

FLIGHT DATA FILE

Flight Plan

STS-55

(Flight Cycle Traj - April 24 Launch)

Mission Operations Directorate
Operations Division

Final, Rev A
April 12, 1993

<u>EVENT</u>	<u>CDT</u>		
Launch	09:52	Sat	April 24
KSC Landing	07:57	Mon	May 3

BRANCH CHIEF
E. NUTE
DH41
SOND 1



National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas



MISSION OPERATIONS DIRECTORATE

STS-55 FLIGHT PLAN

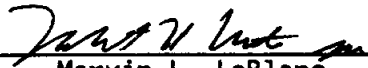
FINAL, REVISION A
April 12, 1993

PREPARED BY:

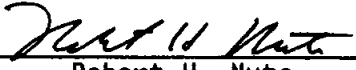


Deborah J. Jackson
Book Manager


APPROVED BY:




Marvin L. LeBlanc
Head, Flight Planning and
Operations Section



Robert H. Nute
Chief, Flight Activity Branch



Edward L. Pavelka, Jr.
Chief, Operations Division



Brock R. Stone
Assistant Director for
Space Shuttle Program

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	FLT PLN-1459(S)
	FLT PLN-1465
	Exemptions: 29B, 30A, 42, 43, 44, 46

AREAS OF TECHNICAL RESPONSIBILITY

Book Manager	DH4/D. Jackson	244-7739
Nominal Timelines	DH4/R. Smith	244-7927
Attitude and Pointing	DH4/D. Kaley	244-7755

FLIGHT PLAN
STS-55

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REV A 04/12/93

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(*) - Omit from flight book

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A4.....	6-8	FLT PLN-6a/55/O/A
DAP A5.....	6-8	FLT PLN-6b/55/O/A
A5.....	6-8	FLT PLN-7a/55/O/A
DAP A6.....	6-9	FLT PLN-7b/55/O/A
A6.....	6-9	FLT PLN-8a/55/O/A
DAP A7.....	6-9	FLT PLN-8b/55/O/A
A7.....	6-9	FLT PLN-9a/55/O/A
DAP A8.....	6-10	FLT PLN-9b/55/O/A
A8.....	6-10	FLT PLN-10a/55/O/A
DAP A9.....	6-10	FLT PLN-10b/55/O/A
A9.....	6-10	FLT PLN-11a/55/O/A
DAP A10.....	6-11	FLT PLN-11b/55/O/C
A10.....	6-11	FLT PLN-12a/55/O/A
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DAP B3.....	6-13	FLT PLN-15b/55/O/A
B3.....	6-13	FLT PLN-16a/55/O/A
DAP B4.....	6-13	FLT PLN-16b/55/O/A
B4.....	6-13	FLT PLN-17a/55/O/A
DAP B5.....	6-14	FLT PLN-17b/55/O/A
B5.....	6-14	FLT PLN-18a/55/O/A
DAP B6.....	6-14	FLT PLN-18b/55/O/A
B6.....	6-14	FLT PLN-19a/55/O/A
DAP B7.....	6-15	FLT PLN-19b/55/O/A
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ALT1.....	6-16	FLT PLN-23a/55/O/A
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ALT2.....	6-17	FLT PLN-24a/55/O/B
DAP ALT3.....	6-17	FLT PLN-24b/55/O/B
ALT3.....	6-17	FLT PLN-25a/55/O/C
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INTRODUCTION

The STS-55 Flight Plan is the Flight Data File article that contains the on-orbit timeline. The Ascent, Post Insertion, Deorbit Prep, and Entry Checklists contain the detailed timelines that the Flight Plan does not cover. For continuity, the summary level timeline includes the entire flight.

This on-orbit timeline satisfies the objectives specified in the Flight Definition and Requirements Directive and the requirements of the STS-55 Flight Requirements Document. The Flight Plan, as part of the Flight Data File, meets the specifications of the STS-55 Flight Initialization Data Pack.

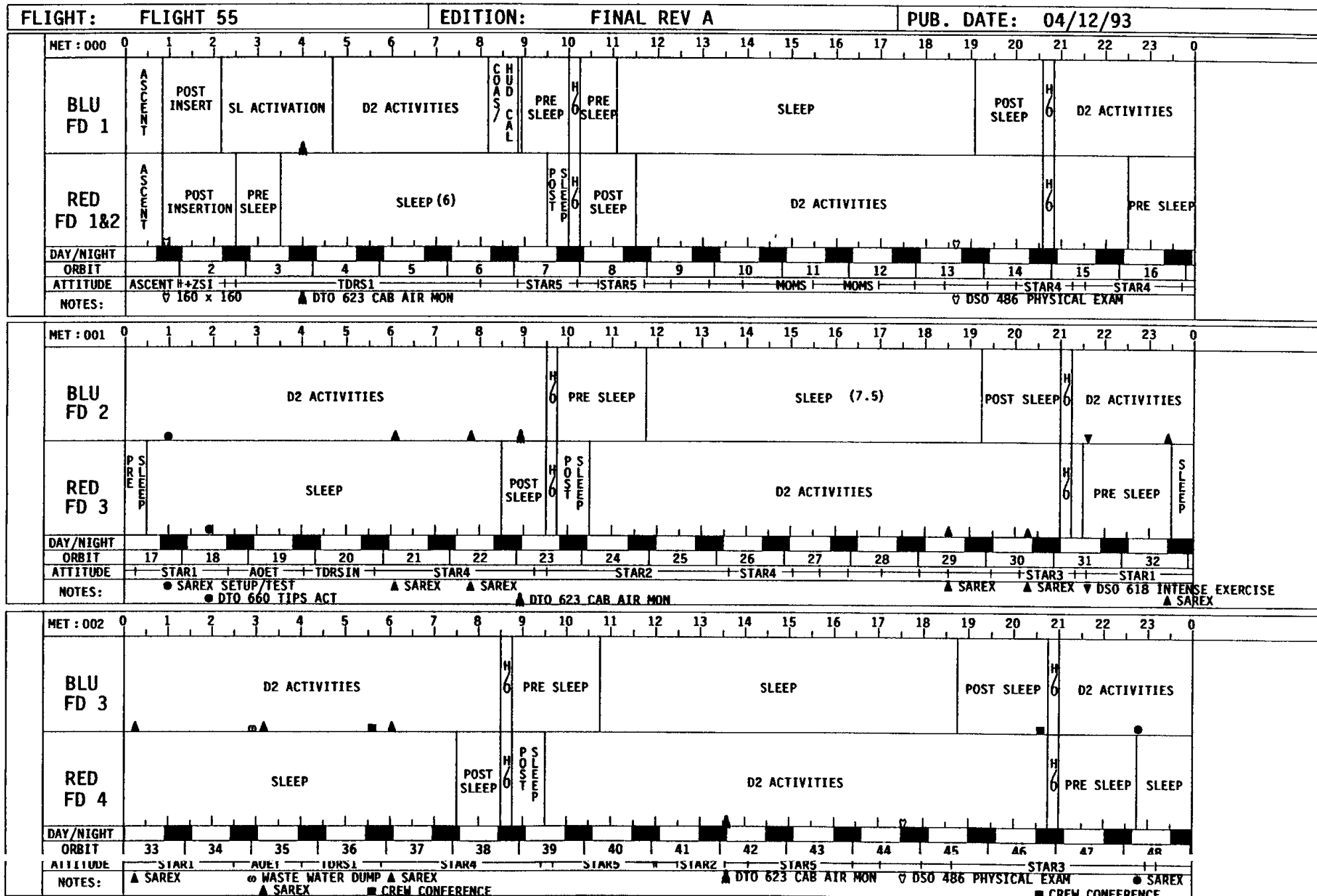
The flight profile used for this Flight Plan is for a launch date of April 24, 1993 at 14:52 GMT.

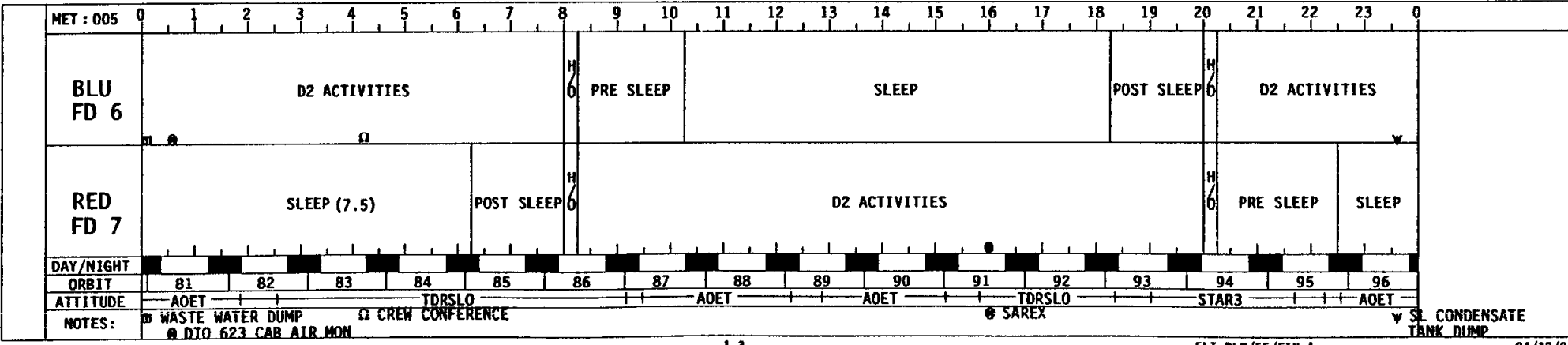
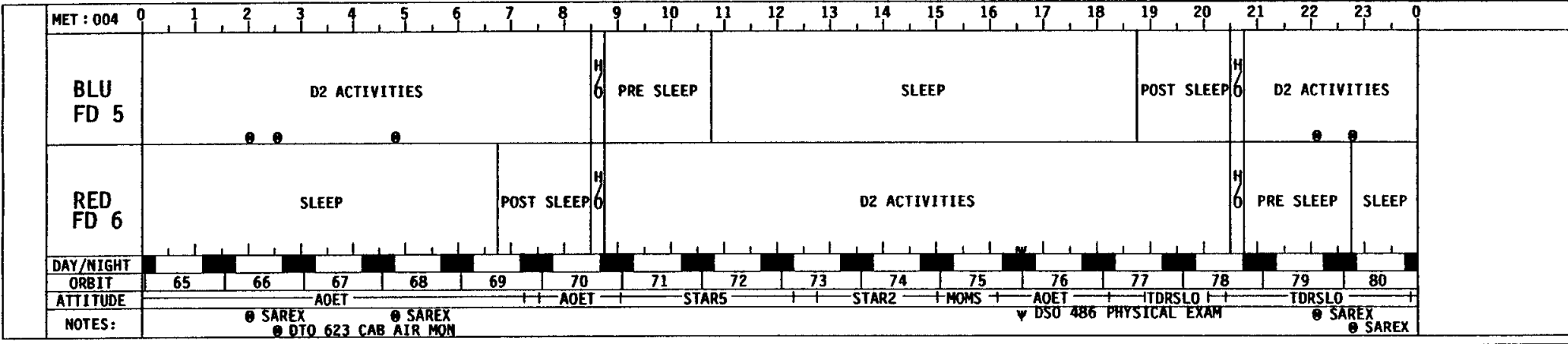
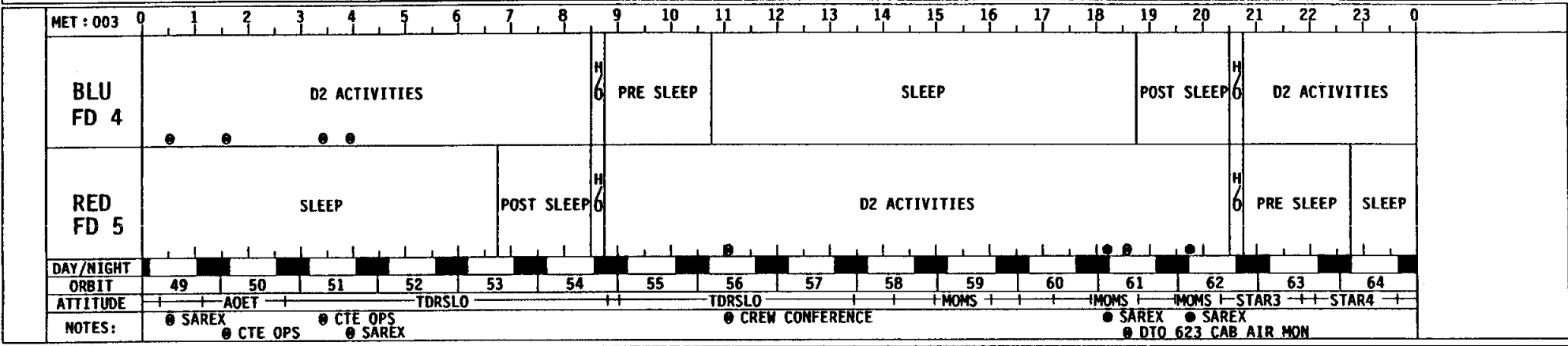
JSC-22359, Crew Scheduling Constraints (Appendix K, CPMP), Basic, Rev B, January 1992, has been used to build the timelines contained in this Flight Plan. Appendix K Exemption #29B authorizes the payload crew to perform Anthrorack Saline Operations during the first hour of postsleep. Exemption #30A authorizes the payload crew to perform Anthrorack Glucose Tolerance Testing during the first hour of postsleep. Exemption #42 permits PS2 to remove a catheter during his first pre-sleep. Exemption #43 allows the payload crew to not exercise throughout the flight. Exemption #44 allows Bremsat deploy during CDR's and PLT's pre-sleep for a one rev late deploy. Exemption #46 was approved to allow the completion of DSO 603B, as time permits, on entry day.

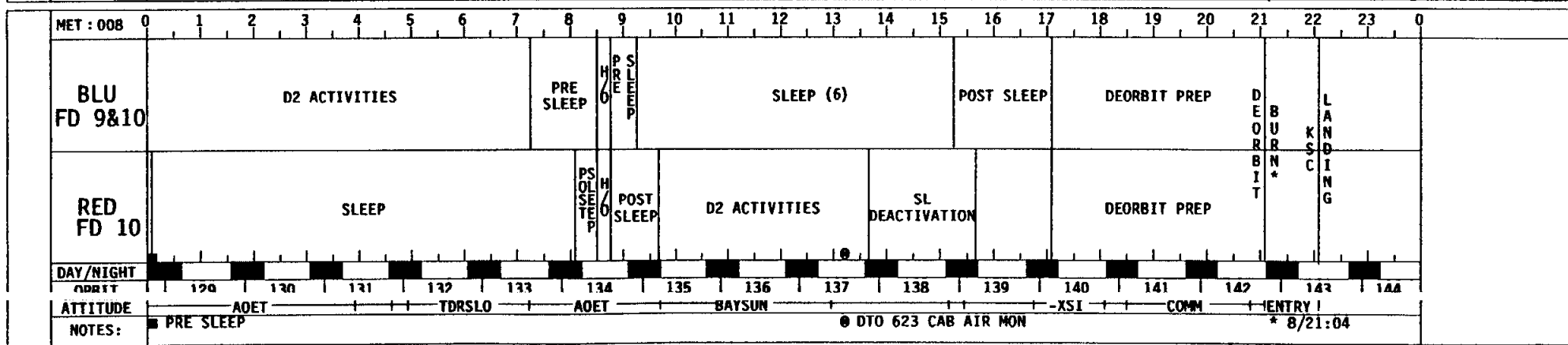
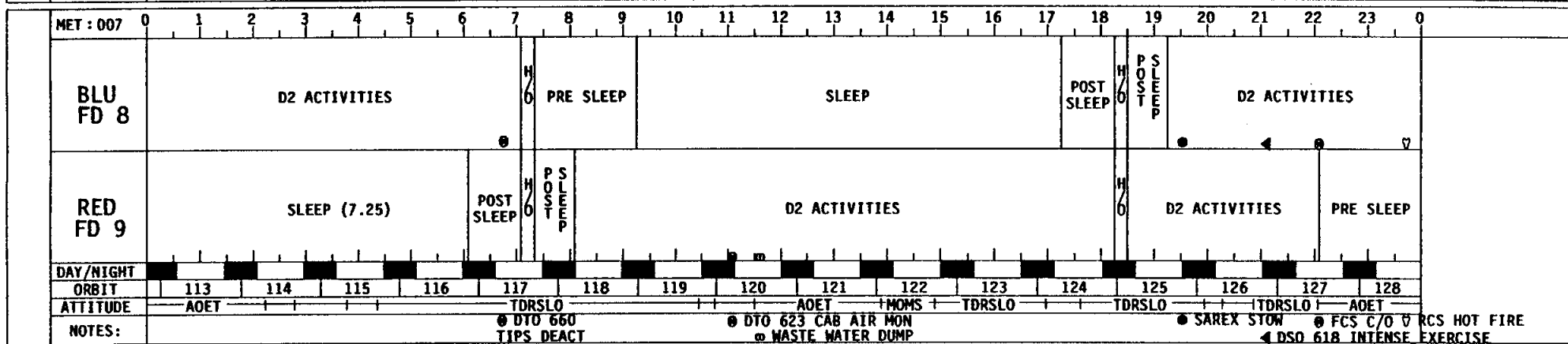
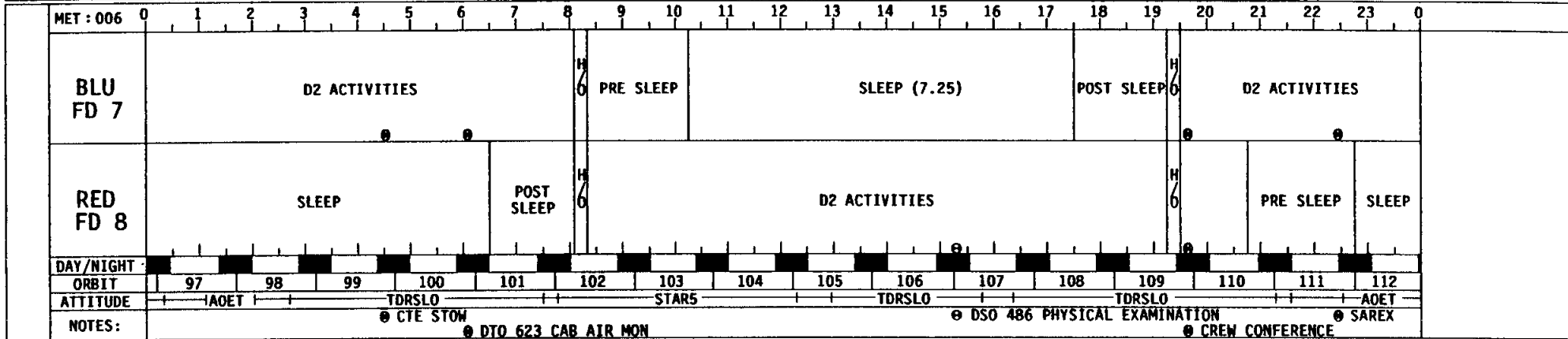
The timeline formats used in this Flight Plan are based on JSC-19933, Timeline Format Definitions and Standard Notes, Rev C, May 1990.

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STS-55 OVERVIEW

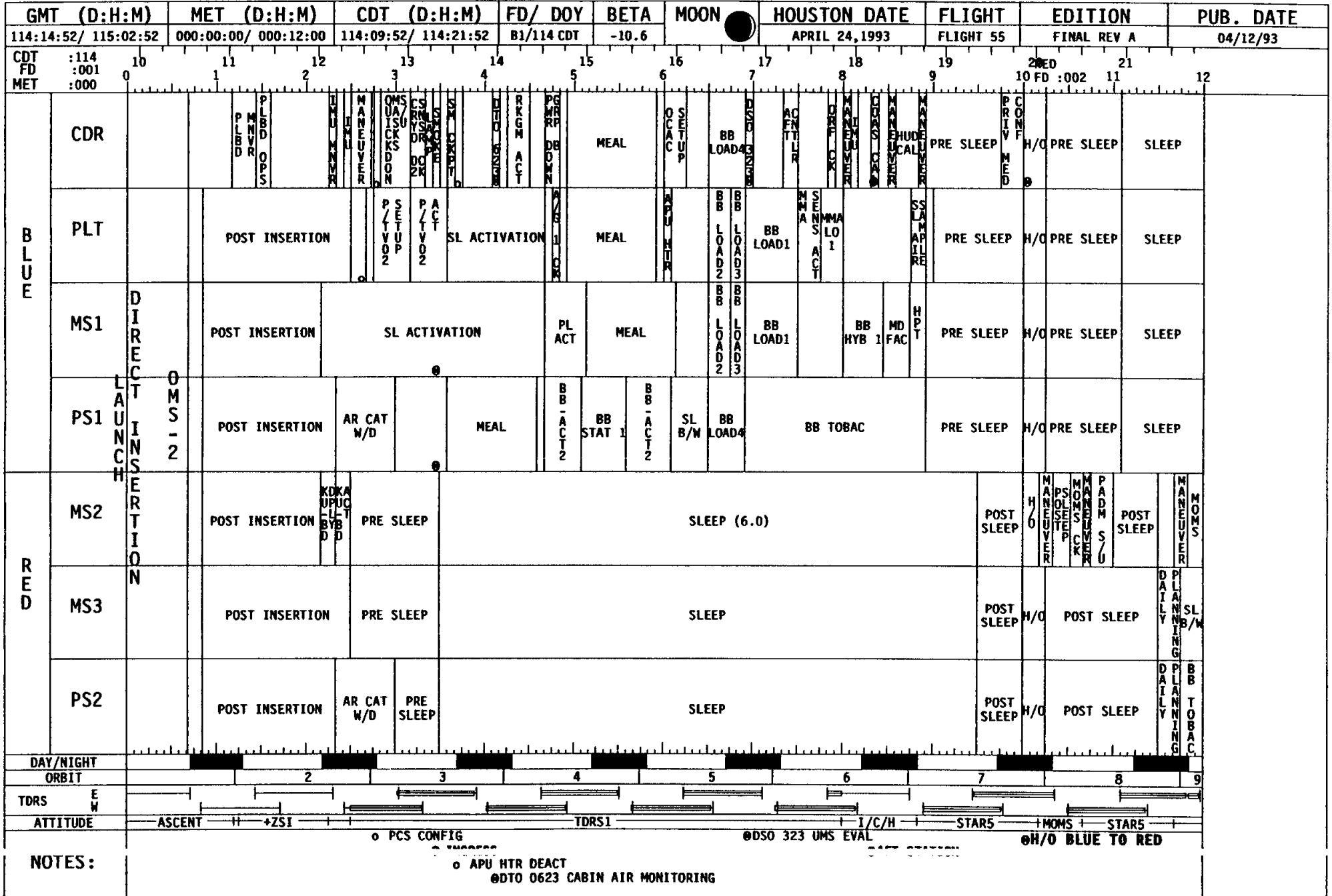






SUMMARY TIMELINE

SUMMARY TIMELINE




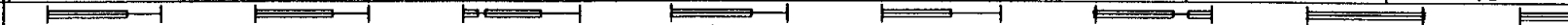
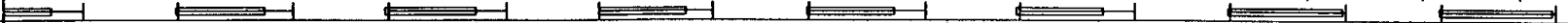


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CDT	:114	22	23	0	1	2	3	4	5	6	7	8	9	0											
RED	FD:002	12	13	14	15	16	17	18	19	20	21	22	23												
MET	:000										BLU			MET:001											
BLUE	CDR	SLEEP								POST SLEEP	H/O	EXERCISE	BOC LRO LEF ED	PA O TV VOS	MANEUVER										
	PLT	SLEEP								POST SLEEP	H/O	EXERCISE			FILTER CLEANING										
	MS1	SLEEP								POST SLEEP	H/O	EXERCISE			RESP MON 1										
	PS1	SLEEP								POST SLEEP	H/O	EXERCISE			RESP MON 1										
RED	MS2	MOMS	S/L COLOR	MANEUVER	MOMS	S/L COLOR	MANEUVER	MOMS	MANEUVER	FO NFI G	MANEUVER	MOMS	MANEUVER	MEAL	MANEUVER	MOMS	DSO 486 SUBJ	MANEUVER	ERG ONET R	SE TUP	MANEUVER	DR KGM	DE EACT	H/O	PRE SLEEP
	MS3	SL B/W	BB stat TV	SL B/W	HPT	HPT	AR SETUP	BB GROW	BB META	MEAL	HPT	DSO 486 OPER	HL FAC	H/O	HL FAC	BB META	PRE SLEEP								
	PS2	BB TOBAC	BB METAB	BB ACT	BB HELI	BB DIGIT	MEAL	BB CULT	BB META	RR MON P 1	H/O	BB FUNGI	PRE SLEEP												
DAY/NIGHT																									
ORBIT																									
TDRS																									
ATTITUDE		STARS + MOMS + STARS + MOMS + STAR4 + MOMS + STAR4 + MOMS + STAR4 + MOMS + STAR4 + MOMS + STAR4																							
NOTES:		@DSO 486 PHYSICAL EXAM IN SPACE @H/O RED TO BLUE																							





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RED FD	:003	12	13	14	15	16	17	18	19	20	21	22	23	0				
MET	:001										BLU	FD :003	22	23	0			
BLUE	CDR	SLEEP (7.5)								POST SLEEP	H/O	EXERCISE	DTO 663	P/TVO6 SETUP	VOICE SAR EXE			
	PLT	SLEEP								POST SLEEP	H/O	DSO 618 EXERCISE	MANEUVER	PACTVO6	BB GRAV 1			
	MS1	SLEEP								POST SLEEP	H/O	PLANNING	GAS	HL SALT	BB GRAV 1			
	PS1	SLEEP								POST SLEEP	H/O	PLANNING	FPM LIQ COL	FPM LIQ COL				
RED	MS2	DSO 323	MEAL		MANEUVER	FUTURE	MOMS CK	BARO REFLEX	MANEUVER	MOMS CK	MANEUVER	MOMS CK	MANEUVER	VOICE SAR EXE	H/O	PRE SLEEP	PRE SLEEP	SLEEP
	MS3	WL HIT PARAM	HIT FAC	MEAL	BB GROW	BB CULT	MANEUVER	MOMS CK	MANEUVER	MOMS CK	MANEUVER	MOMS CK	MANEUVER	VOICE SAR EXE	H/O	PRE SLEEP	PRE SLEEP	SLEEP
	PS2	ELI G BAS	ELI G BAS	BB TOBAC	BB HYB 1	MEAL	IHF DIS 3	BB DIGIT	FPM FAC	FPM LIQ COL	FPM LIQ COL	H/O	PRE SLEEP	PRE SLEEP	SLEEP			
DAY/NIGHT	[Day/Night Cycle Diagram]																	
ORBIT	[Orbit Cycle Diagram]																	
TDRS	[TDRS Cycle Diagram]																	
ATTITUDE	[Attitude Cycle Diagram]																	
NOTES:	@DSO 323 UMS EVAL @TAMWORTH HIGH, AUSTRALIA @PERSONAL CONTACT @H/O RED TO BLUE @DTO 663 ACOUSTIC DOSIMETER @PERSONAL CONTACT @DSO 618 EFFECTS OF INTENSE EXERCISE																	

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE									
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CDT	:116	0	10	11	12	13	14	15	16	17	18	19	20	21	12						
BLU	FD :003																				
MET	:002																				
BLUE	CDR	VOICE SARREX	AR LAND	MEAL	MANEUVER WDAUN SMITPT	VOICE SARREX	WDAUN SMRTPM E	MANEUVER	SL TV SETUP	SL TV ACT	MANEUVER	PACT P/TVOS	DTG 663	H/O	PRE SLEEP	MANEUVER	PRE SLEEP	SLEEP			
	PLT	HL FAC	AR LAND	MEAL	MM LO 11	DSO 323	CAC DUN ND F/V	CC RO EM MF	P S E T U P	SARREX	PADM S/U	H/O	PRE SLEEP	SLEEP							
	MS1	BB GRAV3	HPT	MEAL	SL B/W	BB GRAV1	CC RO EM MF	PACT P/TVOS	BB GRAV1	BB GRAV1	SL B/W	H/O	PRE SLEEP	SLEEP							
	PS1	FPM LIQ COL			FPM HIGH MODE	MEAL	IHF SKIN	CC RO EM MF	PACT P/TVOS	BB HYB 1	BB HYB 1	IHF DIS 2	H/O	PRE SLEEP	SLEEP						
RED	MS2	SLEEP						POST SLEEP H/O						POST SLEEP	EXERCISE						
	MS3	SLEEP						POST SLEEP H/O						POST SLEEP	D P L A N N I N G	H L S A L T	GFQ N1 1				
	PS2	SLEEP						POST SLEEP H/O						POST SLEEP	D P L A N N I N G	FPM HIGH MODE	BB TOBAC	W L H T S	FPM HIGH MODE	R O T E X	
DAY/NIGHT																					
ORBIT																					
TDRS																					
ATTITUDE																					
NOTES:		STAR1 @US AIR FORCE ACADEMY				AOET @ST. MARTINS EPISCOPAL SCHOOL METAIRE, LA @USU 323 OPS EVAL				TDRS1 @SEVEN HILLS SCHOOL CINCINNATI, OH				STAR4 @DTG 663 ACOUSTIC DOSIMETER @H/O BLUE TO RED				STAR5			

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RED	FD	:005	12	13	14	15	16	17	18	19	20	21	22	23														
MET	:003																											
BLUE	CDR	SLEEP								POST SLEEP	H/O	EXERCISE	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER											
	PLT	SLEEP								POST SLEEP	H/O	FILTER CLEANING	EXERCISE	MANUEVER	MANUEVER	MANUEVER	MANUEVER											
	MS1	SLEEP								POST SLEEP	TOMEX 2	POST SLEEP	H/O	PLANNING	ELI G A A S	ELI G A A S	TOMEX 2	IHF AT 4	RM EON P 2									
	PS1	SLEEP								POST SLEEP	TOMEX 1	POST SLEEP	H/O	PLANNING	BB TOBAC	AR BAG	TOMEX 1	RESP MON 2										
RED	MS2	MMA LO 9	MEAL	MANUEVER	P/TVO S	MANUEVER	PACT	MANUEVER	DSO 323	MANUEVER	MANUEVER	MANUEVER	MOMS	MANUEVER	MANUEVER	BARO	MANUEVER	VOICE	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	H/O	PRE SLEEP	SLEEP	
	MS3	ELI G A A S	MEAL	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	H/O	PRE SLEEP	SLEEP
	PS2	GHF A I L I	FPM OSC 2	ELI G A A S	FPM OSC 2	MEAL	MEAL	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	H/O	PRE SLEEP
DAY/NIGHT	[Day/Night Cycle]																											
ORBIT	57 58 59 60 61 62 63 64																											
TDRS	[TDRS Cycle]																											
ATTITUDE	TDRSLO + MOMS + TDRSLO + MOMS + TDRSLO + MOMS + TDRSLO + MOMS + STAR3 + STAR4 + AOET																											
NOTES:	@DSO 323 UMS EVAL @SAREX ANTENNA TEST @DTO 0623 CABIN AIR MONITORING @MOVE TO MODULE @SAREX ANTENNA TEST (MODULE) @H/O RED TO BLUE @DTO 663 ACOUSTIC DOSIMETER																											

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON 	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE		
118:14:52/ 119:02:52		004:00:00/ 004:12:00		118:09:52/ 118:21:52		B5/118 CDT	2.6		APRIL 28, 1993	FLIGHT 55	FINAL REV A	04/12/93		
CDT	:118	10	11	12	13	14	15	16	17	18	19	20	21	12
BLU	FD :005									RED	FD :006			
MET	:004	0	1	2	3	4	5	6	7	8	9	10	11	12
BLUE	CDR	FC P	MRP	MRP	MRP	MRP	MRP	MRP	MRP	MRP	MRP	MRP	MRP	MRP
	PLT	HL FAC	OFF DUTY			MEAL	OFF DUTY			HL FAC	HL FAC	HL FAC	HL FAC	HL FAC
	MS1	RESP MON 2		MEAL	HL SALT	HL SALT	HL SALT	HL SALT	HL SALT	HL SALT	HL SALT	HL SALT	HL SALT	HL SALT
	PS1	RESP MON 2	GFO N1 3	FPM OSC3	MEAL	FPM OSC4	FPM OSC4	FPM OSC4	FPM OSC4	FPM OSC4	FPM OSC4	FPM OSC4	FPM OSC4	FPM OSC4
RED	MS2	SLEEP						POST SLEEP			H/O	MANEUVER	EXERCISE	OFF DUTY
	MS3	SLEEP						POST SLEEP			H/O	SALINE 2		PLANNING
	PS2	SLEEP						SALINE 2			H/O	SALINE 2		SALINE 2
DAY/NIGHT														
ORBIT														
TDRS														
ATTITUDE														
NOTES:	<p>MANUAL HTR CONFIG DSO 323 UMS EVAL DTO 663 ACOUSTIC DOSIMETER VCONFIG FOR ORB POS</p> <p>ACABIN TEMP CNTL RECONFIG STIMANSBURG MIDDLE CH/O BLUE TO RED</p> <p> • DTO 663 ACOUSTIC DOSIMETER TRUMANSBURG, NY</p> <p> • SIESEKELO HIGH, SWAZILAND</p> <p> • DTO 0623 CABIN AIR MONITORING</p>													

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE							
119:02:52 / 119:14:52		004:12:00 / 005:00:00		118:21:52 / 119:09:52		R6/118 CDT	4.6		APRIL 28, 1993	FLIGHT 55	FINAL REV A	04/12/93							
CDT	:118	22	23	0	1	2	3	4	5	6	7	8	9	0					
RED	FD	:006	12	13	14	15	16	17	18	19	20	21	22	23					
MET	:004										BLU	FD	:006	21					
														MET:005					
BLUE	CDR	SLEEP								POST SLEEP	MANEUVER	MANEUVER	H/O	POST SLEEP	EXERCISE	DTO 665	SALINE 1	DTO 665	MANEUVER
	PLT	SLEEP								POST SLEEP	PADM	POST SLEEP	H/O	EXERCISE	DTO 665	SALINE 1	DTO 665	MANEUVER	H L F A C
	MS1	SLEEP								POST SLEEP			H/O	SALINE 1		DTO 665	SALINE 1	DTO 665	MANEUVER
	PS1	SLEEP								POST SLEEP	DTO 665	POST SLEEP	H/O	SALINE 1		DTO 665	SALINE 1	DTO 665	MANEUVER
RED	MS2	OFF DUTY	OFF DUTY	OFF DUTY	P/TVO8	SETUP	MEAL	MANEUVER	MOMS	MANEUVER	P/TVO8 ACT	OFF DUTY	MANEUVER	MANEUVER	OFF DUTY	H/O	PRE SLEEP	SLEEP	
	MS3	SALINE 2	POST SLEEP	OFF DUTY	MEAL	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	H/O	PRE SLEEP	SLEEP	
	PS2	SALINE 2	POST SLEEP	OFF DUTY	MEAL	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	MANEUVER	H/O	PRE SLEEP	SLEEP	
DAY/NIGHT	[Day/Night Cycle]																		
ORBIT	73 74 75 76 77 78 79 80																		
TDRS	[TDRS Schedule]																		
ATTITUDE	MOMS STAR2 MOMS AOET MOMS TDRSLO IMU TDRSLO																		
NOTES:	@DSO 486 PHYSICAL EXAM IN SPACE @H/O RED TO BLUE @DSO 323 UMS EVAL @DTO 665 ACOUSTIC SLM @PERSONAL CONTACT @DTO 663 ACOUSTIC DOSIMETER @MEADOW VILLAGE ELEMENTARY SAN ANTONIO, TX																		

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON 	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
119:14:52/ 120:02:52		005:00:00/ 005:12:00		119:09:52/ 119:21:52		B6/119 CDT	6.6		APRIL 29, 1993	FLIGHT 55	FINAL REV A	04/12/93					
CDT	:119	10	11	12	13	14	15	16	17	18	19	20	21	12			
BLU	FD :006	0	1	2	3	4	5	6	7	8	9	10	11	12			
MET	:005									RED	FD :007						
BLUE	CDR	WDAUN SMI TPT	DTO 663	BARO REFLEX	MDT AUE SMR TPM	MANEUVER	MOMS	MANEUVER	MEAL	SL TV ACT	DTO 665	DTO 663	H/O	PRE SLEEP	SLEEP		
	PLT		P/TVO5P SETUP	P/TVO5P ACT SETUP	SL TV SETUP	MEAL	MMA LO 6	CAC DUR ND F/Z V		DTO 665	DSO 323	PADM S/U	BARO REFLEX	H/O	PRE SLEEP	POST SLEEP	SLEEP
	MS1	BR REF DLEX	SALINE 1	IHF IMM 2	OFF DUTY	MEAL	OFF DUTY			DTO 665	DTO 663	HL DIFF1	H/O	PRE SLEEP	SLEEP		
	PS1	DP AL TAIN YNG	SALINE 1	POST SLEEP	B st att V	BB FUNGI				DTO 665	BARO REFLEX	SALINE 4	H/O	PRE SLEEP	SLEEP		
RED	MS2				SLEEP								H/O	EXERCISE	MMA LO 13	MMA LO 14	
	MS3				SLEEP					SALINE 4	PS OL SEP	SALINE 4	H/O	SALINE 4	PL ANN ING 4	SALINE 4	PS OL SEP
	PS2				SLEEP								H/O	SALINE 4	B P OL AR	SALINE 4	SALINE 4
DAY/NIGHT																	
ORBIT																	
TDRS																	
ATTITUDE		AOET MOMS TDRSLO IMU AOET															
NOTES:		@DTO 0623 CABIN AIR MONITORING @DTO 665 ACOUSTIC SLM o GHF GainSb @DTO 663 ACOUSTIC DOSIMETER ■ IMU ALIGN ■ M/A RINE TO DEF @DTO 665 ACOUSTIC SLM @DSO 323 UMS EVAL @DTO 665 ACOUSTIC SLM															

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE												
120:02:52/ 120:14:52		005:12:00/ 006:00:00		119:21:52/ 120:09:52		R7/119 CDT	8.7		APRIL 29, 1993	FLIGHT 55	FINAL REV A	04/12/93												
CDT	:119	22	23	0	CDT:120	1	2	3	4	5	6	7	8	9	0	MET:006								
RED	FD :007	12	13	14	15	16	17	18	19	20	21	22	23											
MET	:005																							
BLUE	CDR	SLEEP							POST SLEEP	H/O	EXERCISE	DTO 603	MANEUVER	MOMS	MANEUVER	MANEUVER	HL FAC							
	PLT	SLEEP							POST SLEEP	H/O	EXERCISE				MLMO 1 G	SL CNDS TK DUMP								
	MS1	SLEEP							SALINE 3	H/O	SALINE 3				ELI Ga	PLANNING DAILY	SALINE 3							
	PS1	SLEEP							POST SLEEP	H/O	SALINE 3				SALINE 3	PLANNING DAILY	SALINE 3							
RED	MS2	P/VVO5	SUTUP	MANEUVER	PACT	MANEUVER	BARO	REFLEX	MEAL	MANEUVER	MOMS	MANEUVER	SARX	VOICE	DSQ 323	MANEUVER	MOMS	MANEUVER	PAON	DUCK	H/O	PRE SLEEP	SLEEP	
	MS3	POST SLEEP			HL DUFF 1	HL DUFF 1	MMA LO 10	ELI Ga	MEAL				MANEUVER	BARO	REFLEX	HL DUFF 1	HL DUFF 1	HL DUFF 1	HL DUFF 1	HL DUFF 1	HL DUFF 1	H/O	PRE SLEEP	SLEEP
	PS2	MANEUVER	BARO	REFLEX	HL DUFF 2	ROTAX	ROTAX	MEAL	BB DEACT	FPM BEN 1	BB POLAR	GG-GAAS	ELI Ga	SALINE 3	H/O	BB GRAV 7							PRE SLEEP	SLEEP
DAY/NIGHT																								
ORBIT																								
TDRS E W																								
ATTITUDE		MOMS AOET MOMS TDRSLO MOMS STAR3 MOMS INU AOET																						
NOTES:		@GLADSTONE STATE HIGH QUEENSLAND, AUSTRALIA @DSO 323 UMS EVAL @H/O RED TO BLUE @DTO 663 ACOUSTIC DOSIMETER POST SLEEP																						

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE														
120:14:52/ 121:02:52		006:00:00/ 006:12:00		120:09:52/ 120:21:52		87/120 CDT	10.8		APRIL 30, 1993	FLIGHT 55	FINAL REV A	04/12/93														
CDT :120																										
BLU FD :007																										
MET :006																										
		0	10	1	11	2	12	3	13	4	14	5	15	6	16	7	17	8	18	9	19	10	20	11	21	12
BLUE	CDR	MANEUVER		MOMS		MANEUVER		OFF DUTY		MEAL		OFF DUTY				H/O PRE SLEEP		PRE SLEEP		SLEEP (7.25)						
	PLT	UMS CAL	HPIT			MANEUVER	MOMS CK	MANEUVER	MEAL		CITE STOW	DSO 323		PADM S/U	DTO 663	MANEUVER	MANEUVER	DRIF CK	H/O PRE SLEEP		SLEEP					
	MS1	POST SLEEP		BB POLAR	BB GRAV7	Ge-GaAs	ELI GaAs	IHF GaAs	BB GRAV7	ELI GaAs	ELI GaAs	MEAL	ELI GaAs	ELI GaAs	ELI GaAs	H/O PRE SLEEP		SLEEP								
	PS1	SHATS	ELI GaAs	HL DIFF2	HL DIFF2		MEAL	ELI GaAs	OFF DUTY							H/O PRE SLEEP		SLEEP								
RED	MS2	SLEEP				SLEEP				POST SLEEP		H/O EXERCISE		MLMOA 15												
	MS3	SLEEP				SLEEP				POST SLEEP		H/O		PLANNING DAILY	ELI GaAs	NITRO 2	ELI GaAs	NITRO 2	NITRO 2	HL DIFF2	AR MEAL					
	PS2	SLEEP				SLEEP				POST SLEEP		H/O		PLANNING DAILY	ROTATEX	FPM BEN 3	NITRO 2	ROTATEX	AR MEAL	BB POLAR	HL DIFF3					
DAY/NIGHT	[Day/Night Cycle Diagram]																									
ORBIT	[Orbit Cycle Diagram]																									
TDRS E M	[TDRS E M Cycle Diagram]																									
ATTITUDE	[Attitude Cycle Diagram]																									
NOTES:	@DSO 323 UMS EVAL @DTO 0623 CABIN AIR MONITORING @H/O BLUE TO RED @DTO 063 ROOSTIC DSI METER																									

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
121:02:52/ 121:14:52	006:12:00/ 007:00:00	120:21:52/ 121:09:52	R8/120 CDT	12.9		APRIL 30, 1993	FLIGHT 55	FINAL REV A	04/12/93				
CDT :120	22	23	0	1	2	3	4	5	6	7	8	9	0
RED FD :008	12	13	14	15	16	17	18	19	20	21	22	23	0
MET :006													MET:007

BLUE	CDR	SLEEP (7.25)			POST SLEEP			H/O	CREW CONF	EXERCISE			MANEUVER	MANEUVER	FILE LAYENING	PS MAR EXE	VOICE REC	DTO 663	
	PLT	SLEEP			POST SLEEP			PADM/S/U	POST SLEEP	P/TV04 ACT	EXERCISE			MANEUVER	MANEUVER	FILE LAYENING	PS MAR EXE	VOICE REC	DTO 663
	MS1	SLEEP			POST SLEEP			H/O	CREW CONF	PLANNING	HFT DIS1	BARO	NITRO 1	NITRO 1	NITRO 1	NITRO 1	NITRO 1	NITRO 1	NITRO 1
	PS1	SLEEP			POST SLEEP			H/O	CREW CONF	PLANNING	BARO	NITRO 2	NITRO 1	AR MEAL	HL DIFF3	HL DIFF3	HL PHAS1	HL PHAS1	HL PHAS1
RED	MS2	MANEUVER	MOMS	MANEUVER	MEAL	DSO 486 SUBJ	MANEUVER	MOMS	MANEUVER	DSO 323	PSET/TV04	CONF AUD/TV CK	H/O	CREW CONF	PRE SLEEP			SLEEP (7.25)	
	MS3	BB POLAR	GFQ	Cu-Mn 1	BB POLAR	IHF NUC 1	MEAL	GHF DIR 2	DSO 486 OPER	GHF DIR 2	MMA LO 12	BB POLAR	ELI Ge	BB POLAR	NITRO 2	PRE SLEEP			SLEEP
	PS2	ROTEX	ROTEX	ROTEX	MEAL	ROTEX	ROTEX	ELI Ge	ROTEX	AR MEAL	AR TISS4	ELI Ge	H/O	CREW CONF	ELI Ge	NITRO 2	PRE SLEEP		

DAY/NIGHT ORBIT	105	106	107	108	109	110	111	112
TDRS E W	[Timeline bars for TDRS E W]							
ATTITUDE	MOMS	TDRSLO	MOMS	TDRSLO	TDRSLO	TDRSLO	TDRSLO	AOET

NOTES: @DSO 486 PHYSICAL EXAM IN SPACE @DSO 323 UMS EVAL @H/O RED TO BLUE @PERSONAL CONTACT @DTO 663 ACOUSTIC DOSIMETER o PCS CONFIG A GFQ Cu-Mn 2

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
121:14:52/ 122:02:52	007:00:00/ 007:12:00	121:09:52/ 121:21:52	B8/121 CDT	15.0		MAY 1, 1993	FLIGHT 55	FINAL REV A	04/12/93


CDT :121	10	11	12	13	14	15	16	17 RED	18	19	20	21	12
BLU FD :008	0	1	2	3	4	5	6	7	8	9	10	11	
MET :007									FD :009				

BLUE	CDR	Activity Log																					
		MEAL	MANUEVER	MOMENTS	BARO	REFLEX	DSO 323	DTO 663	TACT	H/O PRE SLEEP	PRE SLEEP	SLEEP											
PLT	MS1	PS1	WL HFT	MEAL	DSO 323	REFLEX	PADM SU	WL HFT	H/O	PRE SLEEP	PRE SLEEP	SLEEP											
			HL PHAS1	MEAL	ELI GaAs	ELI GaAs	ELI GaAs	NITRO 1	NITRO 1	H/O	PRE SLEEP	SLEEP											
MS2	MS3	PS2	BB STATV	AR MEAL	HFT DIS2	AR TISS3	MEAL	BB POLAR	BB BACT	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR
			SLEEP (7.25)	POST SLEEP	H/O	POST SLEEP	EXERCISE	NMA LO 18	NMA LO 17	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER	MANUEVER
RED	MS2	MS3	PS2	AR MEAL	HFT DIS2	AR TISS3	MEAL	BB POLAR	BB BACT	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR	BB POLAR
				SLEEP	AR GLUCO	H/O	AR GLUCO	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs	ELI GaAs
DAY/NIGHT	ORBIT	TDRS	ATTITUDE	Notes																			

DAY/NIGHT	ORBIT	TDRS	ATTITUDE	NOTES
	113	E	AOET	
	114	W	MOMS	
	115	E	TDRSLO	
	116	W	MOMS	
	117	E	TDRSLO	
	118	W	MOMS	
	119	E	TDRSLO	
	120	W	MOMS	
			AOET	

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE																							
122:02:52/ 122:14:52		007:12:00/ 008:00:00		121:21:52/ 122:09:52		R9/121 CDT	17.2		MAY 1, 1993	FLIGHT 55	FINAL REV A	04/12/93																							
CDT	:121	22	23	0	CDT:122	1	2	3	4	5	6	7	8	9	0	MET:008																			
RED	FD	:009	12	13	14	15	16	17	18	19	20	21	22	23																					
MET	:007																																		
BLUE	CDR	SLEEP						POST SLEEP	H/O	POST SLEEP	EXERCISE			FCS C/O	REC	POST																			
	PLT	SLEEP						POST SLEEP	H/O	POST SLEEP	SAREX	STOW	DSO 618	EXERCISE	FCS C/O	REC	POST																		
	MS1	SLEEP						POST SLEEP	H/O	AR GLUCO	DAILY	AR GLUCO	POST SLEEP	BB TOBAC	RESP	MON 3																			
	PS1	SLEEP						POST SLEEP	H/O	AR GLUCO	DAILY	AR GLUCO	HL FAC	POST SLEEP	RESP	MON 3																			
RED	MS2	MEAL	WDT	AUE	SMR	TPM	UMS	STOW	MANEUVER	MOMS	MANEUVER	OCACW	WL	HFT	BARO	REFLEX	MANEUVER	MOMS	SCRR	MANEUVER	PADN	S/U	DRK	H/O	MNA	LO 7	FILTER	CLEANING	P/TVO6	SETUP	WL	HFT	P/TVO6	ACT	PRE SLEEP
	MS3	RESP MON 4						MEAL	ELI	FAC	ELI	FAC	H/O	BB	STAT 2	AR	GLUCO	AR	GLUCO	BARO	REFLEX	DD	SN	LN	4	PRE SLEEP									
	PS2	RESP MON 4						HFT	DIS6	MEAL	H/O	PHAS	BB	FUNGI	WL	HFT	7	BARO	REFLEX	PRE SLEEP															
DAY/NIGHT	[Day/Night Cycle]																																		
ORBIT	121 122 123 124 125 126 127 128																																		
TDRS	[TDRS Cycle]																																		
ATTITUDE	AOET MOMS TDRSLO MOMS TDRSLO MOMS TDRSLO TDRSLO MOMS TDRSLO AOET																																		
NOTES:	H/O RED TO BLUE APU HTR ACT DSO 618 EFFECTS OF INTENSE EXERCISE																																		

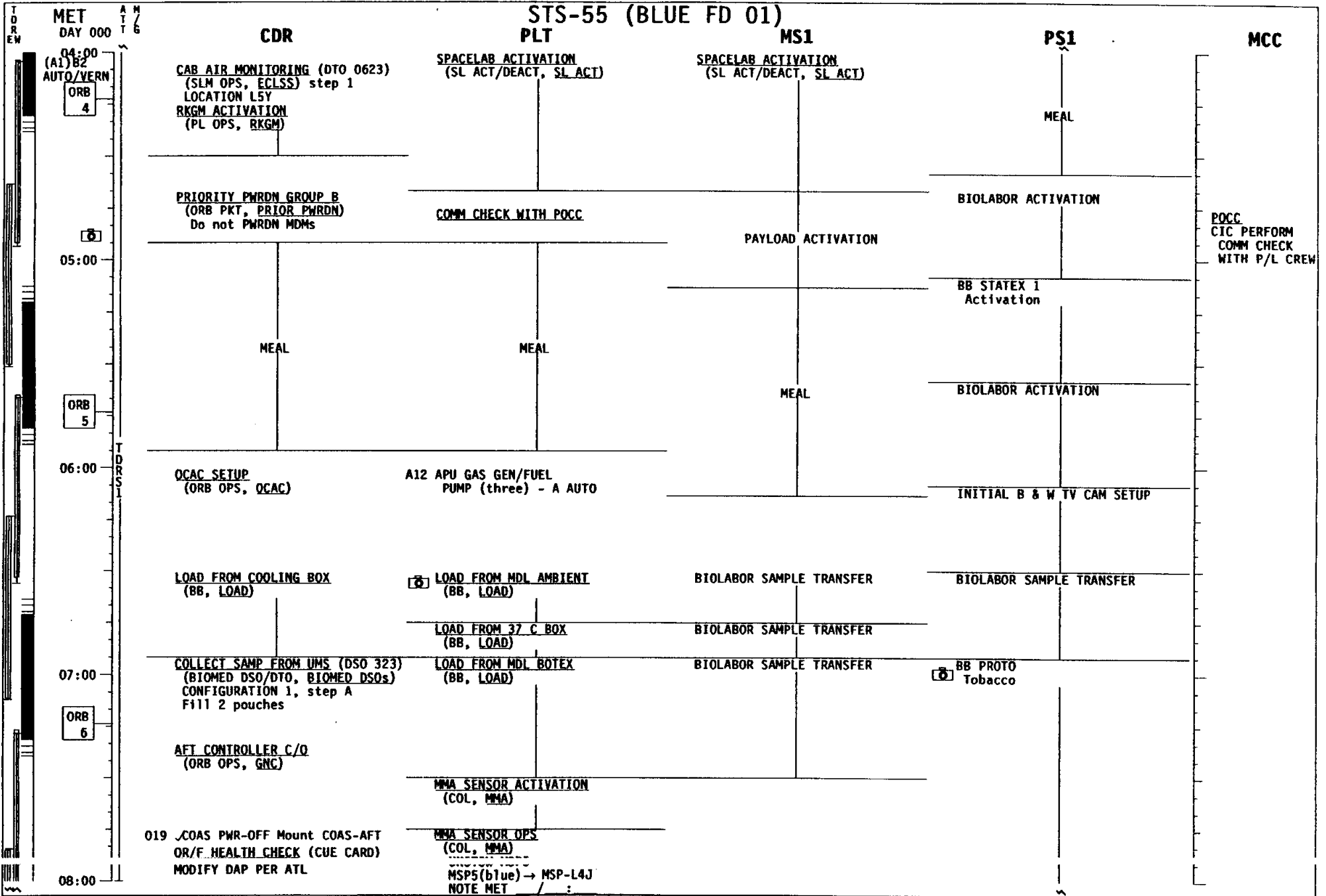
GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE								
122:14:52/ 123:02:52		008:00:00/ 008:12:00		122:09:52/ 122:21:52		89/122 CDT	19.3		MAY 2, 1993	FLIGHT 55	FINAL REV A	04/12/93								
CDT	:122	10	11	12	13	14	15	16	17	18	19	20	21	12						
BLU FD	:009	0	1	2	3	4	5	6	7	8	9	10	11	12						
MET	:008									RED	FD :010									
BLUE	CDR	CABIN STOW			MEAL	MOMS	MANUEVRY	MANUEVRY	MANUEVRY	MANUEVRY	PRE SLEEP	H/O	PRE SLEEP	SLEEP (6.0)						
	PLT	CABIN STOW			MEAL	WL HFT	SSA	APL	RE	SL COLOR	PRE SLEEP	H/O	PRE SLEEP	SLEEP						
	MS1	RESP MON 3			MEAL	HFT DIS4	BB BACT	CABIN STOW			PRE SLEEP	H/O	PRE SLEEP	SLEEP						
	PS1	RESP MON 3		BB ISA	MEAL	ROTEX	BB DEACT	CABIN STOW			PRE SLEEP	H/O	PRE SLEEP	SLEEP						
RED	MS2	SLEEP			SLEEP			SLEEP			POST SLEEP	H/O	POST SLEEP	MANUEVRY	POST SLEEP	CABIN STOW				
	MS3	SLEEP			SLEEP			SLEEP			POST SLEEP	H/O	POST SLEEP	PLANNING	HFT	CABIN STOW	HFT	WL CRYST	HFT	MMA
	PS2	SLEEP			SLEEP			SLEEP			POST SLEEP	H/O	POST SLEEP	PLANNING	MMA HAM		FPM FAC			
DAY/NIGHT	[Day/Night Cycle Diagram]																			
ORBIT	[Orbit Cycle Diagram]																			
TDRS	[TDRS Cycle Diagram]																			
ATTITUDE	[Attitude Cycle Diagram]																			
NOTES.	■ APU HTR RECONFIG ▽ PRE SLEEP ▽ H/O BLUE TO RED																			

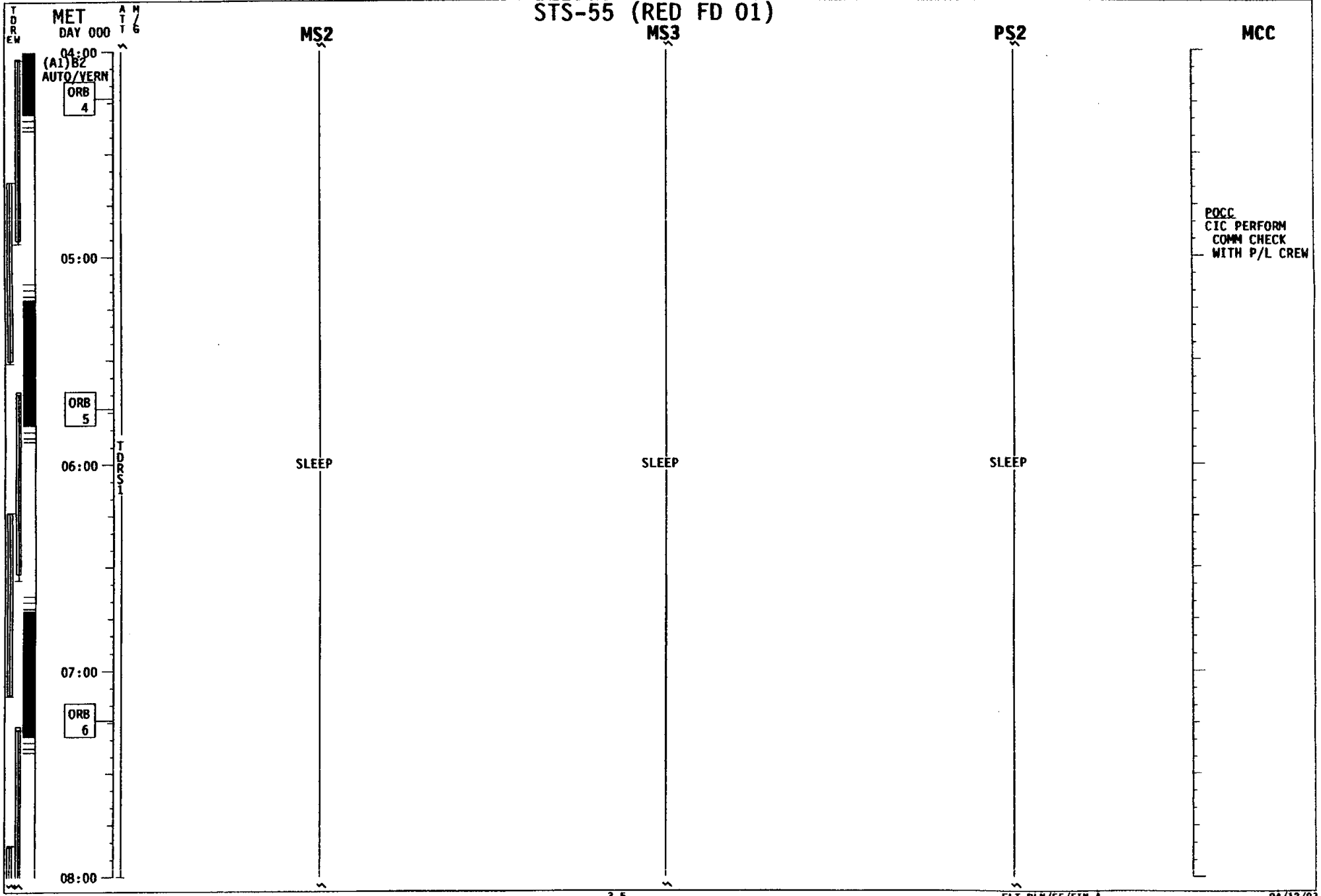
GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON 	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE						
123:02:52/ 123:14:52		008:12:00/ 009:00:00		122:21:52/ 123:09:52		R10/122 CDT	21.4		MAY 2,1993	FLIGHT 55	FINAL REV A	04/12/93						
CDT	:122	22	23	0	CDT:123	1	2	3	BLU	4	5	6	7	8	9	0	MET:009	
RED	FD :010	12	13	14	15	16	17	18	FD :010	18	19	20	21	22	23	0		
MET	:008	12	13	14	15	16	17	18		19	20	21	22	23	0			
BLUE	CDR	SLEEP (6.0)				POST SLEEP		CONTR		IAP								
	PLT	SLEEP				POST SLEEP				MLL								
	MS1	SLEEP				POST SLEEP				UTB								
	PS1	SLEEP				POST SLEEP		AR		GD								
RED	MS2	CABIN	P/SET	MANE	MEAL	PACT	CABIN	MANE										
	MS3	STOW	TV03	UVER		TV03	STOW	UVER										
	PS2	MEAL	PL	SL	DEACTIVATION	CABIN	STOW	AR										
	PS2	MEAL	PL	SL	DEACTIVATION	CABIN	STOW	AR										
DAY/NIGHT	[Day/Night Cycle]																	
ORBIT	136 137 138 139 140 141 142 143 144																	
TDRS	[TDRS Schedule]																	
ATTITUDE	BAYSUN BIAS -ZLV -YVV -ZLV -YVV -XSI COMM ENTRY																	
NOTES:	@OTO 0623 CABIN AIR MONITORING ▽ CRT4 PWRUP ■ EGRESS ○ KU-BD STOW ○ BURN MNR * DEORBIT BURN 8/21:04 * KSC LANDING 8/22:05																	

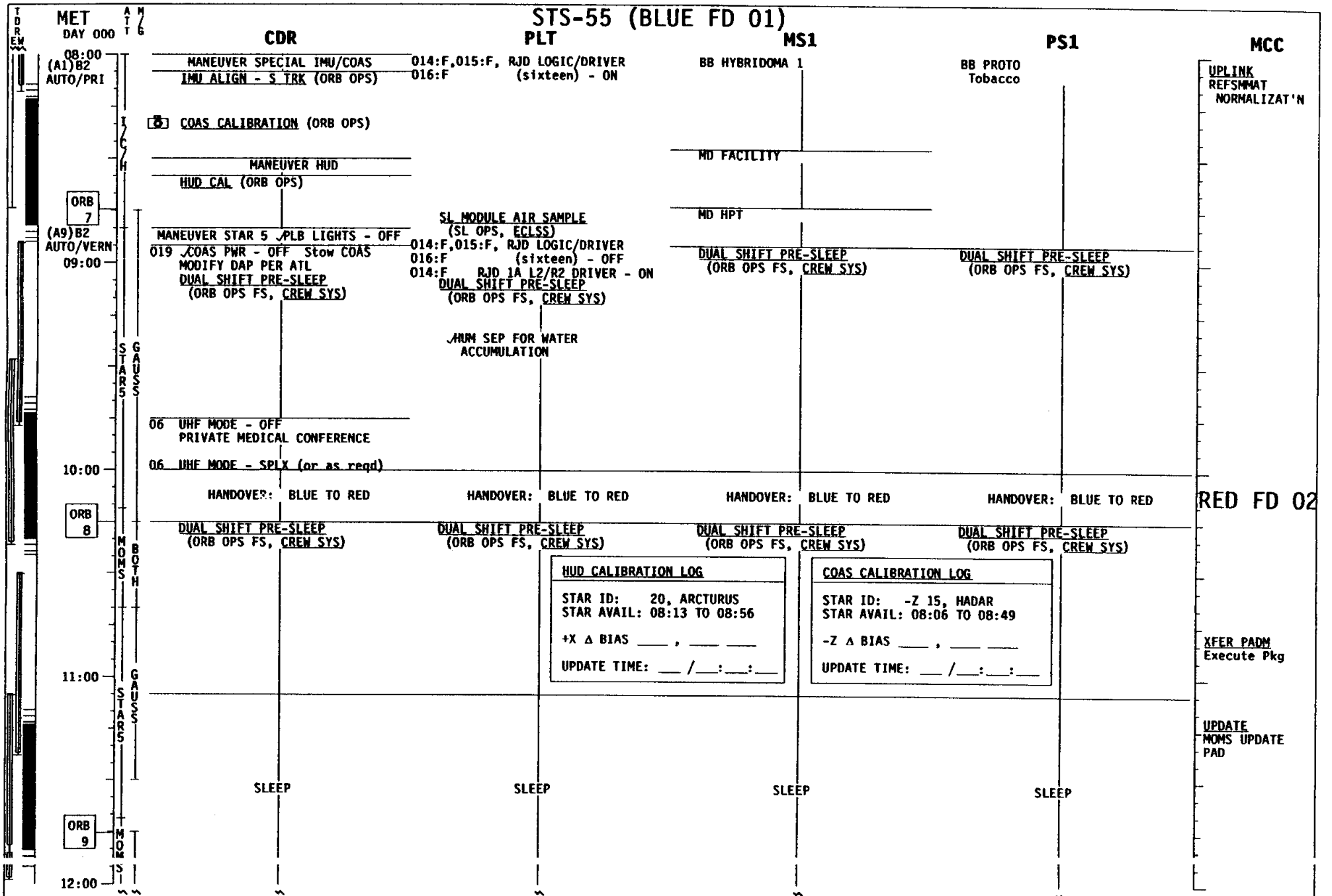
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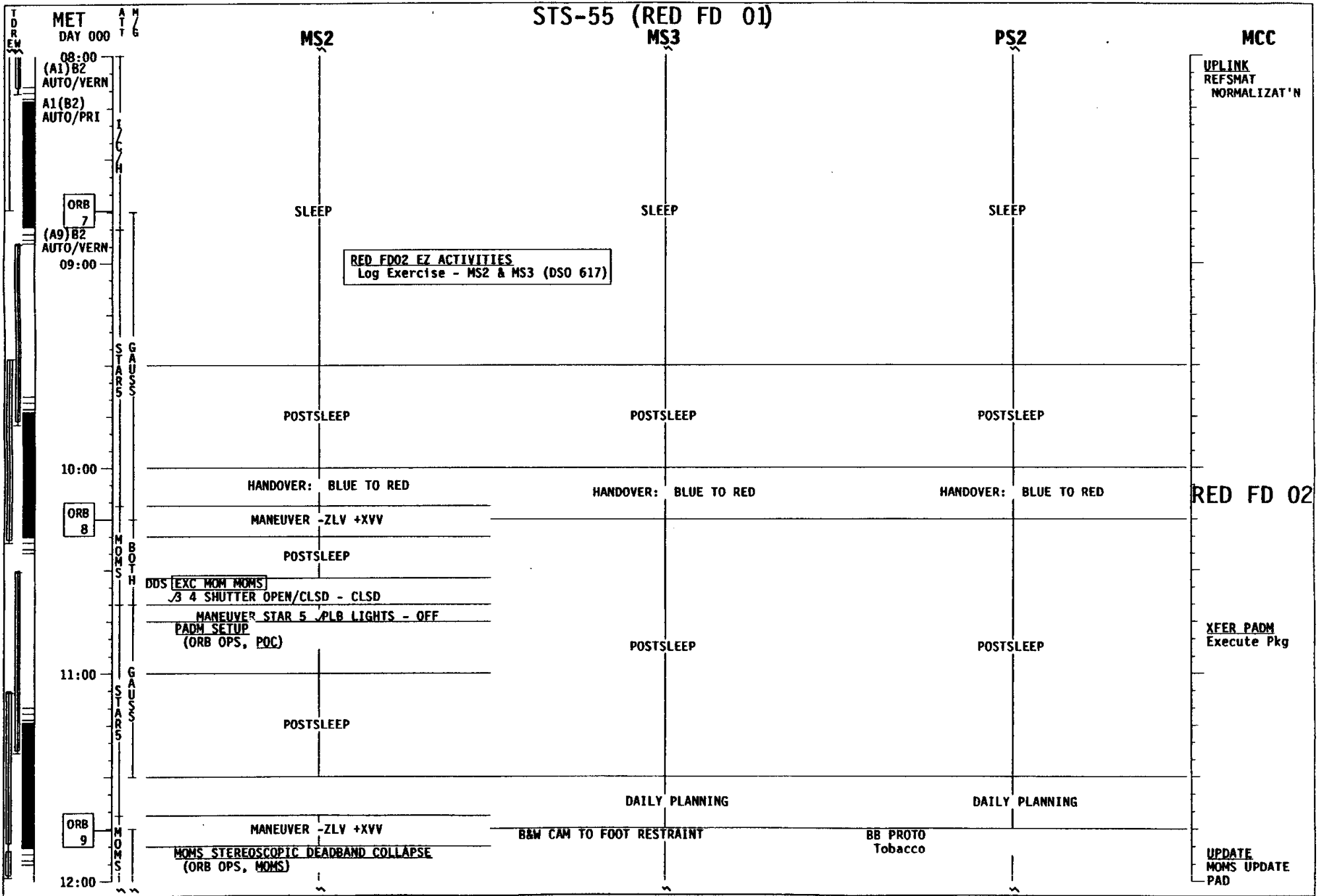
DETAILED TIMELINE

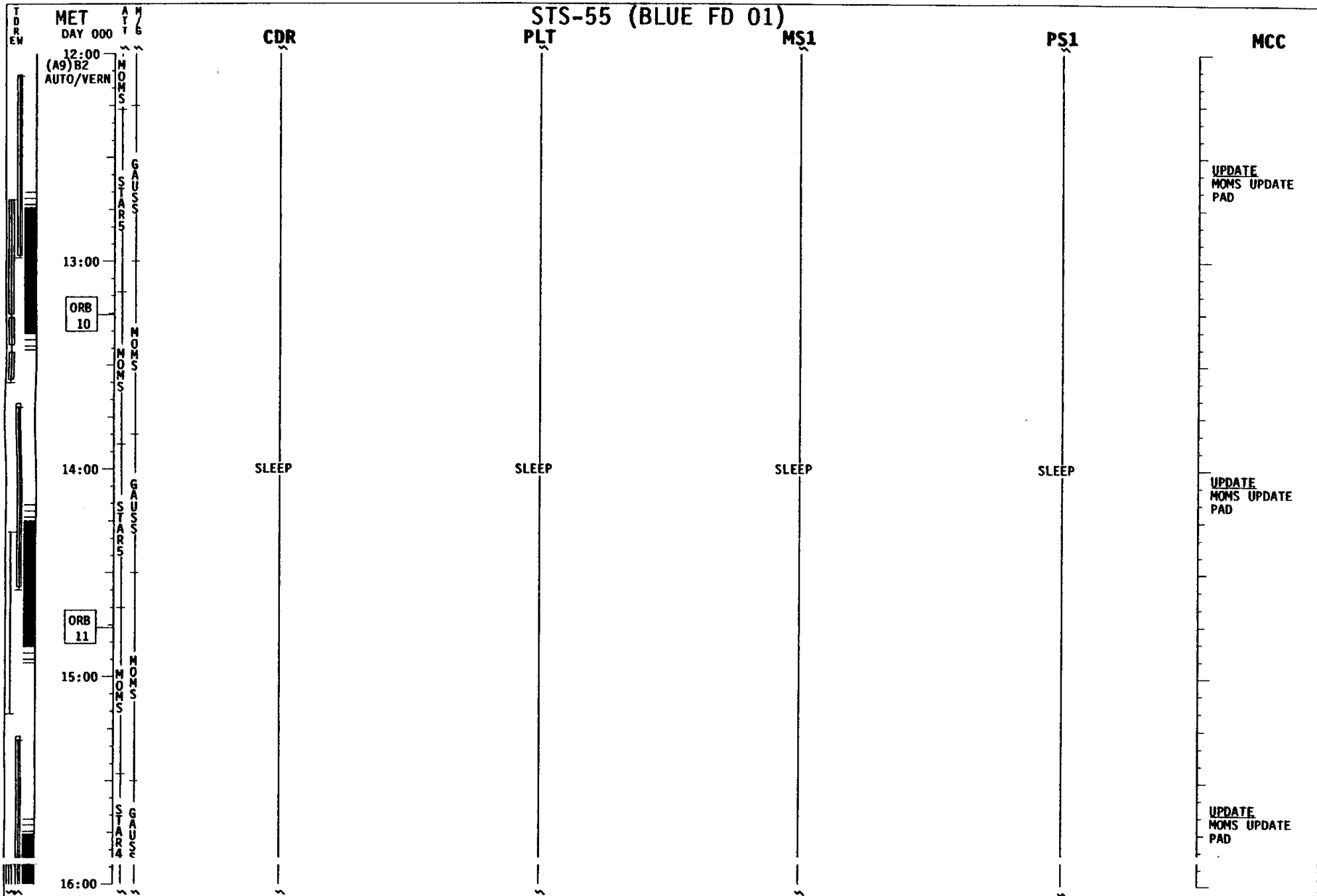
DETAILED
TIMELINE



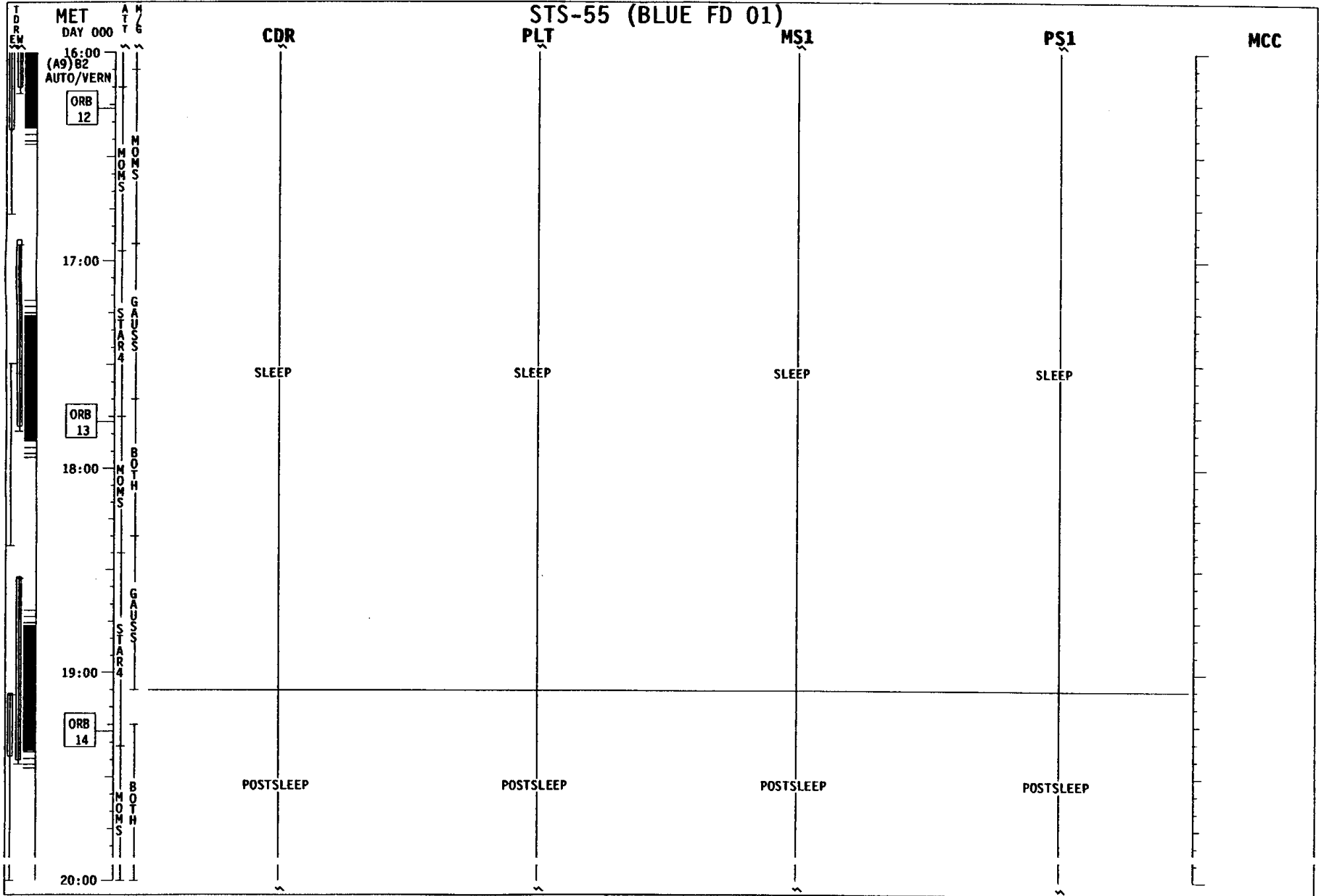


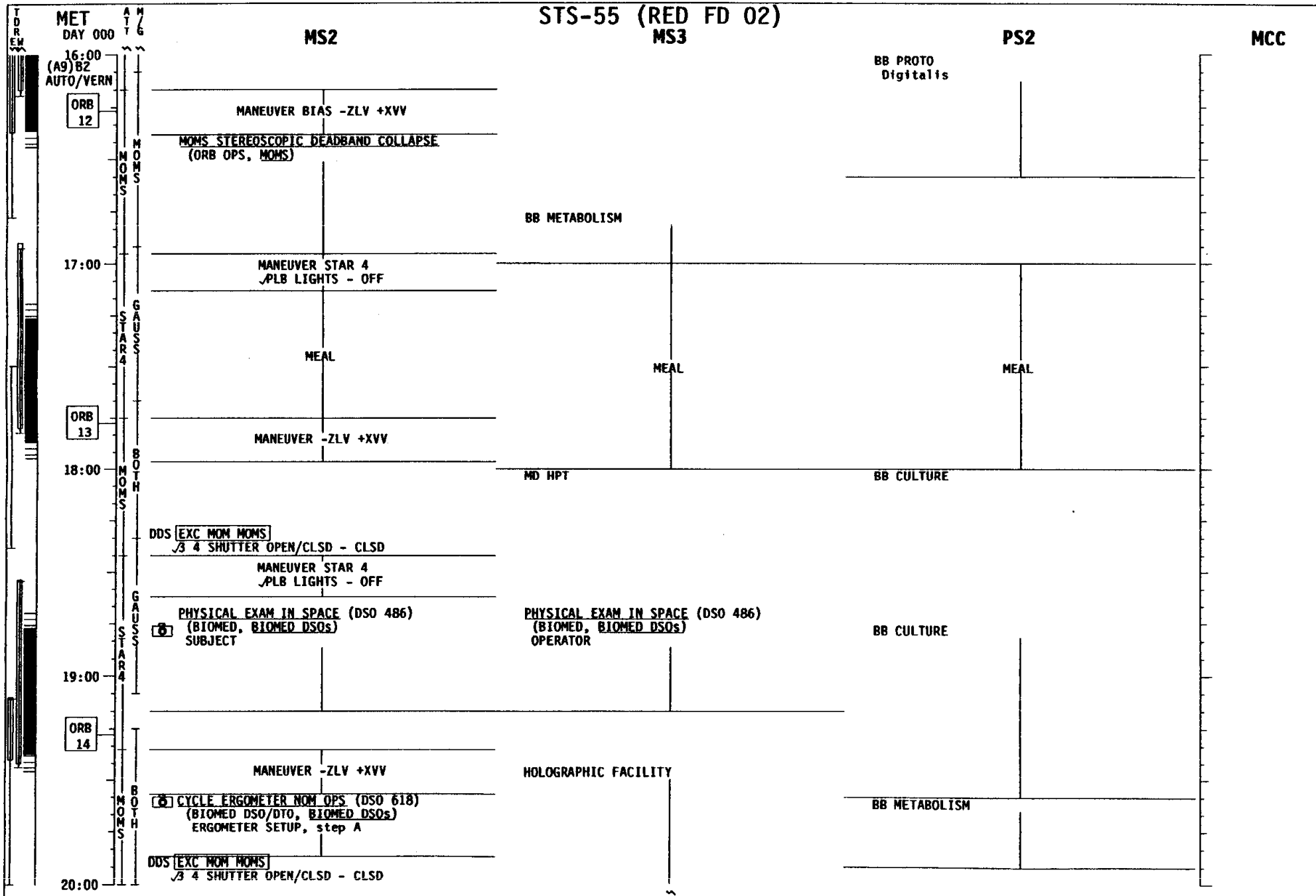


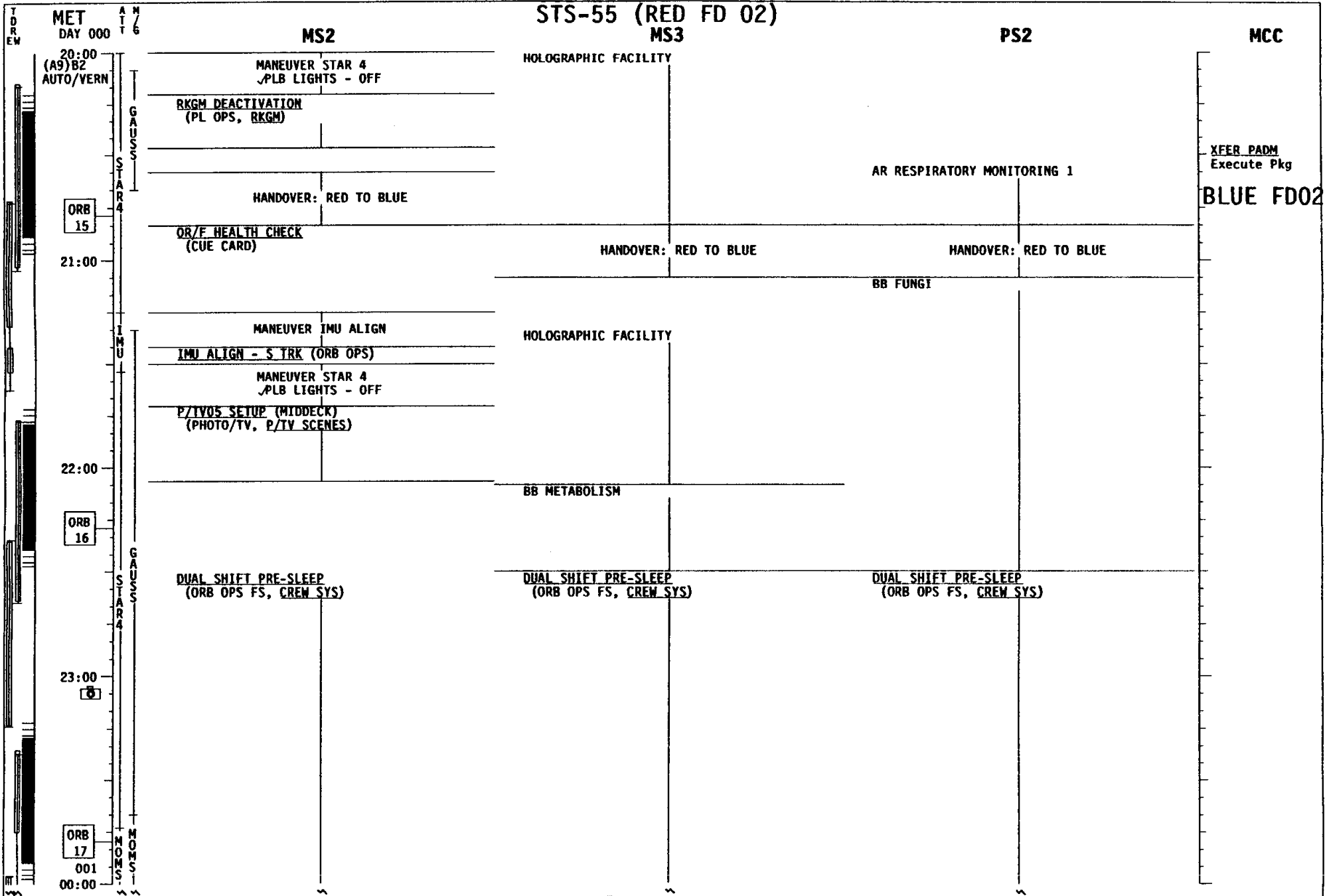


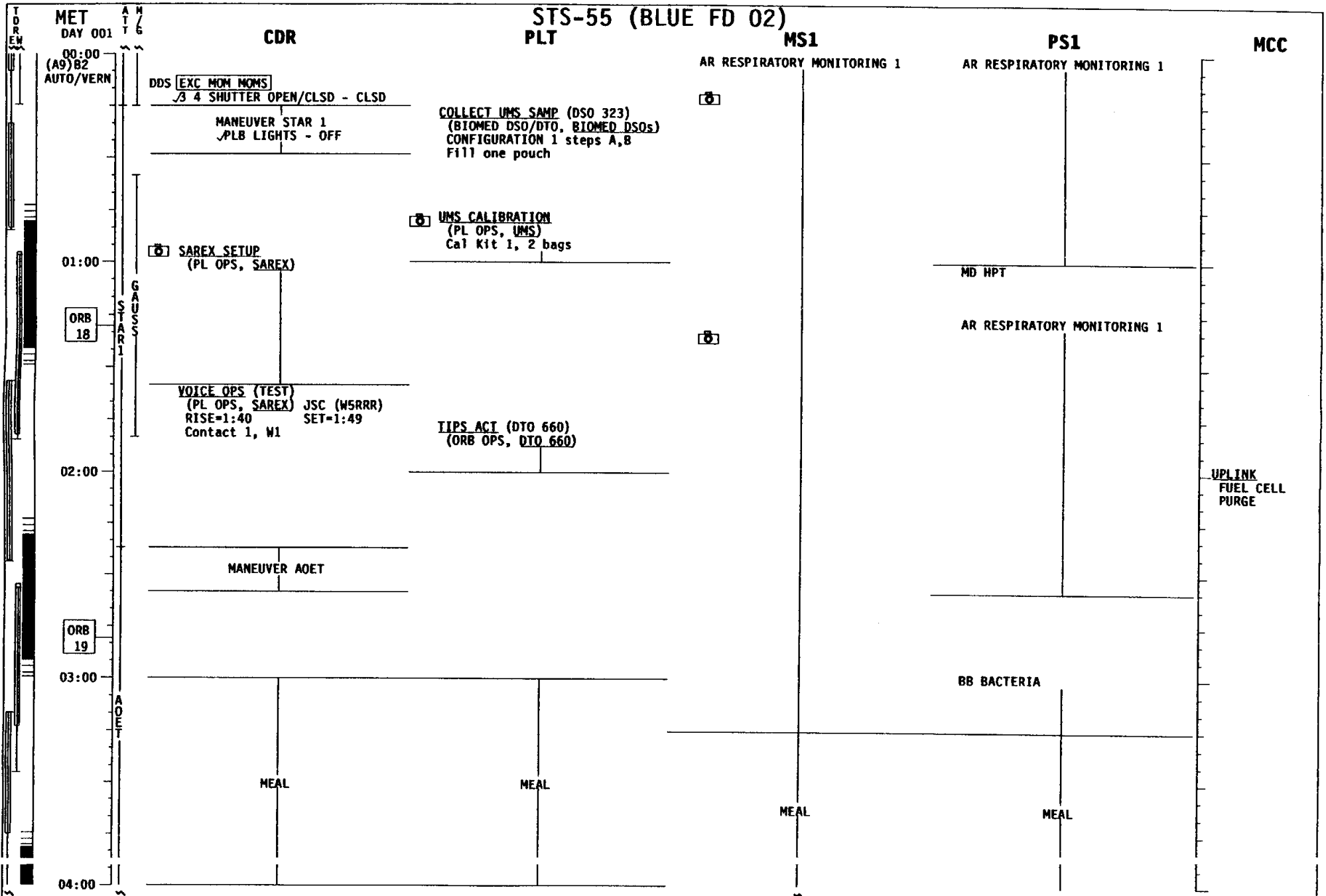


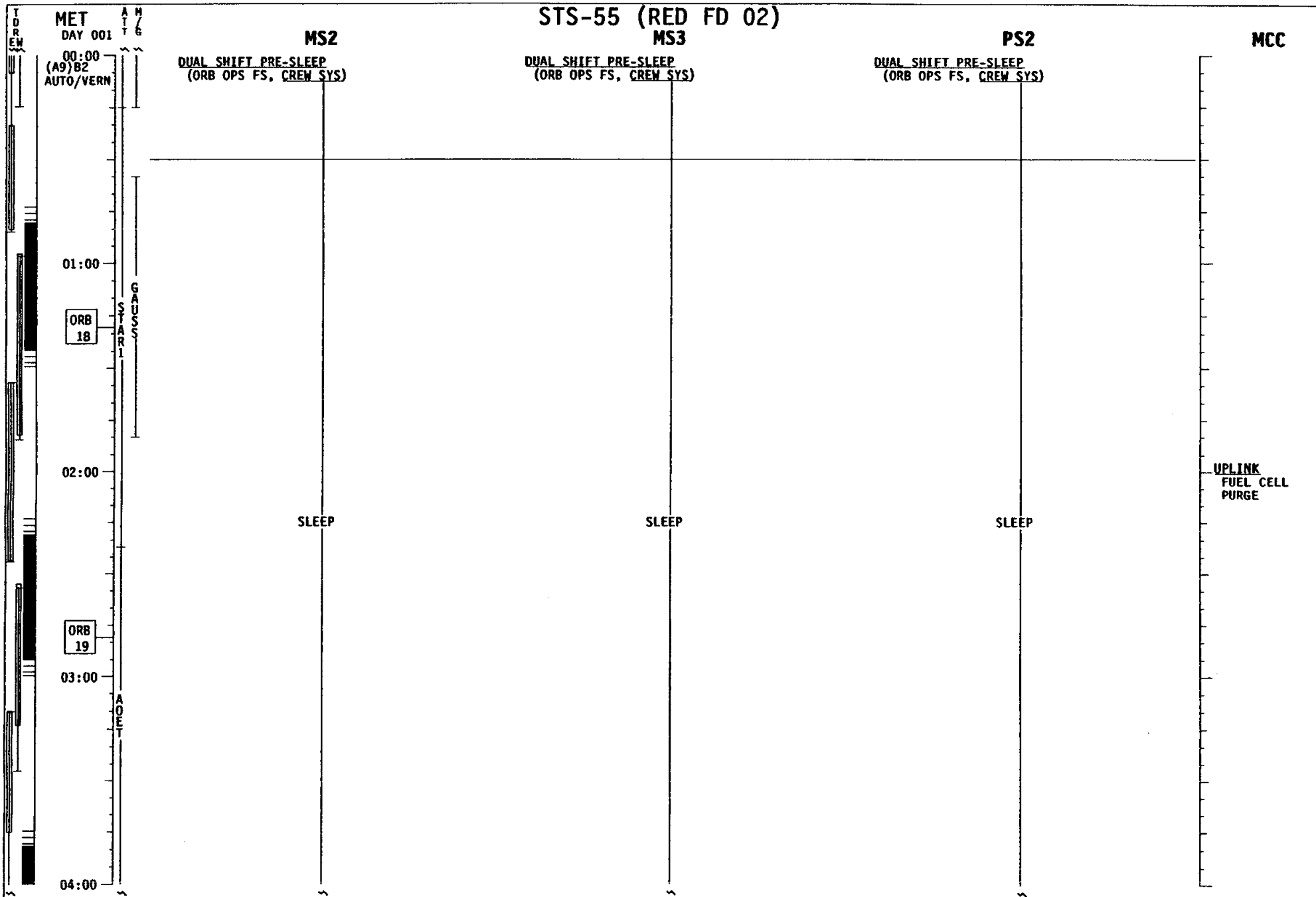
MET DAY 000		STS-55 (RED FD 02)		MCC	
		MS2	MS3	PS2	MCC
12:00 (A9)B2 AUTO/VERN	MOMS STARS	MOMS STEREOSCOPIC DEADBAND COLLAPSE (ORB OPS, MOMS)	B&W CAM TO FOOT RESTRAINT	<input checked="" type="checkbox"/> BB PROTO Tobacco	UPDATE MOMS UPDATE PAD
		MANEUVER STAR 5 PLB LIGHTS - OFF AEC TV CAM RELOCATION L11D (CCTV CUE CARD 2)	BB STATEX TV		
13:00	MOMS STARS		B&W TV CAM TO MICROSCOPE	BB METABOLISM	UPDATE MOMS UPDATE PAD
			<input checked="" type="checkbox"/> MD HPT	BB BACTERIA	
ORB 10	MOMS STARS	MANEUVER BIAS -ZLV +XV		BB PROTO Helianthus	
		MOMS STEREOSCOPIC DEADBAND COLLAPSE (ORB OPS, MOMS)	MD HPT <input checked="" type="checkbox"/> AR SETUP & CALIBRATION		
14:00	MOMS STARS	MANEUVER STAR 5 PLB LIGHTS - OFF			
		INITIAL COLOR TV CAM SETUP (TV PHOTO OPS, PROCEDURES) Steps 1,4			UPDATE MOMS UPDATE PAD
ORB 11	MOMS STARS	MANEUVER BIAS -ZLV +XV			
		MOMS STEREOSCOPIC DEADBAND COLLAPSE (ORB OPS, MOMS)	BB GROWTH	BB PROTO Digitalis	
15:00	MOMS STARS				
		MANEUVER STAR 4 PLB LIGHTS - OFF			
16:00	MOMS STARS	Move NIKON film from: L5J-3 (3 rolls) L5M-1 (16 rolls) L5M-3 (16 rolls) and stow in 03-1. Trash old film.			UPDATE MOMS UPDATE PAD

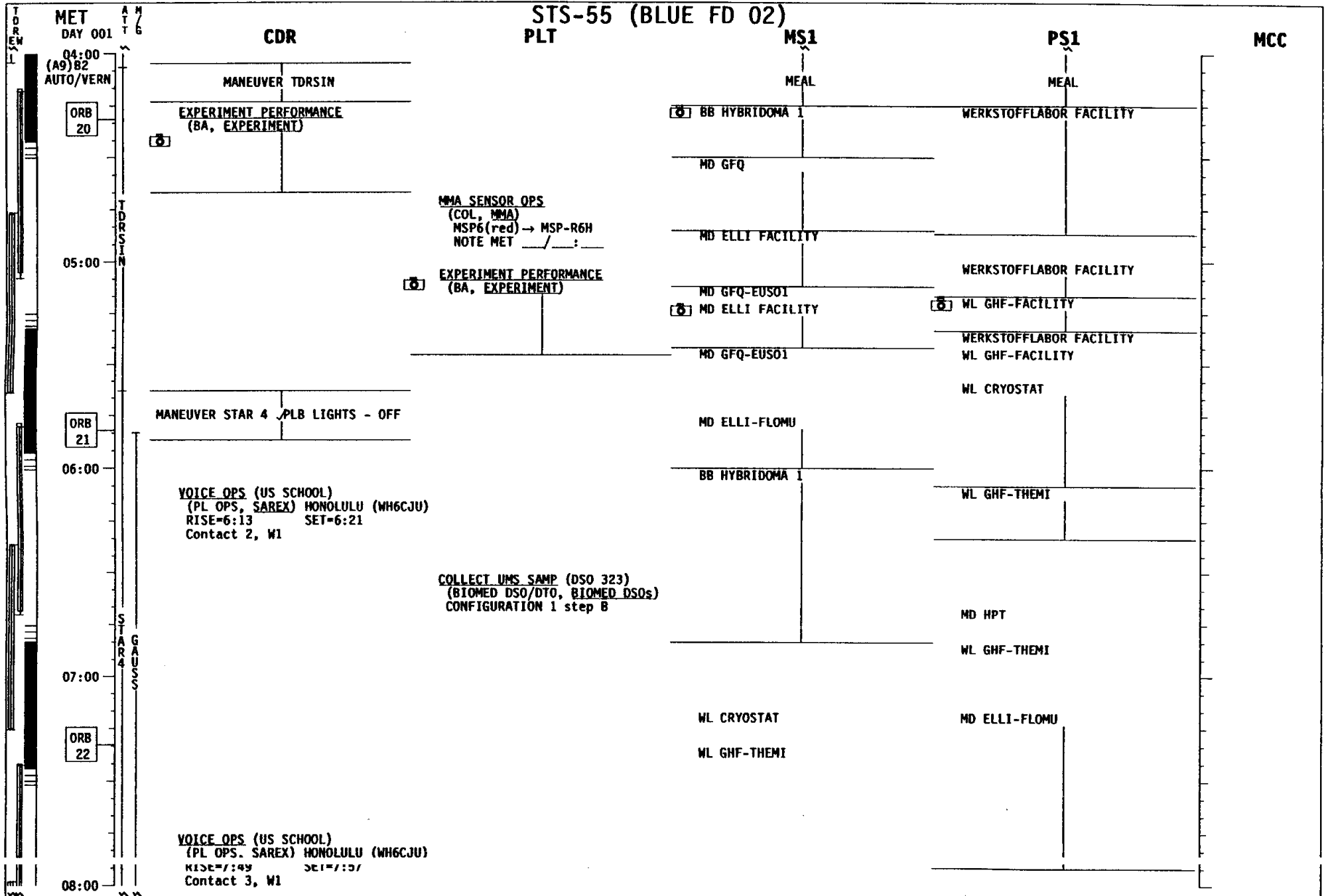


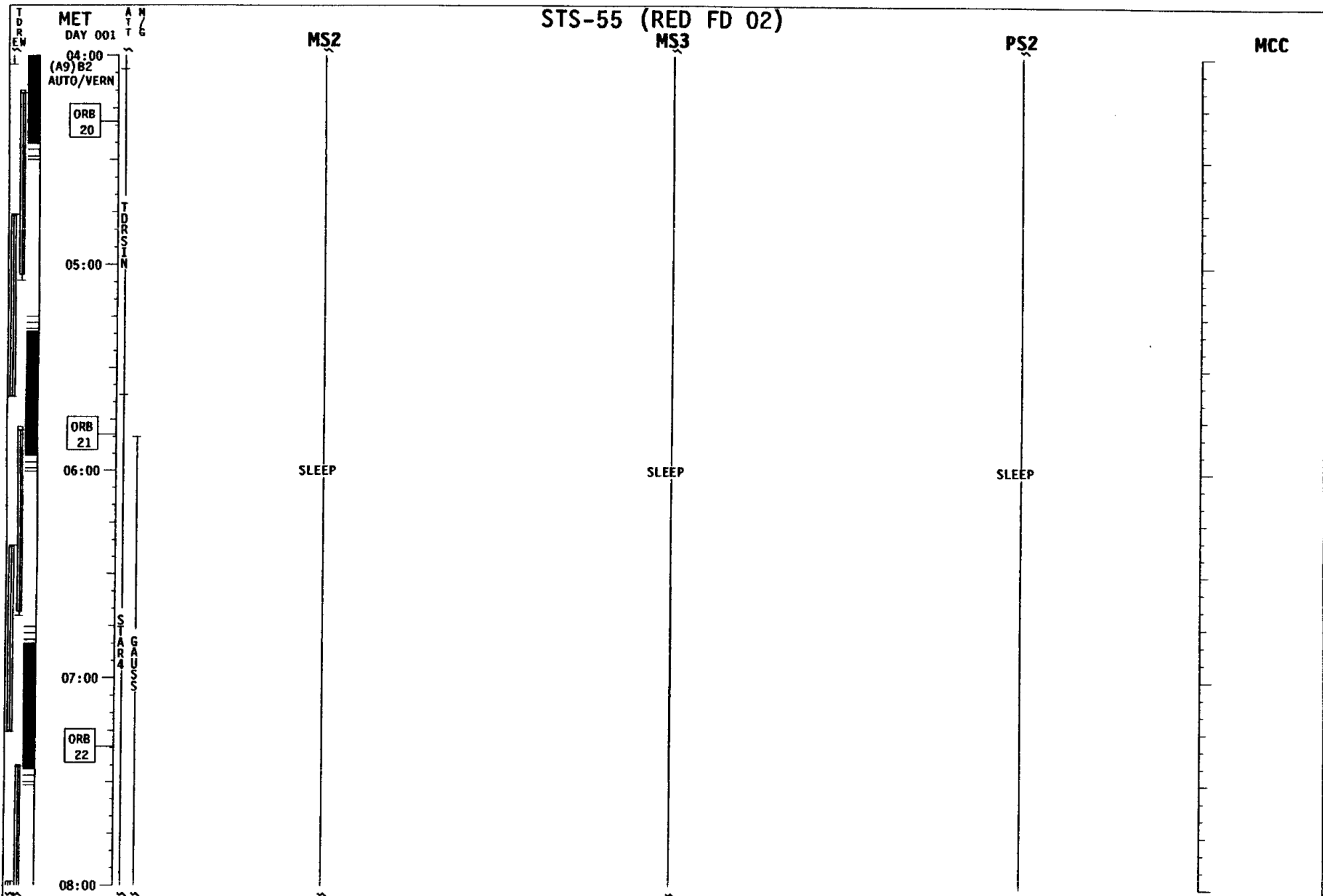


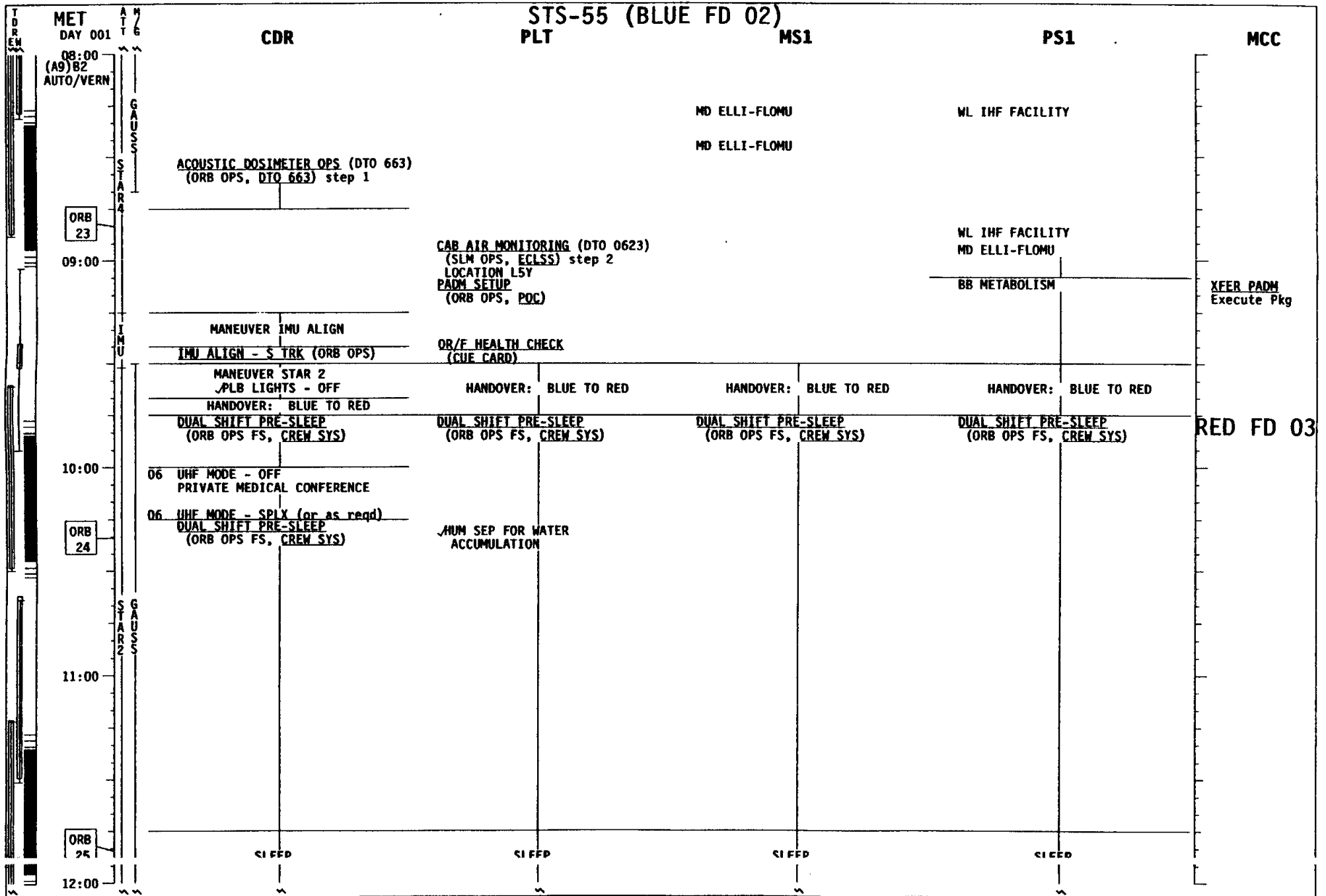


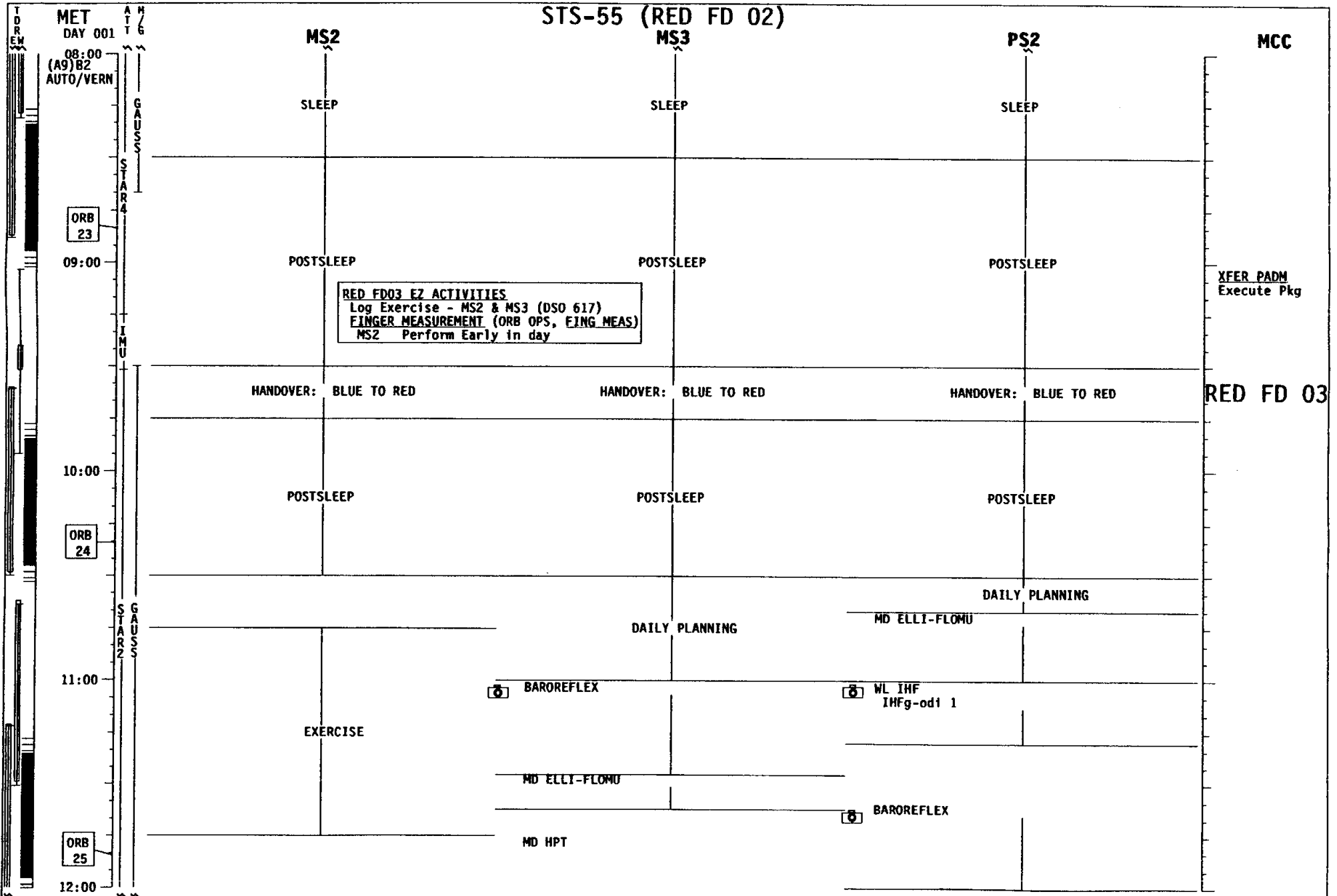


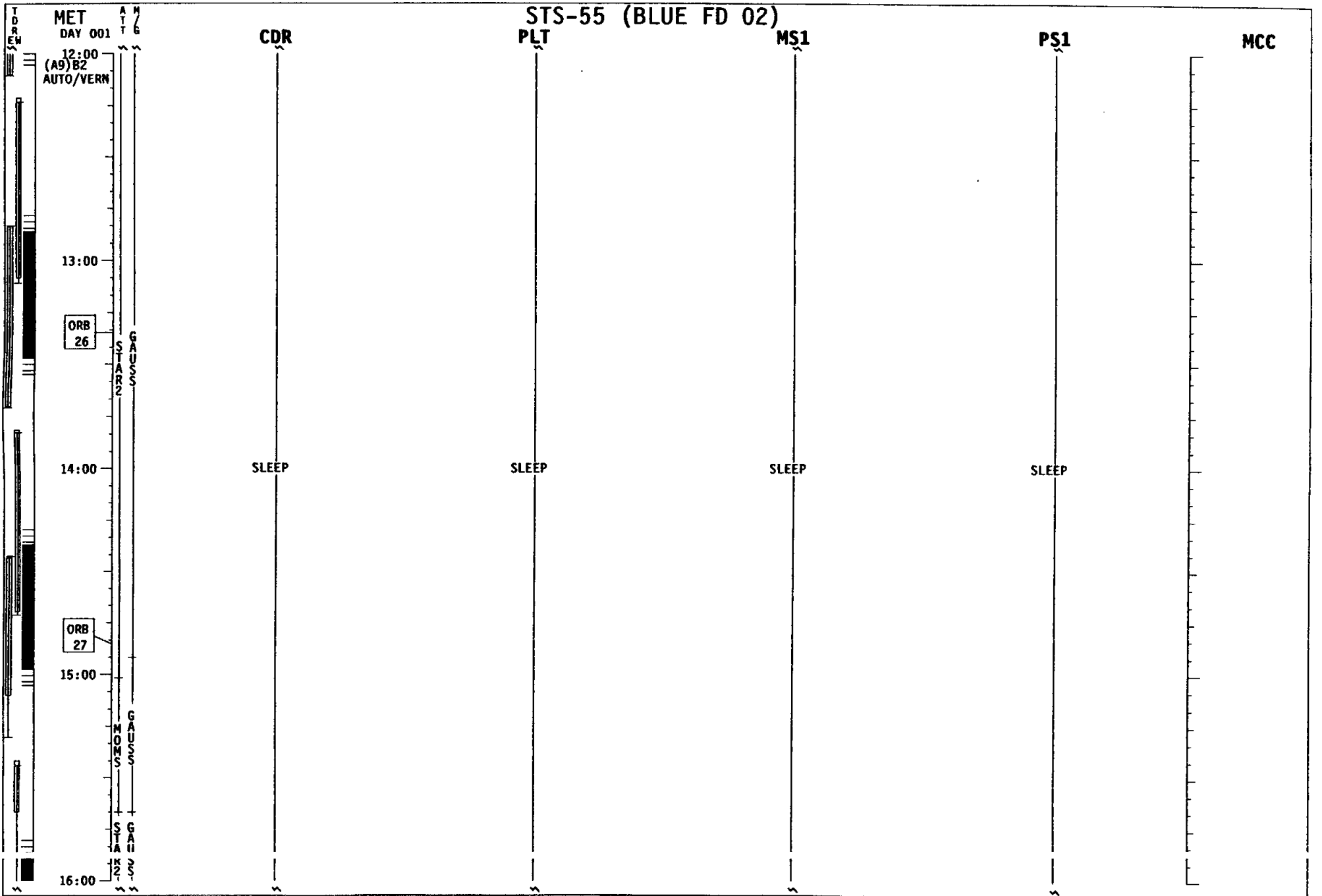


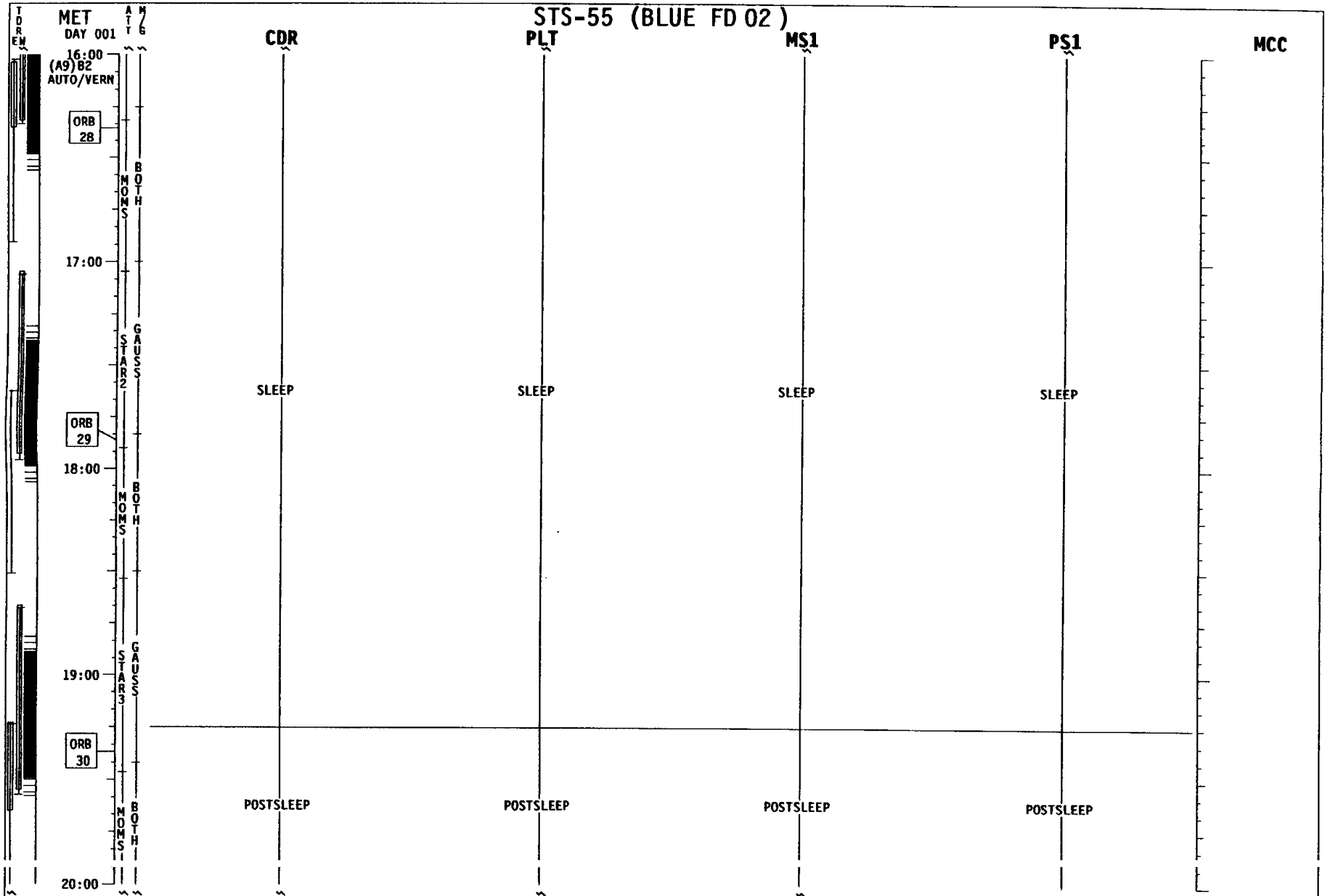


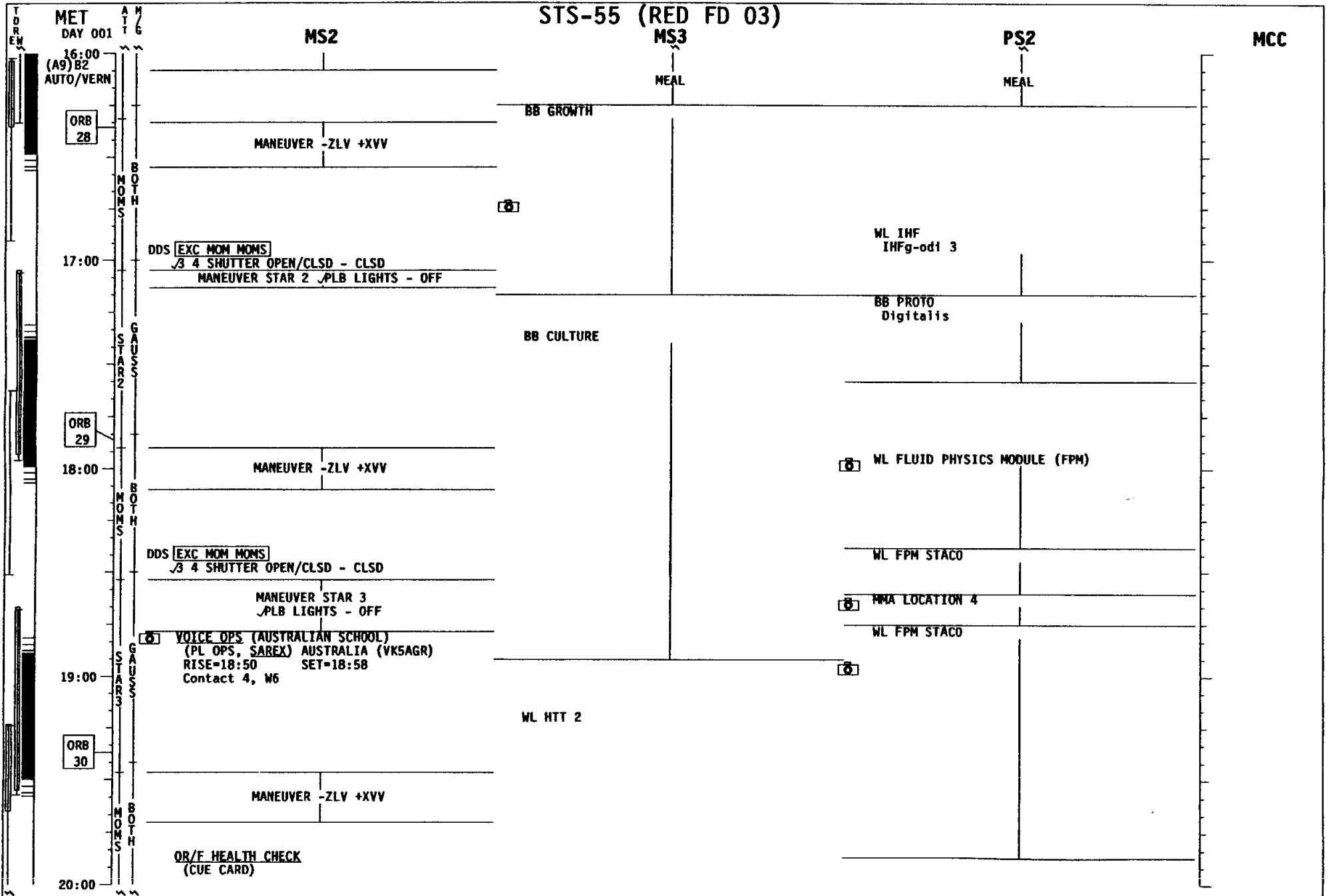


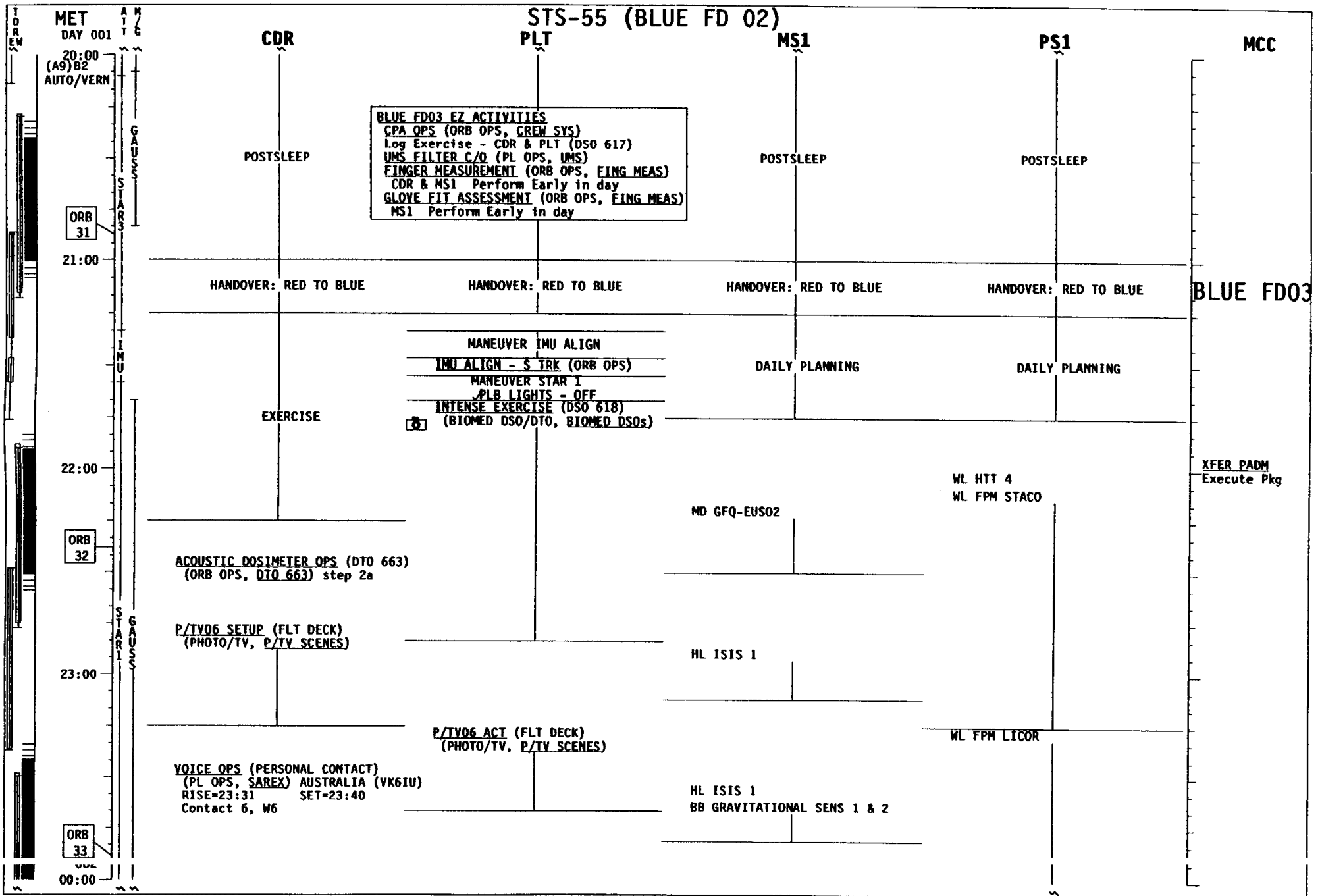


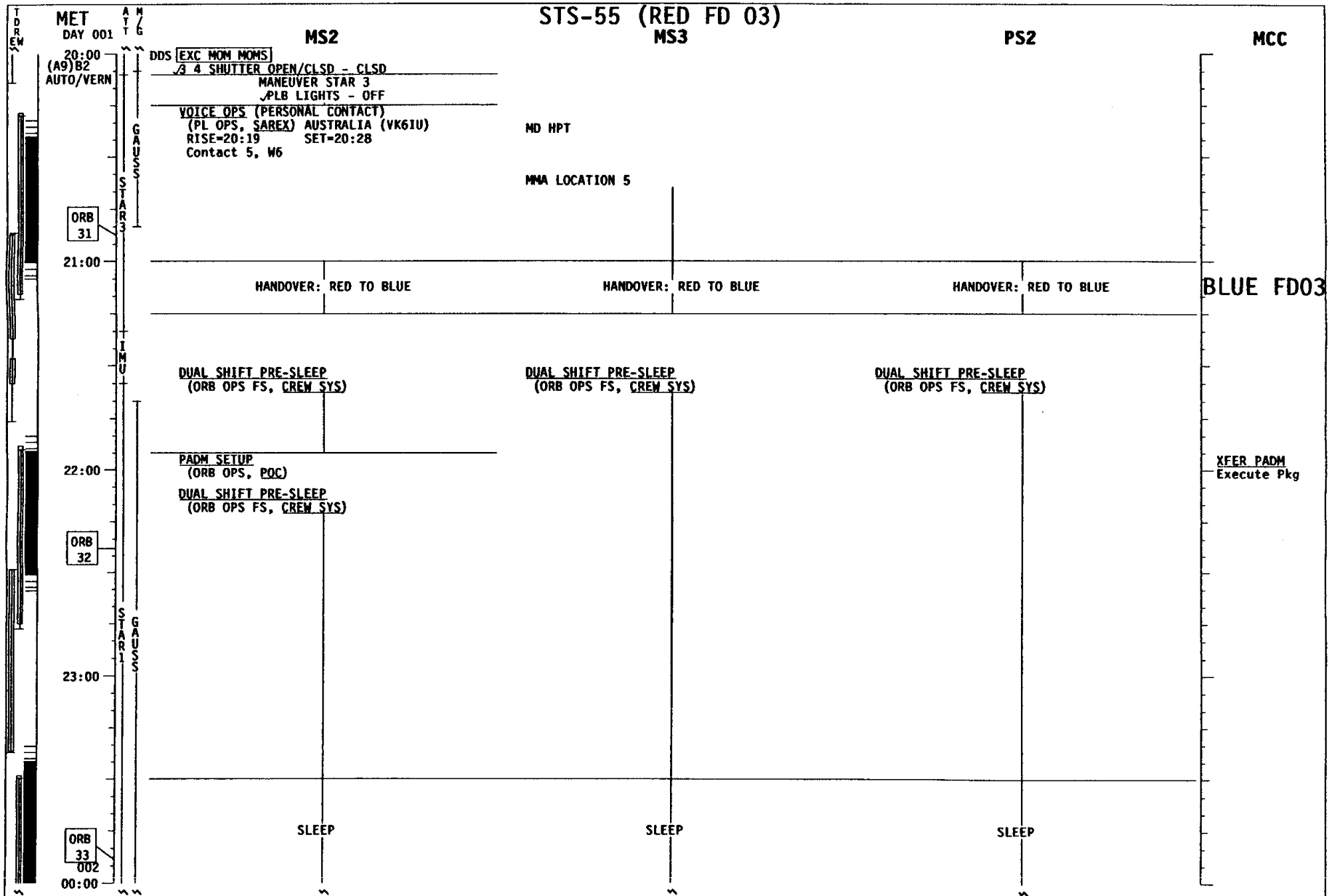


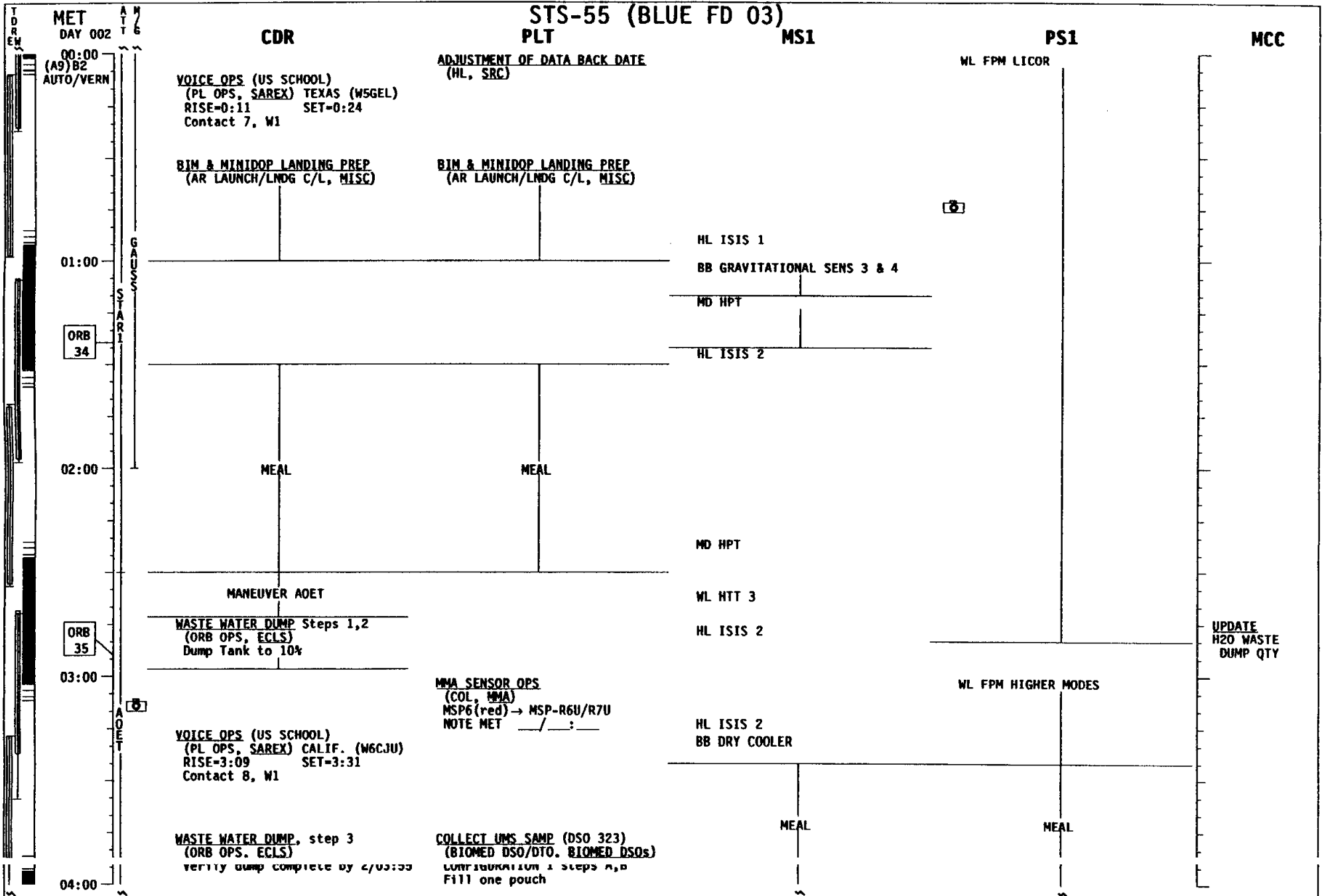












STS-55 (RED FD 03)

MS2

MS3

PS2

MCC

SLEEP

SLEEP

SLEEP

UPDATE
H2O WASTE
DUMP QTY

MET
DAY 002
00:00
(A9)82
AUTO/VERN

01:00

ORB 34

02:00

ORB 35

03:00

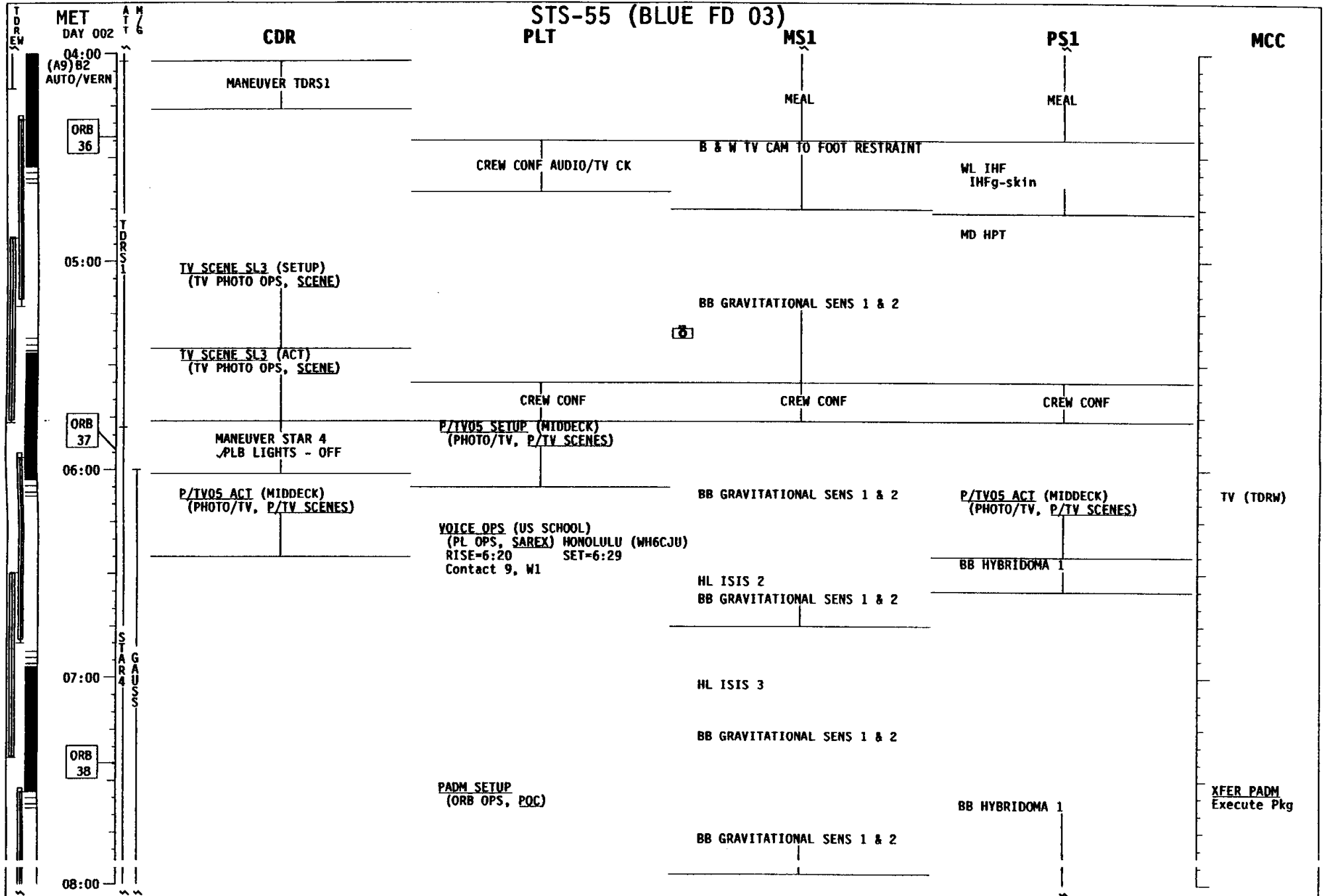
04:00

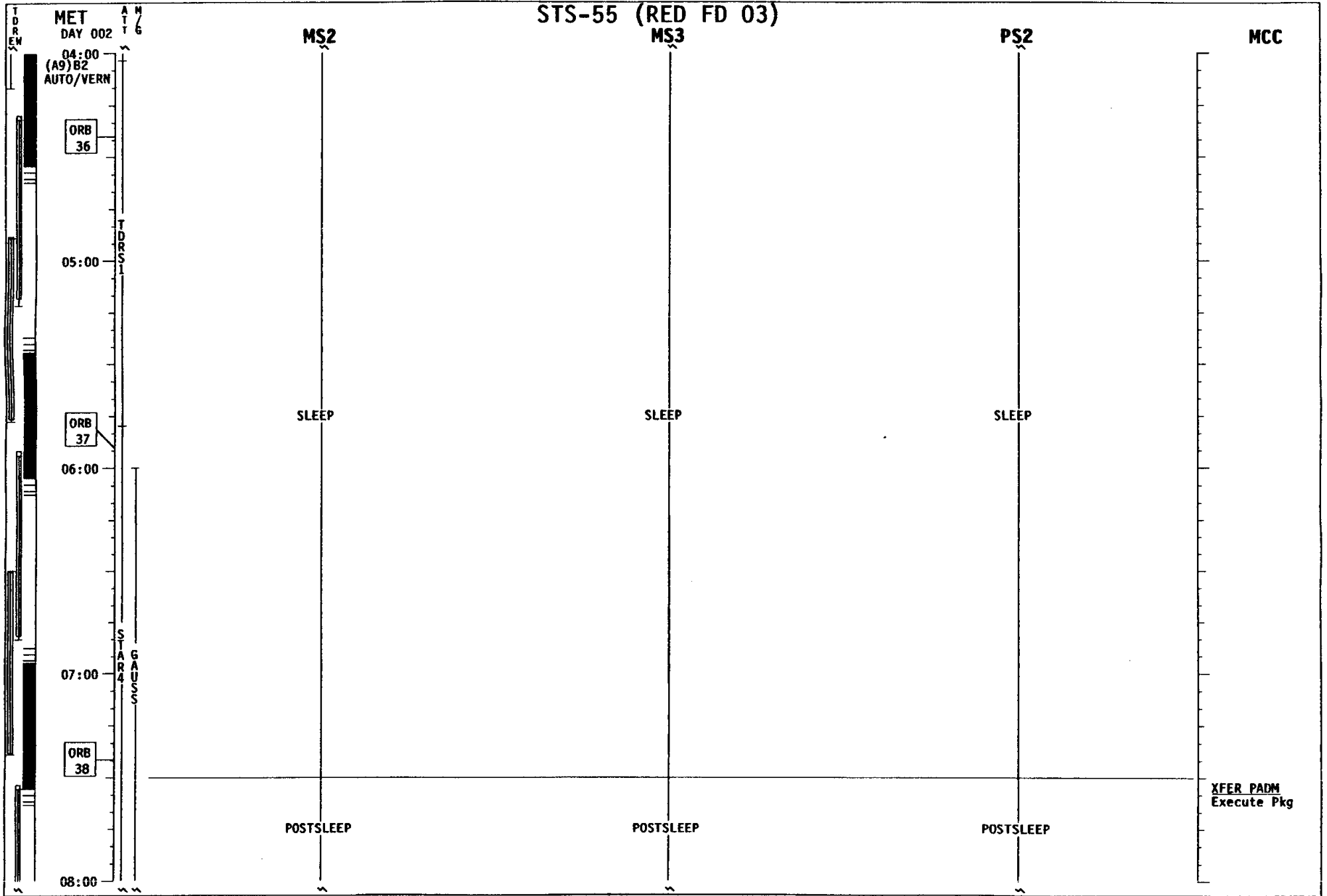
TIME

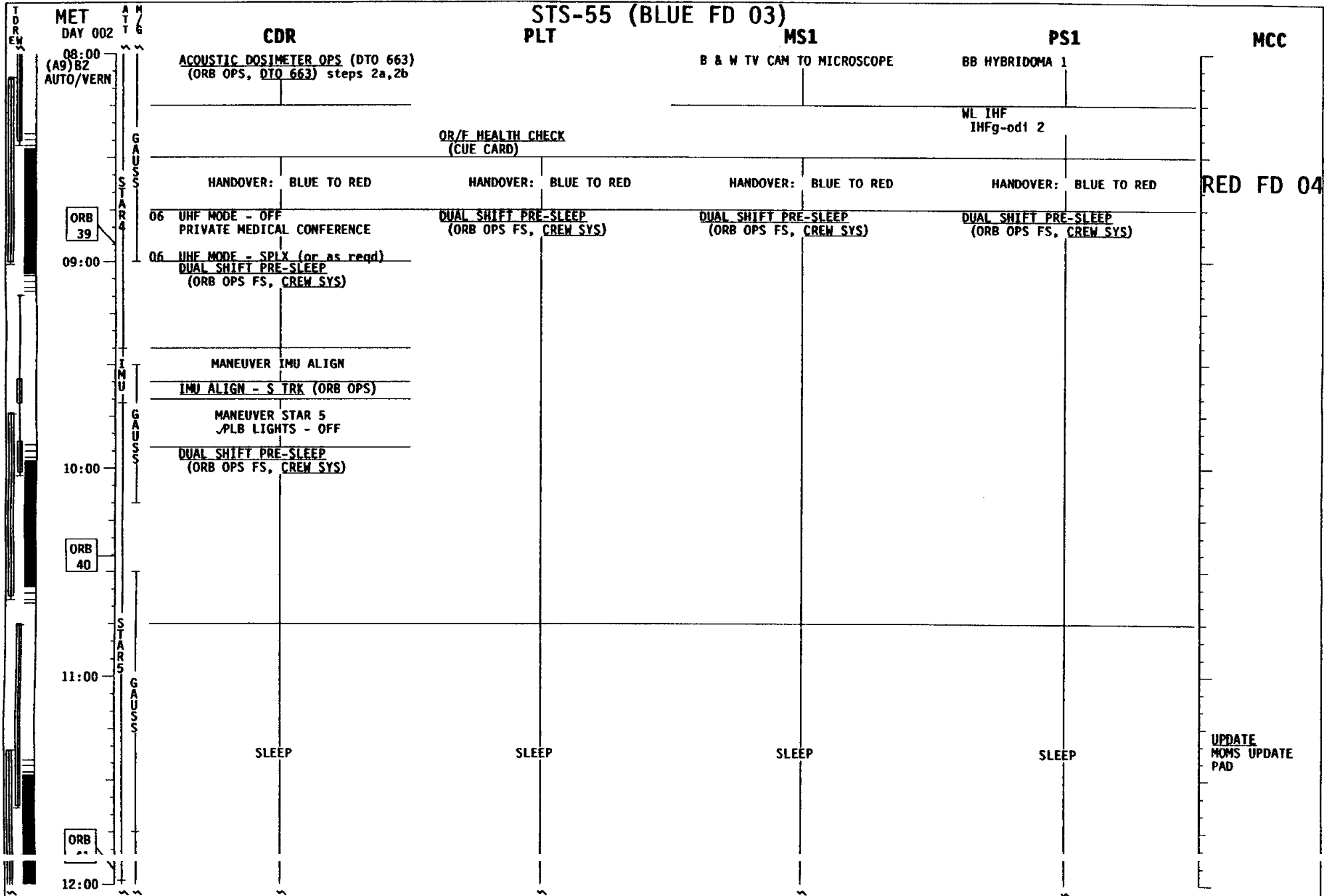
ACT

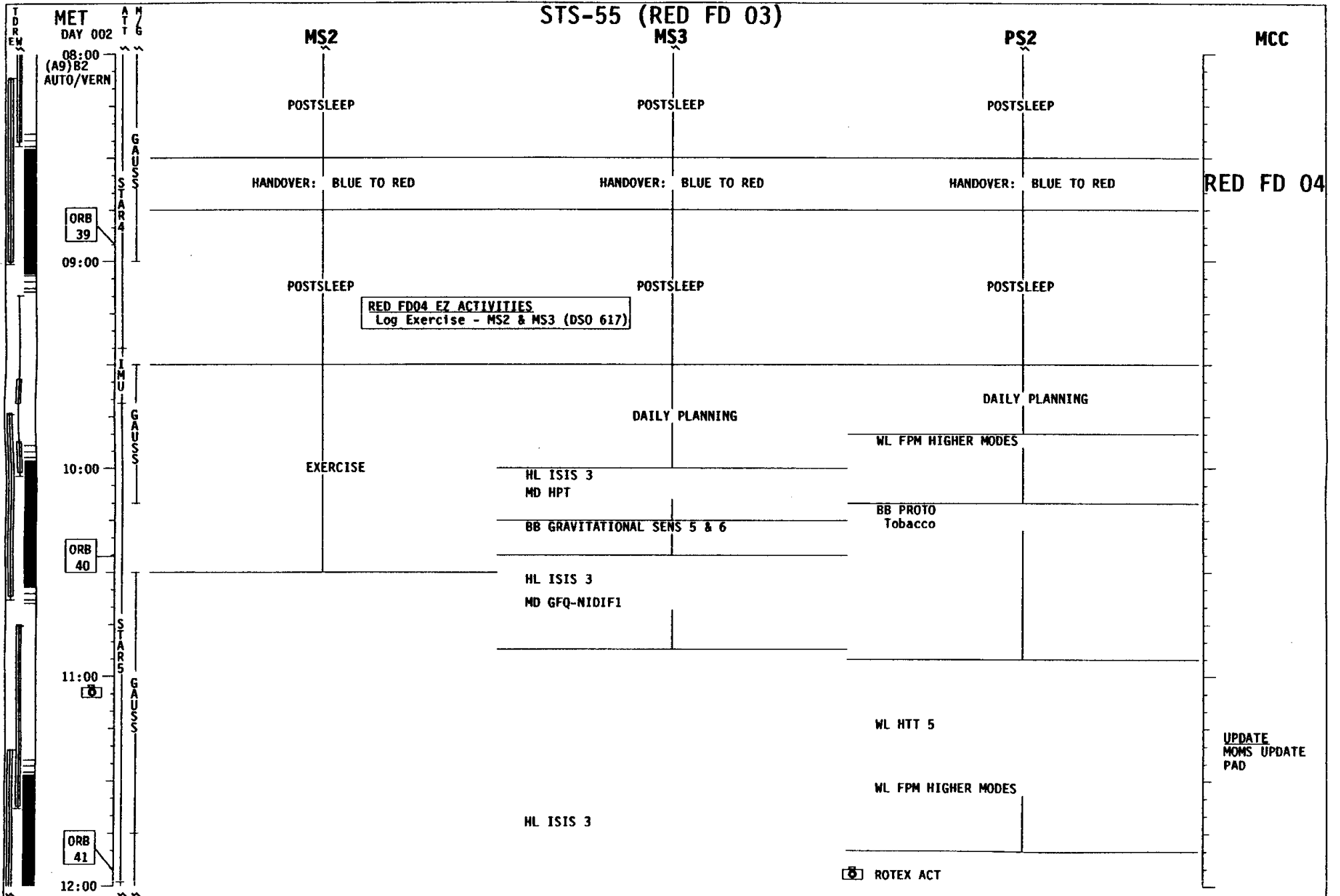
STAGE

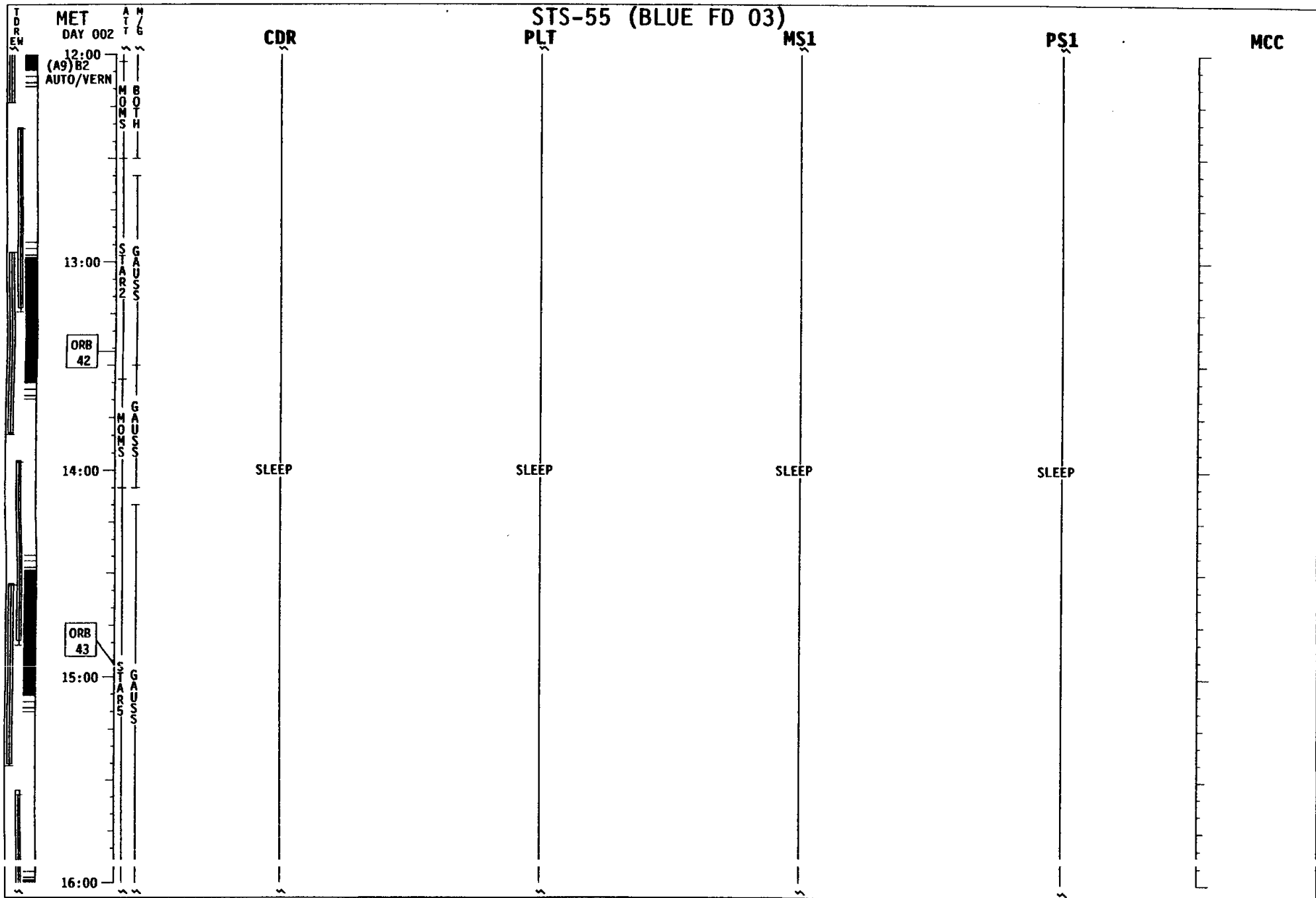
ACT

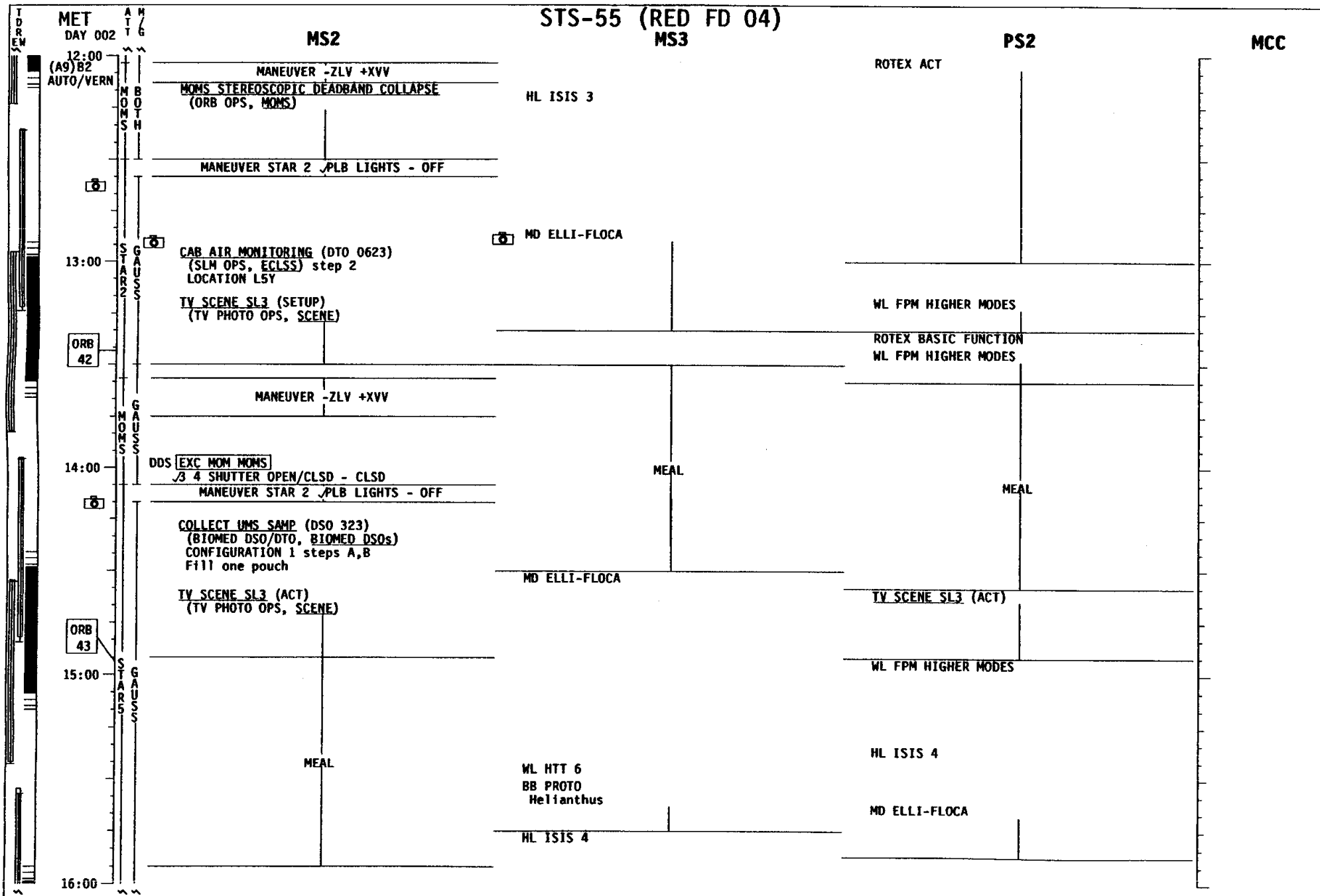


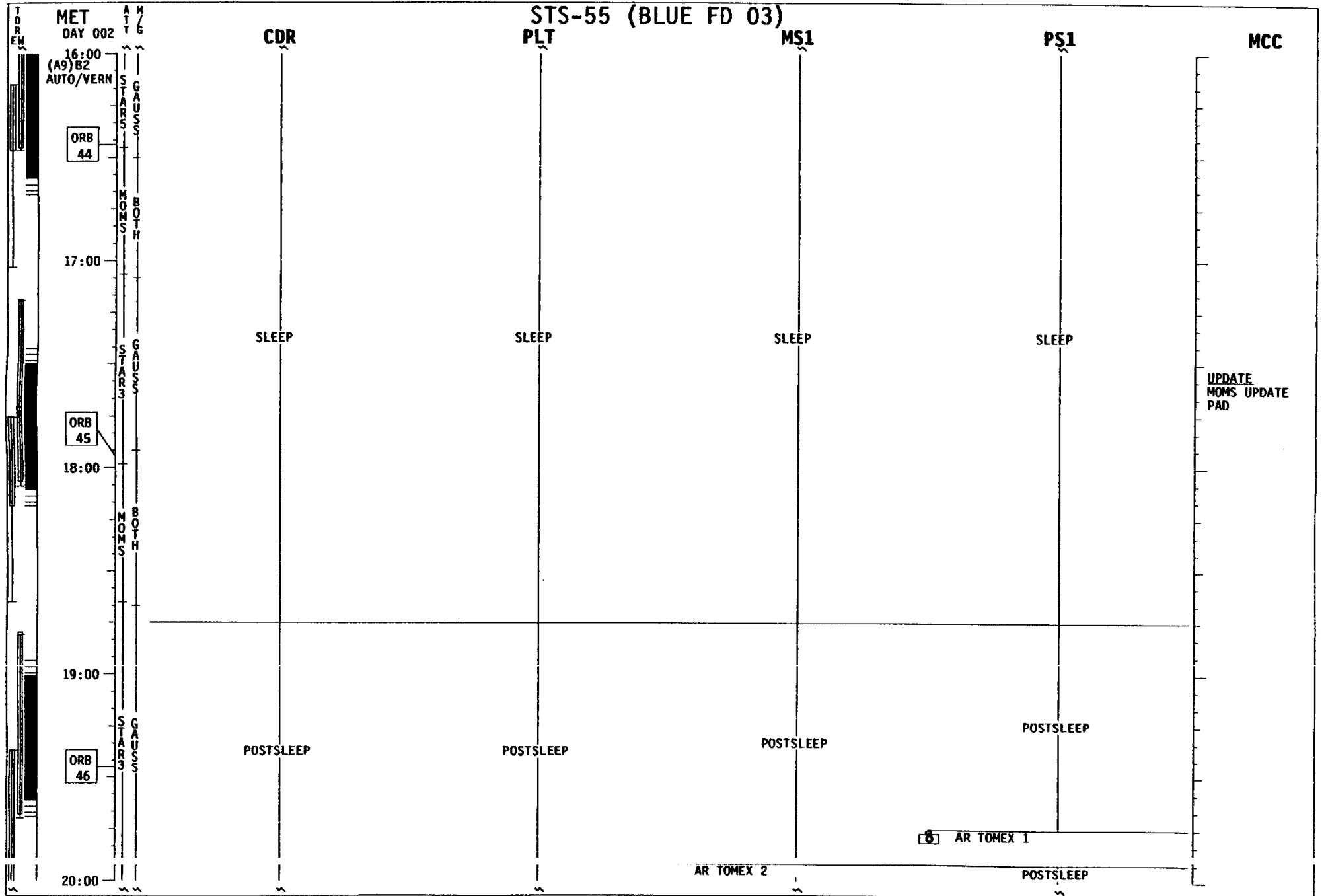




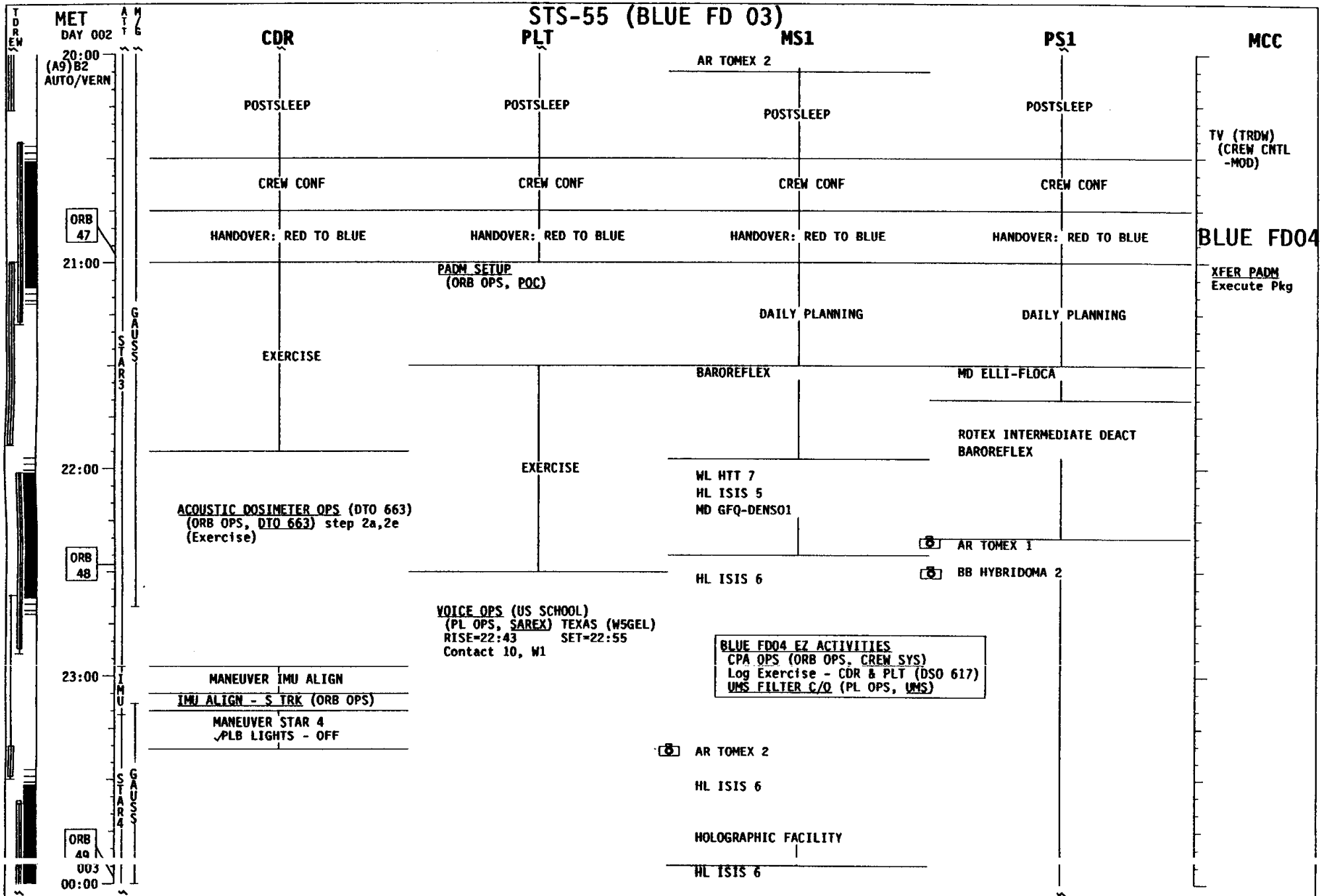


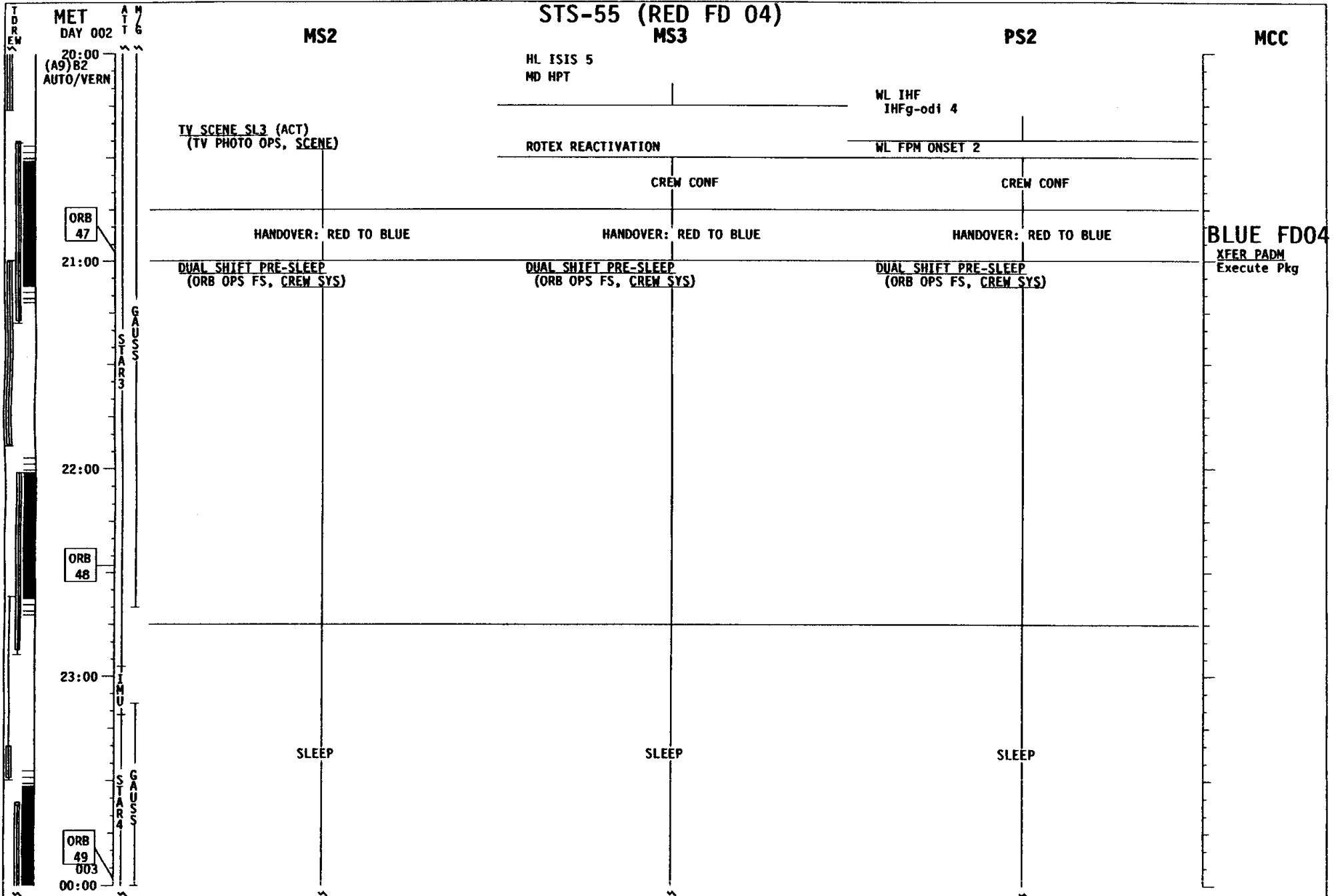


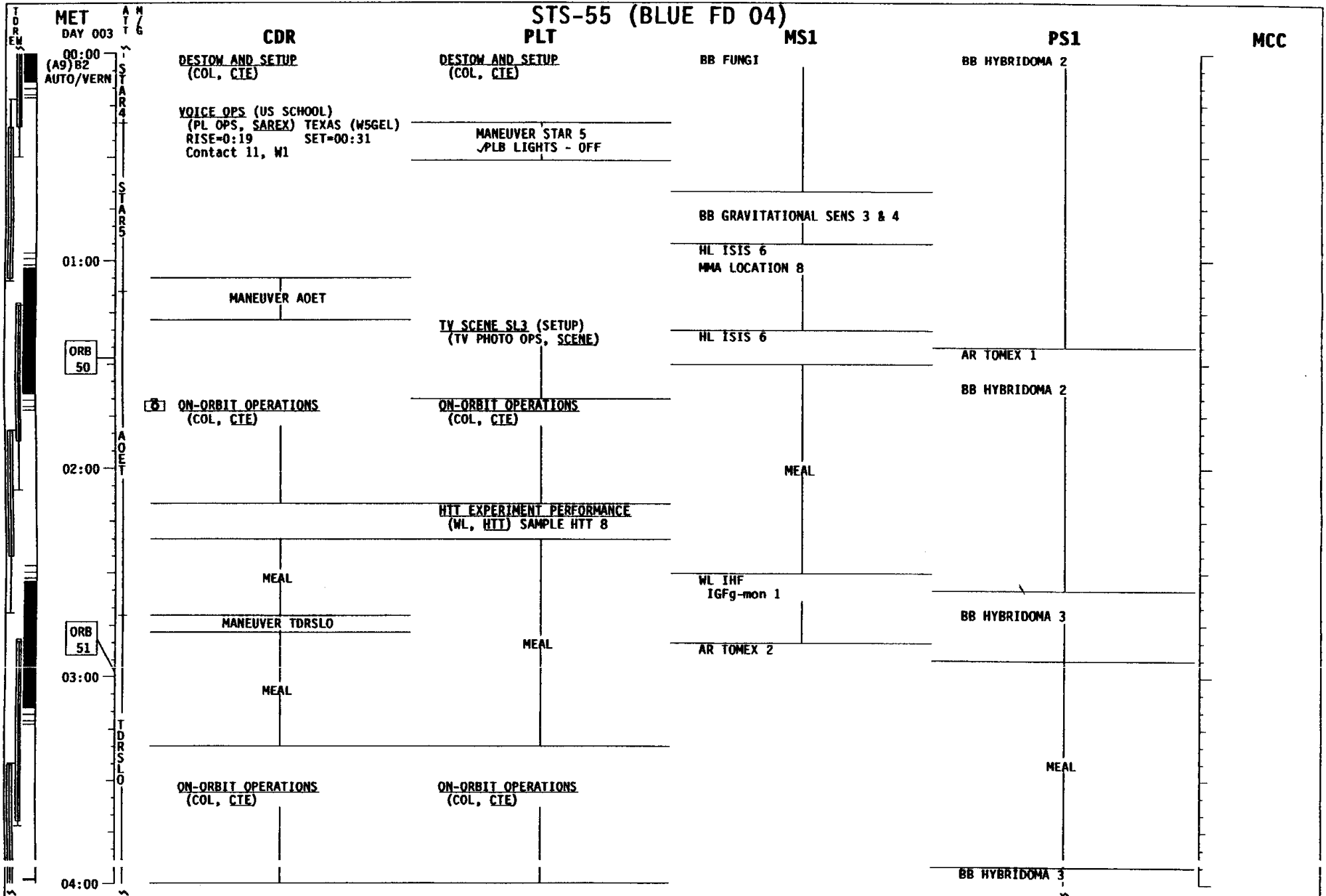


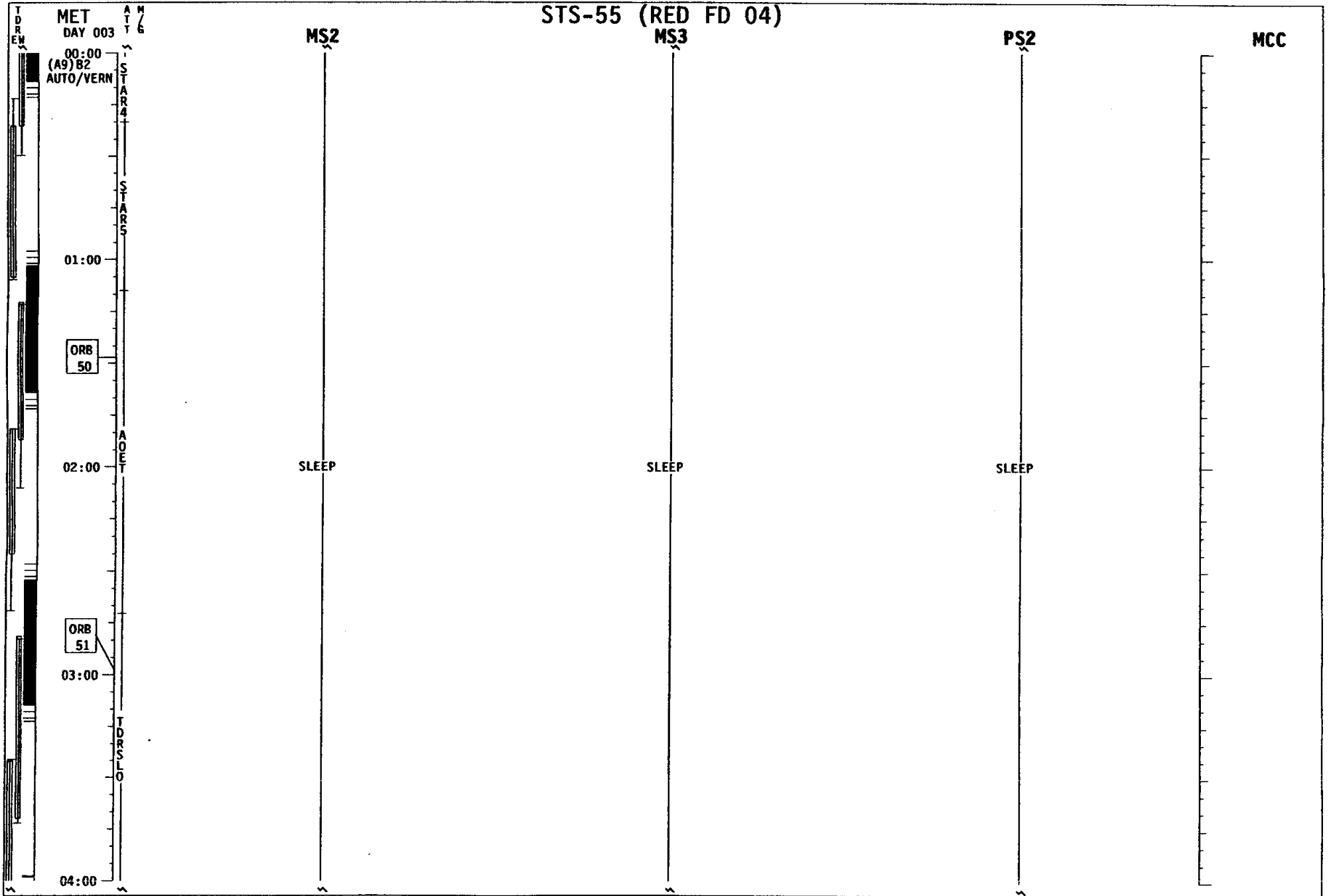


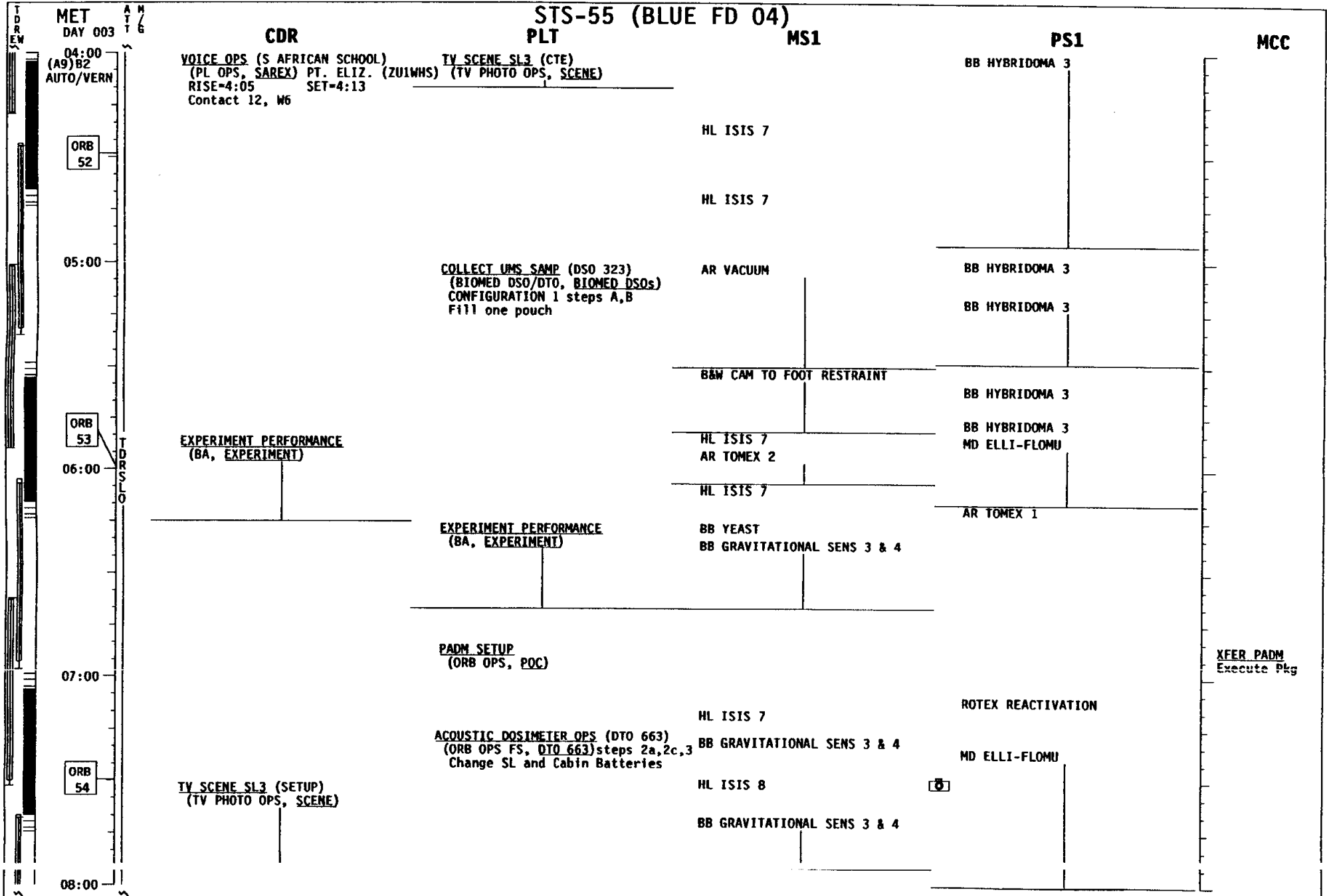
MET DAY 002		STS-55 (RED FD 04)		PS2	MCC
		MS2	MS3		
16:00 (A9)B2 AUTO/VERN	GAUSS STARTS	P/TVOB SETUP (DSO 486) (PHOTO/TV, P/TV SCENES)		MD ELLI-FLOCA	
				<input checked="" type="checkbox"/> WL GHF-DIRS1	
ORB 44		MANEUVER -ZLV +XVV		WL FPM HIGHER MODES	
17:00	BOTH MOMS	DDS <input checked="" type="checkbox"/> EXC MOM MOMS 3 4 SHUTTER OPEN/CLSD - CLSD	HL ISIS 4 BB PROTO <input checked="" type="checkbox"/> Digitalis	WL FPM ONSET 1	
		MANEUVER STAR 3 PLB LIGHTS - OFF	HL ISIS 4	WL GHF-DIRS1	
18:00	GAUSS STARTS	P/TVOB ACT (DSO 486) (PHOTO/TV, P/TV SCENES)	PHYSICAL EXAM IN SPACE (DSO 486) (BIOMED, BIOMED DSOs) OPERATOR	ROTAX INTERMEDIATE DEACT	UPDATE MOMS UPDATE PAD
				MD ELLI-FLOCA	
18:00	BOTH MOMS	MANEUVER -ZLV +XVV		WL FPM ONSET 1	
		MOMS STEREOSCOPIC DEADBAND COLLAPSE (ORB OPS, MOMS)	HL ISIS 5		
19:00		MANEUVER STAR 3 PLB LIGHTS - OFF		WL FPM ONSET 1	
				HL ISIS 5	
19:00	GAUSS STARTS	TV SCENE SL3 (SETUP) (TV PHOTO OPS, SCENE)		WL FPM ONSET 1	
ORB 46		CREW CONF AUDIO/TV CK			
20:00			HL ISIS 5	WL FPM ONSET 1	
		OR/F HEALTH CHECK (CUE CARD)		MD ELLI-FLOCA	

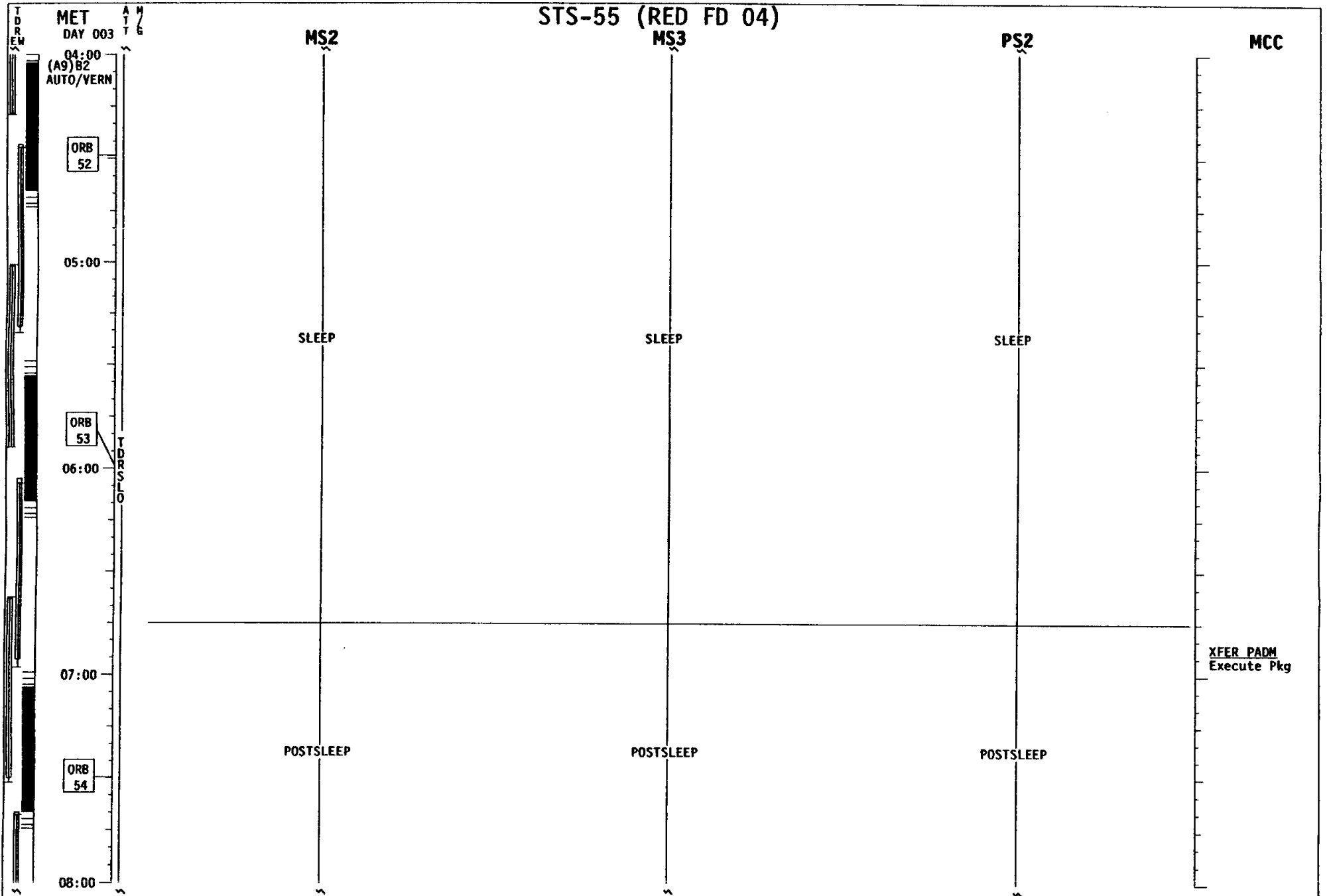


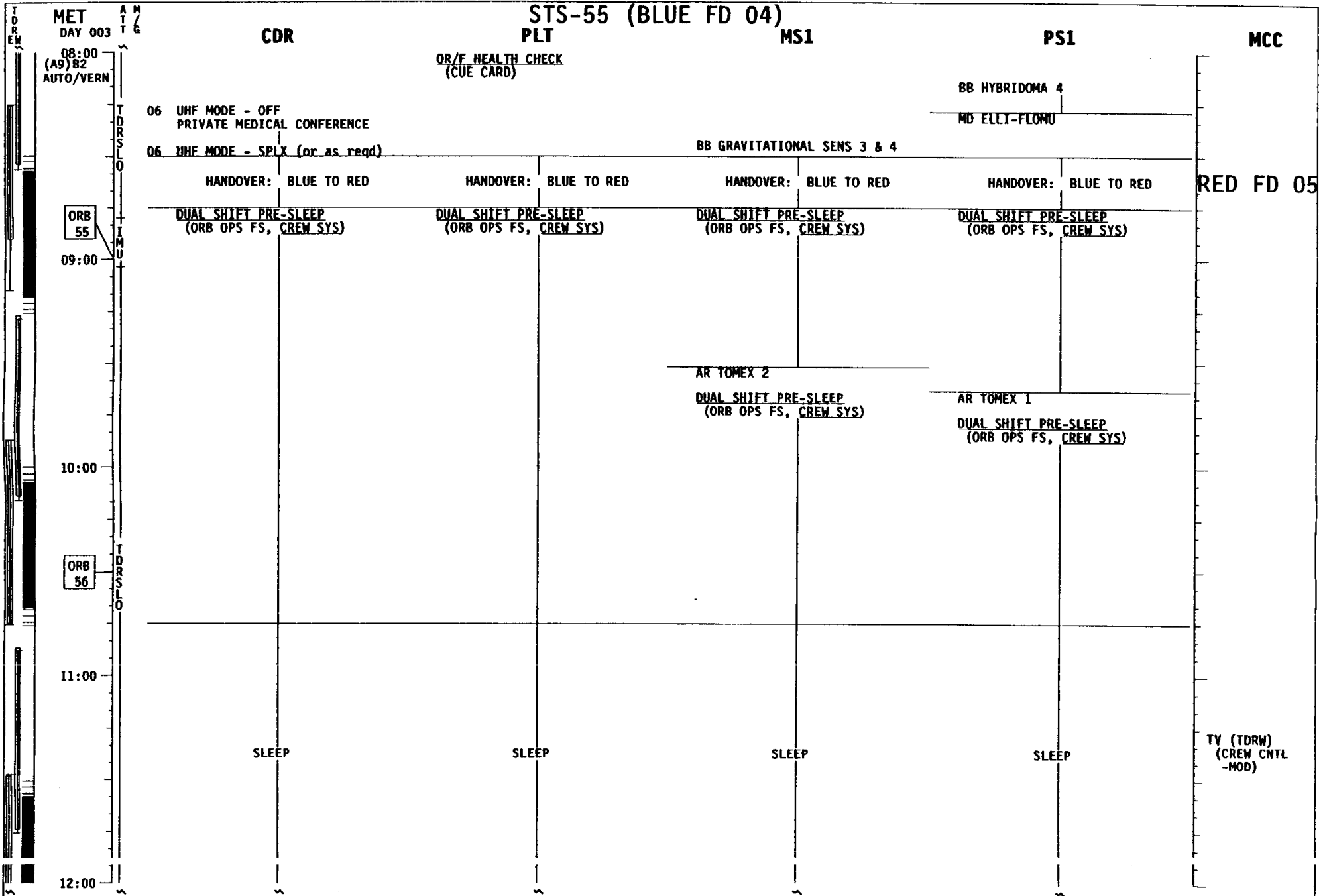


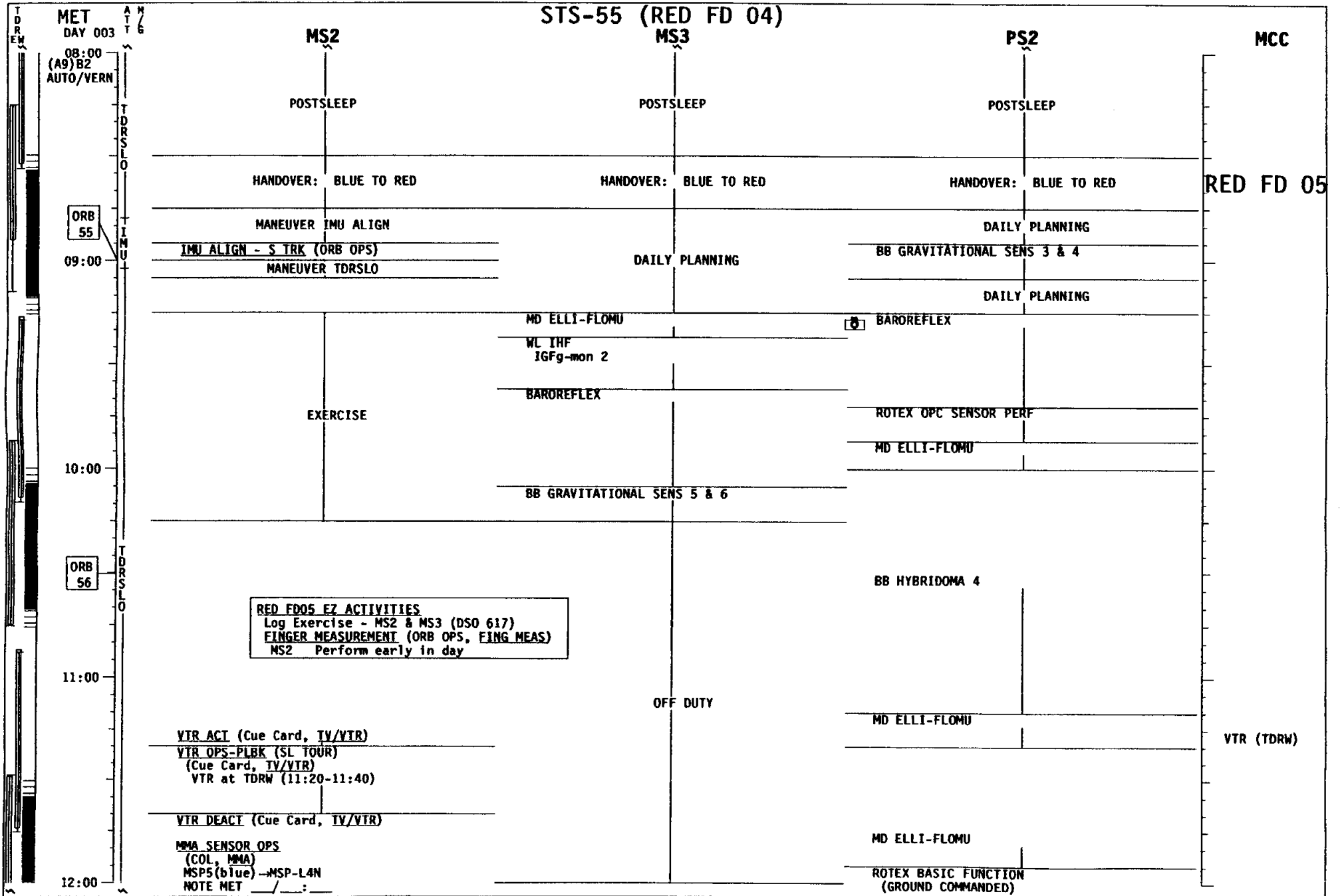


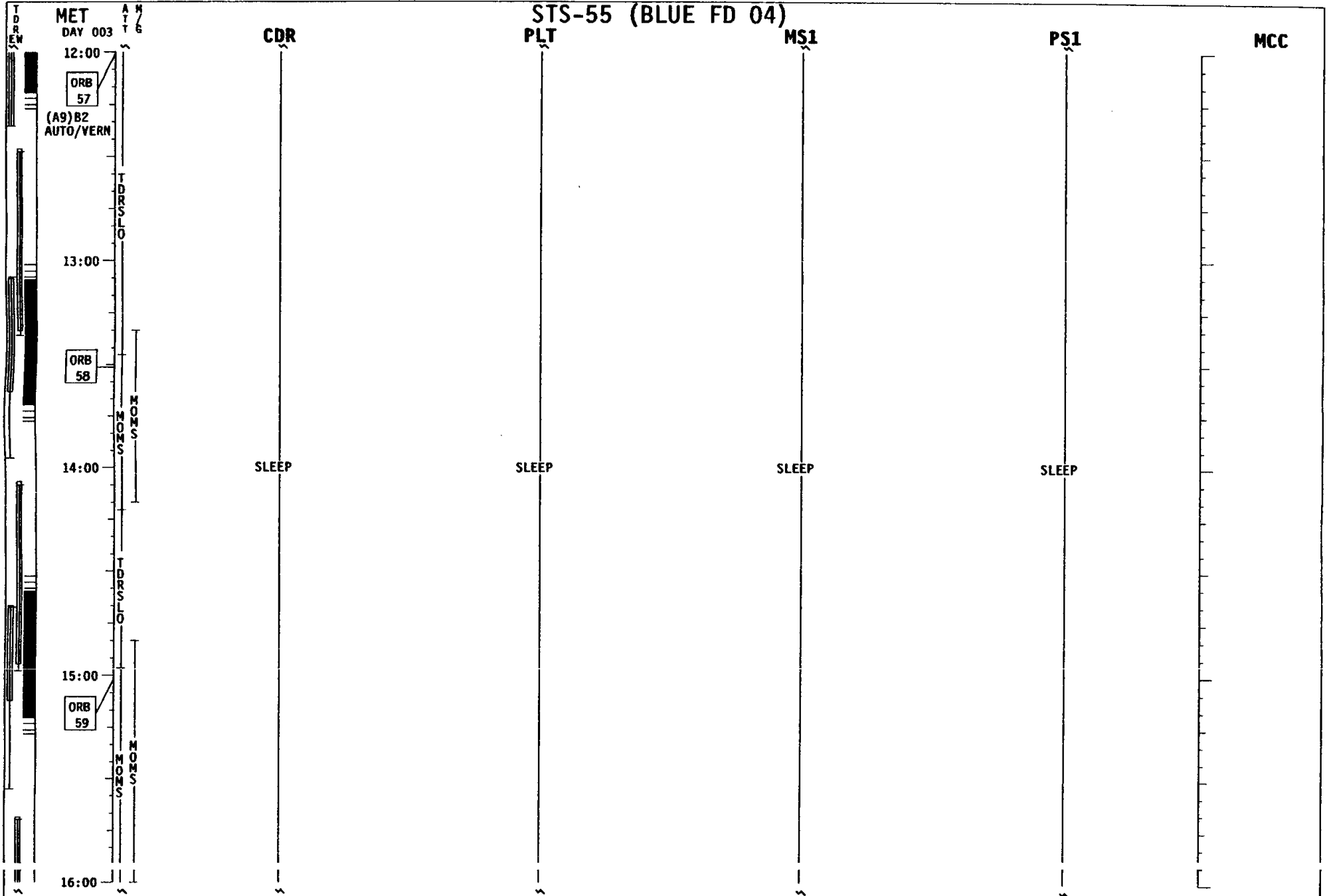


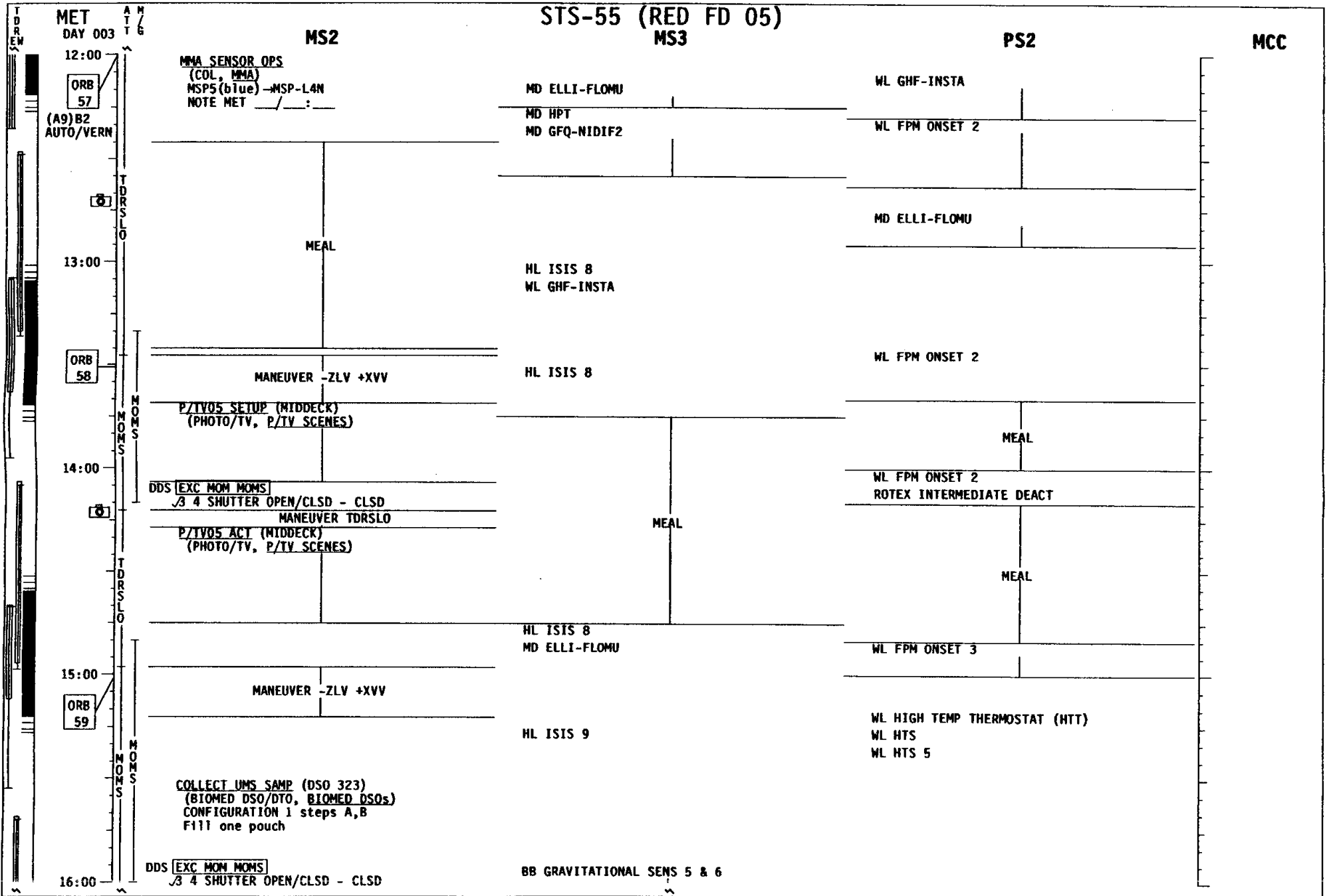


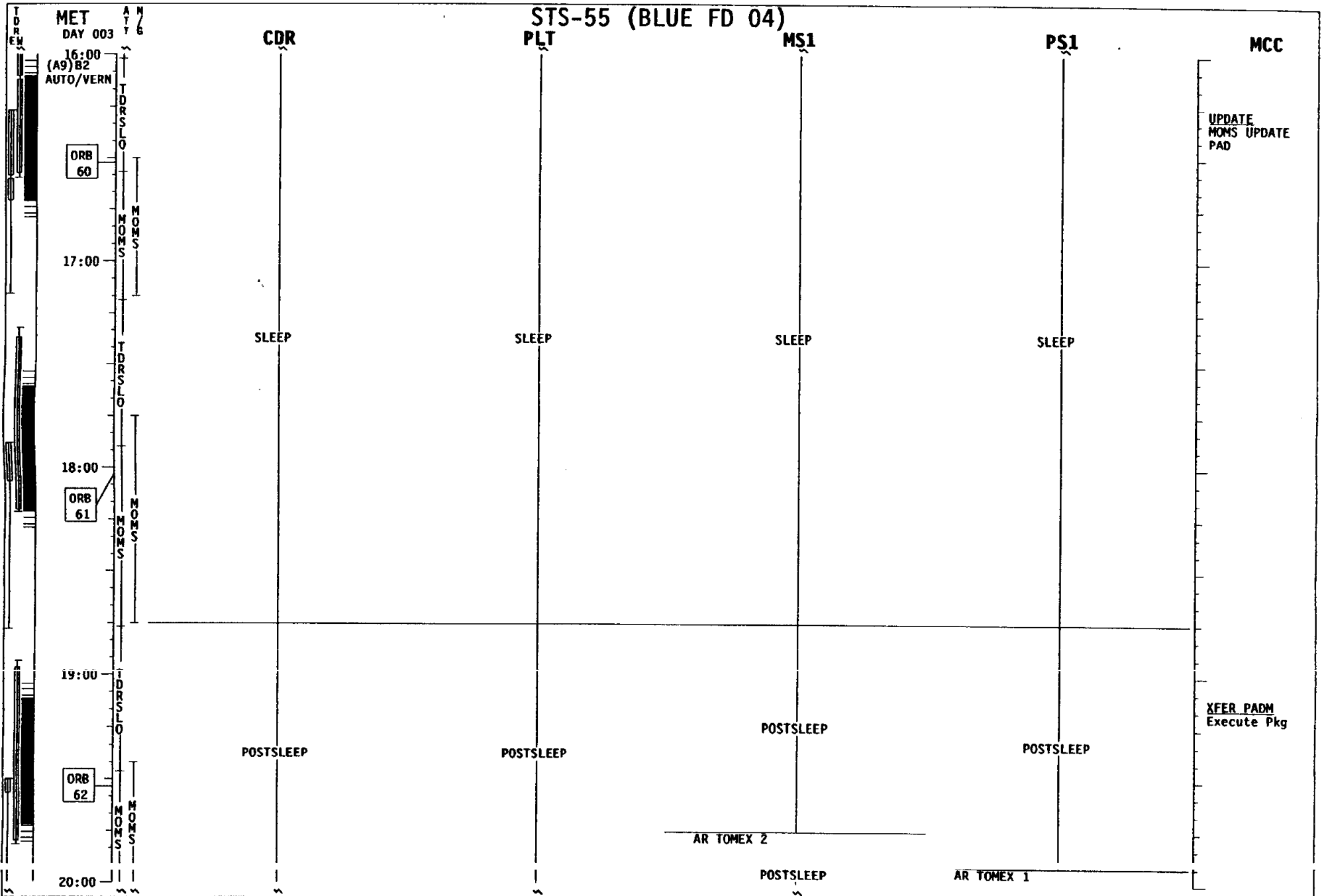




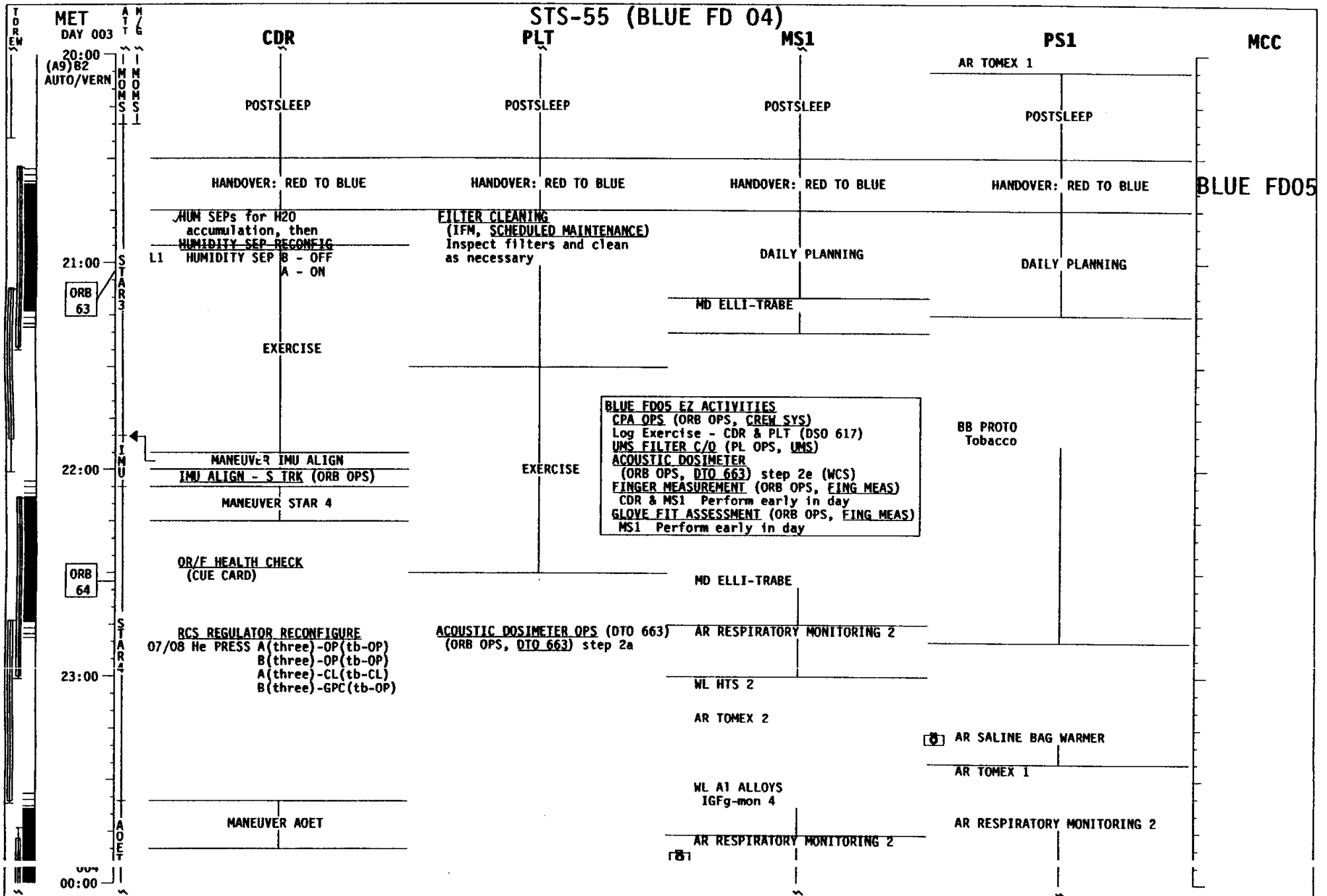


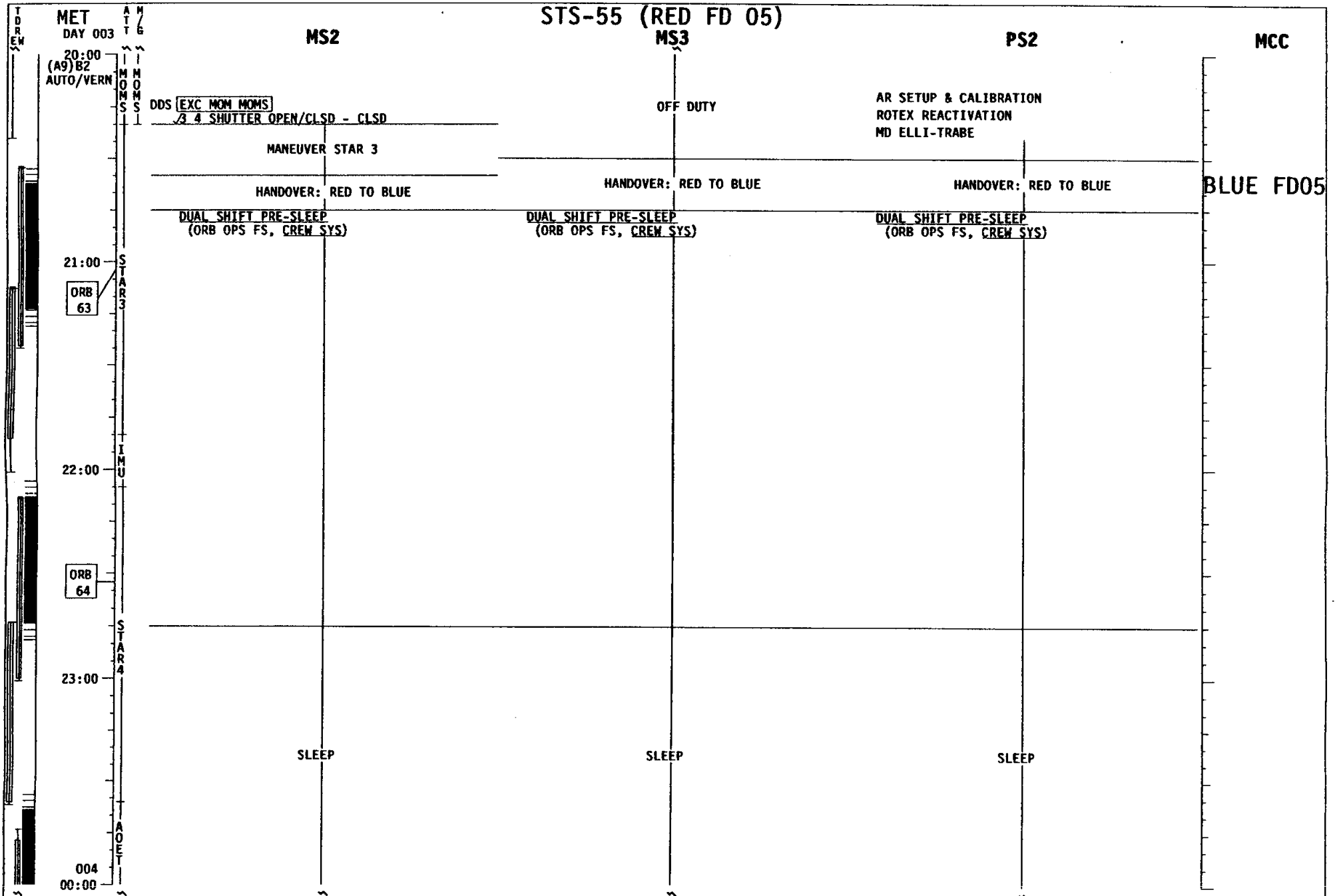


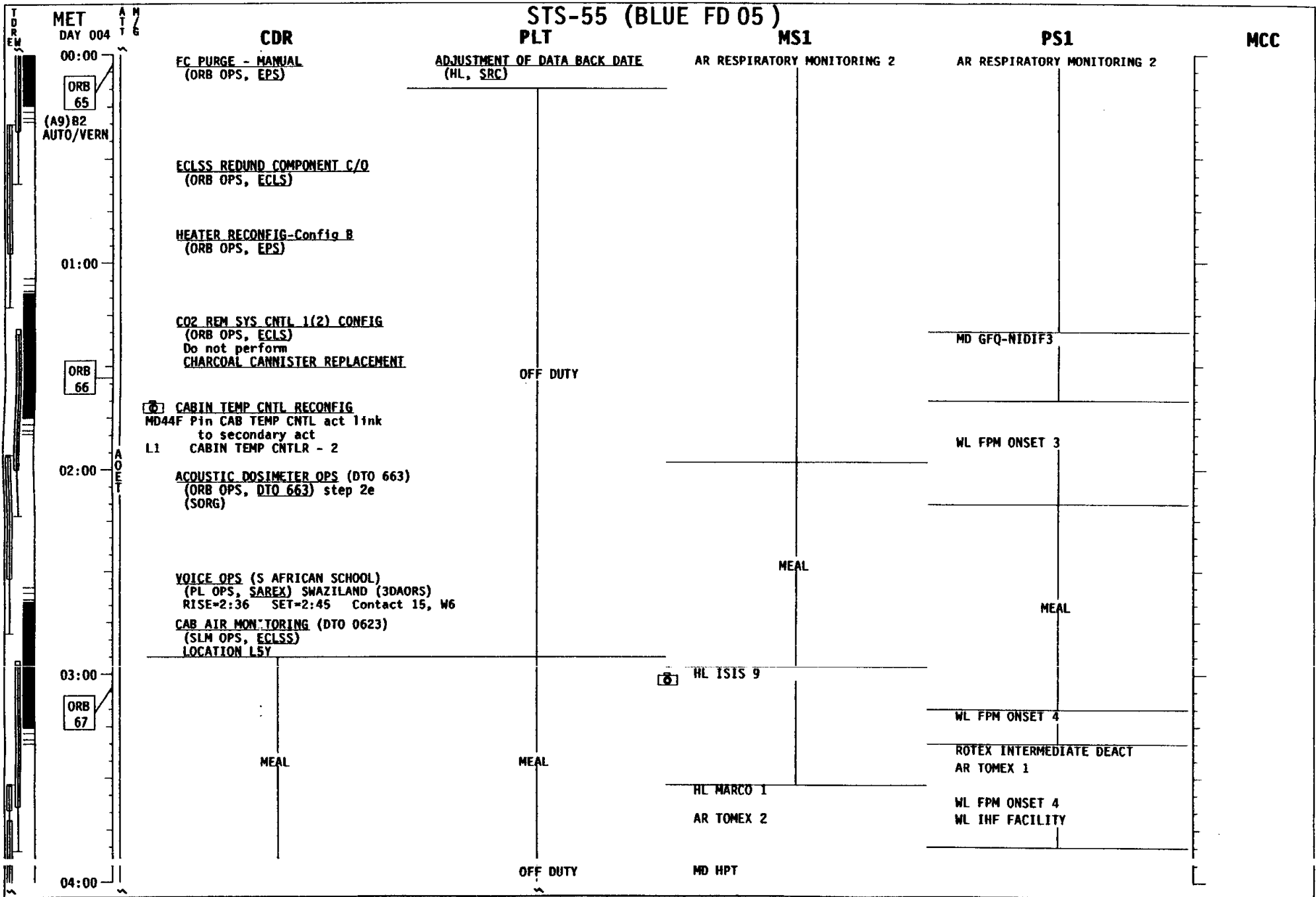


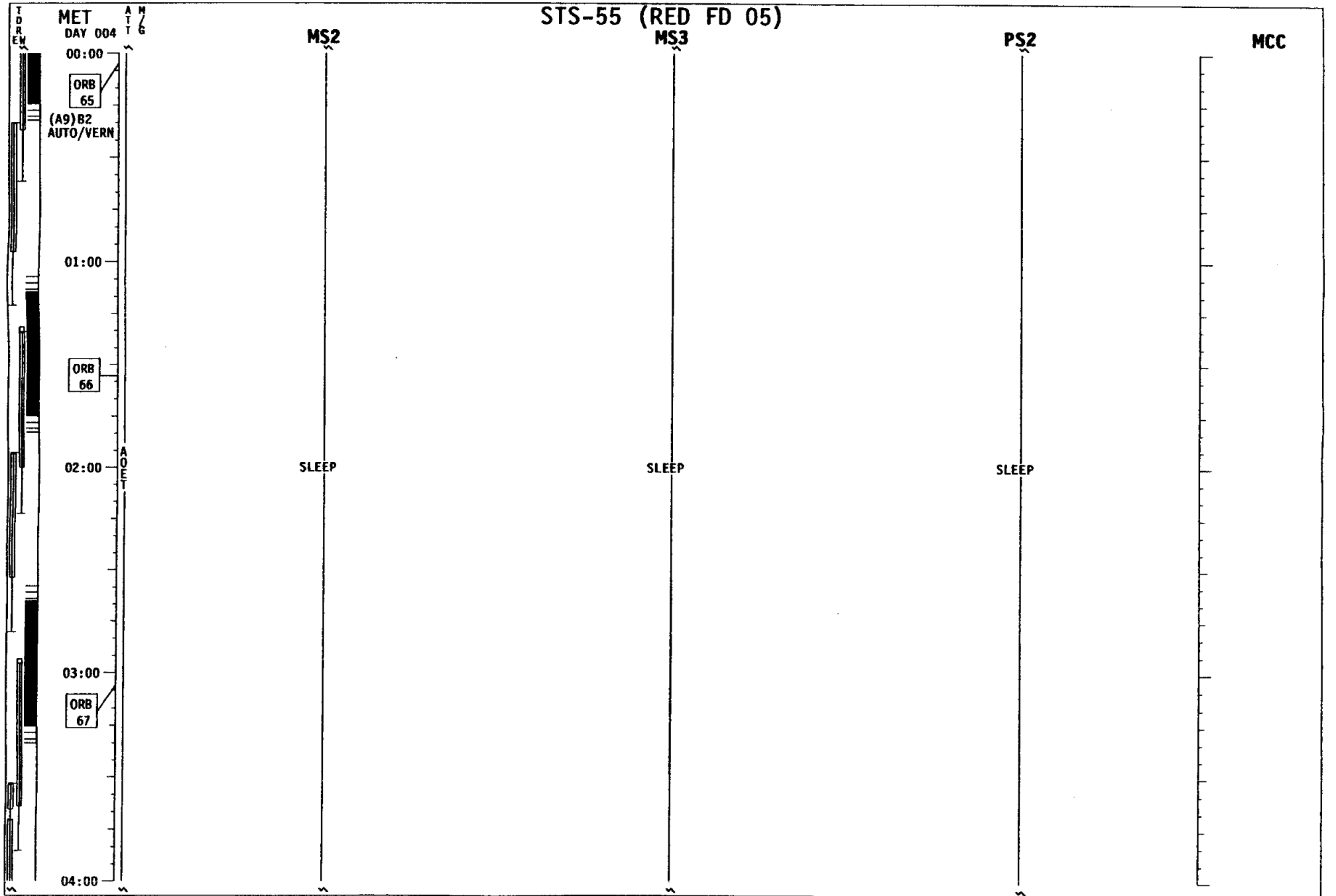


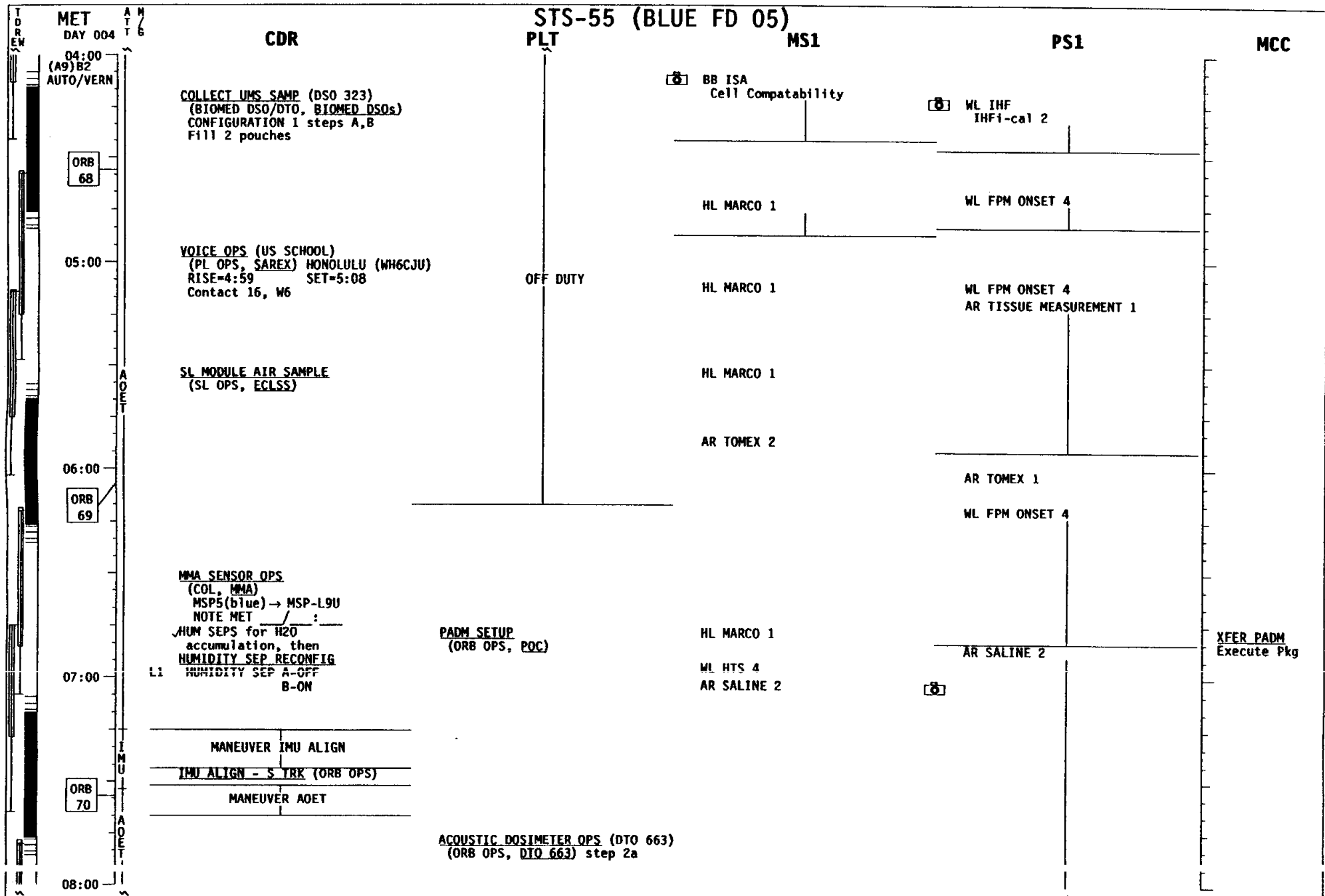
MET DAY 003		STS-55 (RED FD 05)		PS2	MCC
		MS2	MS3		
16:00	(A9) B2 AUTO/VERN	MANEUVER TDRSLO	BB GRAVITATIONAL SENS 5 & 6	WL FPM ONSET 3	UPDATE MOMS UPDATE PAD
ORB 60					
17:00		MANEUVER -ZLV +XV MOMS STEREOSCOPIC DEADBAND COLLAPSE (ORB OPS, MOMS)	HL ISIS 9	WL FPM ONSET 3	
		MANEUVER TDRSLO	BB DRY COOLER HL ISIS 9	<input checked="" type="checkbox"/> AR TISSUE MEASUREMENT 2	
		EXPERIMENT PERFORMANCE (BA, EXPERIMENT)			
18:00		MANEUVER -ZLV +XV		WL HTS 1	
ORB 61		SAREX WINDOW ANTENNA TEST FLORIDA (WA4LZR) TRANSMIT BUTTON - PUSH AND HOLD FROM 18:07 TO 18:15 Contact 13, W6			
		CAB AIR MONITORING (DTO 0623) (SLM OPS, ECLSS) step 2 LOCATION L5Y			
		DDS <input checked="" type="checkbox"/> EXC MOM MOMS 3 4 SHUTTER OPEN/CLSD - CLSD	OFF DUTY	BB GRAVITATIONAL SENS 5 & 6	
19:00		MANEUVER TDRSLO			
		PADM SETUP (ORB OPS, POC)			XFER PADM Execute Pkg
		MODULE OPS (PL OPS, SAREX) steps 1-6		BB GRAVITATIONAL SENS 5 & 6 WL IHF IGFg-mon 3	
ORB 62		MANEUVER -ZLV +XV			
20:00		SAREX WINDOW ANTENNA TEST FLORIDA (WA4LZR) TRANSMIT BUTTON - PUSH AND HOLD Contact 14 FROM 19:40 TO 19:52 THEN: MODULE OPS (PL OPS, SAREX) steps 8-11		BB GRAVITATIONAL SENS 5 & 6	

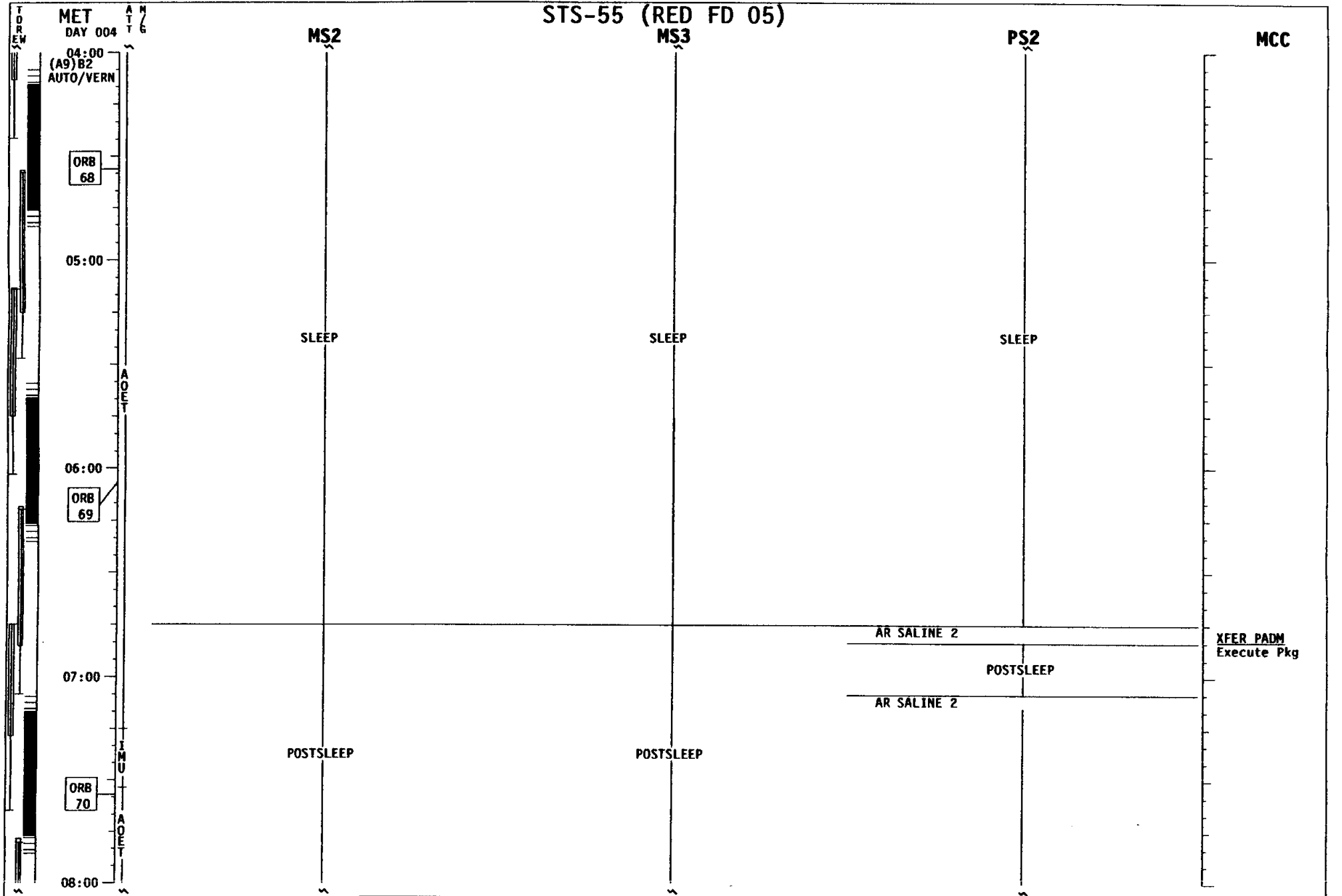


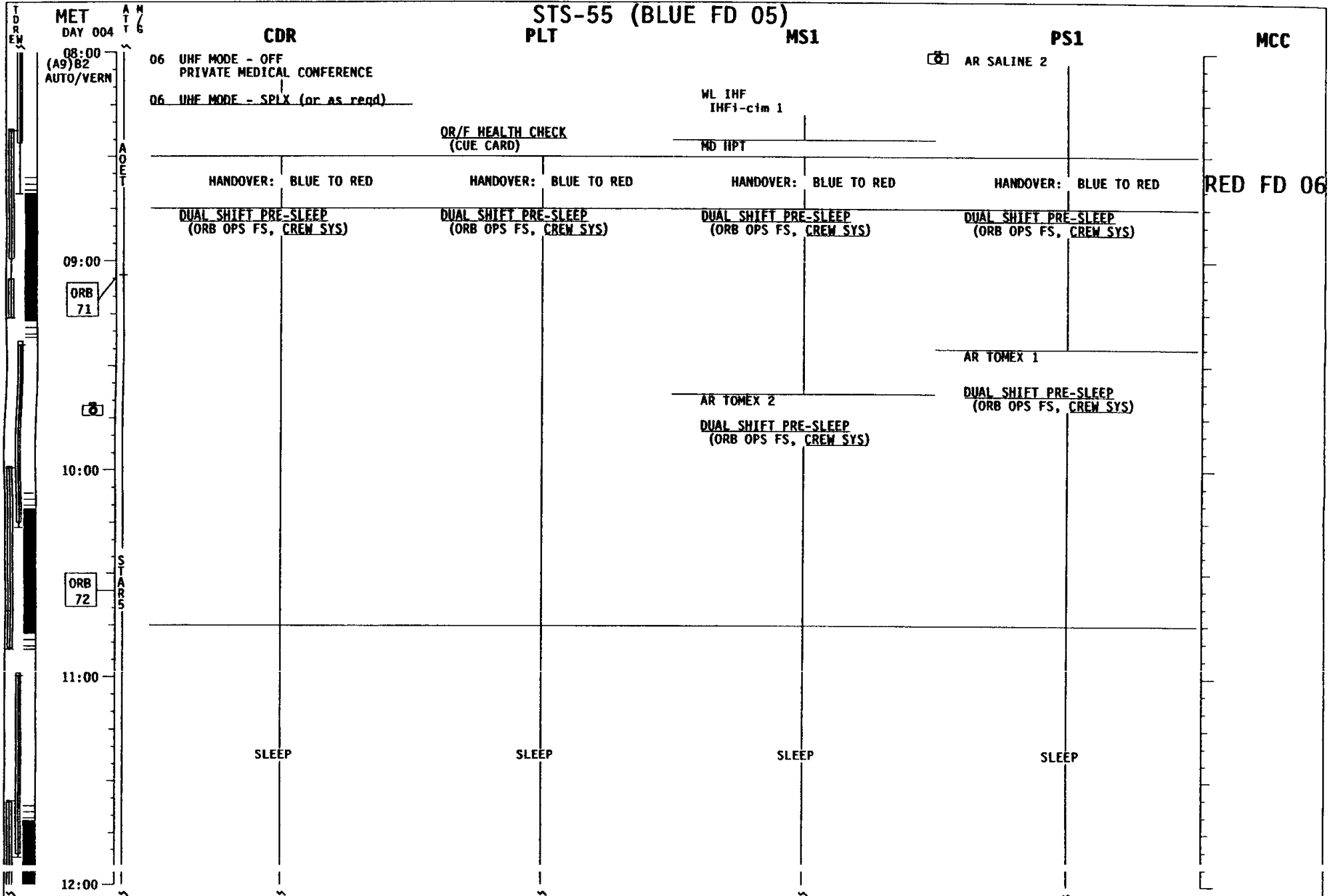


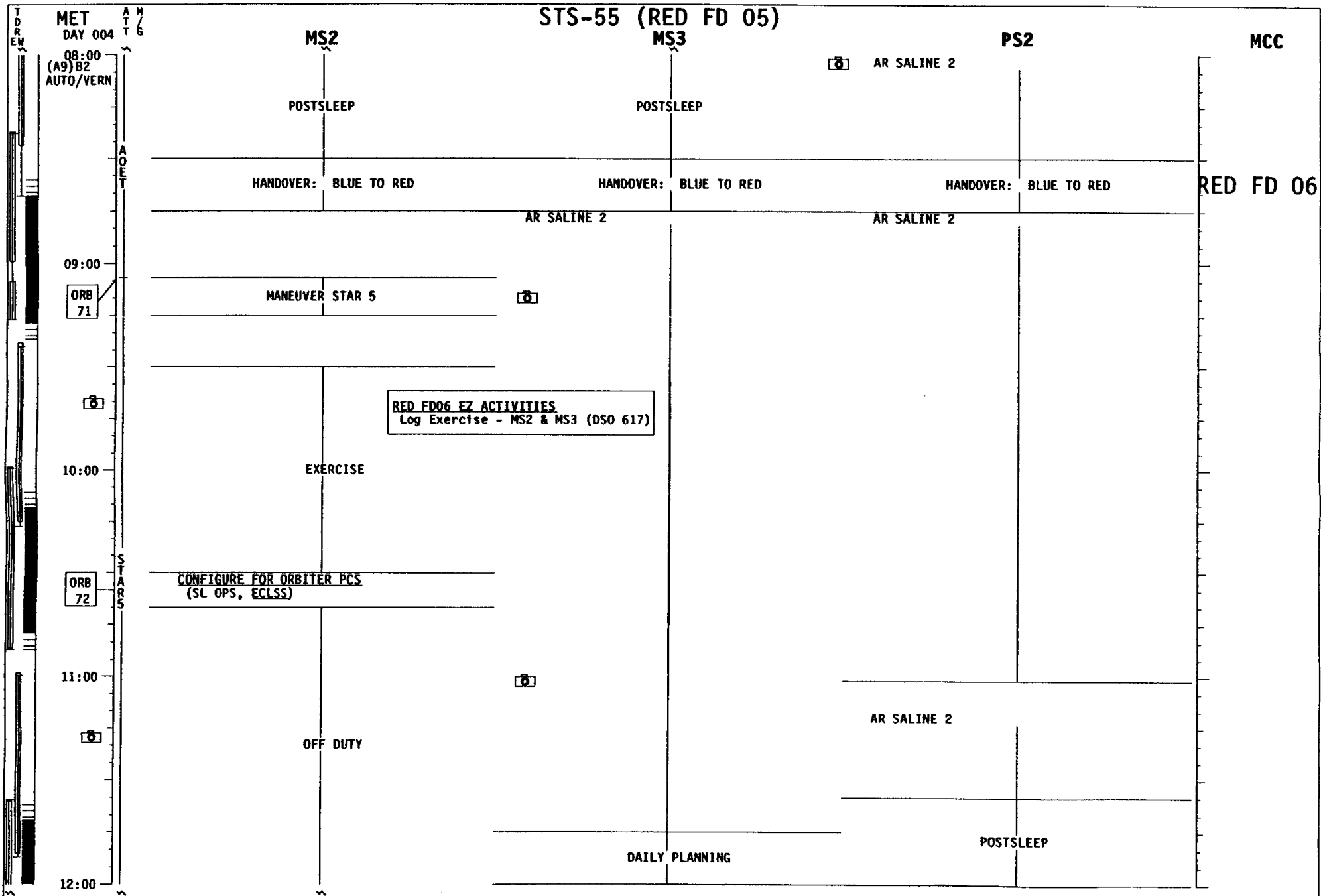


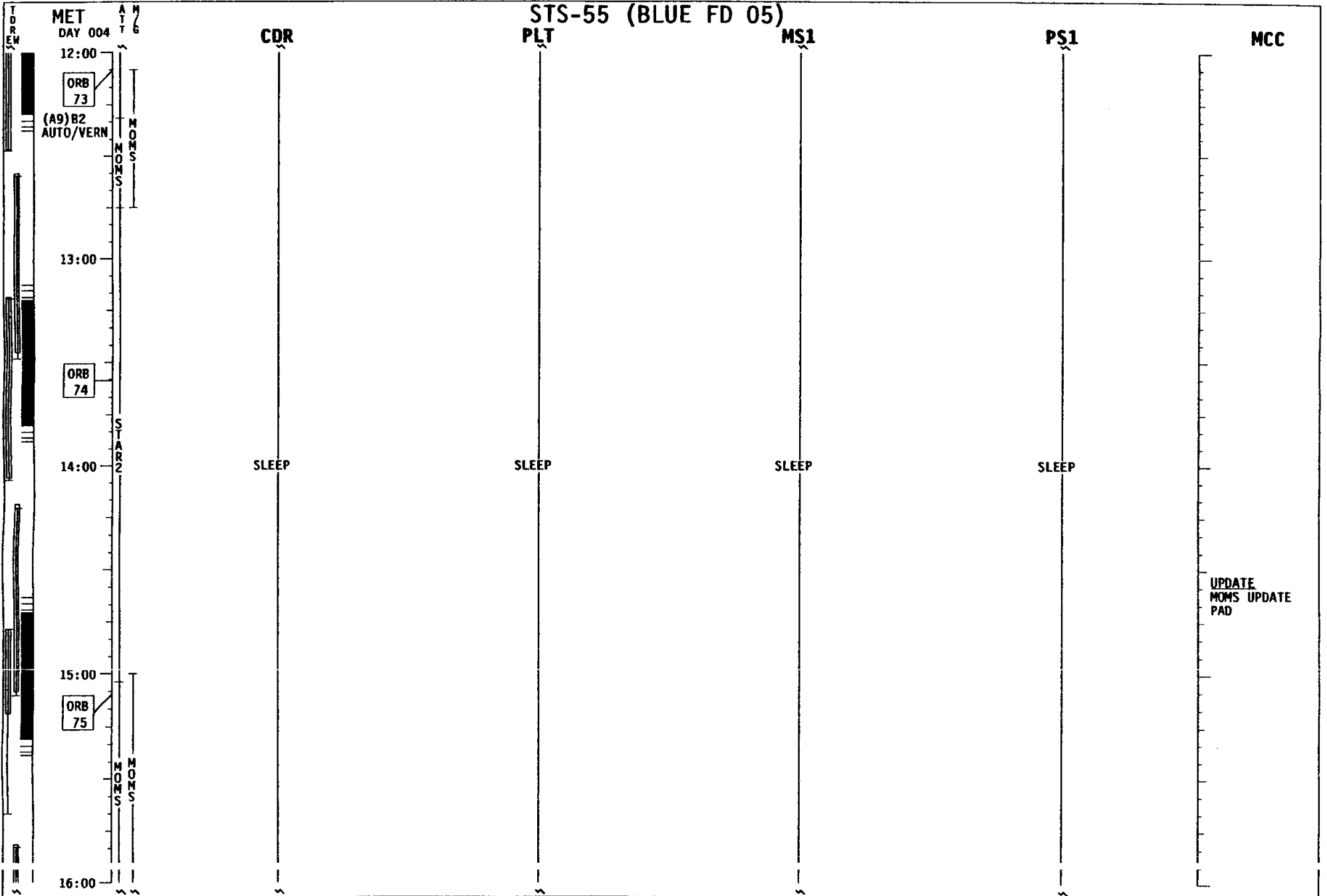


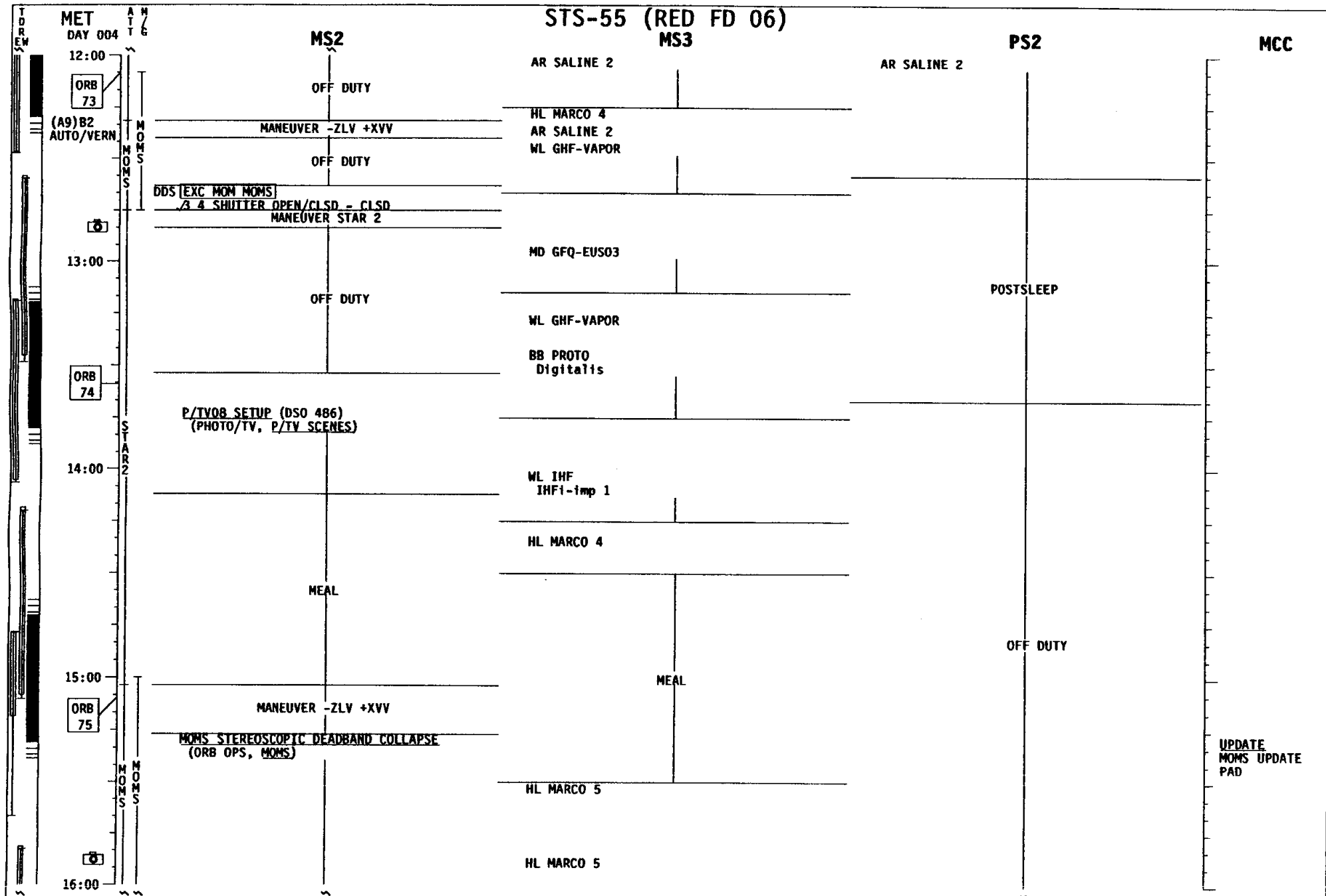


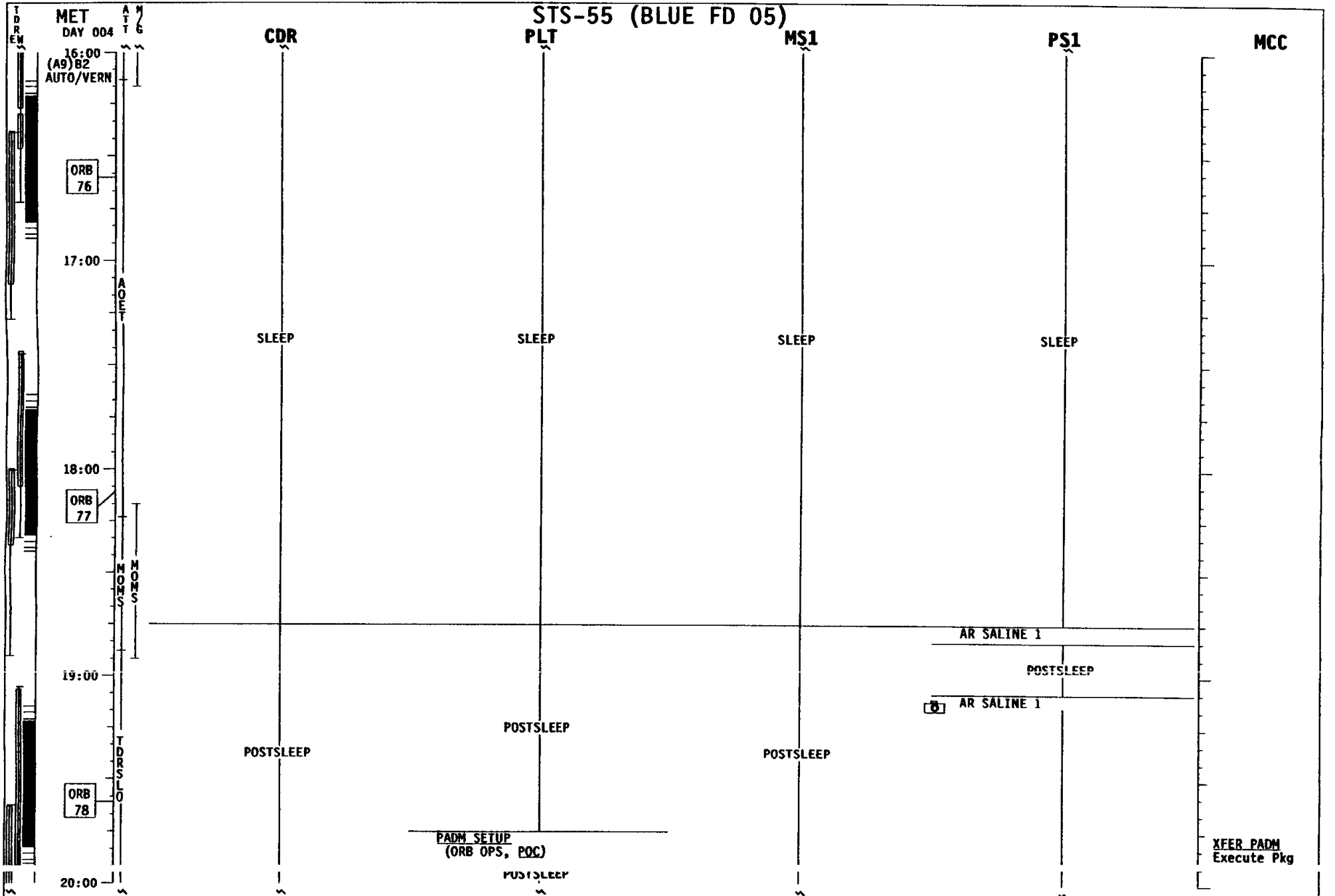


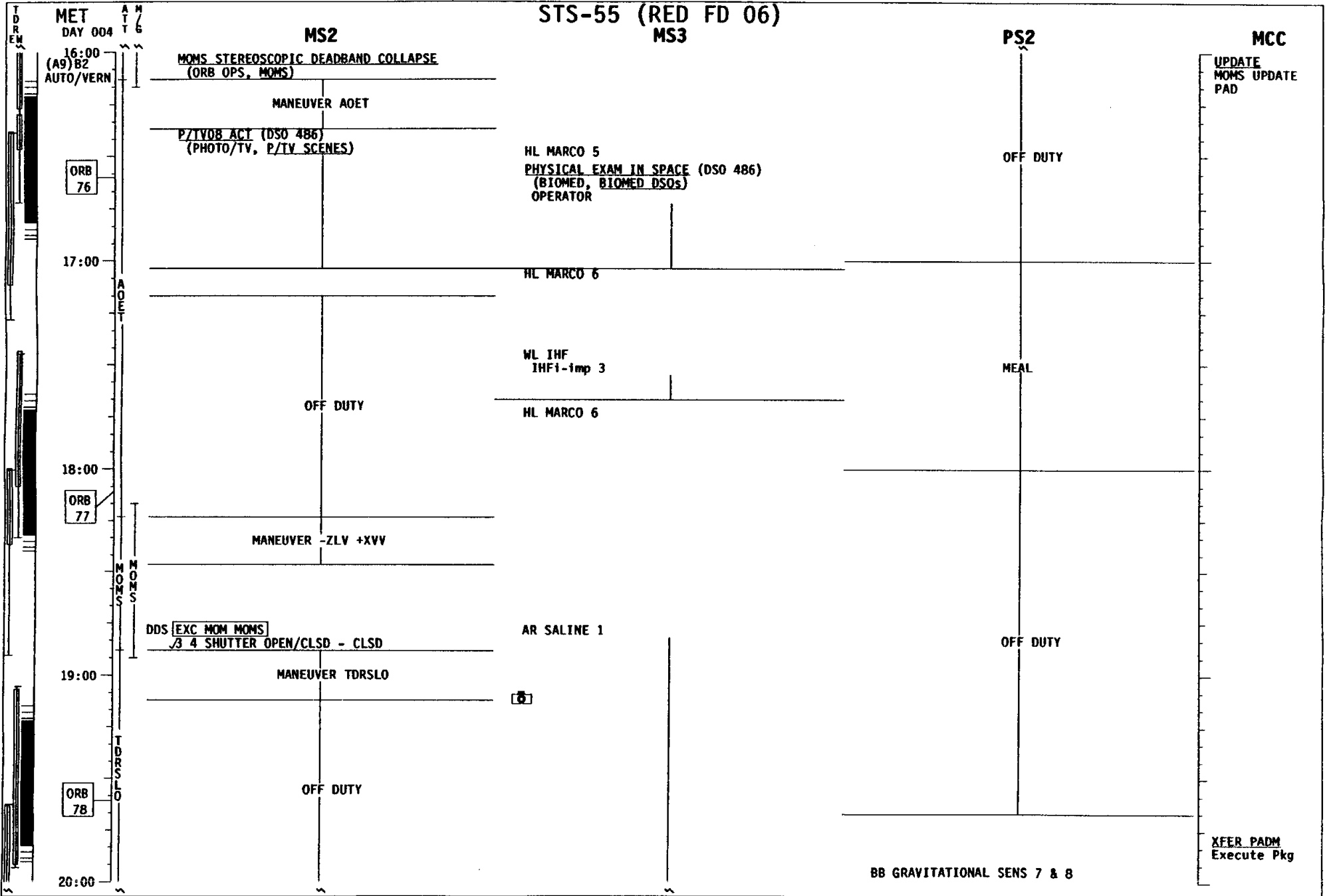


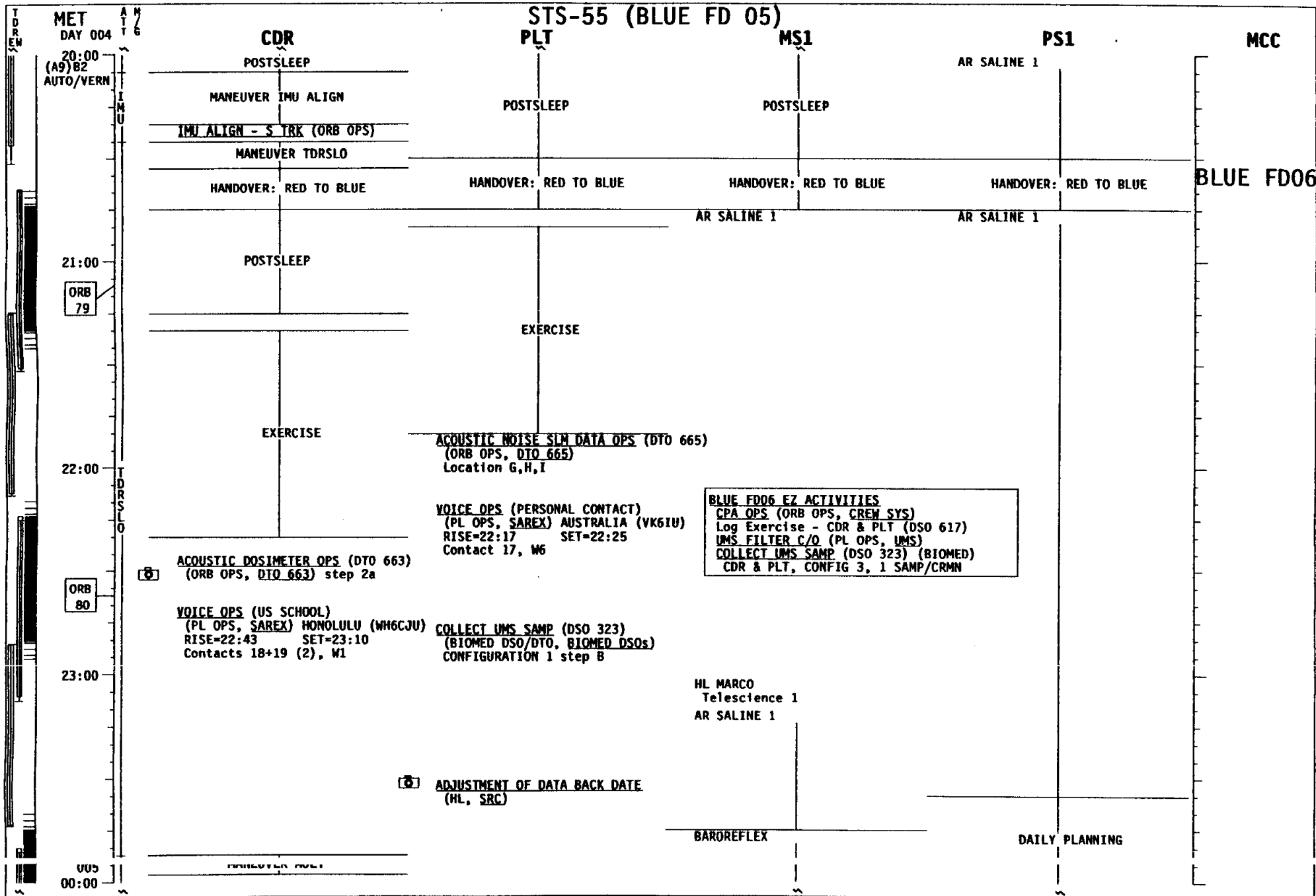


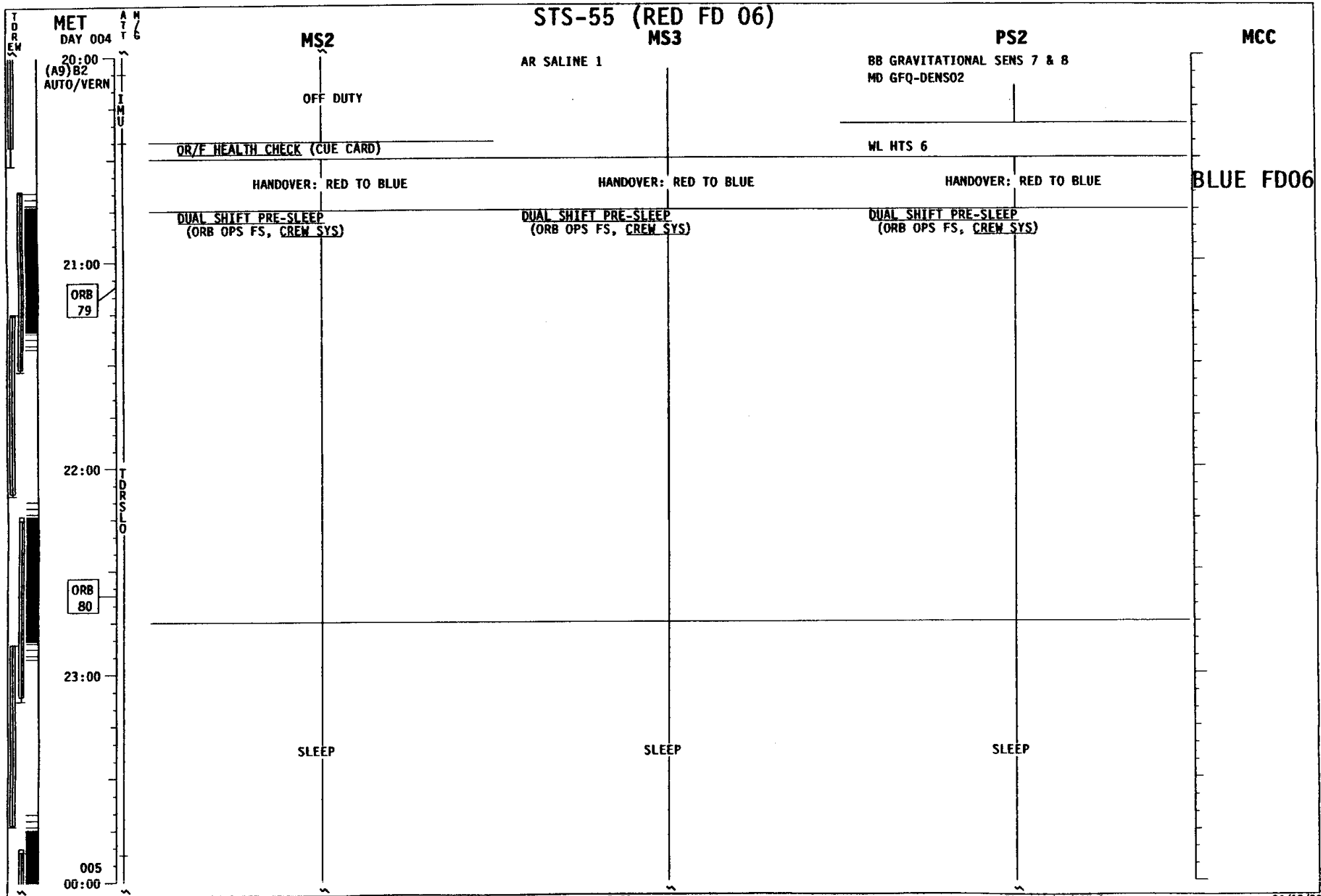


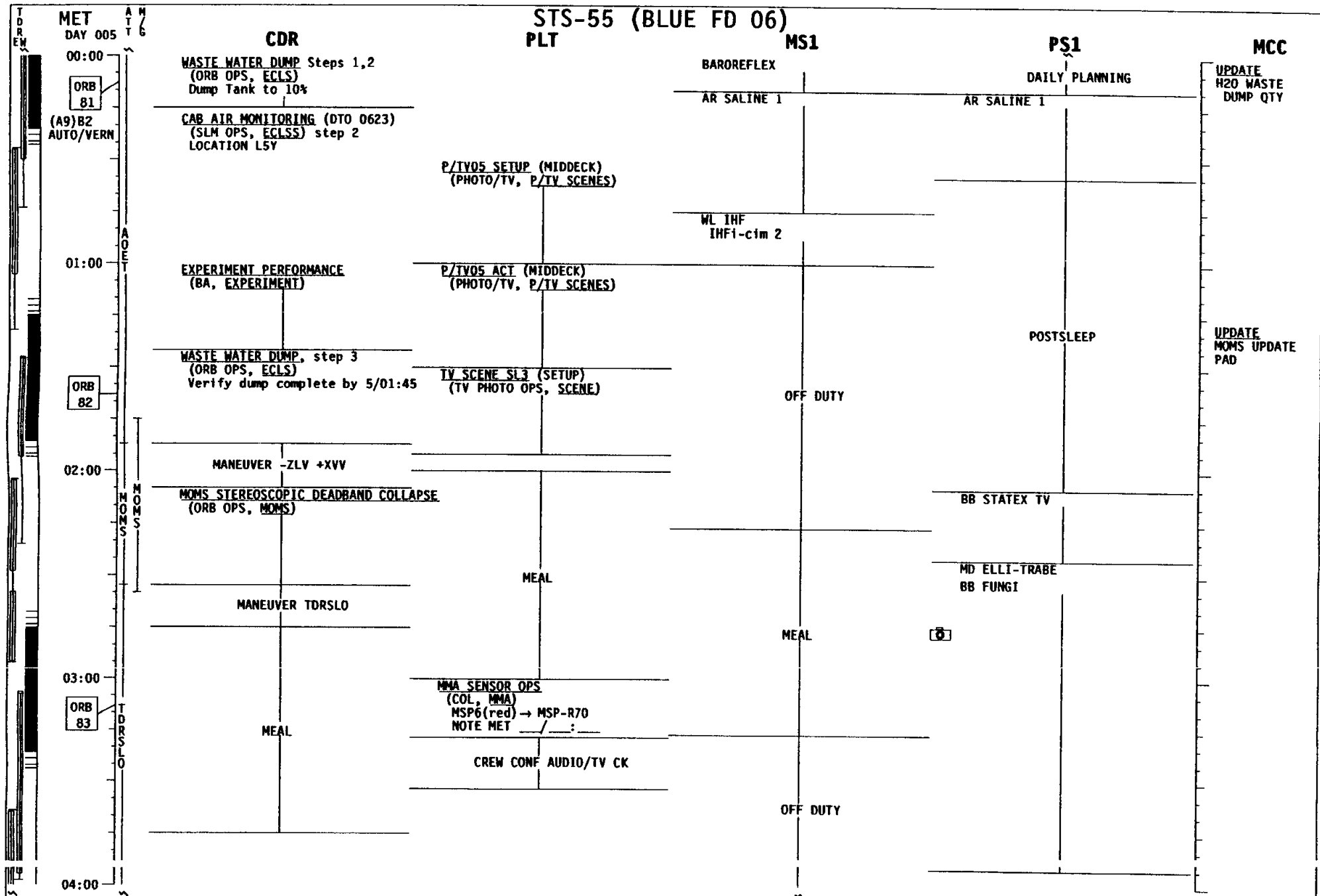




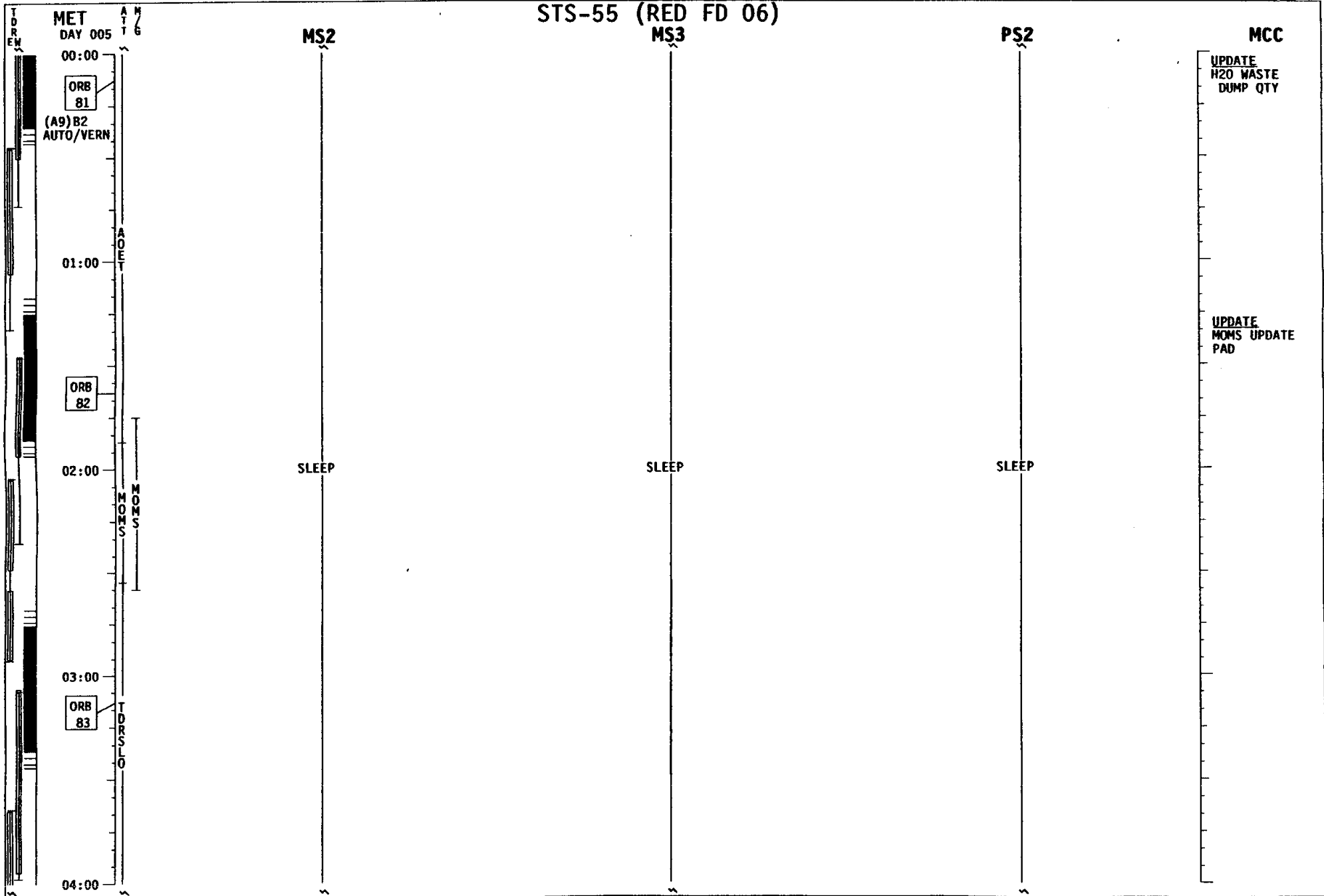


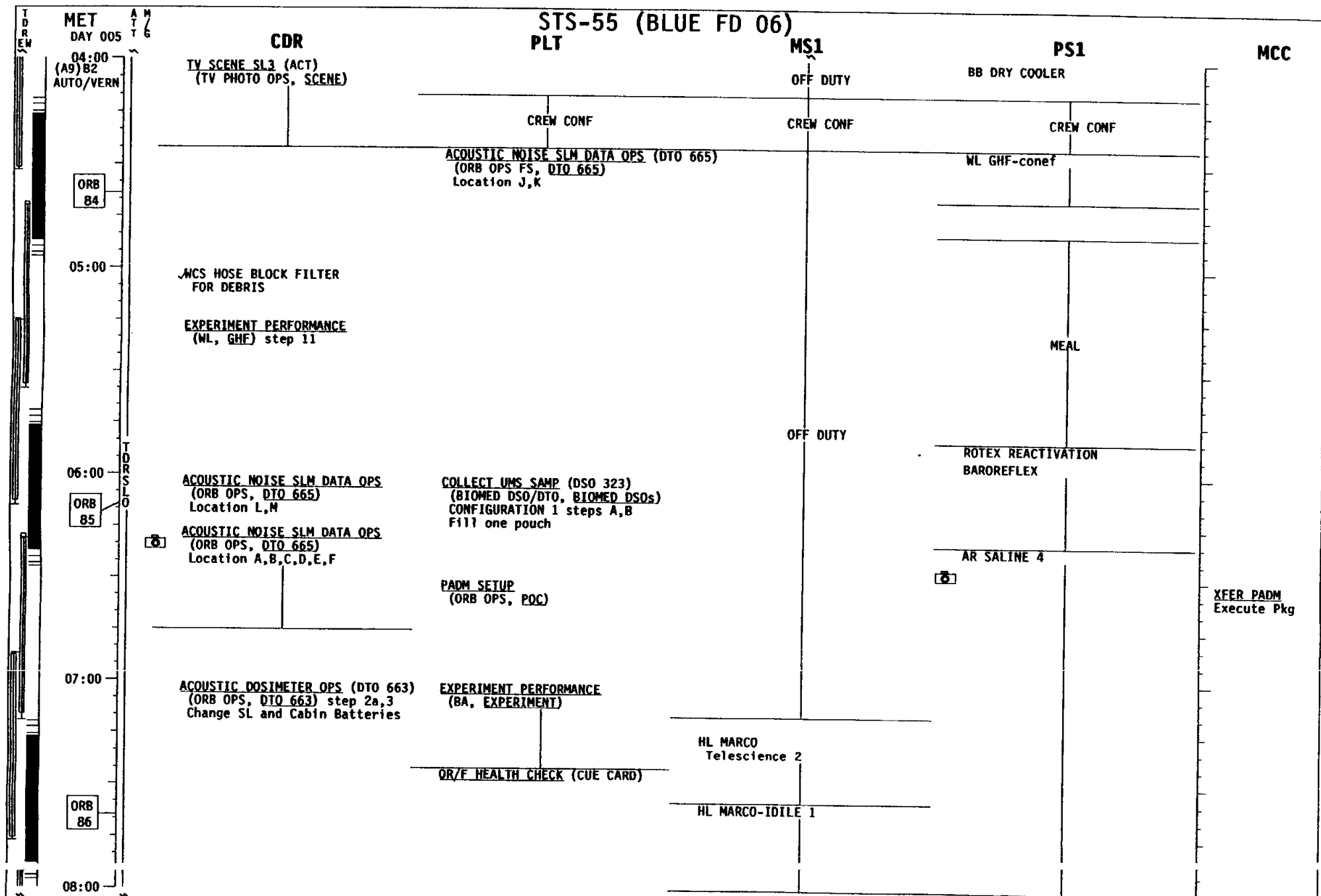


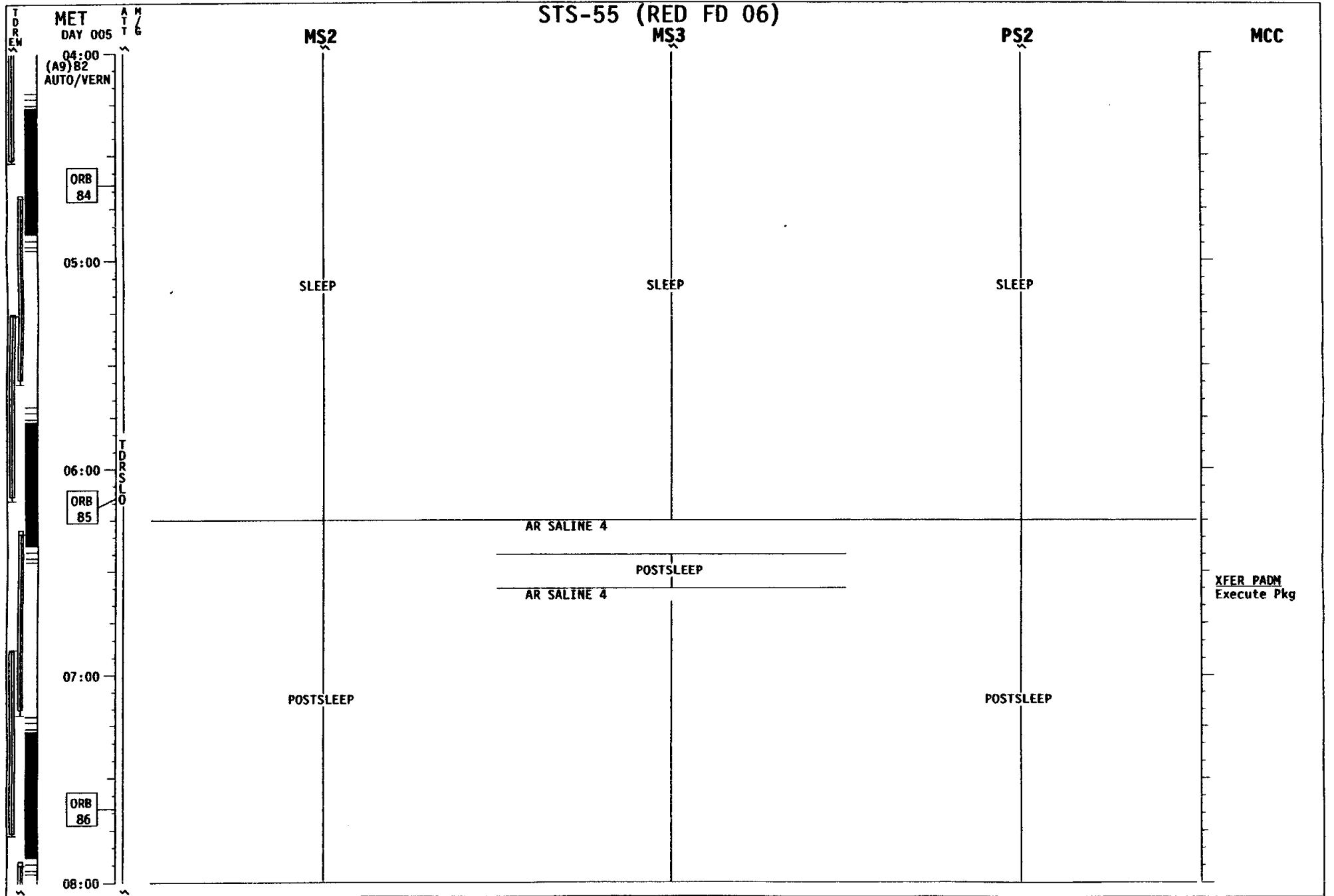


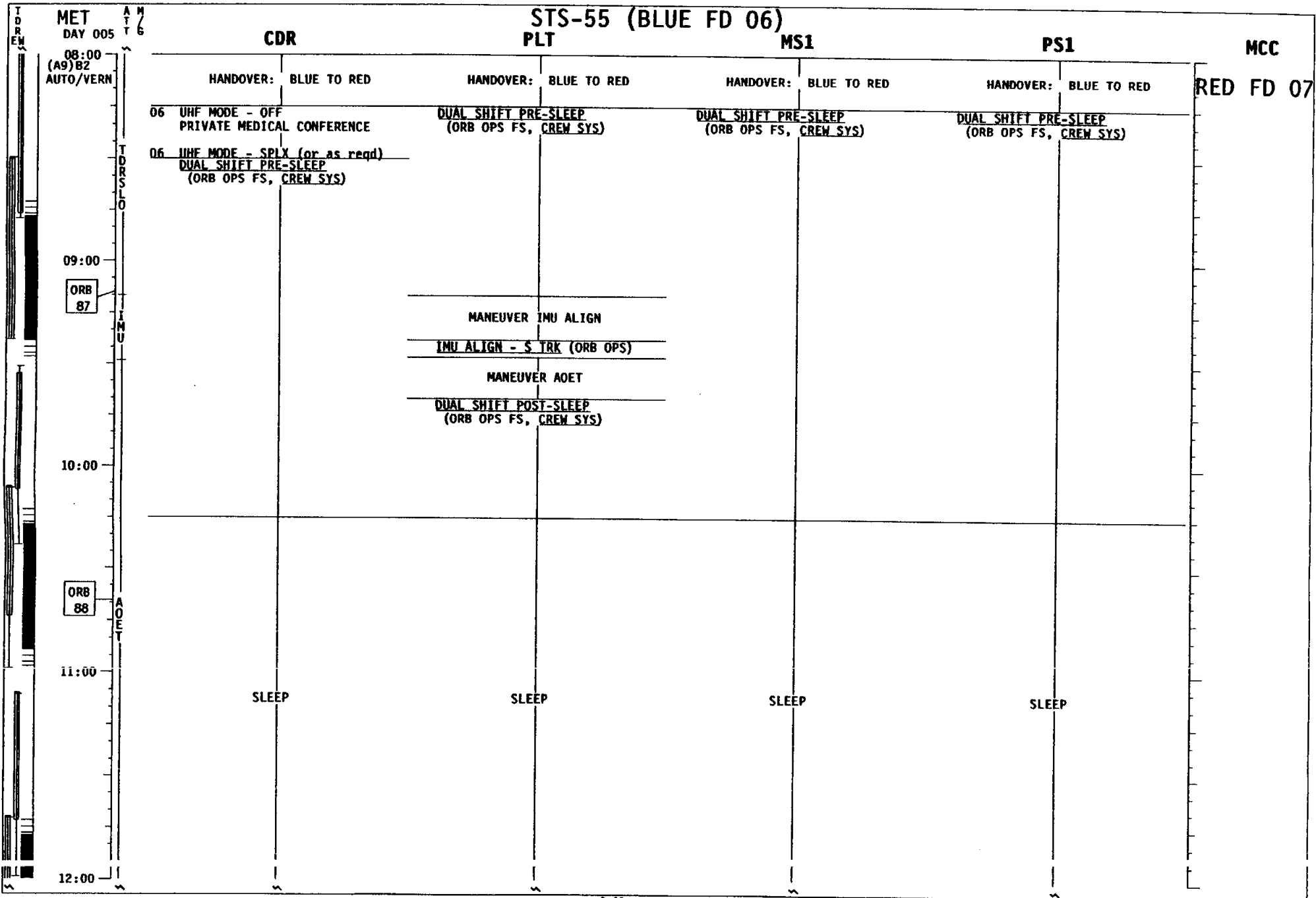


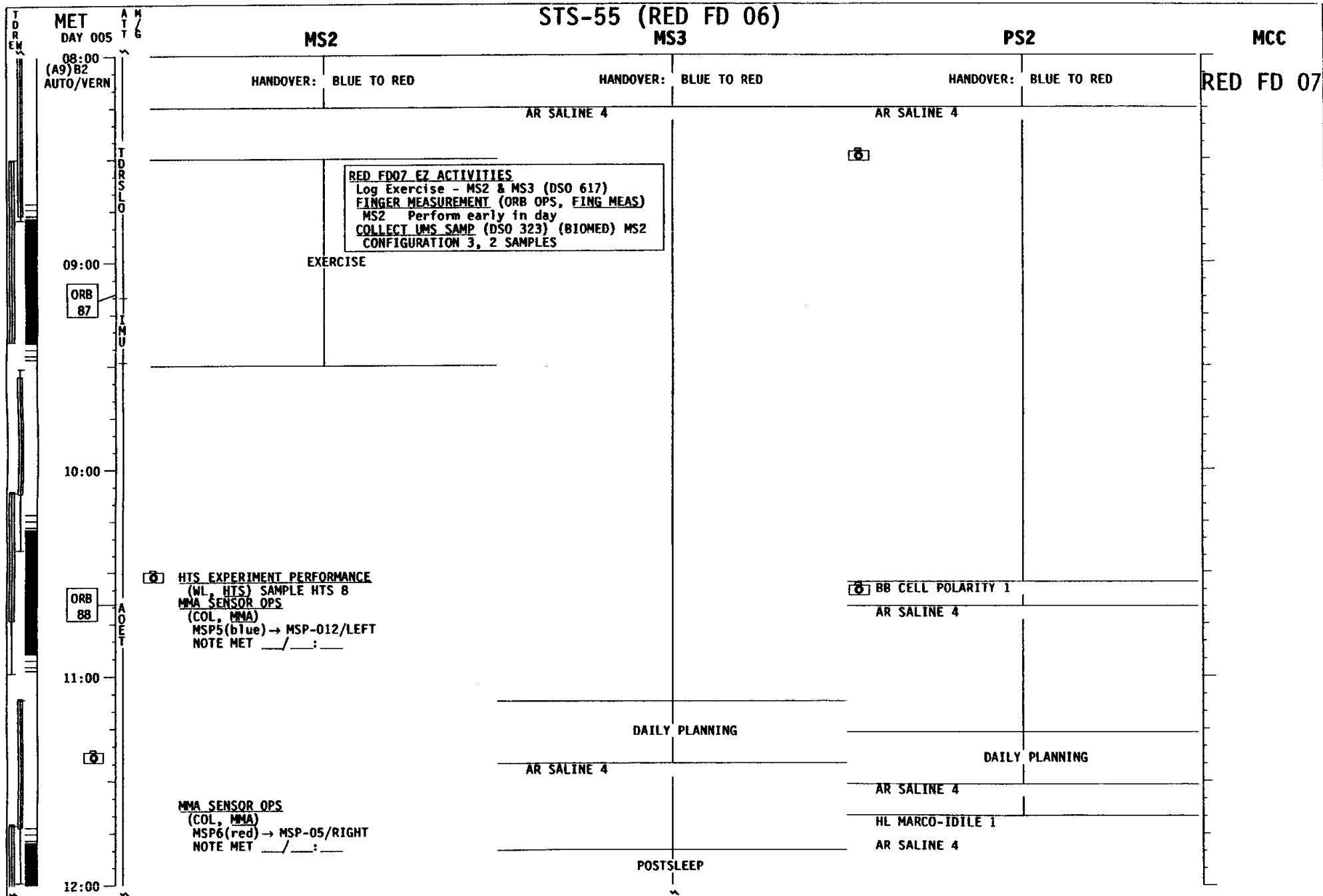
STS-55 (RED FD 06)

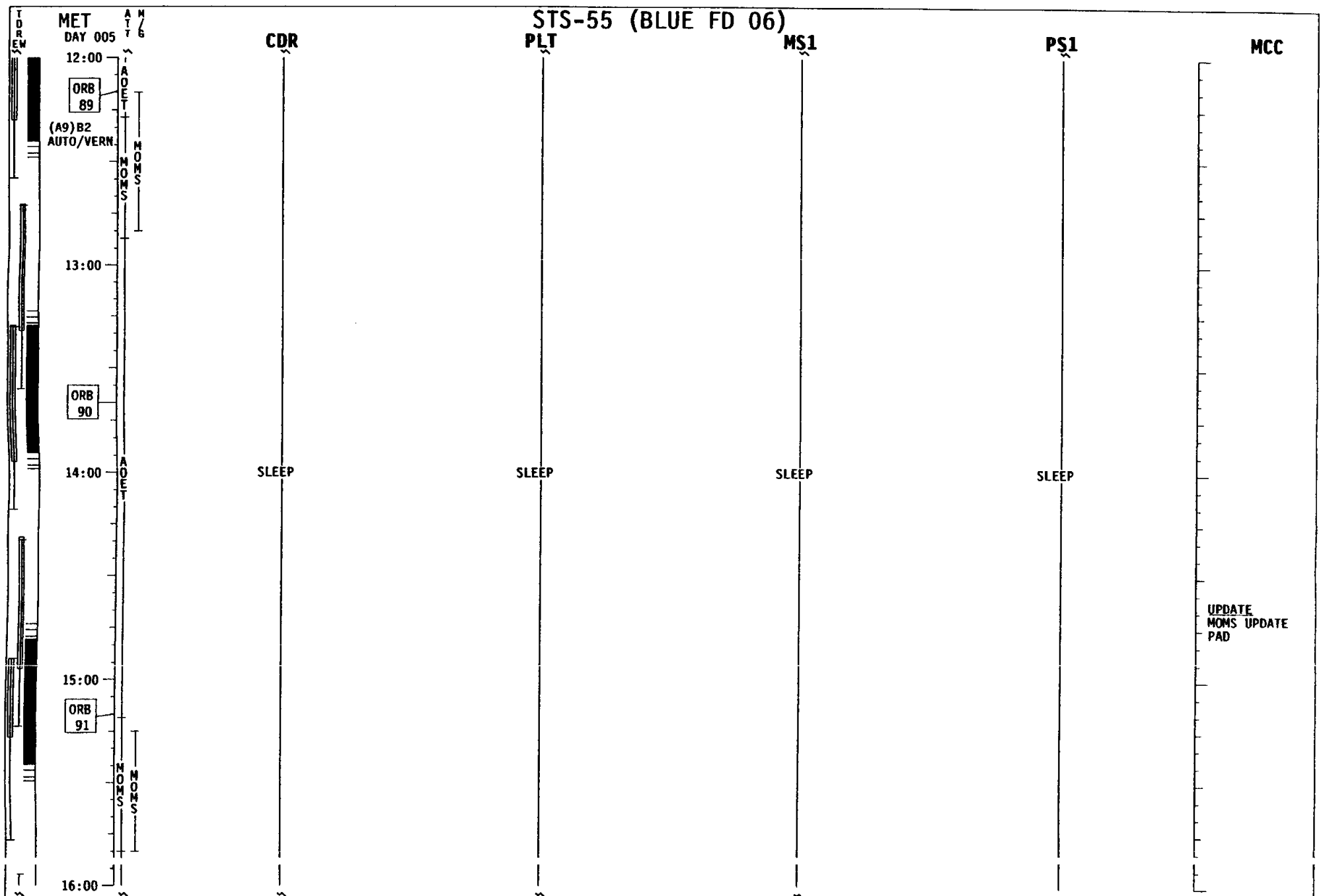


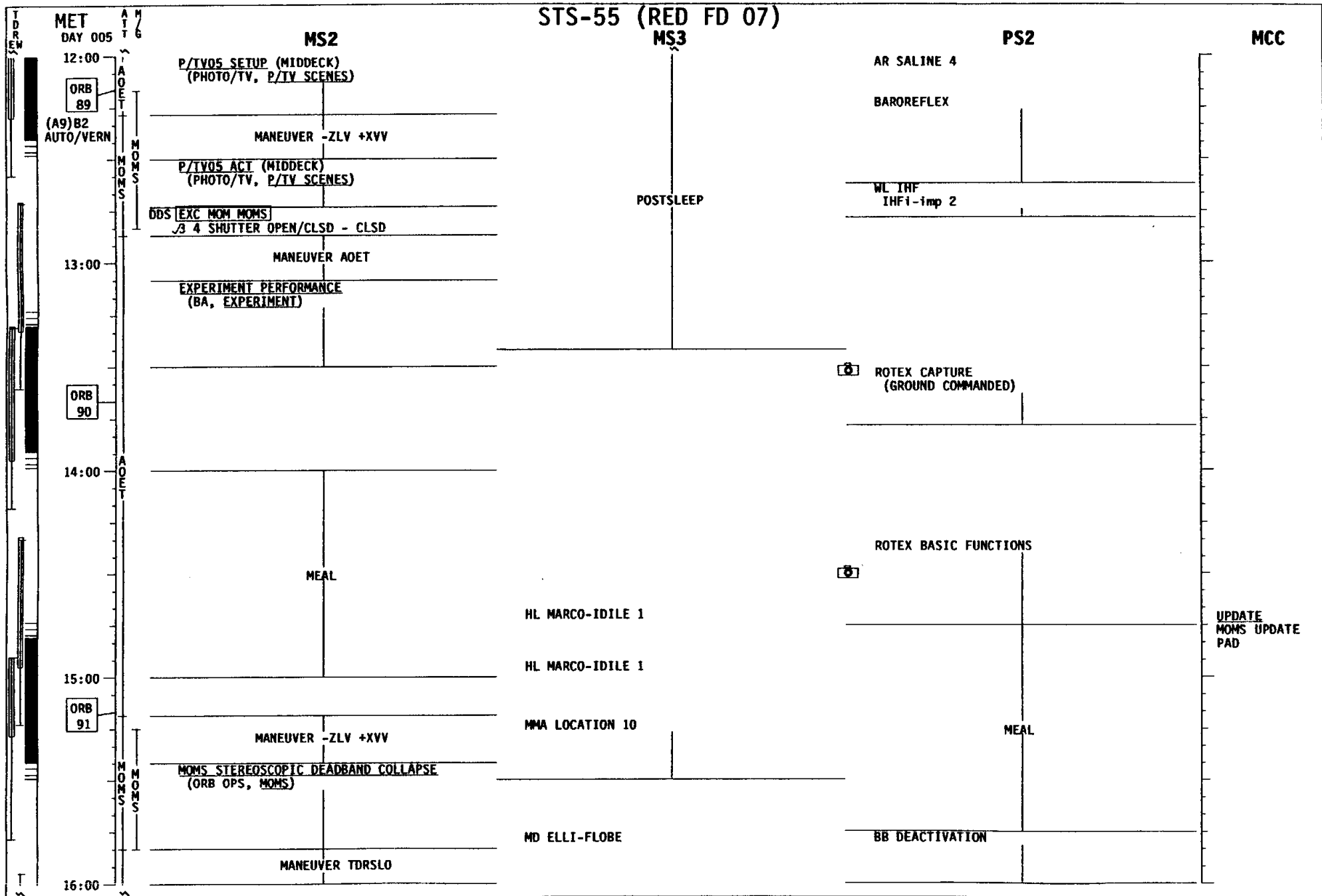


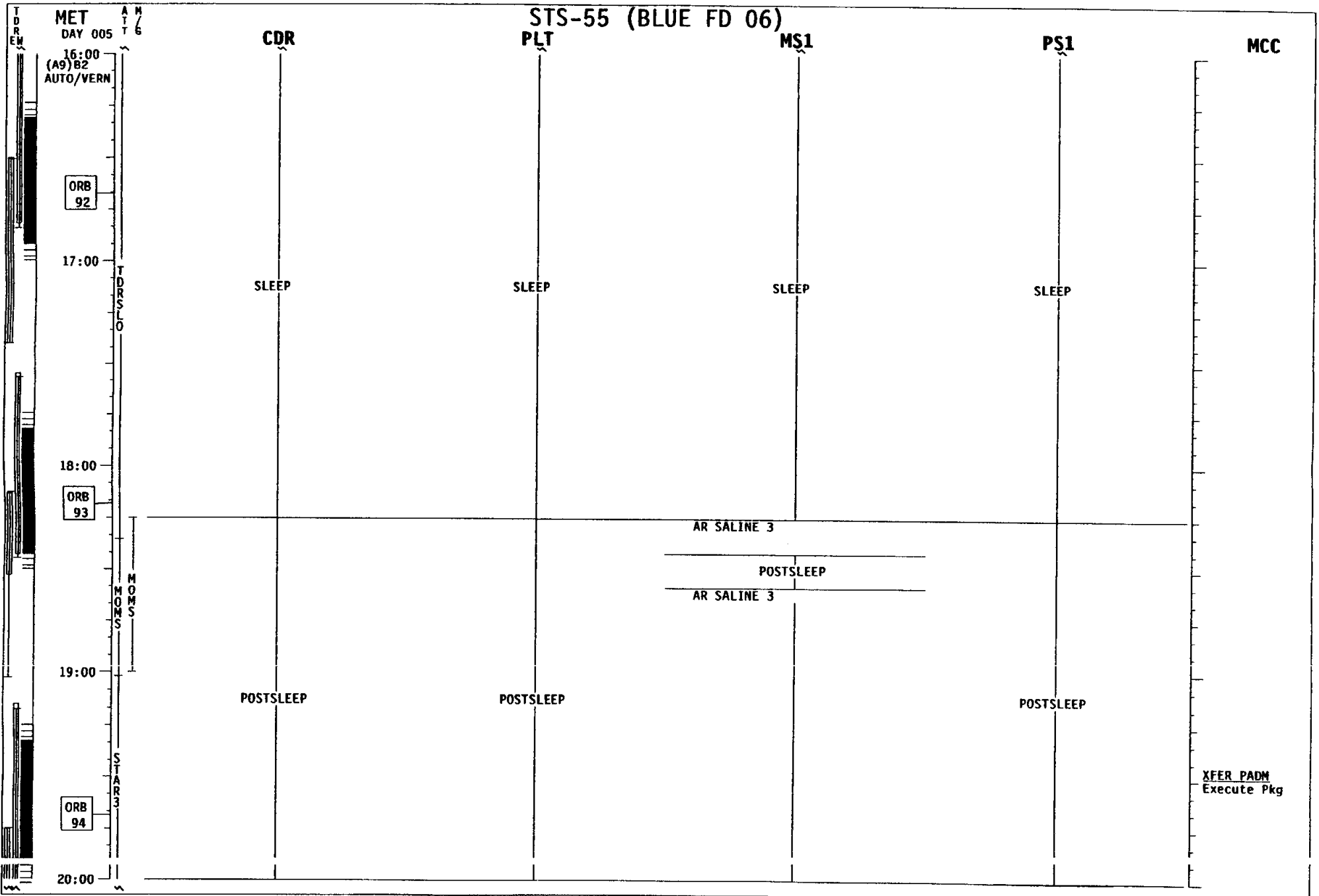




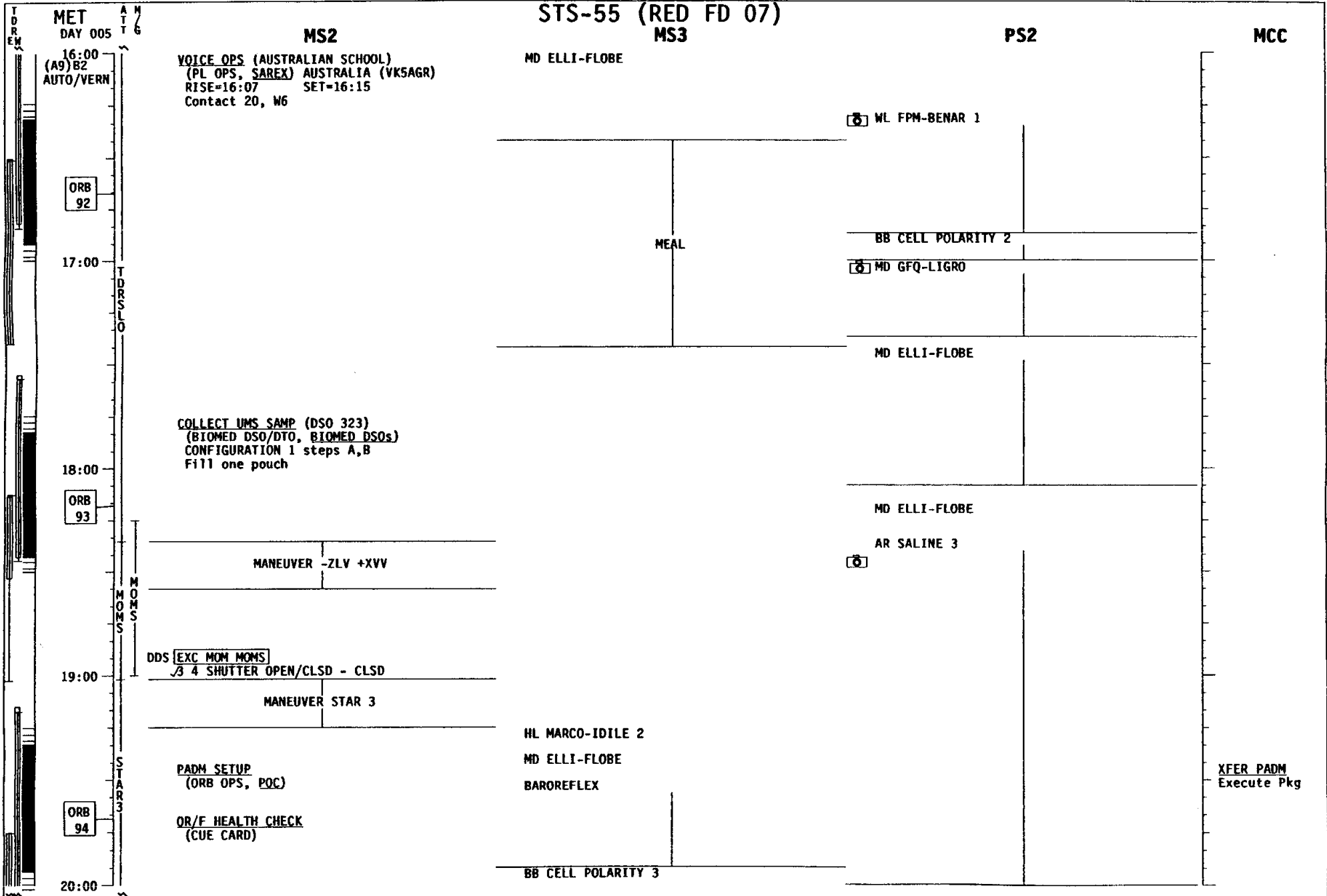


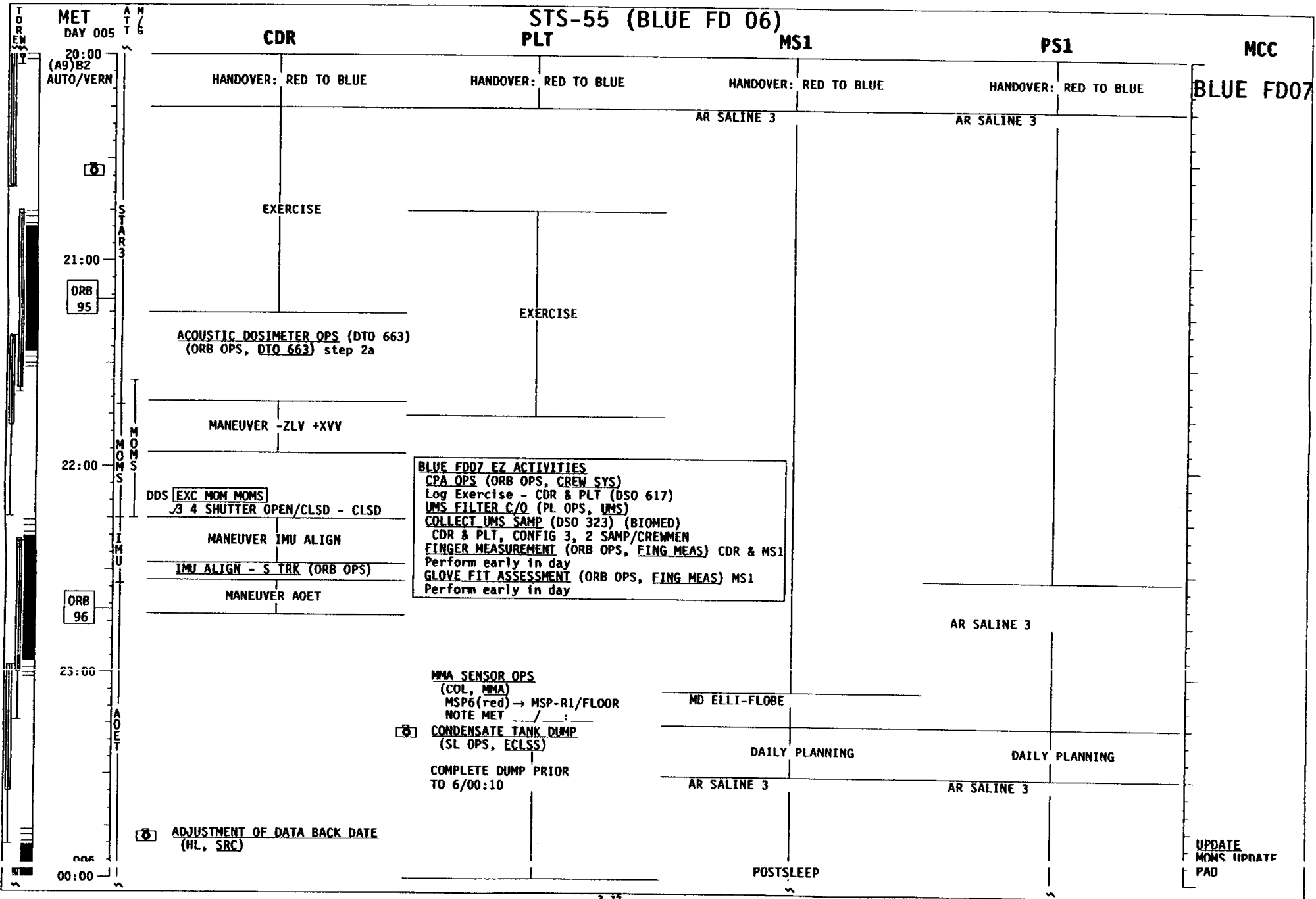


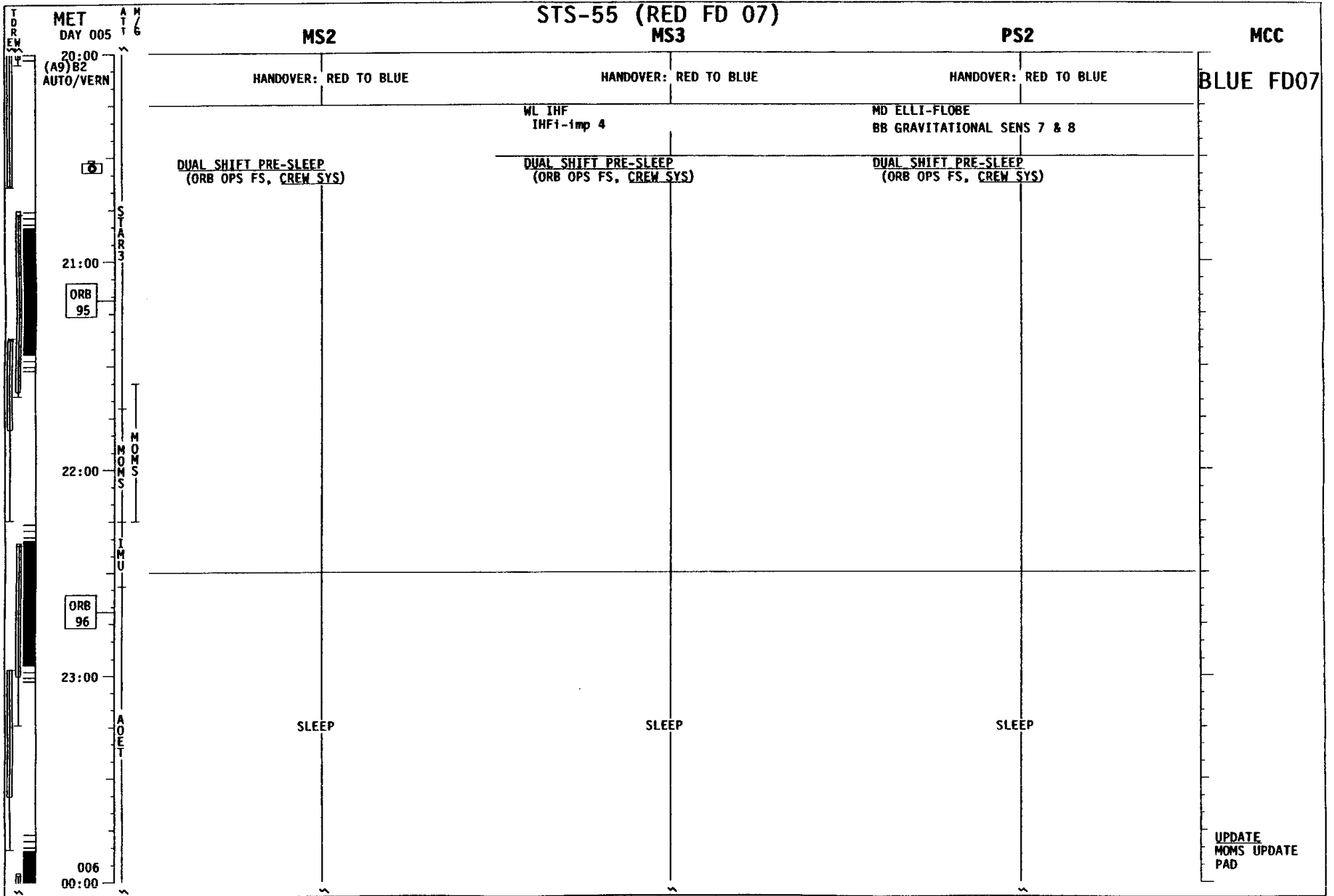




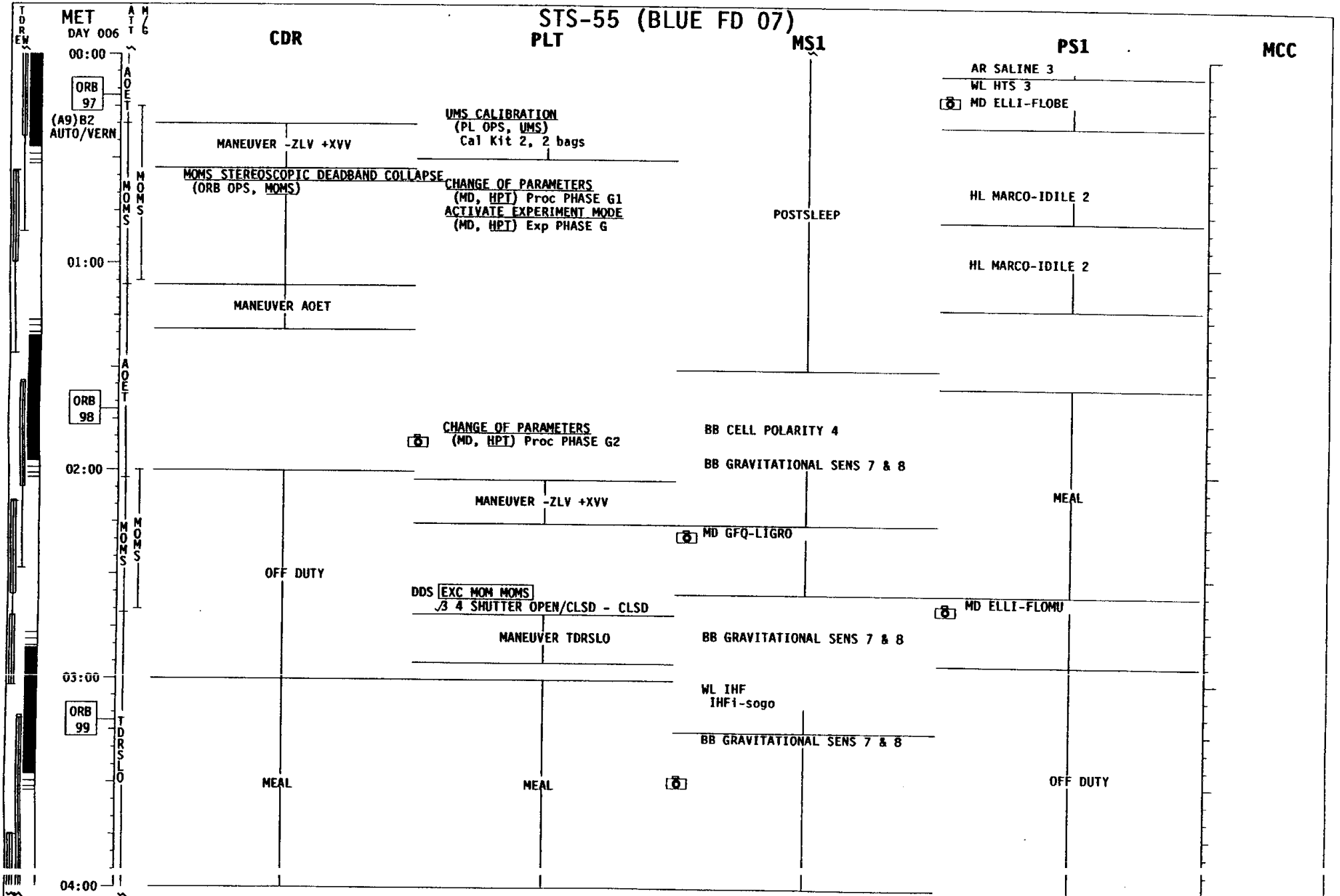
XFER PADM
Execute Pkg



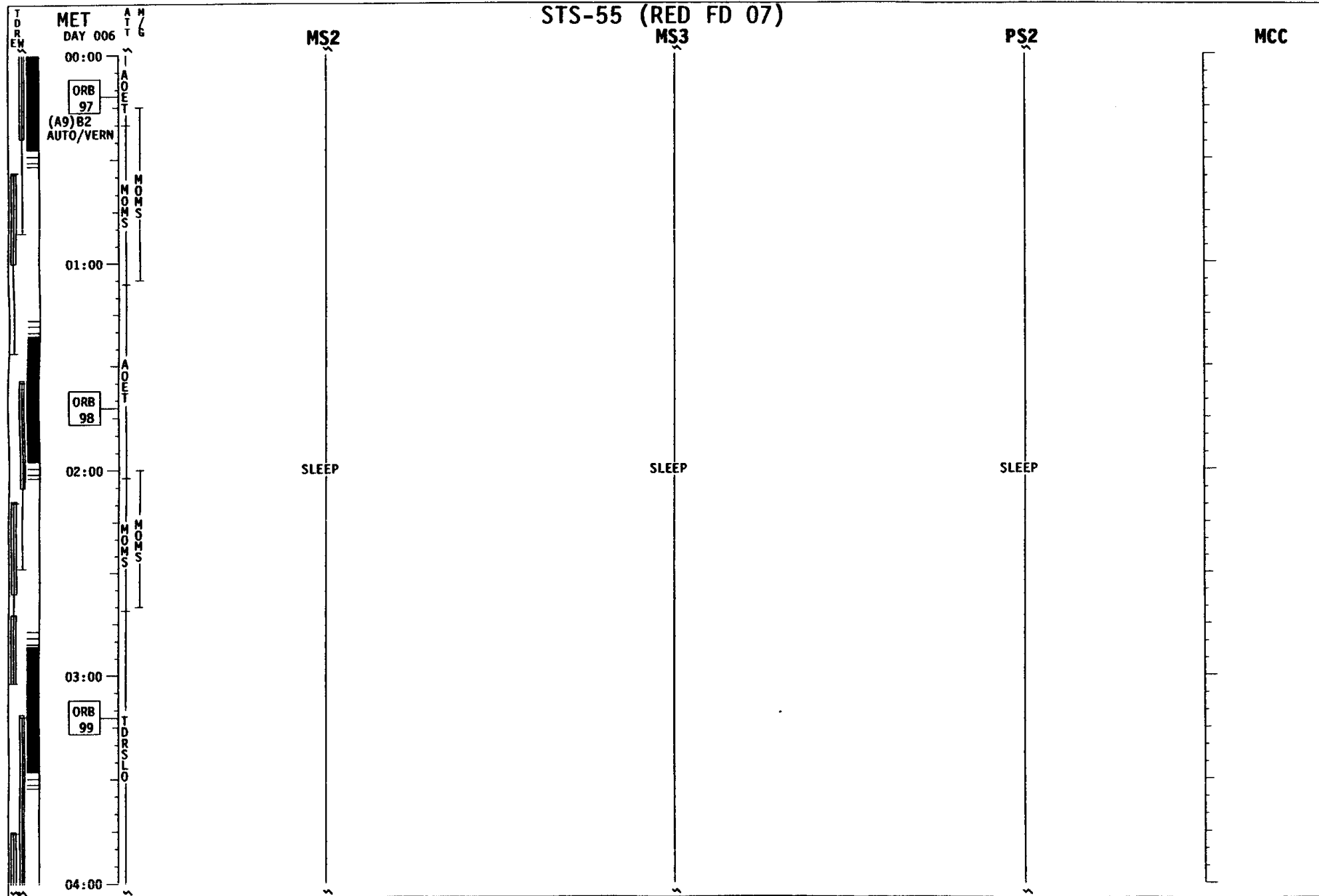




UPDATE
MOMS UPDATE
PAD



STS-55 (RED FD 07)



STS-55 (BLUE FD 07)
PLT

CDR

MS1

PS1

MCC

MET DAY 006

04:00
(A9)B2
AUTO/VERN

ORB
100

05:00

TDRS
SLO

06:00

ORB
101

07:00

ORB
102

08:00

TDRS
U

STOW CTE
(COL, CTE)

MD ELLI-FLOMU

OFF DUTY

MD ELLI-FLOMU

MD ELLI-FLOMU

HL MARCO-IDILE 2

COLLECT UMS SAMP (DSO 323)
(BIOMED DSO/DTO, BIOMED DSOs)
CONFIGURATION 1 steps A,B
Fill one pouch

MEAL

OFF DUTY

CAB AIR MONITORING (DTO 0623)
(SLM OPS, ECLSS) step 2
LOCATION L5Y

MD ELLI-FLOMU

PADM SETUP
(ORB OPS, POC)

OFF DUTY

XFER PADM
Execute Pkg

BB CELL POLARITY 1

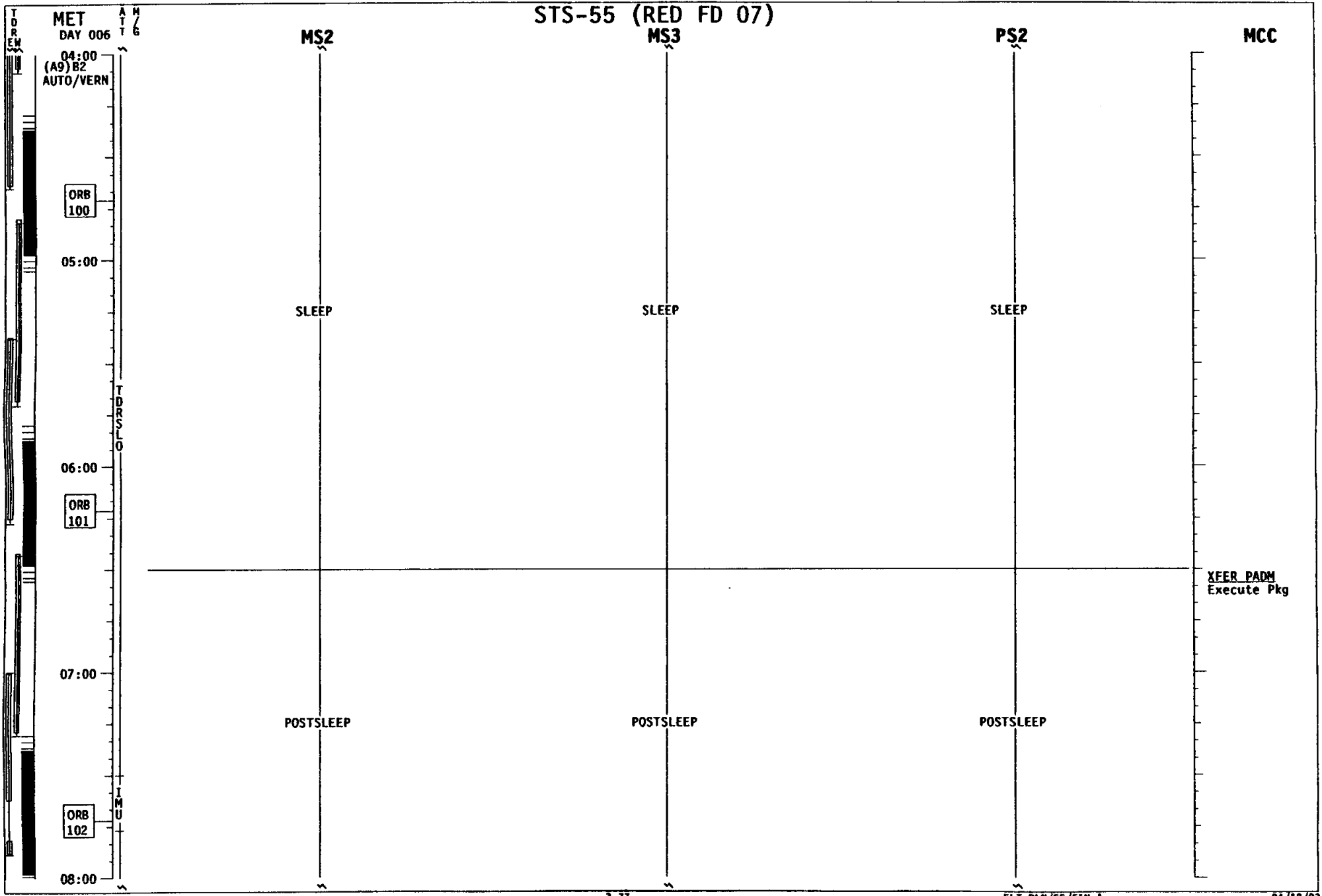
ACOUSTIC DOSIMETER OPS (DTO 663)
(ORB OPS, DTO 663) step 2a

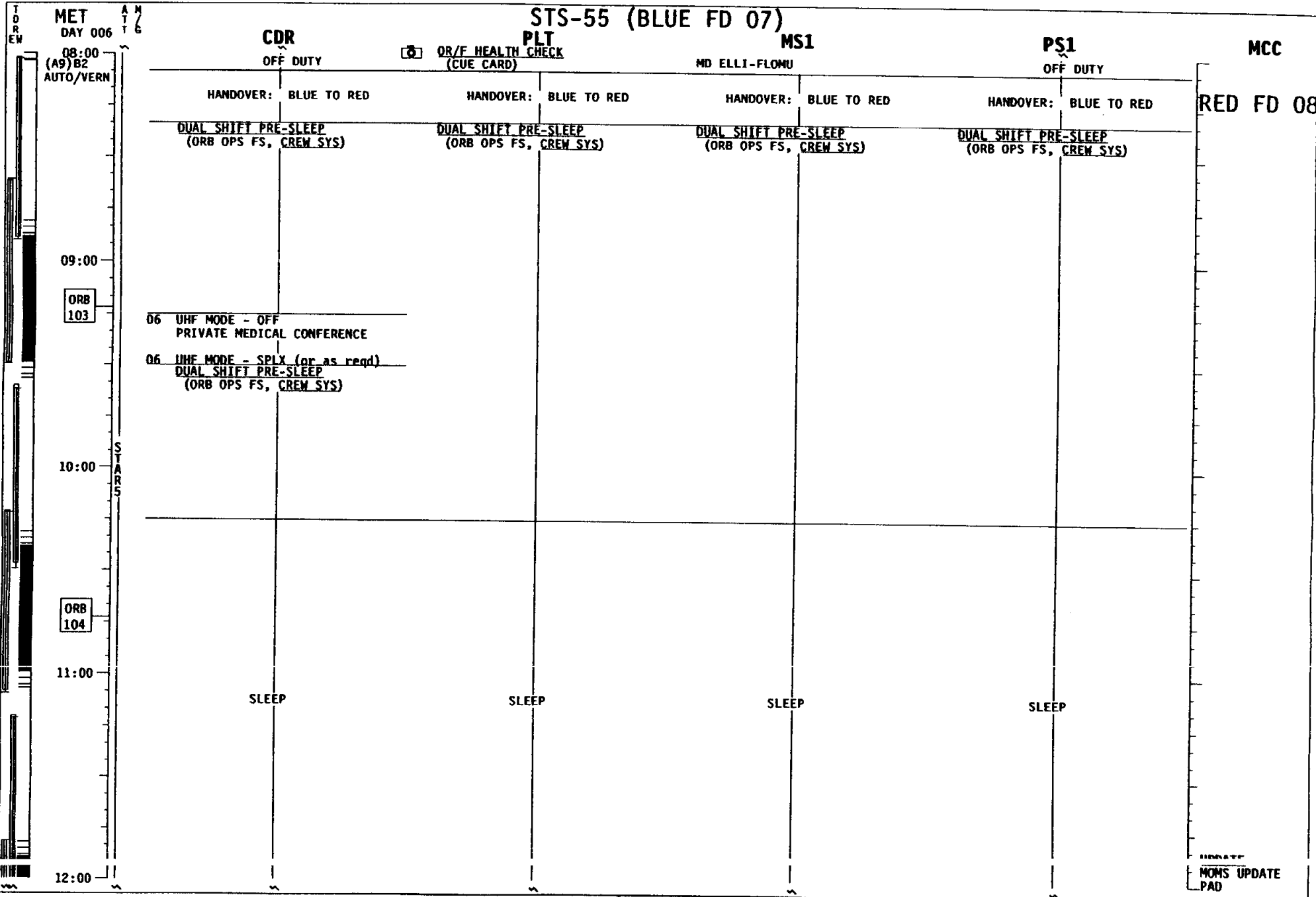
MANEUVER IMU ALIGN

IMU ALIGN - S TRK (ORB OPS)

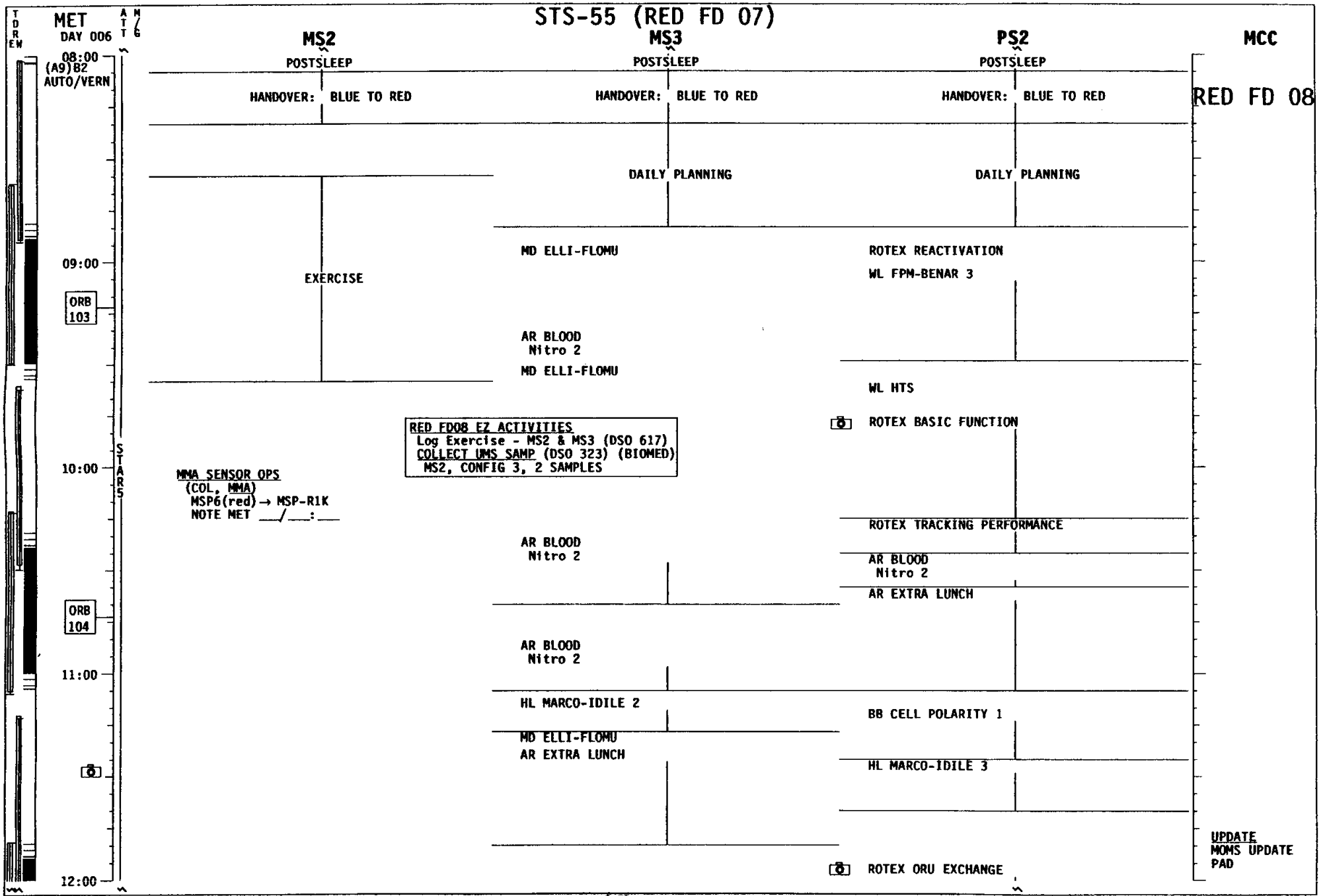
MANEUVER STAR 5

MD ELLI-FLOMU



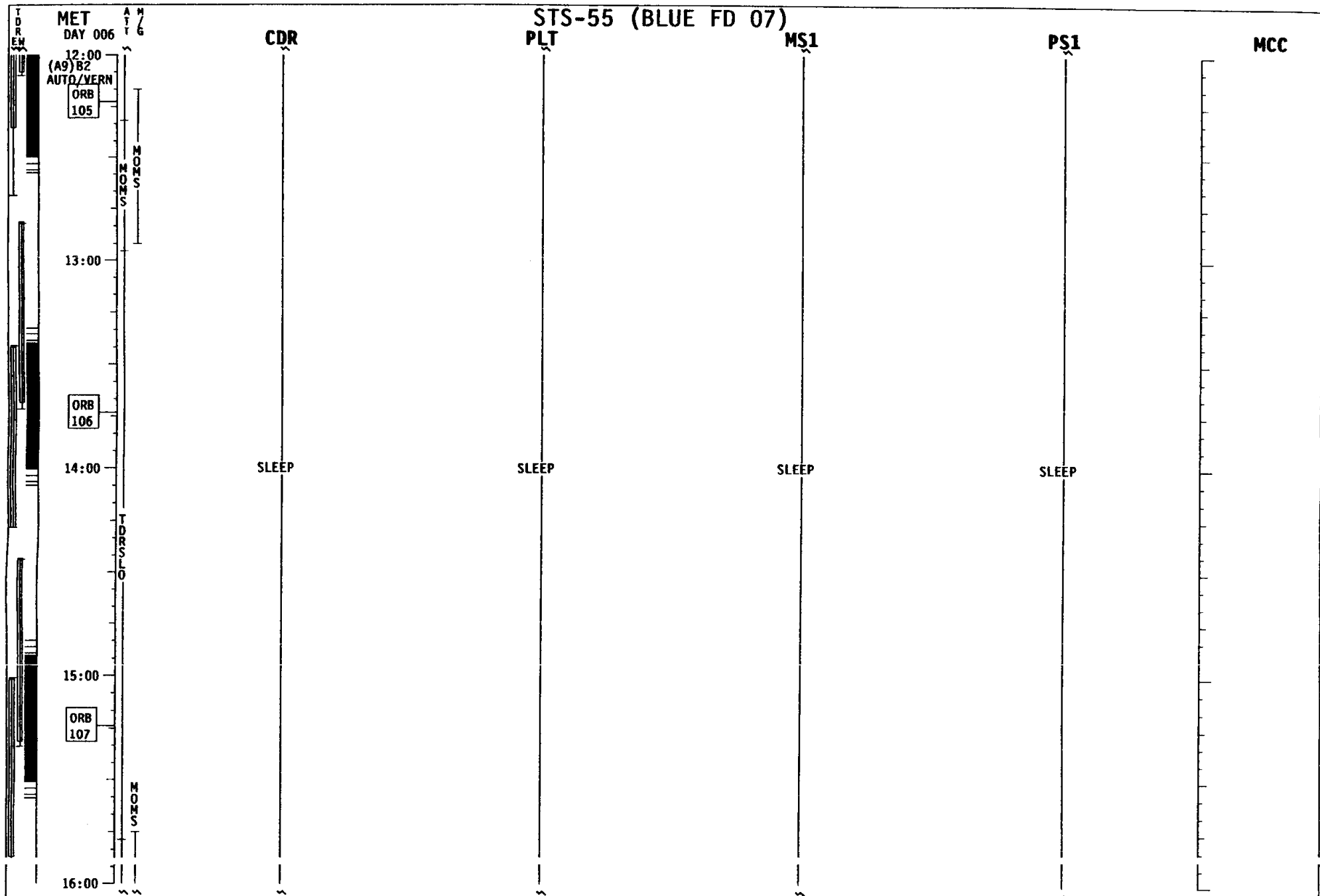


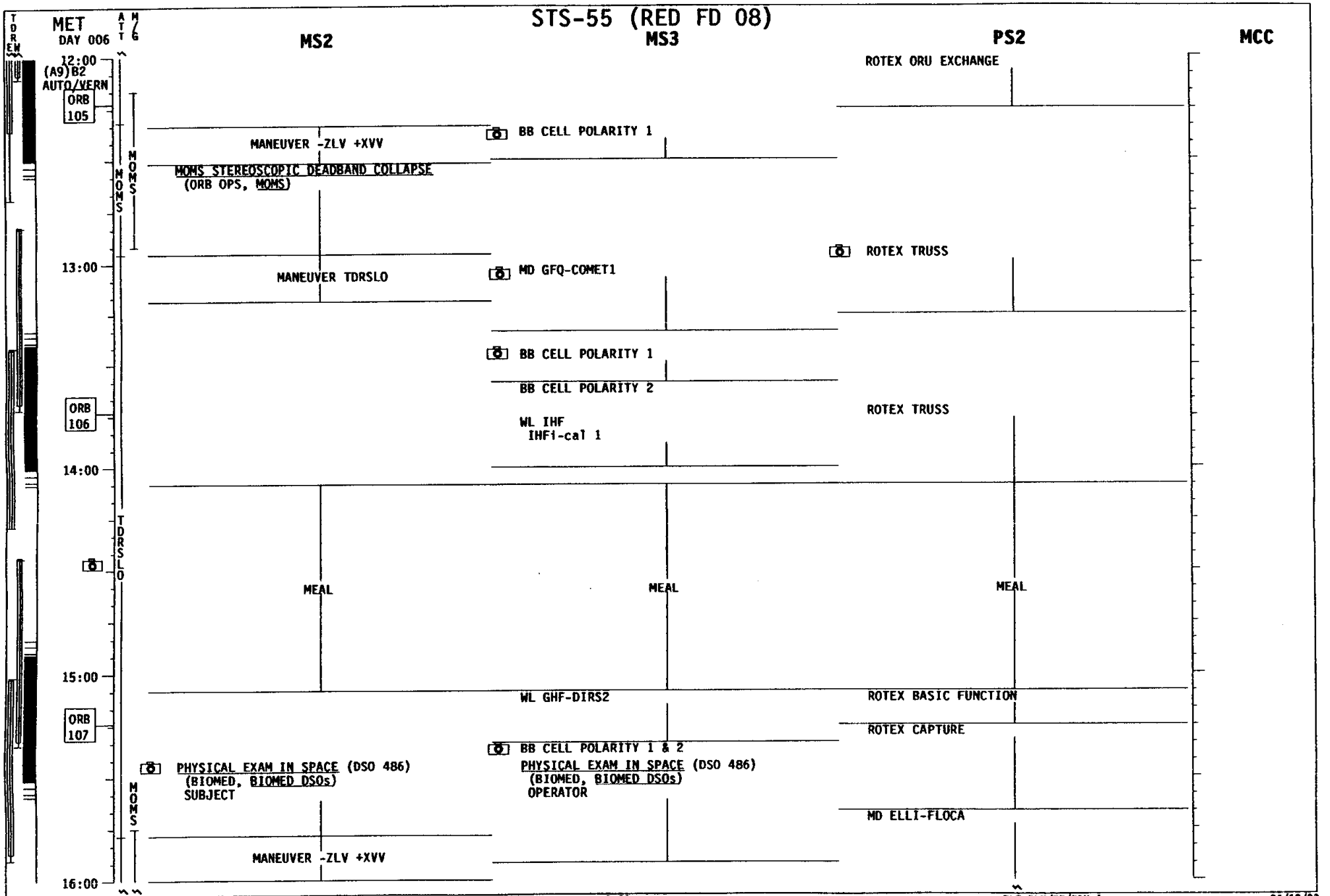
UPDATE
MONS UPDATE
PAD

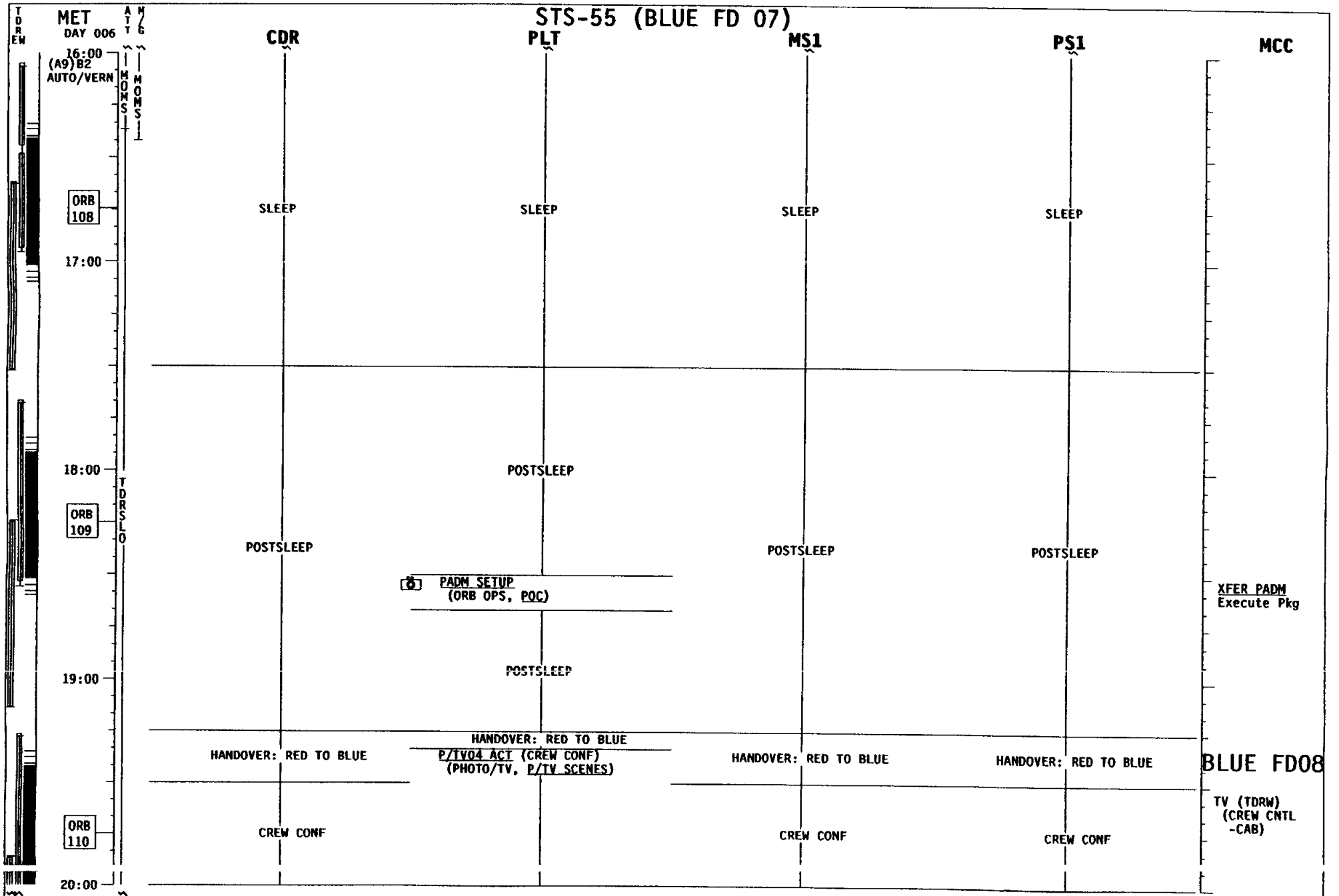


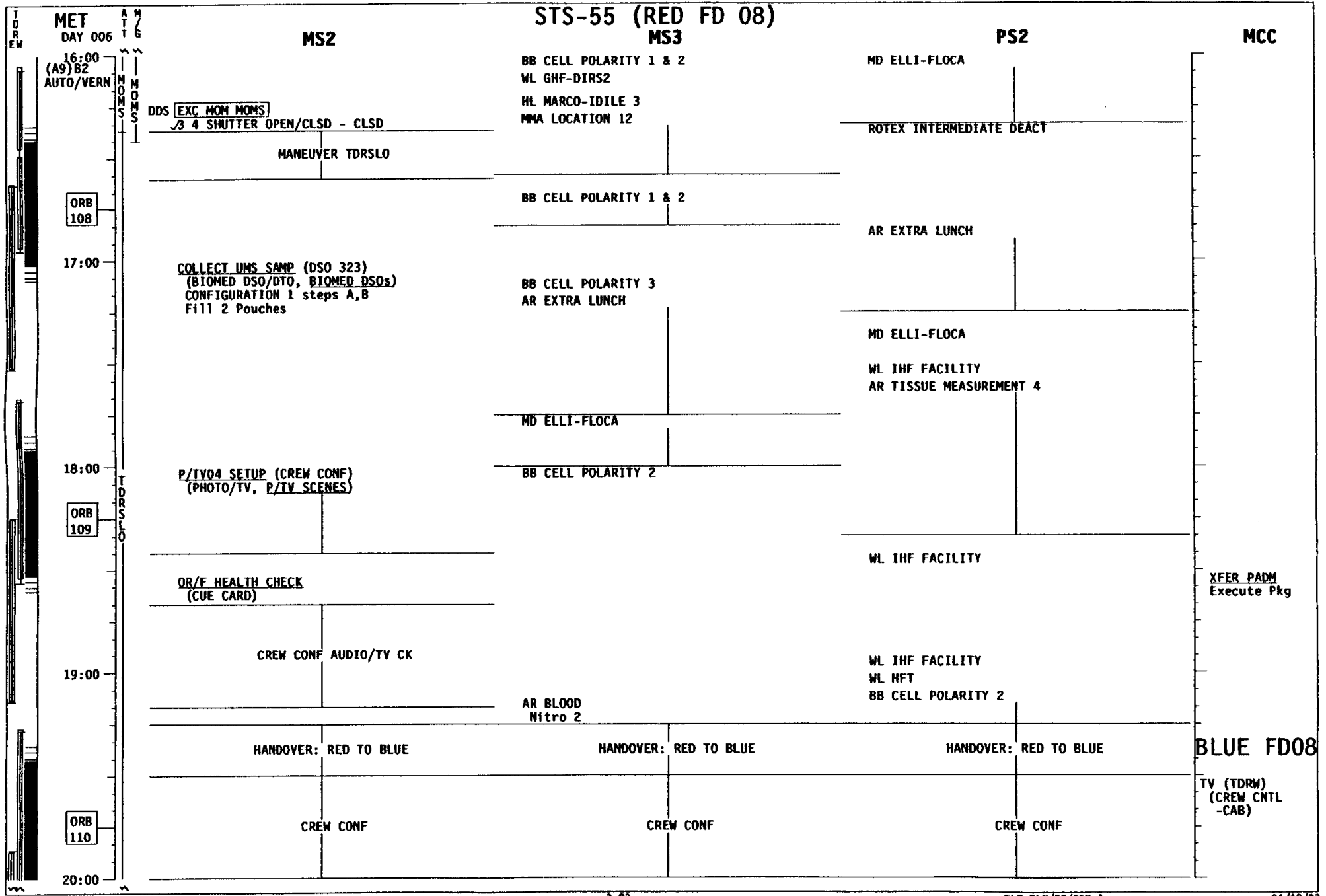
RED FD08 EZ ACTIVITIES
 Log Exercise - MS2 & MS3 (DSO 617)
 COLLECT UMS SAMP (DSO 323) (BIOMED)
 MS2, CONFIG 3, 2 SAMPLES

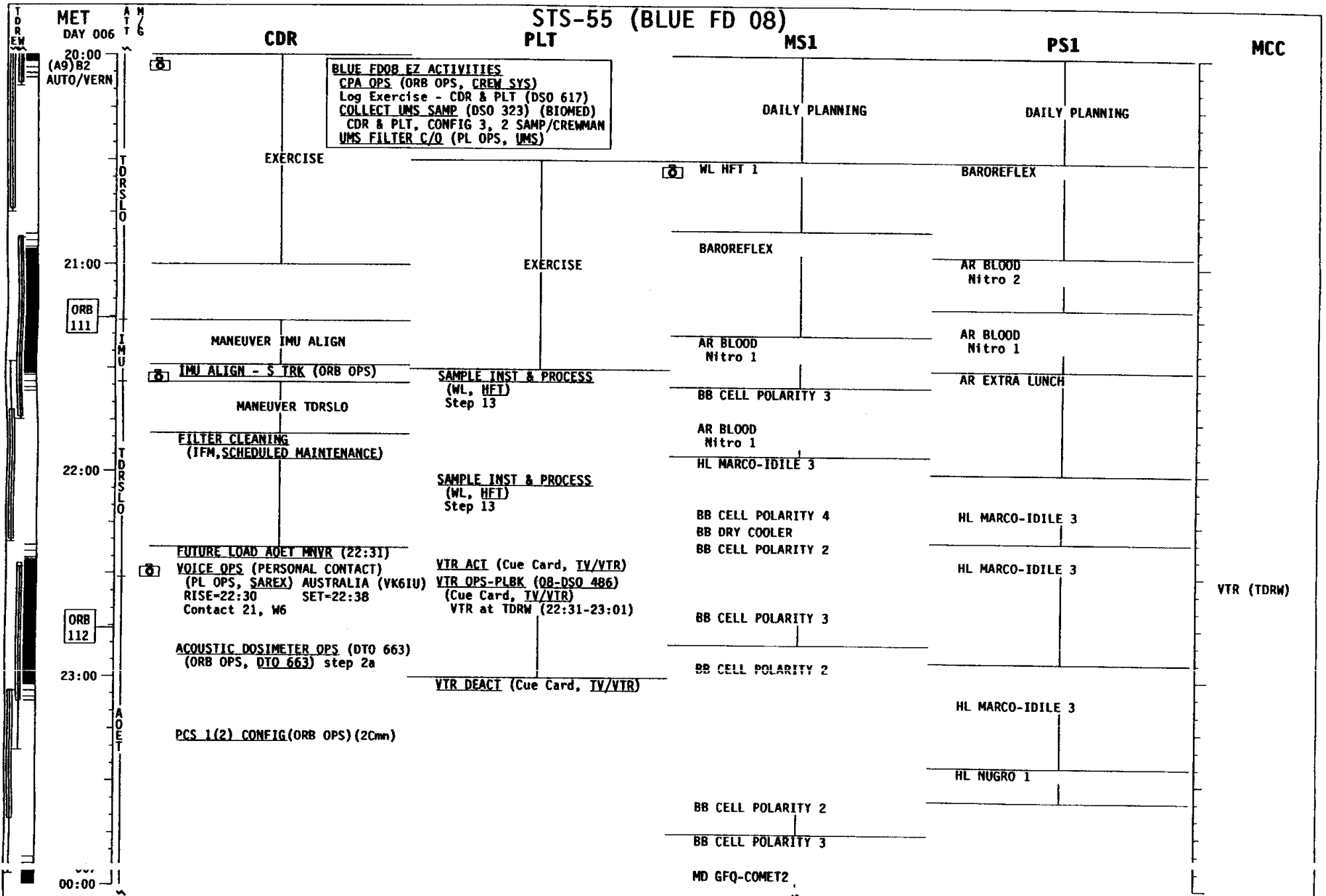
MMA SENSOR OPS
 (COL, MMA)
 MSP6(red) → MSP-R1K
 NOTE MET ___/___:___

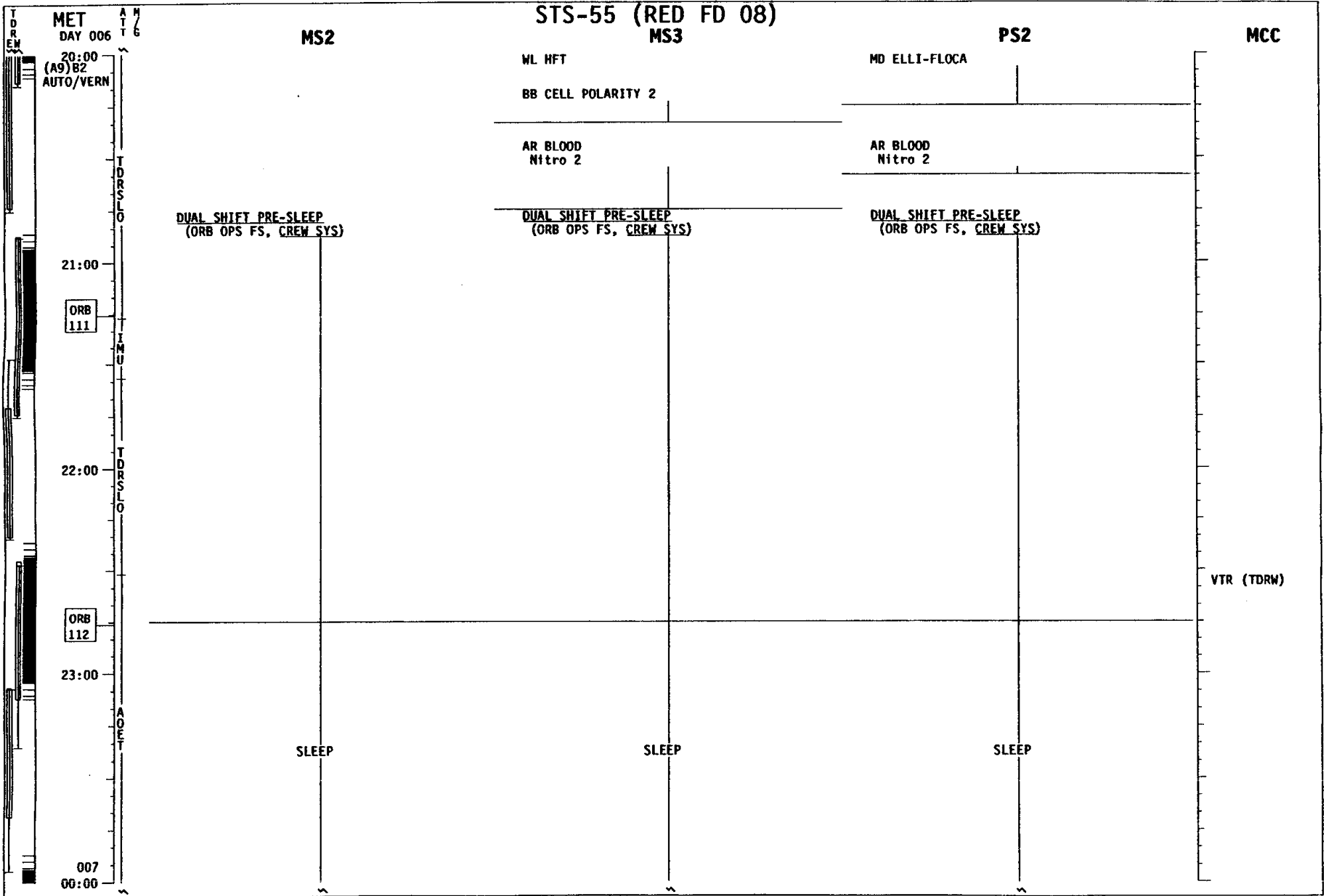


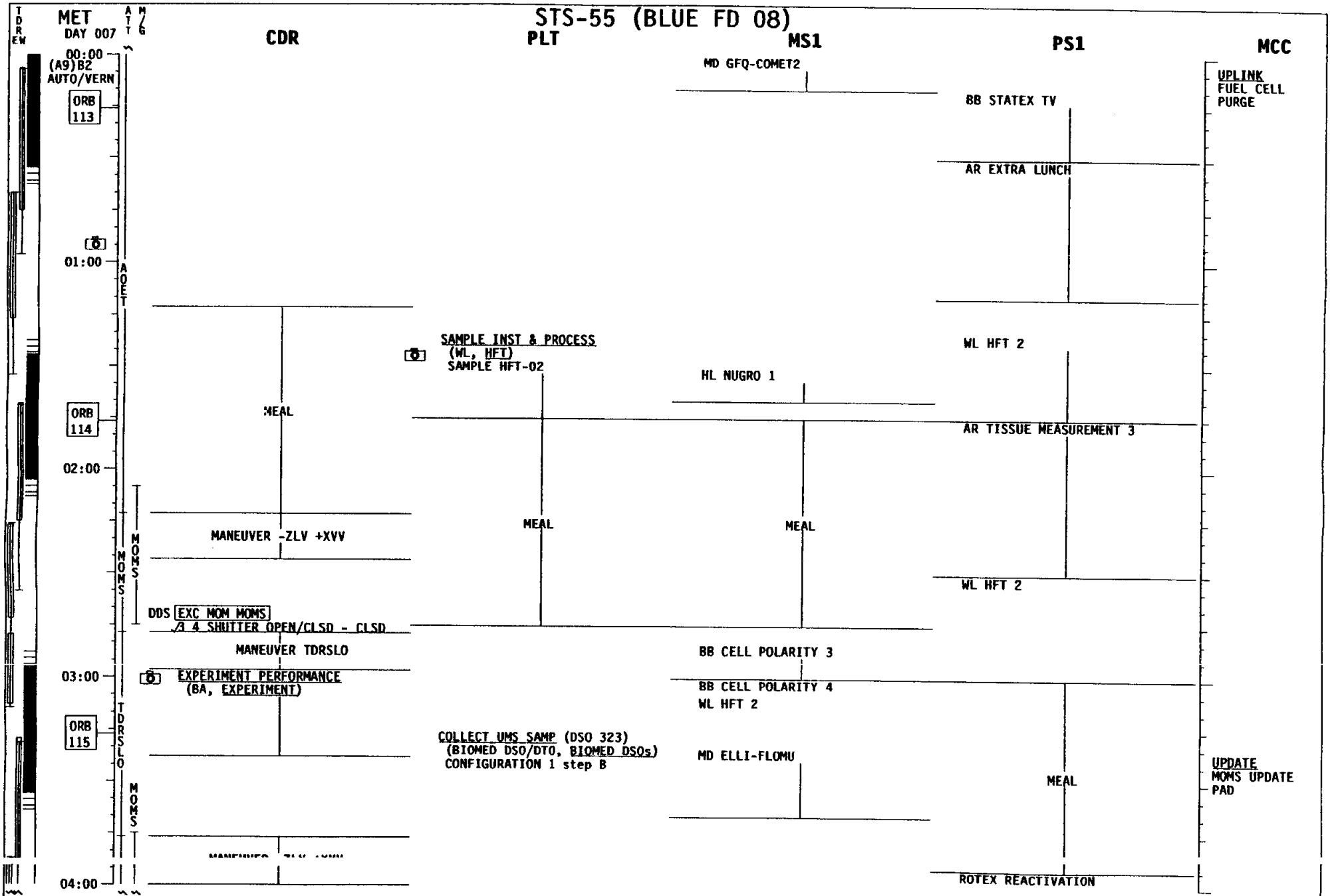












T
D
R
E
W

MET
DAY 007

A
M
T
G

STS-55 (RED FD 08)

MS2

MS3

PS2

MCC

00:00
(A9)B2
AUTO/VERN

ORB
113

01:00

ORB
114

02:00

SLEEP

SLEEP

SLEEP

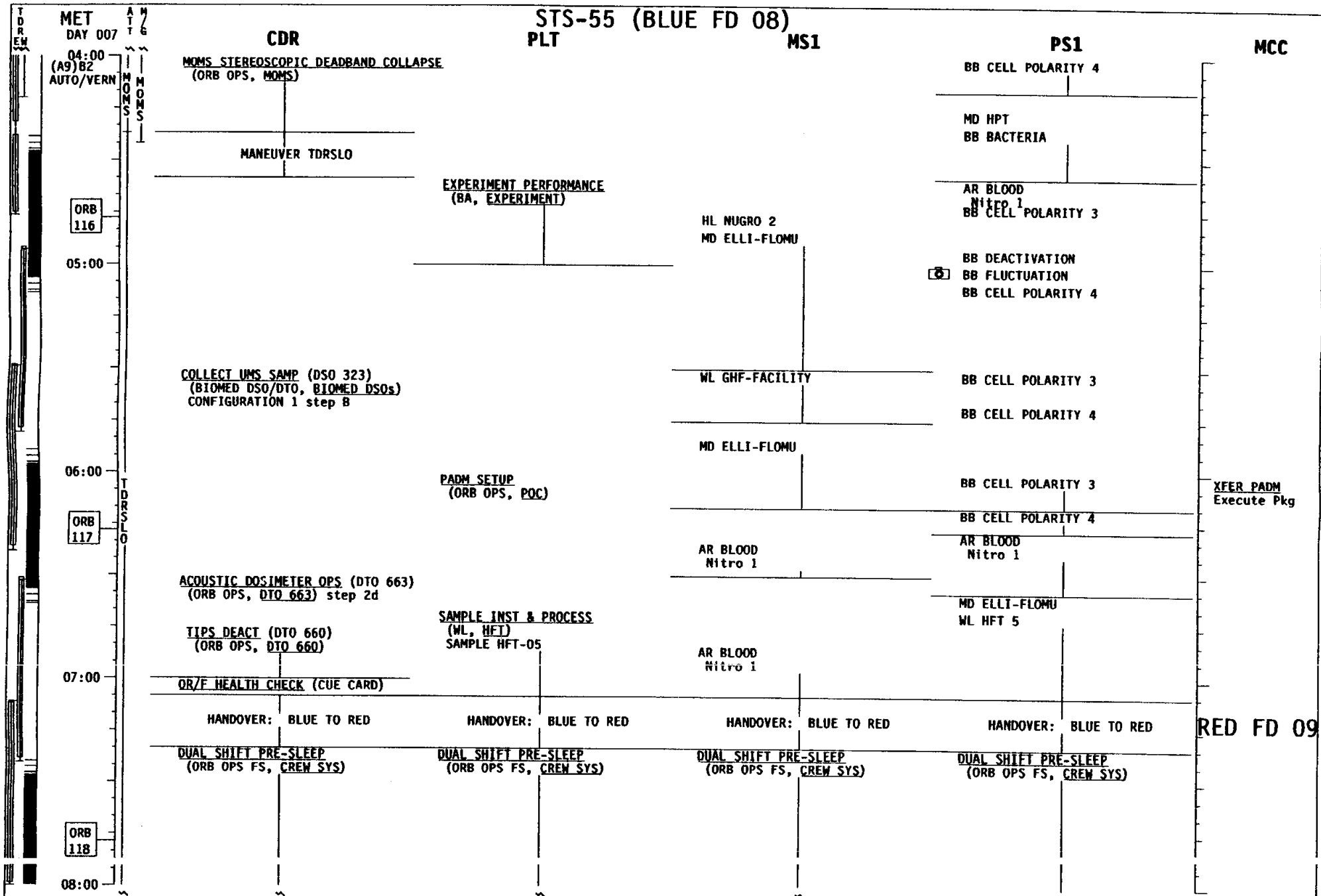
03:00

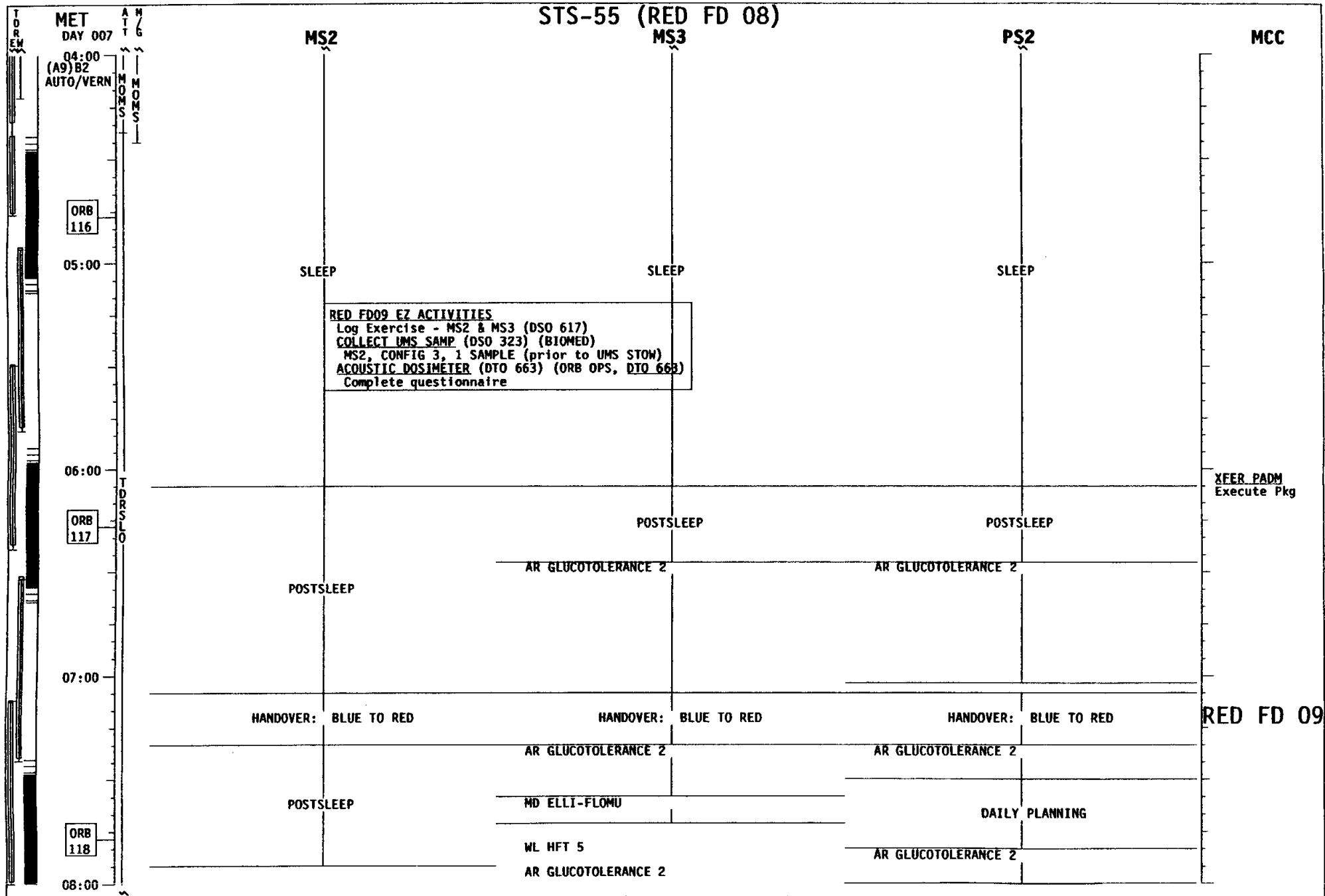
ORB
115

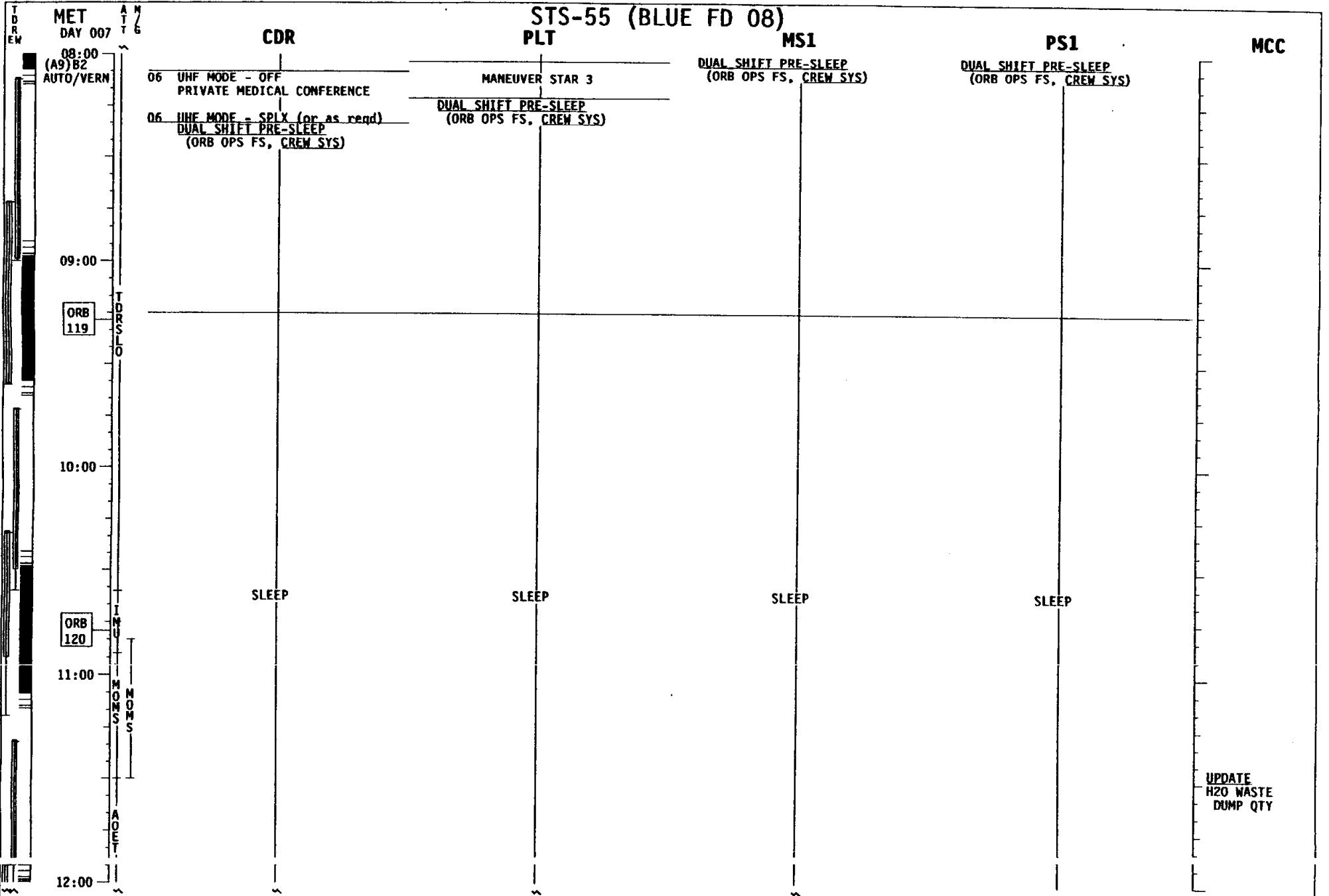
04:00

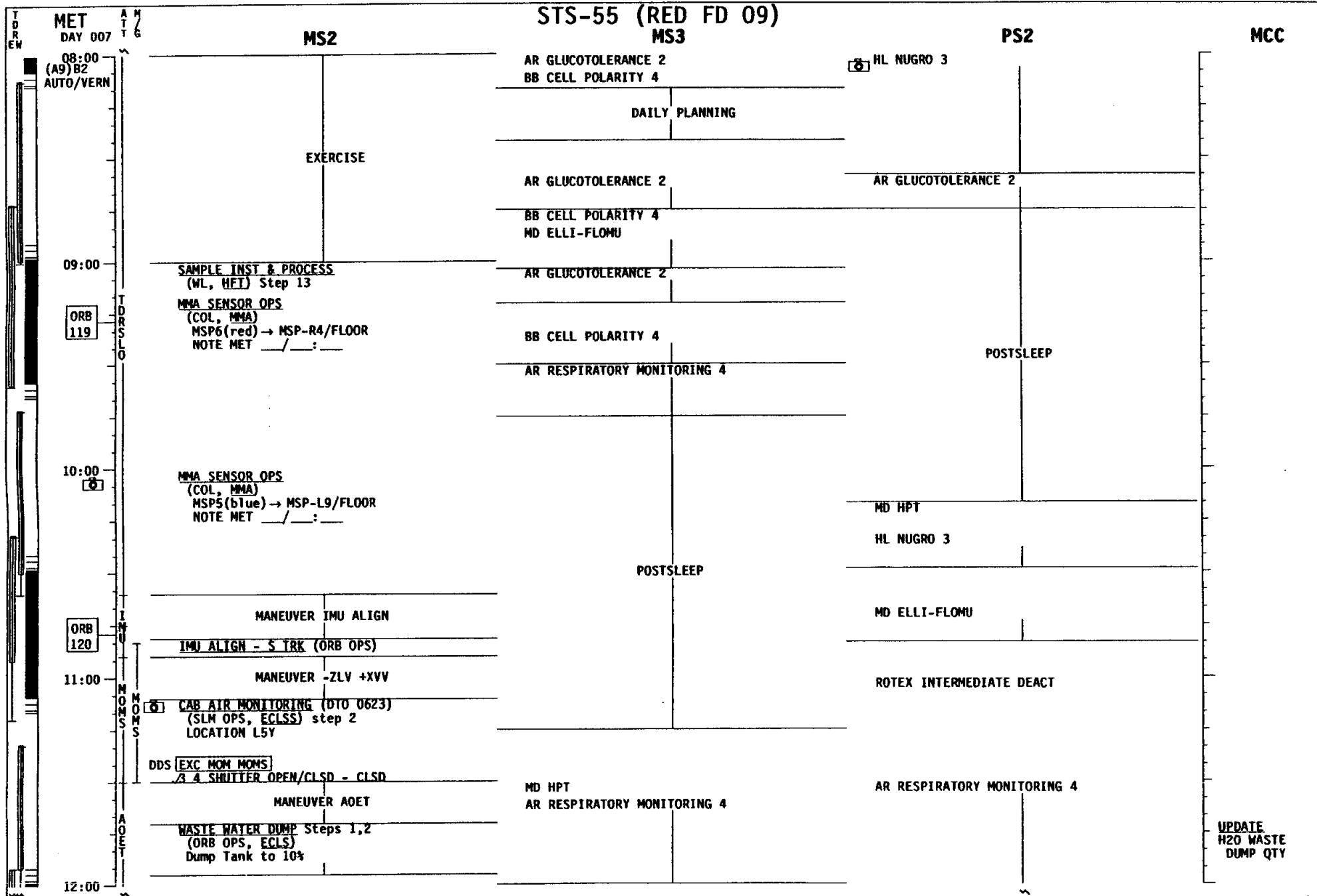
UPLINK
FUEL CELL
PURGE

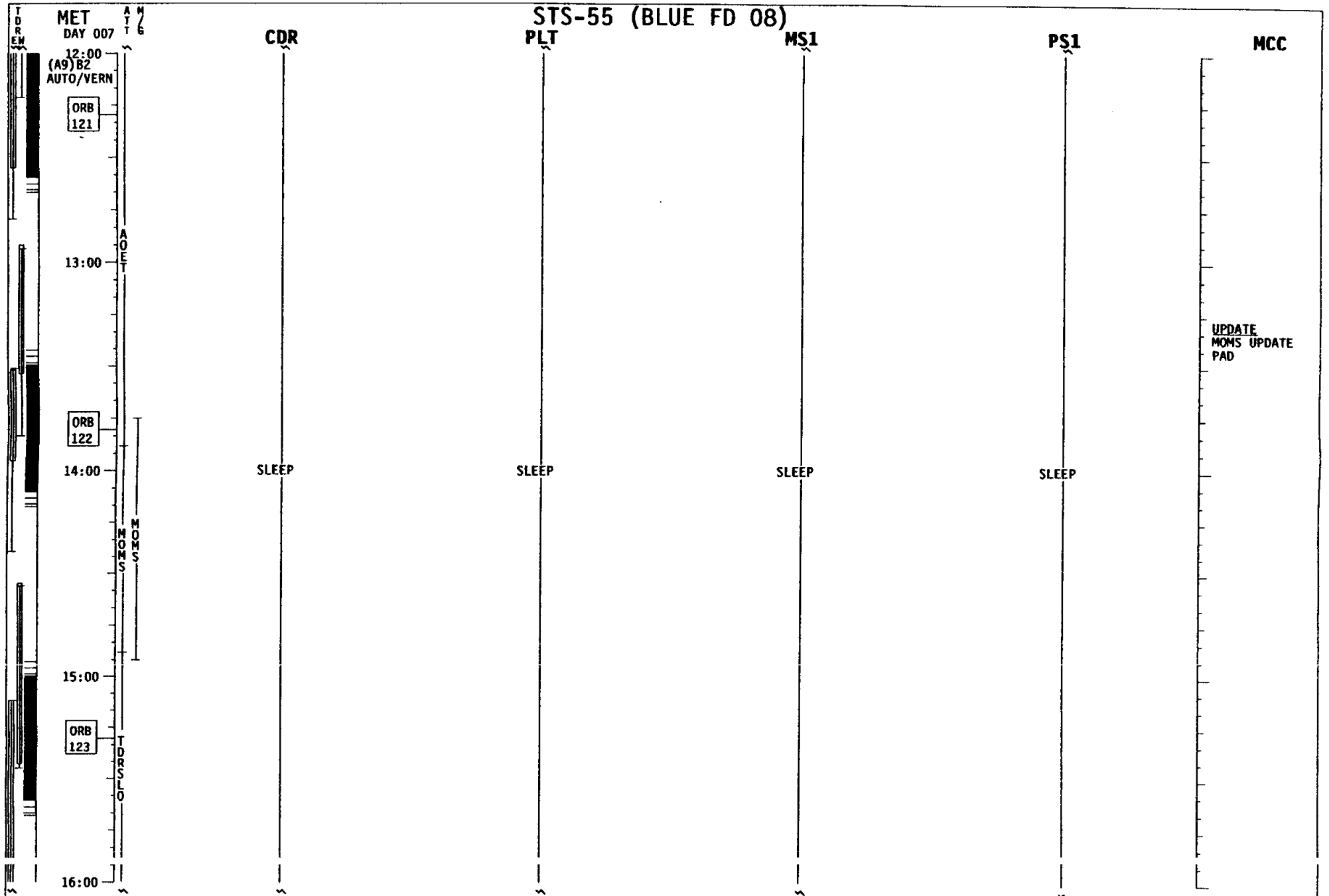
UPDATE
MONS UPDATE
PAD

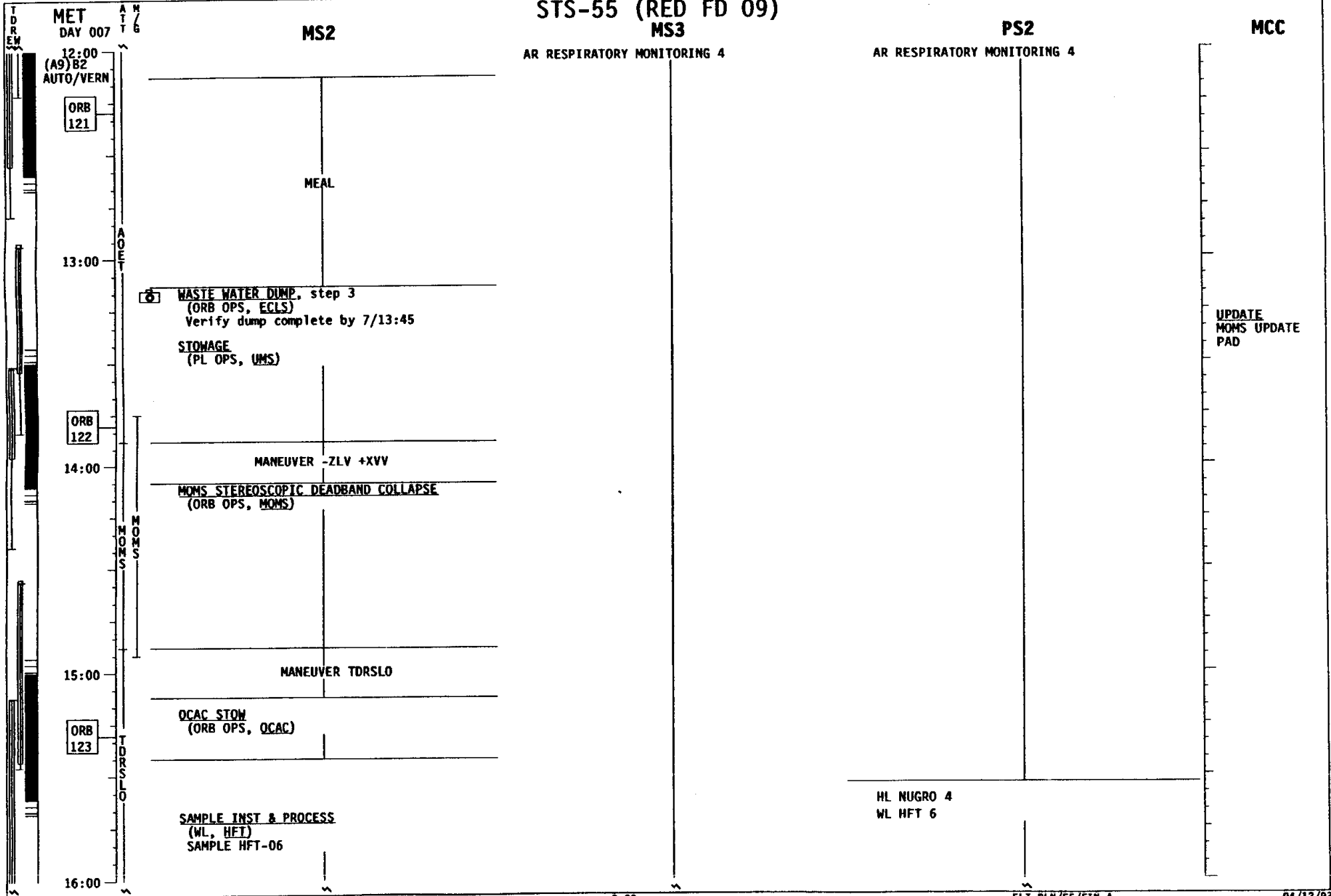


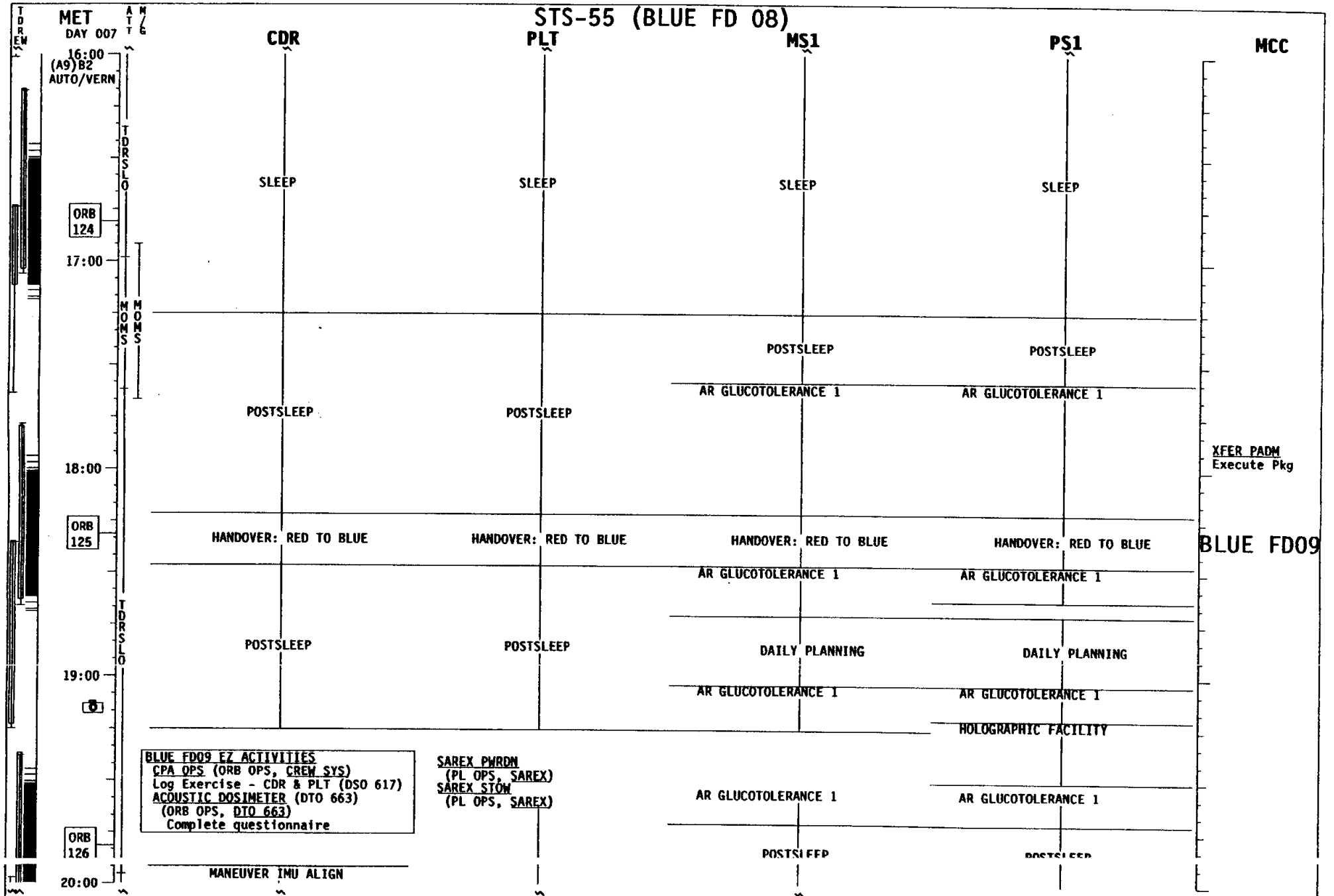


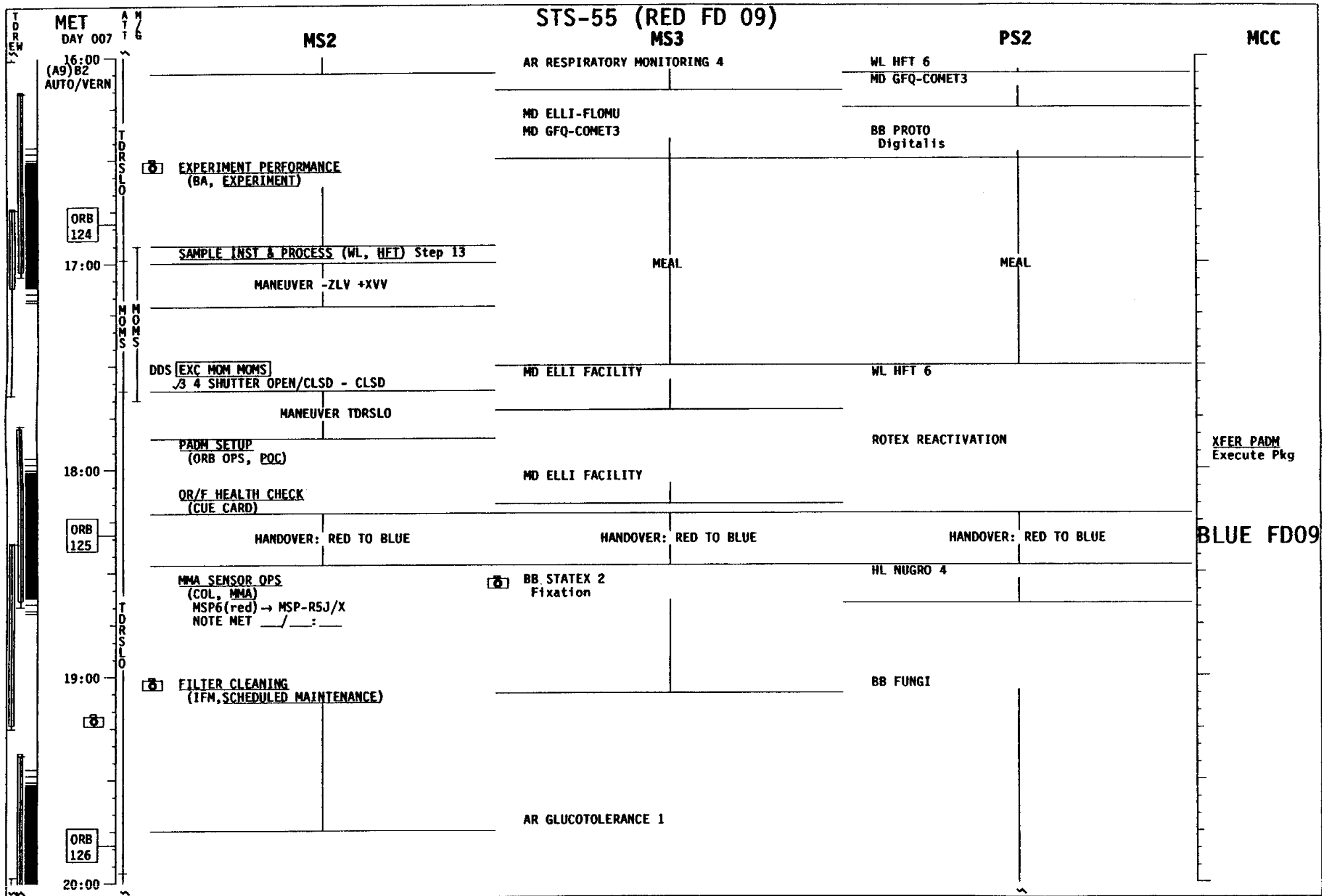


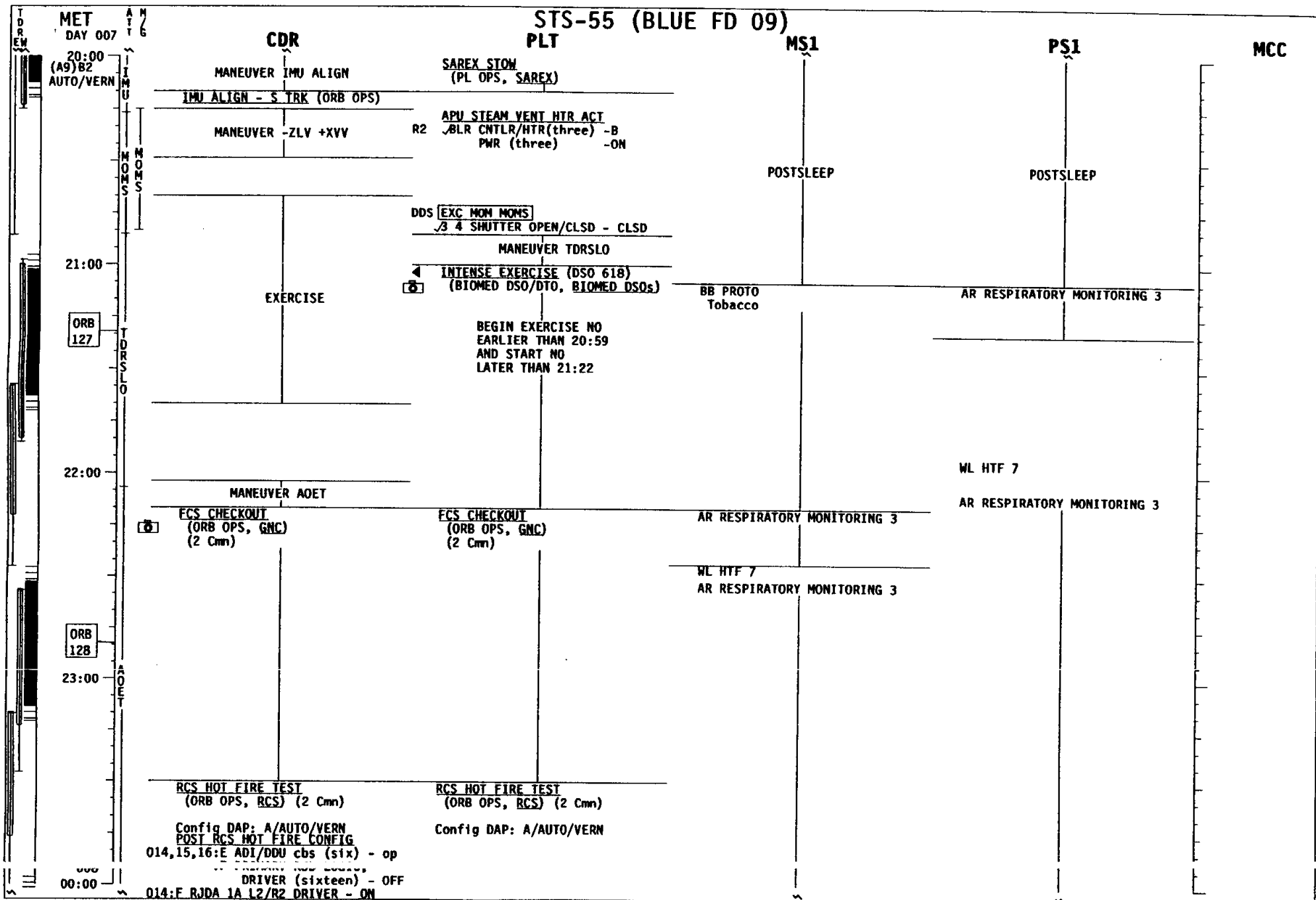


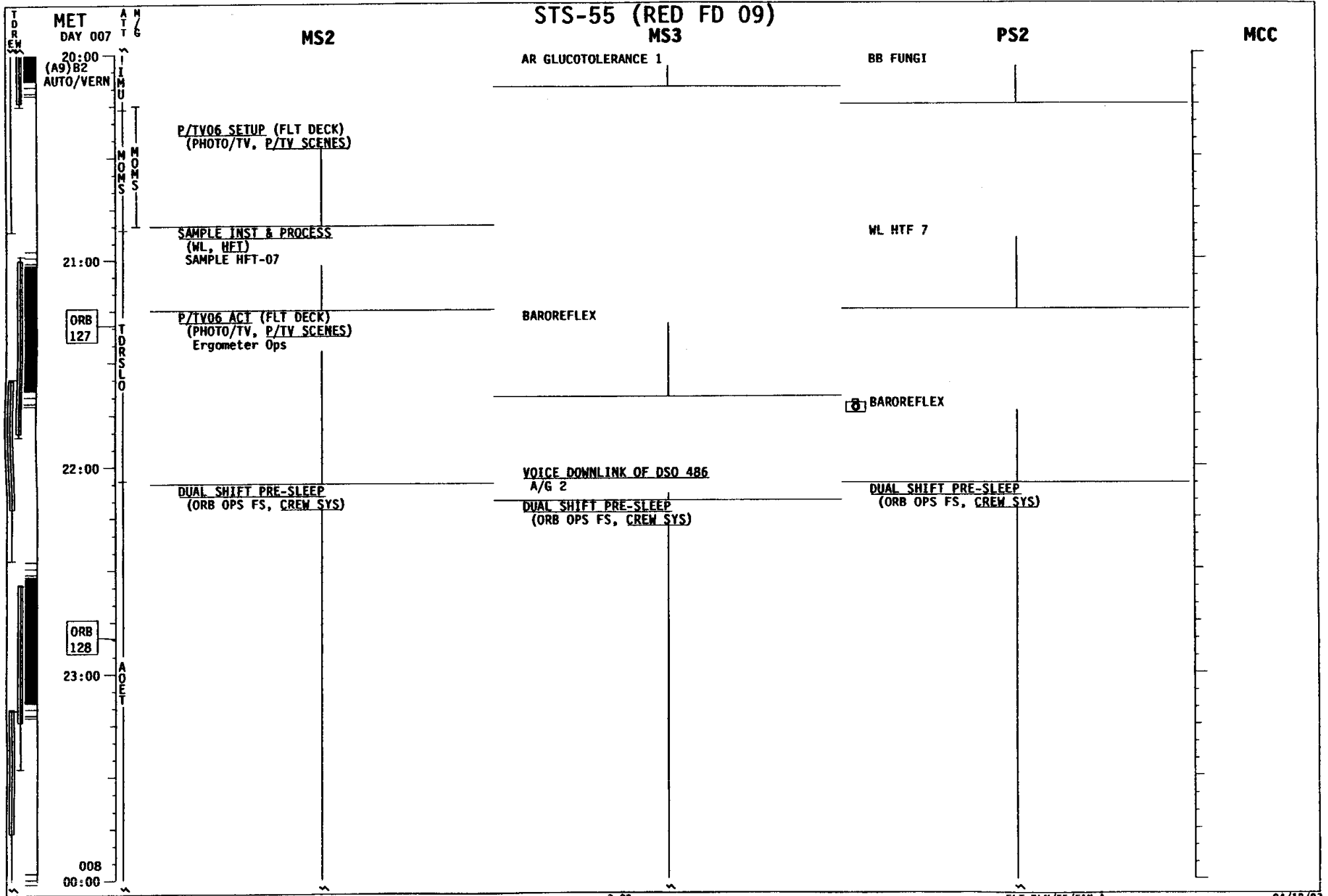


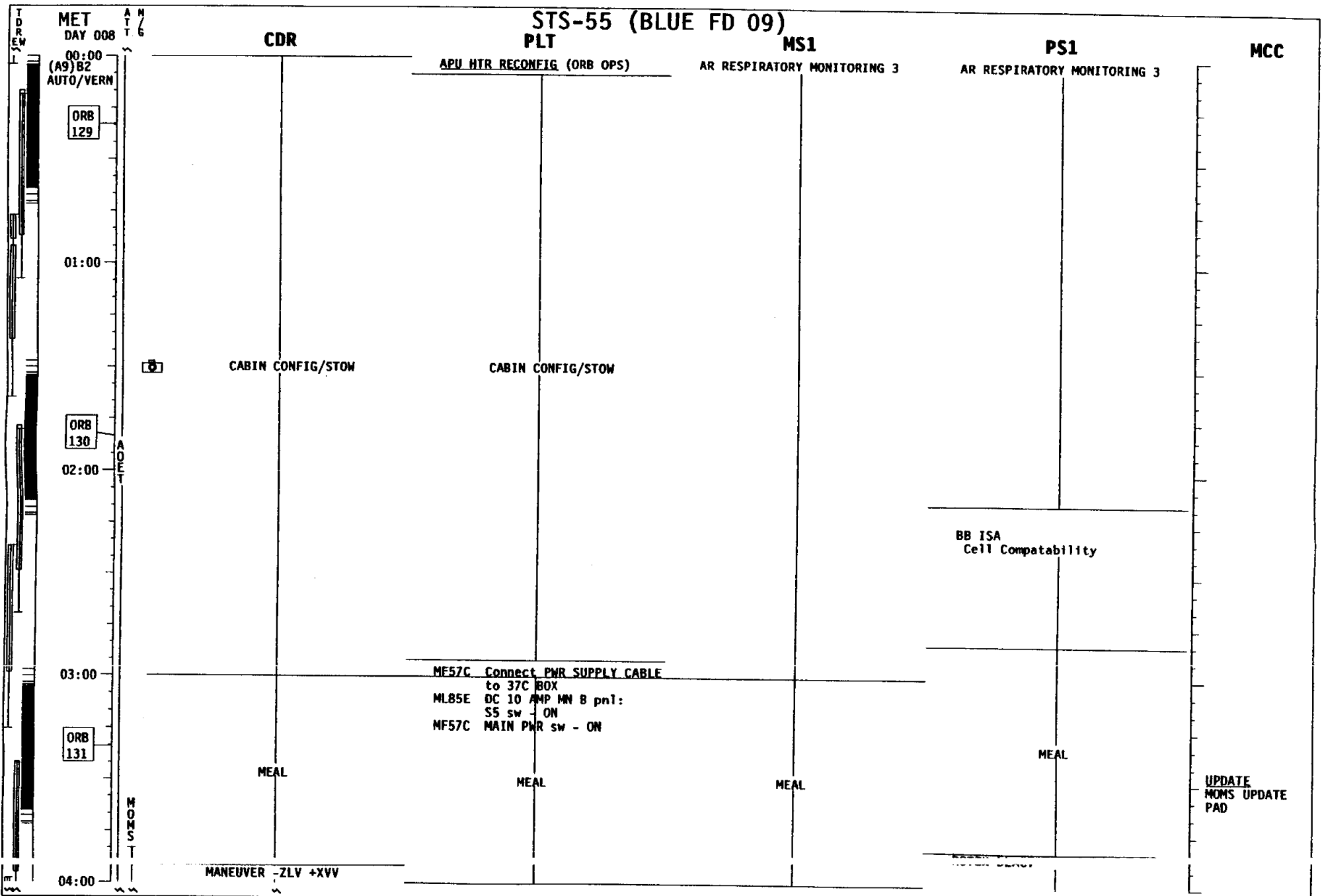












STS-55 (RED FD 09)

MS2

MS3

PS2

MCC

MET DAY 008

00:00 (A9) B2 AUTO/VERN

ORB 129

01:00

ORB 130

02:00

03:00

ORB 131

04:00

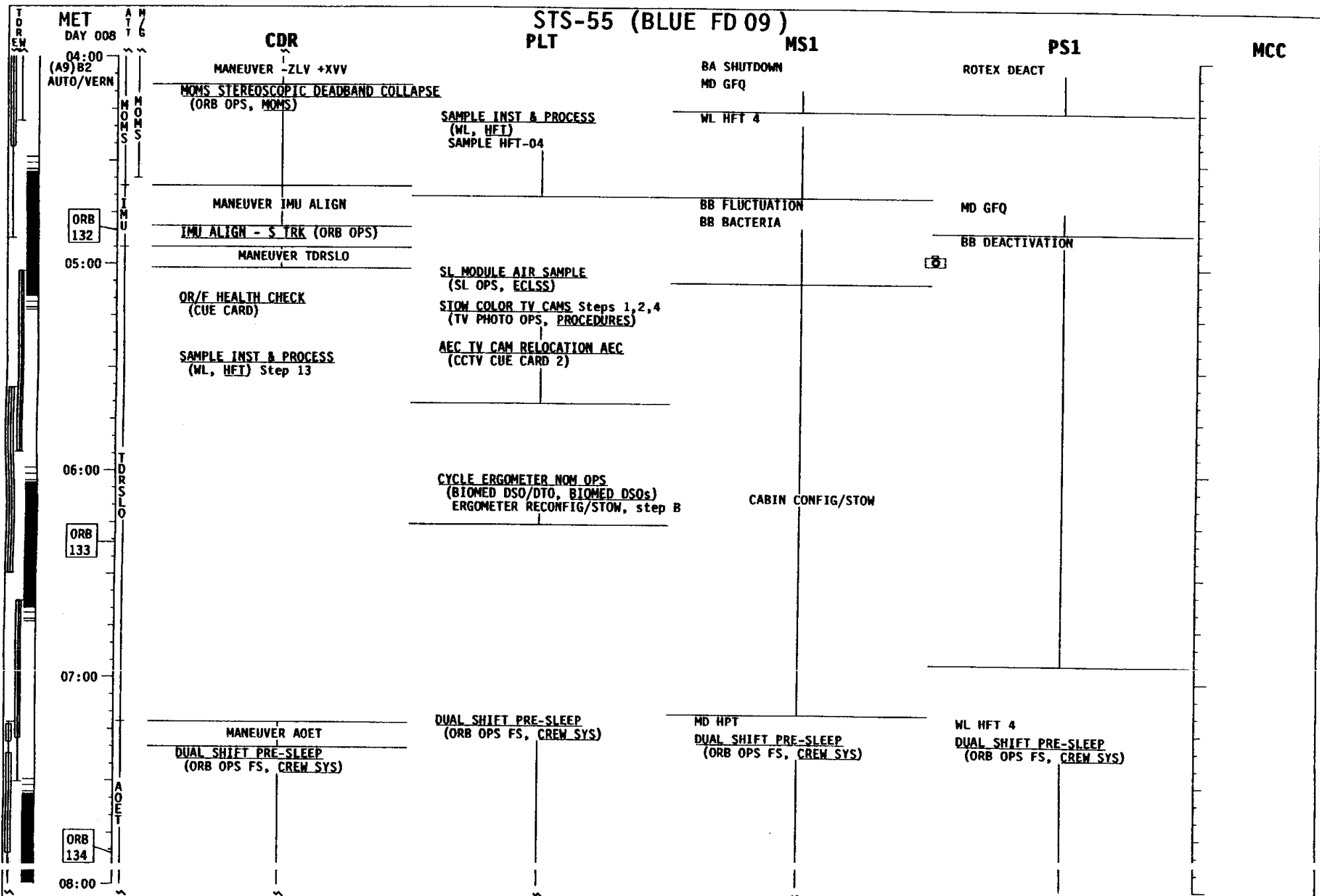
SLEEP

SLEEP

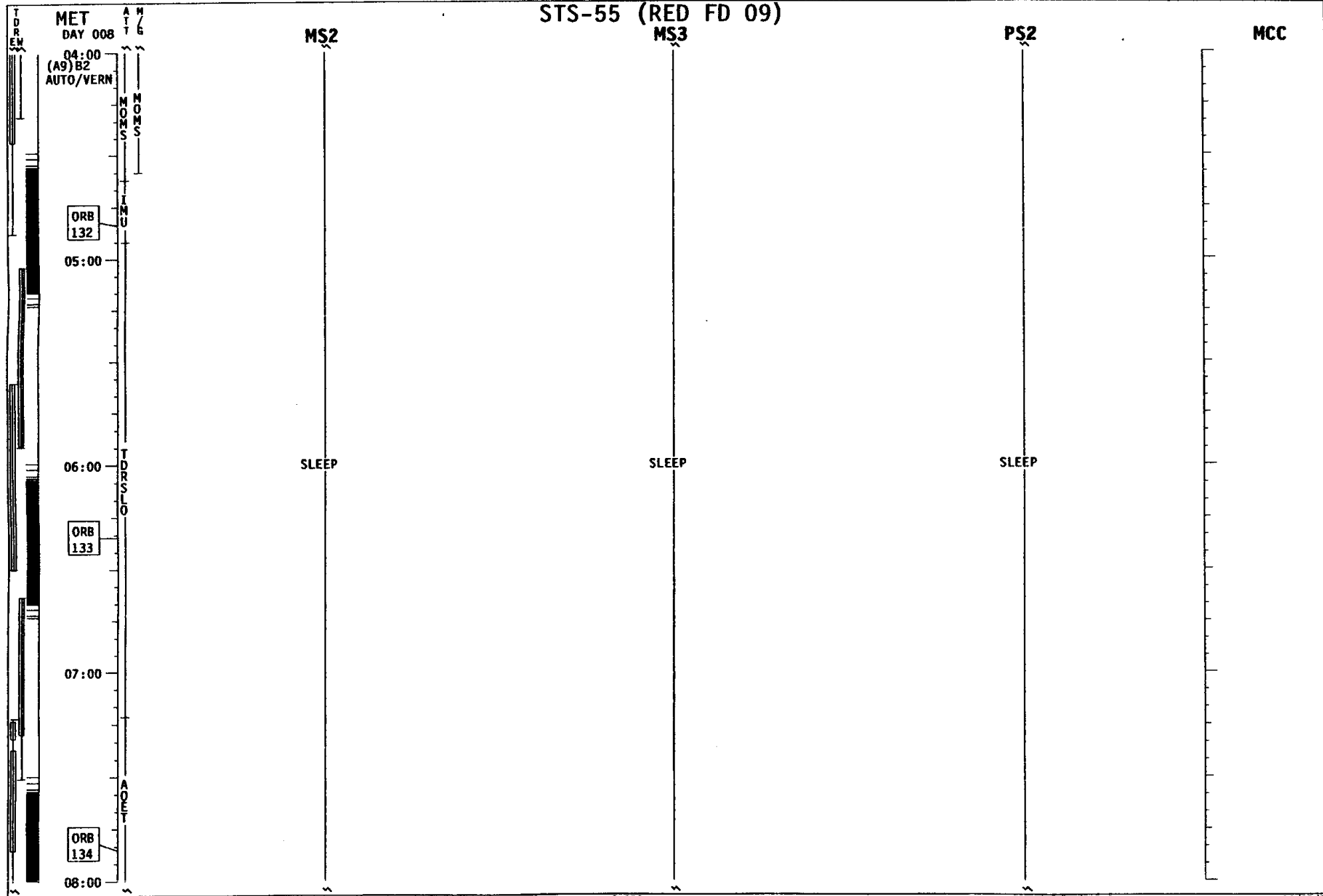
SLEEP

UPDATE
MONS UPDATE
PAD

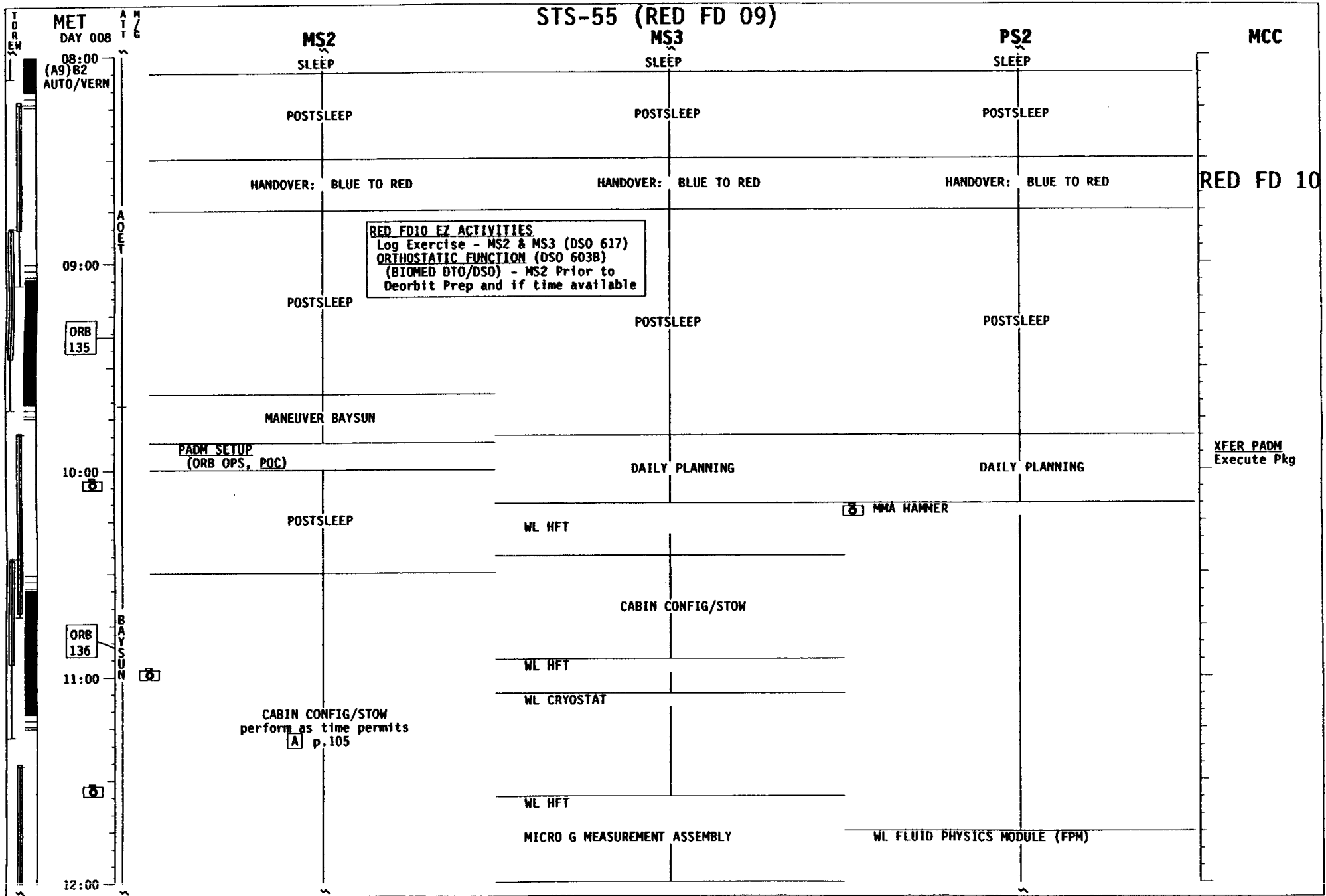
STS-55 (BLUE FD 09)

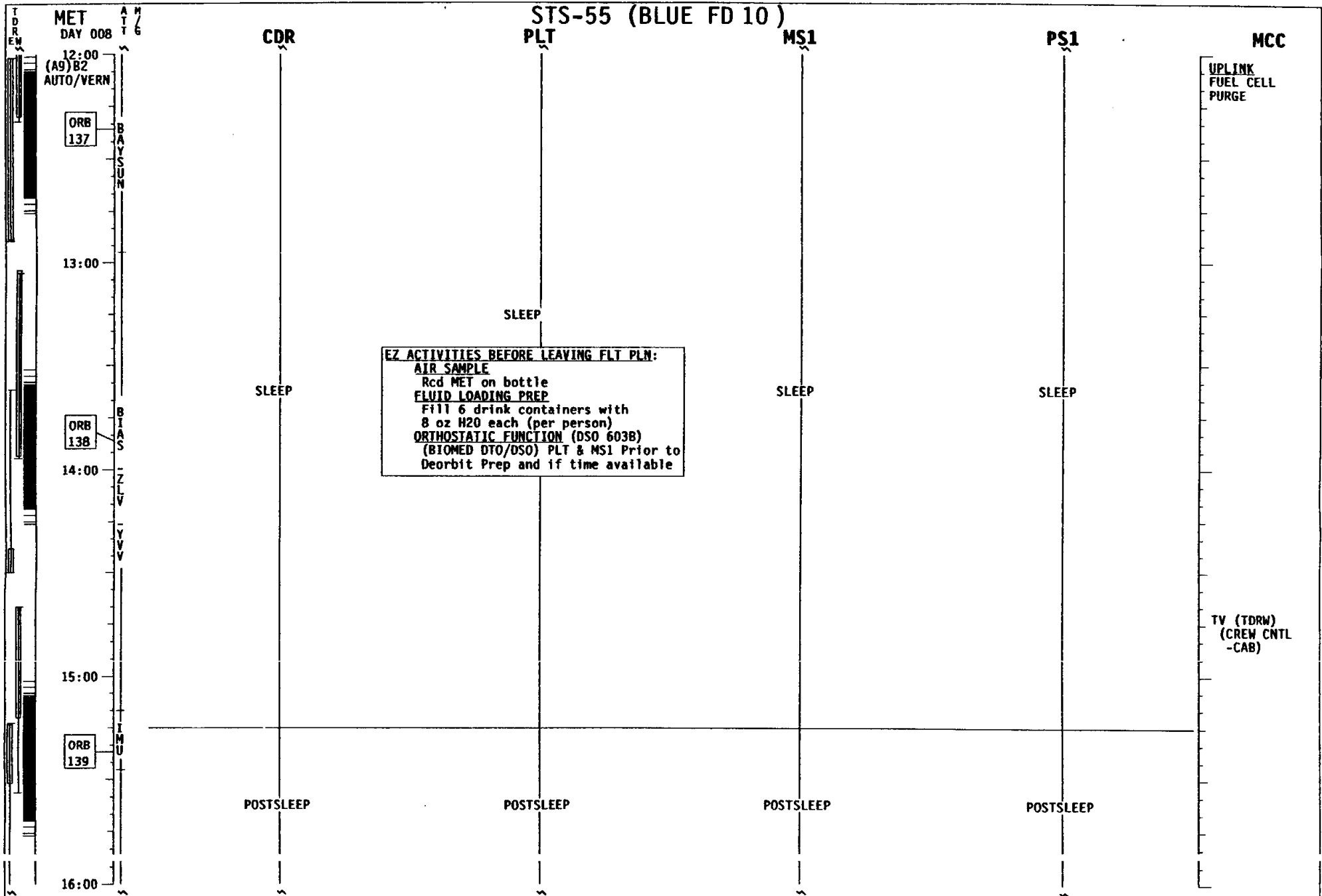


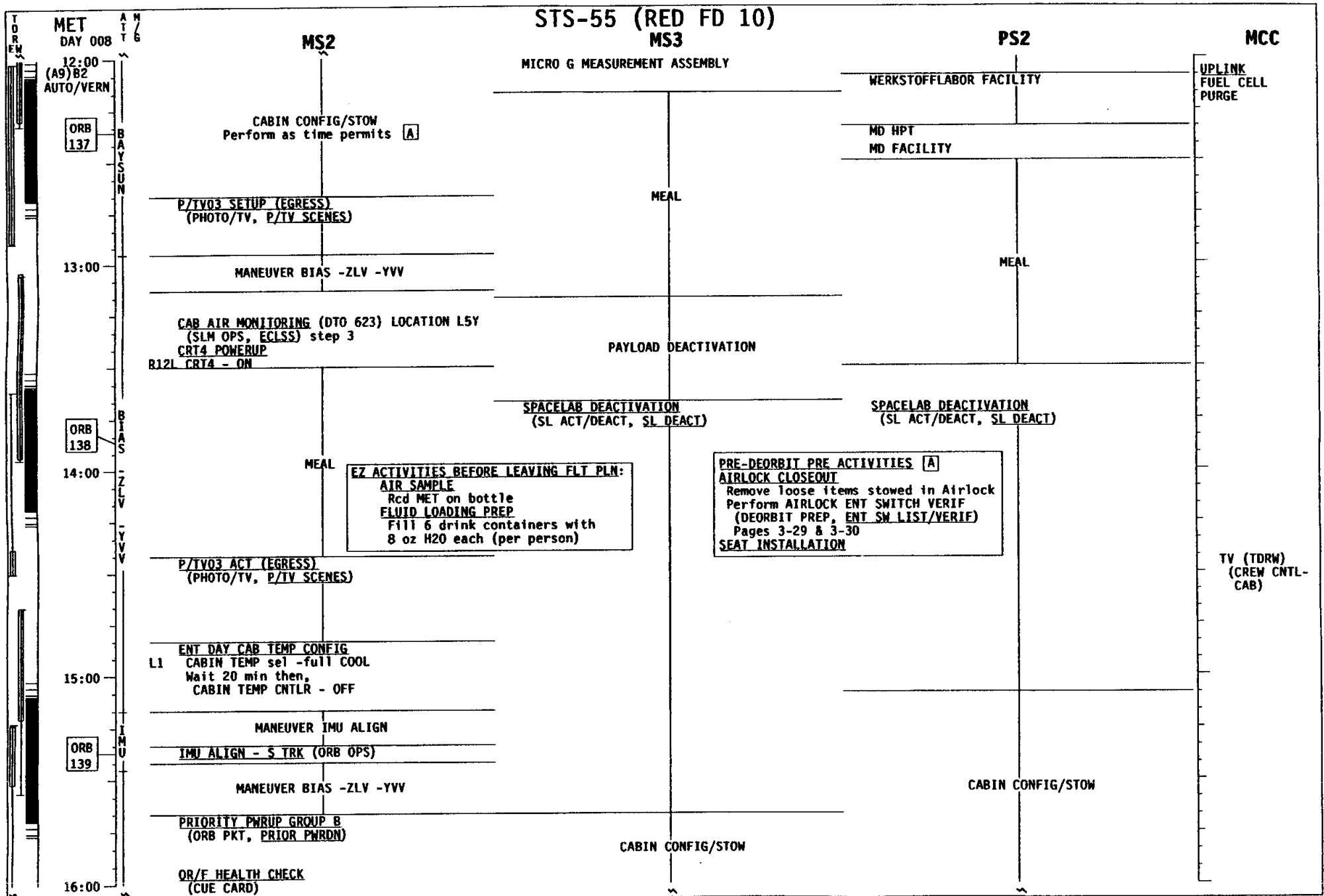
STS-55 (RED FD 09)

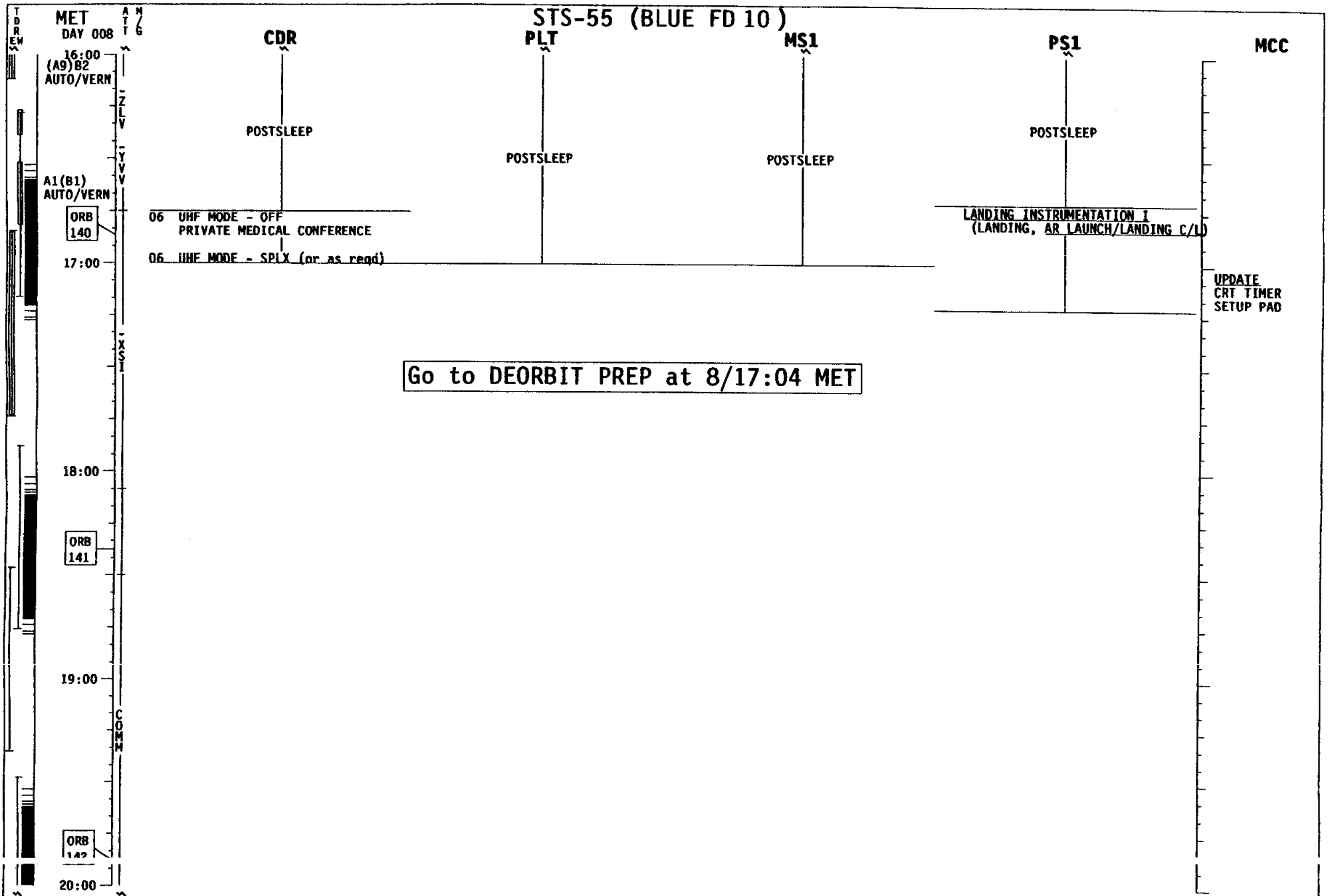


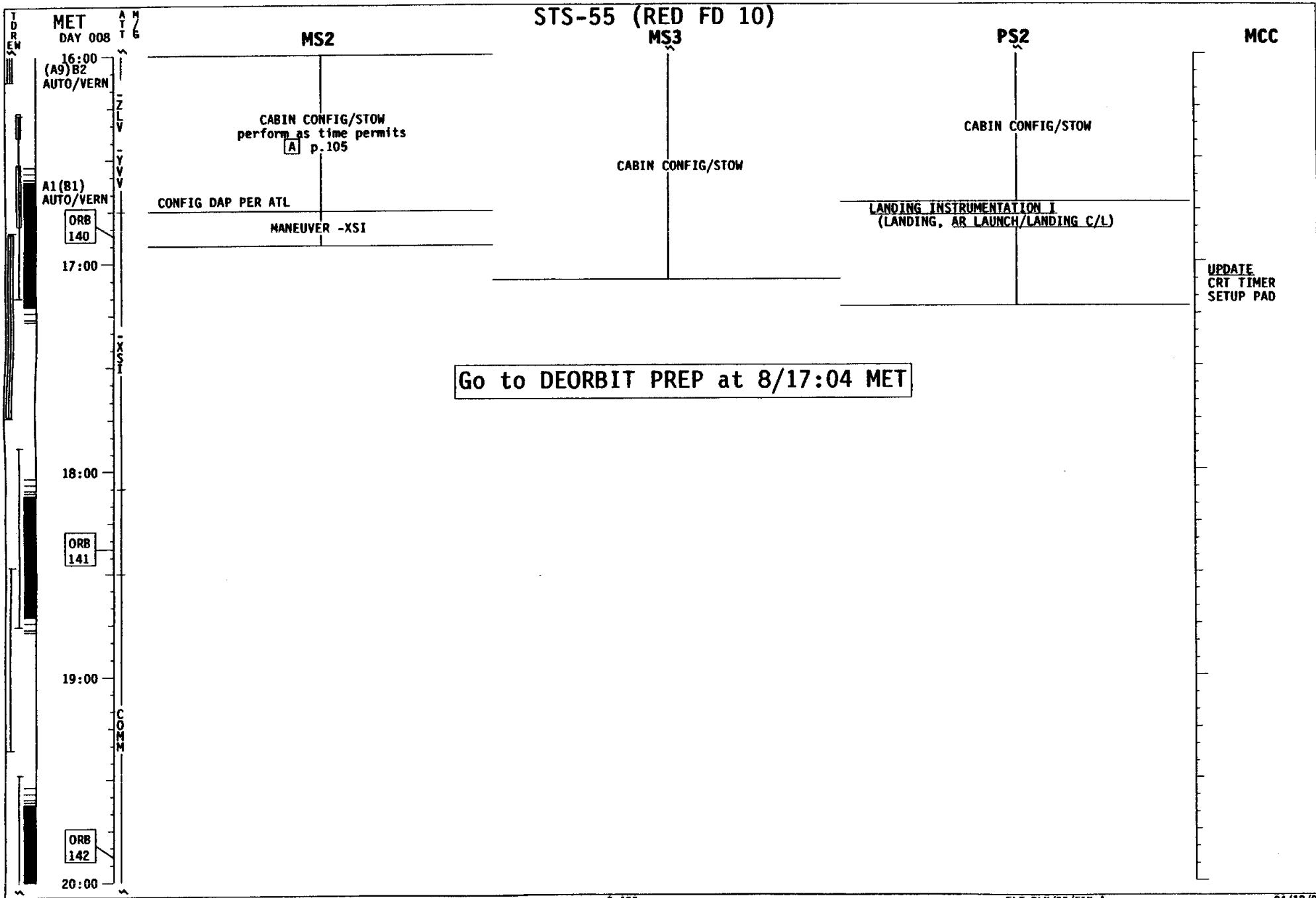
MET DAY 008		STS-55 (BLUE FD 09)				MCC
A M T E		CDR	PLT	MS1	PS1	
08:00 (A9)B2 AUTO/VERN		DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	
06 UHF MODE - OFF PRIVATE MEDICAL CONFERENCE						
06 UHF MODE - SPLX (or as reqd)						
HANDOVER: BLUE TO RED		HANDOVER: BLUE TO RED	HANDOVER: BLUE TO RED	HANDOVER: BLUE TO RED	HANDOVER: BLUE TO RED	RED FD 10
DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)		DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	DUAL SHIFT PRE-SLEEP (ORB OPS FS, CREW SYS)	
09:00						
ORB 135						
10:00						
10:00						XFER PADM Execute Pkg
SLEEP		SLEEP	SLEEP	SLEEP	SLEEP	
ORB 136						
11:00						
12:00						











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ATTITUDE TIMELINE

ATTITUDE
TIMELINE

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT
000/01:12:00 MET 23:36 114/16:04:00 GMT 15:36	TGT=4 RA= 31.633 BV=5 DEC= 12.815N P=270.00 Y= 0.00 OM= 90.00	A1 AUTO PRI	DSC 0.200 SUN DB AT 5.00 R 180 DB RT 0.20 P 90	INRTL R=328.98 P= 70.80 Y=352.92	PLBD OPEN AT +ZSI NOSE SO TH PROTECTS GAU S
000/02:15:00 MET 23:23 114/17:07:00 GMT 15:23	INRTL R=281.00 MNVR P=322.00 Y=323.00	A1 AUTO PRI	DSC 0.200 SUN DB AT 5.00 R 148 DB RT 0.20 P 71	STAR PAIR A1 -Y:29 -Z:30	IMU ALIGN
000/02:30:00 MET 43:14 114/17:22:00 GMT 35:14	INRTL R= 95.00 MNVR P= 20.00 Y= 3.00	A1 AUTO VERN	DSC 0.200 SUN DB AT 1.00 R 41 DB RT 0.02 P 43		TDRS1 COMM ATT
000/02:35:00 MET 114/17:27:00 GMT	LOAD DAP B2 WHEN IN ATT, CONFIG DAP: B/AUTO/VERN				
000/07:55:00 MET 114/22:47:00 GMT	PRIOR TO IMU, MODIFY DAP A1: PRI DISC RT=0.5 TAIL ONLY JETS				
000/08:00:00 MET 05:16 114/22:52:00 GMT 57:16	INRTL R=201.60 MNVR P=222.60 Y=312.80	A1 AUTO PRI	DSC 0.500 SUN DB AT 5.00 R 160 DB RT 0.20 P 134	SPECIAL PAIR -Y:25 -Z:15 COAS -Z, ST:15	IMU & -Z COA:
000/08:30:00 MET 51 114/23:22:00 GMT 51	INRTL R=186.80 MNVR P=197.30 Y=329.50	A1 AUTO PRI	DSC 0.500 SUN DB AT 5.00 R 183 DB RT 0.20 P 152	HUD REQD ID: STAR: 20 ARCTURUS	HUD CALIBRATION STAR 20 AOS: 0/8:13:00
000/08:50:00 MET 54:51 114/23:42:00 GMT 46:51	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	A1 AUTO PRI	DSC 0.500 SUN DB AT 5.00 R 172 DB RT 0.20 P 52		STAR5 GK-CRV290
000/08:56:00 MET 114/23:48:00 GMT	WHEN IN ATT, CONFIG DAP: B2/AUTO/VERN LOAD A9 & ALT3				
000/10:11:00 MET 19:52 115/01:03:00 GMT 11:52	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 EARTH DB AT 1.00 R 0 DB RT 0.02 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
000/10:40:00 MET 41:46 115/01:32:00 GMT 33:46	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 SUN DB AT 1.00 R 172 DB RT 0.02 P 52		STAR5 GK-CRV290
000/11:41:00 MET 50:00 115/02:33:00 GMT 42:00	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 EARTH DB AT 1.00 R 360 DB RT 0.02 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

ATTITUDE
TIMELINE

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 000/12:16:00 MET 19:06 115/03:08:00 GMT 11:06	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 172 P 52		STAR5 GK-CRV295
2 000/13:09:00 MET 19:17 115/04:01:00 GMT 11:17	TGT=2 BV=5 P= 90.00 Y=330.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 330 P 90	LVLH R=210.00 P= 0.00 Y= 0.00	BIAS -ZLV +XVV MOMS STEREO (CALIBRATION)
3 000/13:53:00 MET 58:04 115/04:45:00 GMT 50:04	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 172 P 52		STAR5 GK-CRV295
4 000/14:40:00 MET 50:06 115/05:32:00 GMT 42:06	TGT=2 BV=5 P= 90.00 Y=330.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 330 P 90	LVLH R=210.00 P= 0.00 Y= 0.00	BIAS -ZLV +XVV MOMS STEREO (CALIBRATION)
5 000/15:28:00 MET 39:07 115/06:20:00 GMT 31:07	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 96		STAR4 GK-CRV060
6 000/16:10:00 MET 23:28 115/07:02:00 GMT 15:28	TGT=2 BV=5 P= 90.00 Y=330.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 330 P 90	LVLH R=210.00 P= 0.00 Y= 0.00	BIAS -ZLV +XVV MOMS STEREO (CALIBRATION)
7 000/16:57:00 MET 17:08:11 115/07:49:00 GMT 08:00:11	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 96		STAR4 GK-CRV060
8 000/17:45:00 MET 58:49 115/08:37:00 GMT 50:49	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
9 000/18:25:00 MET 36:58 115/09:17:00 GMT 28:58	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 96		STAR4 GK-CRV060
10 000/19:21:00 MET 34:16 115/10:13:00 GMT 26:16	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
11 000/20:00:00 MET 12:06 115/10:52:00 GMT 11:04:06	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 96		STAR4 GK-CRV060
12 000/21:15:00 MET 25:22 115/12:07:00 GMT 17:22	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 153	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN - DAY PROTECTS GAUSS

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 000/21:32:00 MET 42:22 115/12:24:00 GMT 34:22	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 96		STAR4 GK-CRVO60
2 000/23:44:00 MET 58:02 115/14:36:00 GMT 50:02	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRA
3 001/00:15:00 MET 29:22 115/15:07:00 GMT 21:22	INRTL R=257.60 MNVR P=326.60 Y=350.40	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 170 P 45		STAR1 GK-OPH115
4 001/02:22:00 MET 35:08 115/17:14:00 GMT 27:08	TGT=2 BV=5 P=220.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 140	LVLH R= 90.00 P= 90.00 Y=320.00	AOET (+YVV4)
5 001/04:03:00 MET 09:46 115/18:55:00 GMT 19:01:46	INRTL R=273.00 MNVR P=187.00 Y= 16.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 153 P 128		TDRSIN COMM ATT
6 001/05:38:00 MET 52:24 115/20:30:00 GMT 44:24	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 97		STAR4 GK-CRVO60
7 001/09:15:00 MET 25:22 116/00:07:00 GMT 17:22	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 153	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN - DAY PROTECTS GAUS;
8 001/09:31:00 MET 42:01 116/00:23:00 GMT 34:01	INRTL R=280.20 MNVR P=145.70 Y= 39.80	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 186 P 106		STAR2 GK-OPH290
9 001/15:01:00 MET 10:29 116/05:53:00 GMT 06:02:29	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
10 001/15:40:00 MET 43:27 116/06:32:00 GMT 35:27	INRTL R=280.20 MNVR P=145.70 Y= 39.80	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 186 P 106		STAR2 GK-OPH290
11 001/16:20:00 MET 33:17 116/07:12:00 GMT 25:17	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
12 001/17:03:00 MET 04:00 116/07:55:00 GMT 56:00	INRTL R=280.20 MNVR P=145.70 Y= 39.80	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 186 P 106		STAR2 GK-OPH290

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 001/17:54:00 MET 18:06:06 116/08:46:00 GMT 58:06	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
2 001/18:32:00 MET 46:57 116/09:24:00 GMT 38:57	INRTL R=233.60 MNVR P=309.80 Y=296.20	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 187 P 100		STAR3 GK-CRV105
3 001/19:28:00 MET 42:02 116/10:20:00 GMT 34:02	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
4 001/20:06:00 MET 20:48 116/10:58:00 GMT 11:12:48	INRTL R=233.60 MNVR P=309.80 Y=296.20	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 188 P 100		STAR3 GK-CRV105
5 001/21:20:00 MET 28:37 116/12:12:00 GMT 20:37	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 152	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN - DAY PROTECTS GAUSS
6 001/21:35:00 MET 47:31 116/12:27:00 GMT 39:31	INRTL R=257.60 MNVR P=326.60 Y=350.40	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 171 P 45		STAR1 GK-OPH115
7 002/02:30:00 MET 42:57 116/17:22:00 GMT 34:57	TGT=2 BV=5 P=220.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 140	LVLH R= 90.00 P= 90.00 Y=320.00	AOET & H2O DUMP (+YVV4)
8 002/04:02:00 MET 16:23 116/18:54:00 GMT 19:08:23	INRTL R= 95.00 MNVR P= 20.00 Y= 3.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 40 P 45		TDRS1 COMM ATT
9 002/05:48:00 MET 06:00:01 116/20:40:00 GMT 52:01	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 98		STAR4 GK-CRV060
10 002/09:25:00 MET 35:22 117/00:17:00 GMT 27:22	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 152	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN - DAY PROTECTS GAUSS
11 002/09:41:00 MET 53:37 117/00:33:00 GMT 45:37	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 170 P 51		STAR5 GK-CRV290
12 002/12:02:00 MET 08:34 117/02:54:00 GMT 03:00:34	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 002/12:30:00 MET 31:49 117/03:22:00 GMT 23:49	INRTL R=280.20 MNVR P=145.70 Y= 39.80	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 185 P 105		STAR2 GK-OPH290
2 002/13:34:00 MET 44:35 117/04:26:00 GMT 36:35	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
3 002/14:05:00 MET 23 117/04:57:00 GMT 23	INRTL R=280.20 MNVR P=145.70 Y= 39.80	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 185 P 105		STAR2 GK-OPH290
4 002/16:27:00 MET 40:11 117/07:19:00 GMT 32:11	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
5 002/17:04:00 MET 18:55 117/07:56:00 GMT 08:10:55	INRTL R=233.60 MNVR P=309.80 Y=296.20	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 188 P 100		STAR3 GK-CRV105
6 002/17:59:00 MET 18:13:14 117/08:51:00 GMT 09:05:14	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
7 002/18:39:00 MET 53:47 117/09:31:00 GMT 45:47	INRTL R=233.60 MNVR P=309.80 Y=296.20	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 188 P 101		STAR3 GK-CRV105
8 002/22:57:00 MET 23:05:37 117/13:49:00 GMT 57:37	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 151	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN - D1Y PROTECTS GAUS
9 002/23:11:00 MET 21:22 117/14:03:00 GMT 13:22	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 169 P 98		STAR4 GK-CRV060
10 003/00:20:00 MET 30:50 117/15:12:00 GMT 22:50	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 170 P 51		STAR5 GK-CRV290
11 003/01:09:00 MET 17:42 117/16:01:00 GMT 09:42	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00	AOET (+YVV1)
12 003/02:42:00 MET 47:55 117/17:34:00 GMT 39:55	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +X/V TDRSLO (COMM ATT)

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 003/08:48:00 MET 55:54 117/23:40:00 GMT 47:54	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 151 P 73	STAR PAIR A1 -Y:29 -Z:30	IMU ALIGN
2 003/09:02:00 MET 06:09 117/23:54:00 GMT 58:09	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
3 003/13:27:00 MET 41:07 118/04:19:00 GMT 33:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
4 003/14:12:00 MET 26:07 118/05:04:00 GMT 18:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
5 003/14:58:00 MET 15:12:07 118/05:50:00 GMT 06:04:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
6 003/16:01:00 MET 15:07 118/06:53:00 GMT 07:07:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
7 003/16:34:00 MET 48:07 118/07:26:00 GMT 40:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
8 003/17:11:00 MET 25:07 118/08:03:00 GMT 17:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
9 003/17:54:00 MET 18:08:07 118/08:46:00 GMT 09:00:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL sarex ant test
10 003/18:46:00 MET 19:00:07 118/09:38:00 GMT 52:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
11 003/19:28:00 MET 42:07 118/10:20:00 GMT 34:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL sarex ant test
12 003/20:20:00 MET 34:34 118/11:12:00 GMT 26:34	INRTL R=233.60 MNVR P=309.80 Y=296.20	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 189 P 101		STAR3 GK-CRV105 COM & EARTH OBS

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

4-7

FLY PLN/55/FIN A

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 003/21:50:00 MET 58:37 118/12:42:00 GMT 50:37	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 150	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN
2 003/22:05:00 MET 15:22 118/12:57:00 GMT 13:07:22	INRTL R=324.70 MNVR P= 37.60 Y=307.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 168 P 99		STAR4 GK-CRV060 COM & EARTH (BS)
3 003/23:36:00 MET 49:58 118/14:28:00 GMT 41:58	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00	AOET (+YVV1)
4 004/07:15:00 MET 26:36 118/22:07:00 GMT 18:36	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 151 P 74	STAR PAIR A1 -Y:29 -Z:30	IMU ALIGN
5 004/07:32:00 MET 39:31 118/22:24:00 GMT 31:31	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00	AOET (+YVV1)
6 004/09:04:00 MET 14:49 118/23:56:00 GMT 119/00:06:49	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 168 P 50		STAR5 GK-CRV290 COM & EARTH (BS)
7 004/12:19:00 MET 24:09 119/03:11:00 GMT 16:09	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
8 004/12:45:00 MET 46:22 119/03:37:00 GMT 38:22	INRTL R=280.20 MNVR P=145.70 Y= 39.80	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 184 P 104		STAR2 GK-OPH290 COM & EARTH (BS)
9 004/15:02:00 MET 16:22 119/05:54:00 GMT 06:08:22	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
10 004/16:08:00 MET 21:52 119/07:00:00 GMT 13:52	TGT=2 BV=5 P=240.00 Y=351.00 OM=275.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 190 P 120	LVLH R= 79.96 P= 90.28 Y=299.59	AOET (+YVV2)
11 004/18:14:00 MET 27:52 119/09:06:00 GMT 19:52	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
12 004/18:53:00 MET 19:07:07 119/09:45:00 GMT 59:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +Y/V TDRSLO (COMM ATT)

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR Euler SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	B2 AUTO VERN	DAP DSC 0.200 DB AT 1.00 DB RT 0.02	E/S SUN R 283 P 149	REF ATT/REMARKS STAR PAIR D1 -Y:31 -Z:12	EVENT
1 004/20:05:00 MET 19:35 119/10:57:00 GMT 11:11:35	INRTL R=145.00 MNVR P=176.00 Y=353.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 283 P 149	STAR PAIR D1 -Y:31 -Z:12	IMU ALIGN
2 004/20:25:00 MET 33:18 119/11:17:00 GMT 25:18	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
3 004/23:52:00 MET 57:55 119/14:44:00 GMT 49:55	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00	AOET & H2O DUMP (+YVV1)
4 005/01:52:00 MET 02:04:40 119/16:44:00 GMT 56:40	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
5 005/02:33:00 MET 47:07 119/17:25:00 GMT 39:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
6 005/09:10:00 MET 23:09 120/00:02:00 GMT 15:09	INRTL R=282.00 MNVR P=119.00 Y=320.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 252 P 146	STAR PAIR B1 -Y:26 -Z:14	IMU ALIGN
7 005/09:29:00 MET 40:31 120/00:21:00 GMT 32:31	TGT=2 BV=5 P=250.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 110	LVLH R= 90.00 P= 90.00 Y=290.00	AOET (+YVV3)
8 005/12:17:00 MET 30:49 120/03:09:00 GMT 22:49	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
9 005/12:52:00 MET 13:05:49 120/03:44:00 GMT 57:49	TGT=2 BV=5 P=250.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 110	LVLH R= 90.00 P= 90.00 Y=290.00	AOET (+YVV3)
10 005/15:11:00 MET 24:49 120/06:03:00 GMT 16:49	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
11 005/15:50:00 MET 16:04:07 120/06:42:00 GMT 56:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
12 005/18:21:00 MET 35:07 120/09:13:00 GMT 27:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GHT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT
1 005/19:01:00 MET 15:30 120/09:53:00 GMT 10:07:30	INRTL R=233.60 MNVR P=309.80 Y=296.20	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 190 P 103	STAR3 GK-CRV105 COM & EARTH OBS
2 005/21:42:00 MET 56:32 120/12:34:00 GMT 48:32	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00 -ZLV +XVV MOMS MULTISPECTR/L
3 005/22:15:00 MET 28:05 120/13:07:00 GMT 20:05	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 152 P 75	STAR PAIR A1 -Y:29 -Z:30 IMU ALIGN
4 005/22:34:00 MET 43:21 120/13:26:00 GMT 35:21	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00 AOET (+YVV1)
5 006/00:20:00 MET 32:40 120/15:12:00 GMT 24:40	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00 -ZLV +XVV MOMS STEREO
6 006/01:06:00 MET 18:40 120/15:58:00 GMT 16:10:40	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00 AOET (+YVV1)
7 006/02:02:00 MET 14:40 120/16:54:00 GMT 17:06:40	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00 -ZLV +XVV MOMS MULTISPECTRA .
8 006/02:41:00 MET 55:07 120/17:33:00 GMT 47:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32 BIAS +ZLV, +(VV) TDRSLO (COMM ATT)
9 006/07:30:00 MET 40:03 120/22:22:00 GMT 32:03	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 153 P 75	STAR PAIR A1 -Y:29 -Z:30 IMU ALIGN
10 006/07:46:00 MET 59:39 120/22:38:00 GMT 51:39	INRTL R= 19.20 MNVR P= 49.40 Y= 68.90	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 166 P 49	STAR5 GK-CRV290 COM & EARTH OBS
11 006/12:19:00 MET 28:06 121/03:11:00 GMT 20:06	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00 -ZLV +XVV MOMS STEREO
12 006/12:57:00 MET 13:11:07 121/03:49:00 GMT 04:03:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32 BIAS +ZLV, +(VV) TDRSLO (COMM ATT)

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 006/15:47:00 MET 16:01:07 121/06:39:00 GMT 53:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
2 006/16:22:00 MET 36:07 121/07:14:00 GMT 28:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
3 006/21:16:00 MET 29:06 121/12:08:00 GMT 21:06	INRTL R=282.00 MNVR P=119.00 Y=320.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 250 P 147	STAR PAIR B1 -Y:26 -Z:14	IMU ALIGN
4 006/21:35:00 MET 48:00 121/12:27:00 GMT 40:00	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
5 006/22:31:00 MET 36:55 121/13:23:00 GMT 28:55	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00	AOET (+YVV1)
6 007/02:13:00 MET 25:40 121/17:05:00 GMT 17:40	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
7 007/02:47:00 MET 03:01:07 121/17:39:00 GMT 53:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
8 007/03:46:00 MET 04:00:07 121/18:38:00 GMT 52:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
9 007/04:22:00 MET 36:07 121/19:14:00 GMT 28:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
10 007/10:36:00 MET 46:19 122/01:28:00 GMT 38:19	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 154 P 76	STAR PAIR A1 -Y:29 -Z:30	IMU ALIGN
11 007/10:54:00 MET 11:05:26 122/01:46:00 GMT 57:26	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
12 007/11:30:00 MET 42:40 122/02:22:00 GMT 34:40	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.02 P= 90.01 Y=310.00	AOET & H2O DUMP (+YVV1)

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 007/13:53:00 MET 14:05:40 122/04:45:00 GMT 57:40	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
2 007/14:53:00 MET 15:07:07 122/05:45:00 GMT 59:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
3 007/16:59:00 MET 17:13:07 122/07:51:00 GMT 08:05:07	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTR L
4 007/17:37:00 MET 51:07 122/08:29:00 GMT 43:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
5 007/19:57:00 MET 20:09:50 122/10:49:00 GMT 11:01:50	INRTL R=282.00 MNVR P=119.00 Y=320.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 249 P 148	STAR PAIR B1 -Y:26 -Z:14	IMU ALIGN
6 007/20:16:00 MET 29:03 122/11:08:00 GMT 21:03	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS MULTISPECTRAL
7 007/20:51:00 MET 21:05:07 122/11:43:00 GMT 57:07	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
8 007/22:04:00 MET 09:55 122/12:56:00 GMT 13:01:55	TGT=2 BV=5 P=230.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 130	LVLH R= 90.00 P= 90.00 Y=310.00	AOET (+YVV1)
9 008/03:55:00 MET 04:07:40 122/18:47:00 GMT 59:40	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=180.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y= 0.00	-ZLV +XVV MOMS STEREO
10 008/04:37:00 MET 48:49 122/19:29:00 GMT 40:49	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 154 P 77	STAR PAIR A1 -Y:29 -Z:30	IMU ALIGN
11 008/04:55:00 MET 05:01:26 122/19:47:00 GMT 53:26	TGT=2 BV=5 P=227.00 Y=340.00 OM=339.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 206 P 130	LVLH R= 0.71 P= 46.93 Y=331.32	BIAS +ZLV, +XVV TDRSLO (COMM ATT)
12 008/07:13:00 MET 18:54 122/22:05:00 GMT 10:54	TGT=2 BV=5 P=250.00 Y= 0.00 OM=270.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 180 P 110	LVLH R= 90.00 P= 90.00 Y=290.00	AOET BIASED (+YVV3)

*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

Attitude Timeline

GMT/MET	MNVR OPTION	DAP	E/S	REF ATT/REMARKS	EVENT	
1 008/09:41:00 MET 51:50 123/00:33:00 GMT 43:50	INRTL R= 59.00 MNVR P=300.00 Y=316.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 0 P 90		BAYSUN
2 008/12:57:00 MET 13:07:49 123/03:49:00 GMT 59:49	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=135.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 360 P 90	LVLH R=180.00 P= 0.00 Y=315.00	BIAS -ZLV -YVV THERMAL BAYDOWN
3 008/15:10:00 MET 19:45 123/06:02:00 GMT 11:45	INRTL R=281.00 MNVR P=322.00 Y=323.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 154 P 77	STAR PAIR A1 -Y:29 -Z:30	IMU ALIGN
4 008/15:27:00 MET 38:15 123/06:19:00 GMT 30:15	TGT=2 BV=3 P= 90.00 Y= 0.00 OM=135.00	B2 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH R 0 P 90	LVLH R=180.00 P= 0.00 Y=315.00	BIAS -ZLV -YVV THERMAL BAYDOWN
5 008/16:40:00 MET 123/07:32:00 GMT	LOAD DAP A1,B1					
6 008/16:45:00 MET 54:14 123/07:37:00 GMT 46:14	TGT=4 RA= 39.837 BV=5 DEC= 15.527N P=184.00 Y= 0.00 OM= 90.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN R 180 P 176	INRTL R= 13.51 P=155.16 Y=320.85	-XSI TAIL SUN
7 008/18:05:00 MET 15:50 123/08:57:00 GMT 09:07:50	INRTL R=249.00 MNVR P=307.00 Y=322.00	A1 AUTO PRI	DSC 0.200 DB AT 5.00 DB RT 0.20	SUN R 175 P 82	-Y:44 -Z:48	D/O PREP IMU
8 008/18:20:00 MET 22:51 123/09:12:00 GMT 14:51	INRTL R=305.00 MNVR P= 13.00 Y= 11.00	B1 AUTO PRI	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN R 187 P 40	-Y:36 -Z:27	VERIF IMU
9 008/18:30:00 MET 33:12 123/09:22:00 GMT 25:12	INRTL R=215.00 MNVR P= 54.00 Y=355.00	B1 AUTO PRI	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN R 285 P 81		D/O COMM ATT
10 008/20:49:00 MET 51:00 123/11:41:00 GMT 43:00	INRTL R=225.00 MNVR P= 27.00 Y= 50.00 TIG -00:15	B1 AUTO PRI	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN R 316 P 35		D/O BURN ATT TIG: 8/21:04:00

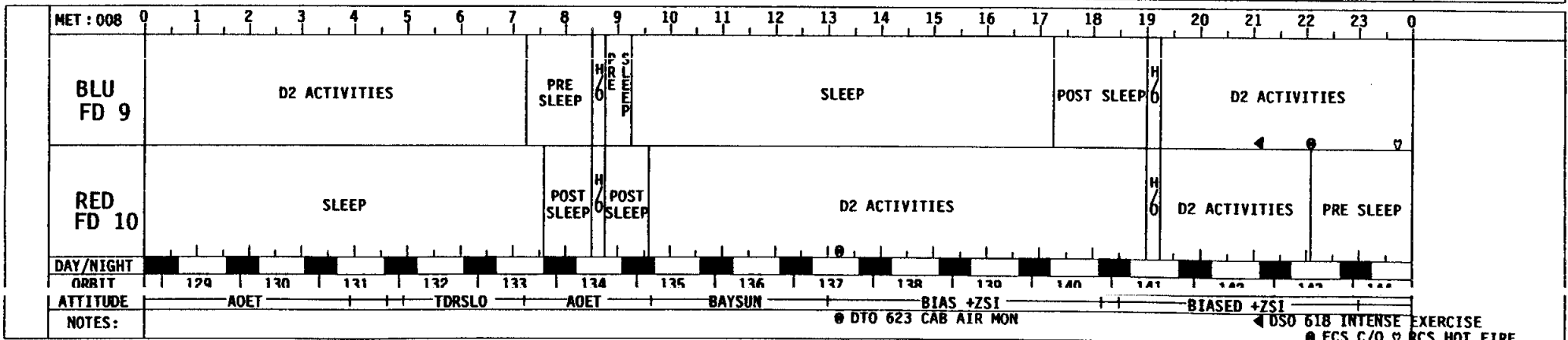
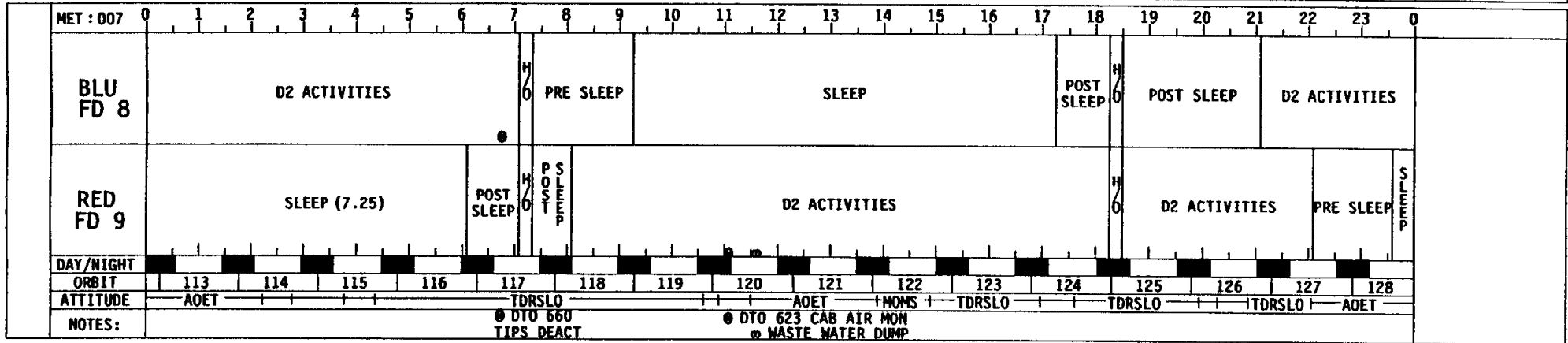
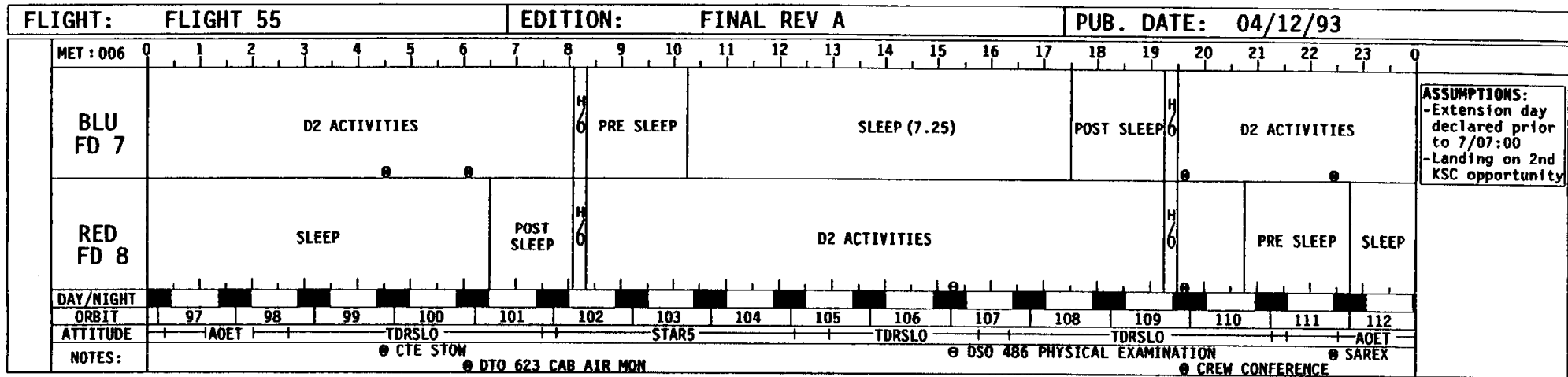
*** ALL ATTITUDES IN MEAN OF 1950 ***
*** PYR EULER SEQUENCE ***

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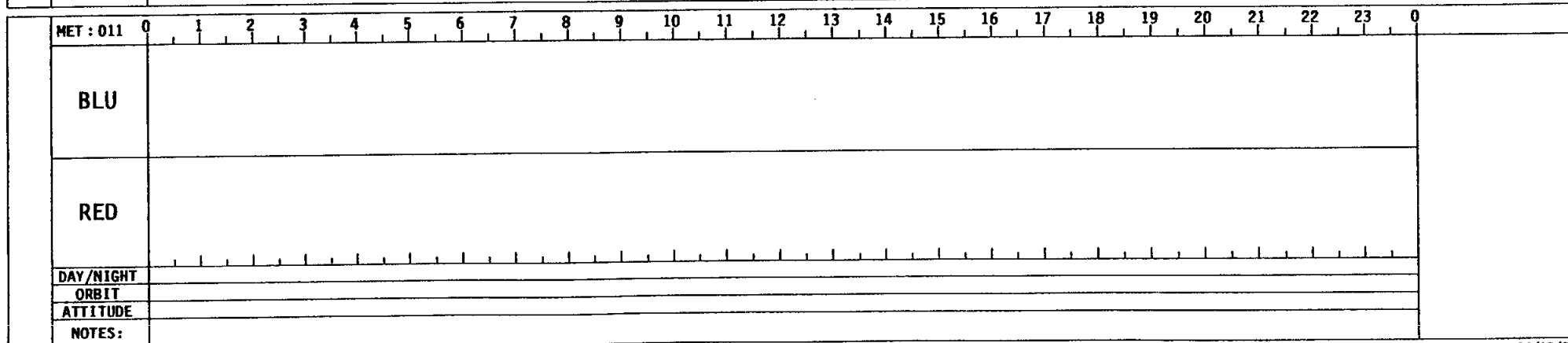
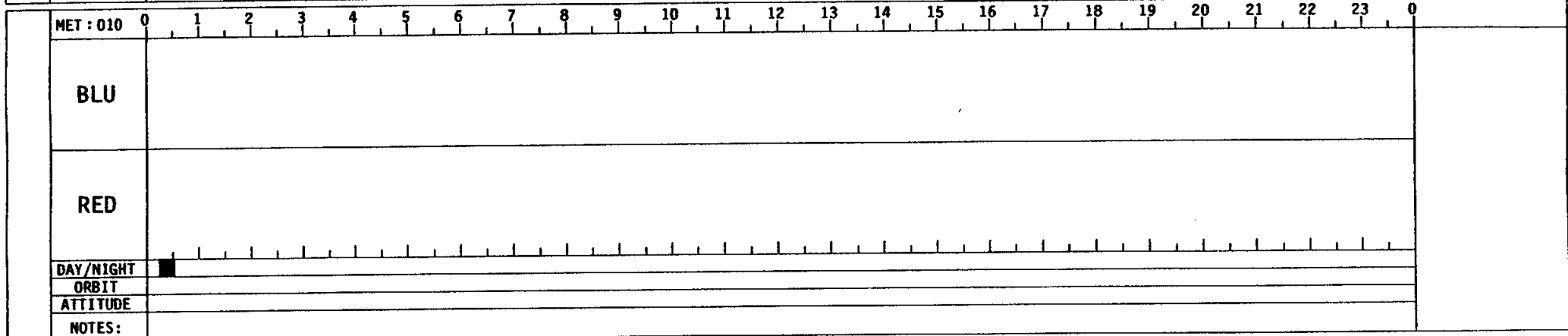
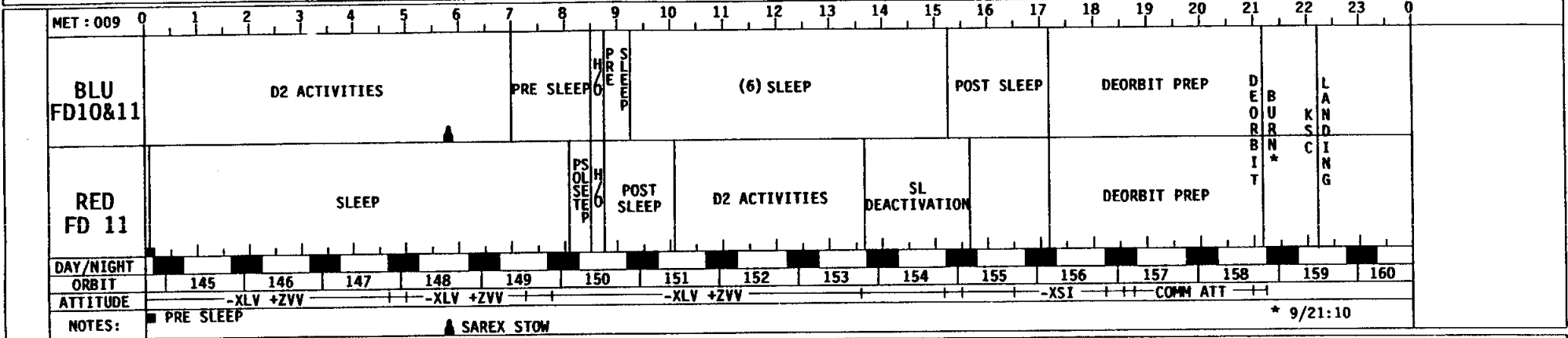
EXTENSION DAY TIMELINE

**EXTENSION
DAY T/L**

**EXTENSION
DAY T/L**



FLIGHT: FLIGHT 55 EDITION: FINAL REV A PUB. DATE: 04/12/93



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**The sections following this divider page
will not be included in flight copies.**

STS-55 DAP BOOK

DAP A CONFIGURATIONS

	ITEM #	A1*	A2	A3	A4	A5	A6	A7	A8	A9	A10
<u>TRANSLATION</u>											
PULSE ft/sec	1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.05	0.10	0.10
<u>ROTATION</u>											
DSC RT NORM °/sec	2	0.200	0.400	0.200	0.500	0.200	0.200	0.200	0.200	0.200	0.100
VERN °/sec	3	0.200	0.400	0.008	0.200	0.200	0.200	0.200	0.200	0.008	0.200
PULSE NORM °/sec	4	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.04
VERN °/sec	5	0.010	0.010	0.010	0.010	0.050	0.010	0.010	0.010	0.010	0.002
COMP NORM °/sec	6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
VERN °/sec	7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
<u>DEADBAND</u>											
ATT NORM (deg)	8	5.00	1.00	1.00	3.00	5.00	5.00	2.00	2.00	0.30	5.00
VERN (deg)	9	1.000	1.000	0.070	1.000	1.000	1.000	1.000	1.000	0.070	1.000
RATE NORM °/sec	10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
VERN °/sec	11	.020	.020	.010	.020	.020	.020	.020	.020	.010	.020
<u>JET OPT</u>											
P	12	1	1	1	1	1	3	1 or 3	1	3	3
Y	13	1	1	3	1	1	3	1 or 3	1	3	3
<u>CNTL ACCEL</u>											
	14	0	0	0	0	0	0	0	0	0	0

*I-LOADED OPS-2 DAP Configuration

DAP B CONFIGURATIONS

	ITEM #	B1*	B2	B3	B4	B5	B6	B7	B8
<u>TRANSLATION</u>									
PULSE ft/sec	15	0.02	0.02	0.02	0.02	0.02		0.05	0.01
<u>ROTATION</u>									
DSC RT NORM °/sec	16	0.500	0.200	0.200	0.200	0.200		0.500	0.200
VERN °/sec	17	0.200	0.200	0.200	0.008	0.016		0.200	0.200
PULSE NORM °/sec	18	0.04	0.04	0.04	0.04	0.04		0.04	0.04
VERN °/sec	19	0.002	0.002	0.002	0.002	0.002		0.002	0.002
COMP NORM °/sec	20	.00	.00	.00	.00	.00		.00	.00
VERN °/sec	21	.000	.000	.000	.000	.000		.000	.000
<u>DEADBAND</u>									
ATT NORM (deg)	22	3.00	3.00	3.00	0.30	3.00		2.00	2.00
VERN (deg)	23	1.000	1.000	1.000	0.100	0.033		1.000	1.000
RATE NORM °/sec	24	0.20	0.20	0.20	0.20	0.20		0.20	0.20
VERN °/sec	25	.020	.020	.020	.010	.020		.020	.020
<u>JET OPT</u>									
P	26	1	3	1	3	3		1 or 3	1
Y	27	1	3	1	3	3		1 or 3	1
<u>CNTL ACCEL</u>	28	0	0	0	0	0		0	0

*I-LOADED OPS-2 DAP Configuration

ALT DAP CONFIGURATIONS

	ITEM #	ALT1*	ALT2	ALT3	ALT4
RATE DEADBAND	32	0.200	0.070	0.070	0.070
JET OPTION	33	1	1 or 3	1 or 3	1 or 3
NUMBER OF JETS	34	2	1	1	1
ON TIME	35	0.08	0.08	0.08	0.08
DELAY	36	0.00	0.00	0.00	1.00

*I-LOADED OPS-2 DAP Configuration

<u>DAP</u>	<u>PURPOSE</u>	<u>DAP</u>	<u>PURPOSE</u>
A1	- NOMINAL IMU ALIGN LOSS OF VERN (NOSE & TAIL)	B1	- NOMINAL PRCS IMU ALIGN OMS & RCS BURNS
A2	- PTC	B2	- LOSS OF VERN (TAIL ONLY)
A3	- GG	B3	- LOSS OF VERN (NOSE & TAIL)
A4	- PRE/POST DEPLOY		GG MNVR
A5	- IMU ROTATION	B4	- SSUS DEPLOY
A6	- LOSS OF VERN (TAIL ONLY)	B5	- COAS CAL
A7	- RENDEZVOUS	B6	- (Blank)
A8	- PROX OPS	B7	- RENDEZVOUS
A9	- MOMS STEREO	B8	- PROX OPS
A10	- AOET, TDRS 1 STAR (COMM) BAYSUN, TDRSLO		

(See reverse for DAP Applications)

FLT PLN-1a/55/0/C

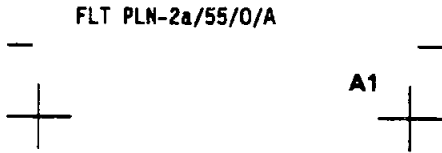
DAP APPLICATIONS

<u>DAP</u>	<u>APPLICABLE</u>
NOMINAL:	
B2	- All mnvrs & atts
A9	- MOMS STEREO procedures
LOSS OF VERNS:	
B2/ALT3	- All mnvrs - STAR atts (GAUSS) - All MOMs, IMU aligns
A10/ALT4	- When in att - STAR atts (COMM) - AOET, TDRS 1 - BAYSUN, TDRSLO

FLT PLN-1b/55/0/C



DAP A



FLT PLN-2a/55/0/A

A1



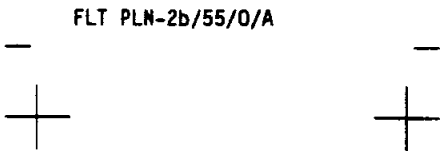
DAP A1

A1

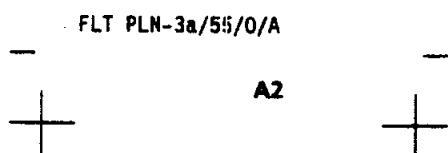
PURPOSE:

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 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
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



FLT PLN-2b/55/0/A



FLT PLN-3a/55/0/A

A2



A1



DAP A2

PURPOSE:

PTC

A2

0.1 0 1 TRANSLATION PULSE

0.4 0 0 2 DSC RT NORM
 0.4 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

1.0 0 8 DEADBAND ATT NORM
 1.0 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

FLT PLN-3b/55/0/A

FLT PLN-4a/55/0/A



A3



A2

DAP A3

PURPOSE:

GG

A3

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

FLT PLN-4b/55/0/A

FLT PLN-5a/55/0/A



A4



DAP A4

PURPOSE:
PRE/POST DEPLOY

FLT PLN-5b/55/0/A



DAP A5

PURPOSE:
IMU ROTATION

FLT PLN-6b/55/0/A



A4

0.1 0	1	TRANSLATION	
		PULSE	
ROTATION			
0.5 0 0	2	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			
3.0 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	

FLT PLN-6a/55/0/A



A5

0.1 0	1	TRANSLATION	
		PULSE	
ROTATION			
0.2 0 0	2	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
1	12	JET OPT	P
1	13		Y
0	14	CNTL ACCEL	

FLT PLN-7a/55/0/A





A5



DAP A6

PURPOSE:

LOSS OF VERN
(TAIL ONLY)

A6

0.1 0	1	TRANSLATION	
		PULSE	
		ROTATION	
0.2 0 0	2	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
		RATE	
0.2 0	10		NORM
.0 2 0	11		VERN
		JET OPT	P
3	12		
3	13		Y
		CNTL ACCEL	
0	14		

FLT PLN-7b/55/0/A

FLT PLN-8a/55/0/A



A7



A6



DAP A7

PURPOSE:

RENDEZVOUS

A7

0.1 0	1	TRANSLATION	
		PULSE	
		ROTATION	
0.2 0 0	2	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	
2.0 0	8	ATT	NORM
1.0 0 0	9		VERN
		RATE	
0.2 0	10		NORM
.0 2 0	11		VERN
		JET OPT	P
1 or 3	12		
1 or 3	13		Y
		CNTL ACCEL	
0	14		

FLT PLN-8b/55/0/A

FLT PLN-9a/55/0/A



A8





A7

DAP A8

PURPOSE:
PROX OPS

FLT PLN-9b/55/0/A



A8

DAP A9

PURPOSE:
MOMS STEREO

FLT PLN-10b/55/0/A



A8

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

FLT PLN-10a/55/0/A



A9

A9

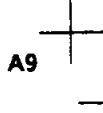
0.1 0 1 TRANSLATION PULSE
 0.2 0 0 2 ROTATION DSC RT NORM
 0.0 0 0 3 VERN
 0.1 0 0 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN
 0.3 0 8 DEADBAND ATT NORM
 0.0 7 0 9 VERN
 0.2 0 10 RATE NORM
 .0 1 0 11 VERN
 3 12 JET OPT P
 3 13 Y
 0 14 CNTL ACCEL

FLT PLN-11a/55/0/A



A10





DAP A10

PURPOSE:

AOET, TDRS 1
STAR (COMM)
BAYSUN, TDRSLO

A10

0.1 0	1	TRANSLATION
		PULSE
		ROTATION
0.1 0 0	2	DSC RT NORM
0.2 0 0	3	VERN
0.0 4	4	PULSE NORM
0.0 0 2	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

FLT PLN-11b/55/0/C



FLT PLN-12a/55/0/A

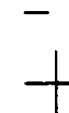


A10



DAP B

FLT PLN-12b/55/0/A



FLT PLN-13a/55/0/A

B1





DAP B1

PURPOSE:

NOMINAL
PRCS IMU ALIGN
OMS & RCS BURNS

B1

15	0.0 2
16	0.5 0 0
17	0.2 0 0
18	0.0 0 4
19	0.0 0 2
20	.0 0 0
21	.0 0 0
22	3.0 0
23	1.0 0 0
24	0.2 0
25	.0 2 0
26	1
27	1
28	0

FLT PLN-13b/55/0/A

FLT PLN-14a/55/0/A



B2



B1



B2



DAP B2

PURPOSE:

LOSS OF VERN
(TAIL ONLY)

15	0.0 2
16	0.2 0 0
17	0.2 0 0
18	0.0 0 4
19	0.0 0 2
20	.0 0 0
21	.0 0 0
22	3.0 0
23	1.0 0 0
24	0.2 0
25	.0 2 0
26	3
27	1
28	0

FLT PLN-14b/55/0/A

FLT PLN-15a/55/0/A



B3





B2

DAP B3

PURPOSE:

LOSS OF VERN
(NOSE & TAIL)
GG MNVR

FLT PLN-15b/55/0/A



B3

DAP B4

PURPOSE:

SSUS DEPLOY

FLT PLN-16b/55/0/A



(reduced copy)



B3

15 0.0 2

16 0.2 0 0

17 0.2 0 0

18 0.0 0 4

19 0.0 0 2

20 0.0 0 0

21 0.0 0 0

22 3.0 0

23 -1.0 0 0

24 0.2 0

25 0.2 0

26 1

27 1

28 0

FLT PLN-16a/55/0/A



B4



B4

15 0.0 2

16 0.2 0 0

17 0.0 0 0

18 0.0 0 4

19 0.0 0 2

20 0.0 0 0

21 0.0 0 0

22 0.3 0

23 -0.1 0 0

24 0.2 0

25 0.1 0

26 3

27 3

28 0

FLT PLN-17a/55/0/A



B5

FLT PLN/55/FIN A



B4

DAP B5

PURPOSE:

COAS CAL

FLT PLN-17b/55/0/A



B5

DAP B6

PURPOSE:

(Blank)

FLT PLN-18b/55/0/A



(reduced copy)



B5

15 0.0 2

16 0.2 0 0

17 0.0 0 0

18 0.0 0 0

19 0.0 0 0

20 0.0 0 0

21 0.0 0 0

22 3.0 0 0

23 0.0 0 0

24 0.2 0 0

25 0.0 0 0

26 3 0

27 0 0

28 0 0

FLT PLN-18a/55/0/A



B6



B6

15 . . .

16 . . .

17 . . .

18 . . .

19 . . .

20 . . .

21 . . .

22 . . .

23 . . .

24 . . .

25 . . .

26 . . .

27 . . .

28 . . .

FLT PLN-19a/55/0/A



B7

FLT PLN/55/FIN A

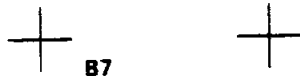


B6

DAP B7

PURPOSE:
RENDEZVOUS

FLT PLN-19b/55/0/A



B7

DAP B8

PURPOSE:
PROX OPS

FLT PLN-20b/55/0/A



B7

15	0.0 5
16	0.5 0 0
17	0.2 0 0 0
18	0.0 4
19	0.0 0 2
20	.0 0 0
21	.0 0 0
22	2.0 0
23	- 1.0 0 0
24	0.2 0
25	.0 2 0
26	1 or 3
27	1 or 3
28	0

FLT PLN-20a/55/0/A



B8



B8

15	0.0 1
16	0.2 0 0
17	0.2 0 0 0
18	0.0 4
19	0.0 0 2
20	.0 0 0
21	.0 0 0
22	2.0 0
23	- 1.0 0 0
24	0.2 0
25	.0 2 0
26	1
27	1
28	0

FLT PLN-21a/55/0/A



+ B8 +

+ DAP PURPOSE +

ALT1 - NOMINAL
I-LOAD
ALT2 - GENERIC
LOSS OF
VERNS
ALT3 - MNVRS, MOMS
STAR (GAUSS)
ALT4 - AOET, TDRS 1
STAR (COMM)
BAYSUN, TDRSLO
FLT PLN-22a/55/0/C

+ ALT1 +

FLT PLN-21b/55/0/A

+ +

+ DAP ALT1 +

PURPOSE:
NOMINAL I-LOAD

FLT PLN-22b/55/0/A

+ ALT1 +

RATE DB
32 0.2 0 0
JET OPT
33 1
JETS
34 2
ON TIME
35 - 0.0 8
DELAY
36 - 0.0 0

FLT PLN-23a/55/0/A

+ ALT2 +

+	+	+	+
DAP ALT2			ALT2

PURPOSE:
 GENERIC
 LOSS OF VERNIS

RATE DB
 32 0.0 7 0
 JET OPT
 33 1 or 3
 # JETS
 34 1
 ON TIME
 35 - 0.0 8
 DELAY
 36 - 0.0 0

FLT PLN-23b/55/0/B

FLT PLN-24a/55/0/B

+	ALT1	+	ALT3	+
---	-------------	---	-------------	---

+	DAP ALT3	+	ALT3	+
---	-----------------	---	-------------	---

PURPOSE:
 MNVRS, MOMS
 STAR (GAUSS)

RATE DB
 32 0.0 7 0
 JET OPT
 33 1 or 3
 # JETS
 34 1
 ON TIME
 35 - 0.0 8
 DELAY
 36 - 0.0 0

FLT PLN-24b/55/0/B

FLT PLN-25a/55/0/C

+	ALT2	+	ALT4	+
---	-------------	---	-------------	---

+ + + +

DAP ALT4

PURPOSE:

AOET, TDRS 1
STAR (COMM)
BAYSUN, TDRSLO

FLT PLN-25b/55/0/C

ALT4

RATE DB
32 0.0 7 0
JET OPT
33 1 or 3
JETS
34 1
ON TIME
35 - 0.0 8
DELAY
36 - 1.0 0

FLT PLN--26a/55/0/C

+ + + +

ALT3

+ +

FLT PLN-26b/55/0/B

+ +

ALT4

UNIV PTG	
TGT ID	= 1 Orbiting Vehicle = 2 Earth ctr = 3 Earth tgt Input LAT (± 90) LON (± 180 , + = East) ALT (-3444.0 to 20000.0 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 -Y Star Tracker* = 5 Optional Input P (0-359.99) Y (270-359.99,0-90) * input QM \rightarrow QM (0-359.99)
MON AXIS	= 1 +X = 2 -X
CNTL ACCEL	= 0 Orbiter Alone = 1 thru 5 not used
PRI JET OPT	= 1 Normal = 2 Nose only = 3 Tail only
ALT JET OPT	= 1 Normal = 2 Illegal entry = 3 Tail only

FLT PLN-27a/55/0/A



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FLT PLN-27b/55/0/A



STS-55
FLIGHT PLAN NOTES

FLIGHT PLAN NOTES
(CONSTRAINTS AND GUIDELINES)

A. FLIGHT DESCRIPTION

The STS-55 (OV102) launch from KSC on April 24, 1993, will be into a 160 x 160 nm orbit at an inclination of 28.45 degrees. The mission duration will be 9 days for a launch at 14:52 GMT. The capability exists for a 9-day mission plus 1 extra day for science and 2 additional days for contingency operations and weather avoidance. Nominal landing occurs at KSC on May 3, 1993.

Landing opportunities are:

		<u>Landing Orbit No.</u>	<u>Site</u>	<u>Local Time</u>
Nominal	Primary	143	KSC	08:57 EDT
	Weather Alt. /1 rev late	144	EDW	07:23 PDT
1 Day Late	Primary	159	KSC	09:02 EDT
	Weather Alt.	160	EDW	07:29 PDT
2 Days Late	Primary	175	KSC	09:07 EDT
	Weather Alt.	176	EDW	07:34 PDT

Major Events

<u>LAUNCH</u> (KSC)	April 24, 1993
Day of year	114
CDT/GMT	09:52/14:52
<u>OMS-2 C/O</u>	
MET (DD/HH:MM)	00/00:42
DV (fps)	221.5
ORBIT ha/hp (nm)	161/160
<u>DEORBIT BURN</u>	
MET (DD/HH:MM)	08/21:04
DV (fps)	272
<u>LANDING</u> (KSC)	May 3, 1993
MET (DD/HH:MM)	08/22:02
Day of year	123
CDT/GMT	07:57/12:57

B. CREW

- There will be seven crewmembers flying this mission with each specialist assigned to the following tasks:

CDR - Steven R. Nagel
 PLT - Terence T. Henricks
 MS1 - Jerry L. Ross
 MS2 - Charles J. Precourt
 MS3 - Bernard Harris
 PS1 - Ulrich Walter
 PS2 - Hans Schlege

FLT PLN NOTES

2. The crewmembers responsible for performing an EVA, should one become necessary, are MS1 as EV1, MS2 as EV2, and PLT as IV.

C. COMMUNICATIONS AND INSTRUMENTATION

1. The Operational Instrumentation (OI) system will nominally be managed from the ground through uplink real-time commands (RTCs) coordinated with the crew.
2. TDRS coverage is assumed to be supported by TDRS-E (41 degrees W) and TDRS-W (171 degrees W) and is the prime mode of communication coverage.
3. TDRS Ku-band is the prime mode of real-time TV; however, there are also two ground network (GN) sites available as backups: DFR and MIL(MLX) (90-minute lead time required).
4. Five GSTDN sites are available for on-orbit contingency support or for deorbit: MIL(MLX), BDA(BDX), DKR, DFR, and GDS(GDX). MAD (MAX) and CAN are available for emergency support (2-hour lead time required).
5. RTS sites are available on a 4-hour callup basis for contingency support: HTS, GTS, VTS, IOS, CTS, OTS, and DGS. Note: IOS and OTS also have UHF voice capability.
6. TDRS-E and TDRS-W are available to support Ku-band uplink (e.g., TAGS).
7. S-band HDR uplink (e.g., Teleprinter) is available through TDRS-E and TDRS-W.
8. TDRS-E and TDRS-W are available for ascent and entry support. IOS (RTS site) is available for UHF voice in an emergency (2-hour lead time required).

D. TELEVISION/PHOTOGRAPHY

1. The Orbiter CCTV system provides one color, wide-angle camera for in-cabin coverage. There will also be four PLB TV cameras. There are three different lens assemblies for the PLB cameras (color, monochrome, and wide-angle lens assemblies). The type of lens assembly for each PLB camera is documented in the Flight Requirements Document.
2. The Orbiter has one video tape recorder available which uses 30-minute cassettes.
3. Three camera systems are available: 16mm, 35mm, and 70mm.

E. PAYLOADS

1. Spacelab D2

The Spacelab D2 mission is a German sponsored payload (DLR) which is designed to conduct research in a microgravity environment. The payload consists of a long module and a Unique Support Structure (USS). Module experiments will investigate materials and life sciences and advanced technology development. USS experiments will complete Earth and stellar observations.

a. Module Experiments

(i) Robotics Experiment (Rotex)

A robotic arm located in an enclosed workcell will be operated from both within the module and from the ground. Rotex will verify design and operation of its systems for future applications.

(ii) Holographics Optics Laboratory (HL)

HL will investigate transient heat transfer, mass transfer, surface convection, and particle motion in optical transparent media via holographic methods. HL encompasses four different experiments: Interferences par Diffusion de Liquides dans L'Espace (IDILE), Interdiffusion in Salt Melts (ISIS), Marangoni Convection in a Square Cavity (MACO), and Nucleation and Growth in Binary Mixtures with Miscibility Gap (NUGO).

(iii) Werkstofflabor (WL)

WL consists of seven separate experiment facilities. Experiments within these facilities study several areas of metal processing, crystal growth for electronics applications, fluid boundary surfaces, and transport phenomena.

(iv) Material Science Experiment Double Rack for Experiment Modules and Apparatus (MEDEA)

MEDEA accommodates three separate experiment facilities: High Precision Thermostat (HPT), Gradient Furnace with Quenching (GFQ), and Ellipsoidspiegelofen (Elli). Material science and physical chemistry experiments will be carried out in the areas of critical point phenomena, direction solidification of metallic crystals, and long term crystallization.

(v) Biolabor (BB)

Studies the effects of the absence of gravity on plants and animal organisms, and on single cells (Gravitational Biology-GB). BB also studies cultivation methods of different cells and electrocell fusion of plant and animal cells (Biological Methods-BV).

(vi) Anthrorack (AR)

AR measures cardiac, pulmonary, and metabolic function in resting conditions and during challenges that are imposed to change the cardiopulmonary function. This experiment will investigate fluid shifts, the hormonal system, lung circulation and ventilation, deconditioning of the cardiovascular system, and the body's reaction to different physical states.

(vii) Baroreflex (BA)

BA will investigate changes in the baroreceptor reflex that play a major role in the development of conditions responsible for the fall of blood pressure (Orthostatic Hypotension) after space flight.

(viii) Urine Monitoring System (UMS)

The UMS is used to collect urine samples from each crewmember. The urine sample will be analyzed for protein metabolism, fluid electrolyte regulation, and pathophysiology of mineral loss during space flight.

(ix) Radiation Detectors (RD)

RD is a set of four experiments in which different types of material and biological probes will be exposed to different environmental conditions. The results of these tests will be used in the development of radiation protection in space.

(x) Microgravity Measurement Assembly (MMA)

MMA will measure structural transfer functions at various locations thus providing information about experiment environmental conditions for future Spacelab flights.

(xi) Crew Telesupport Experiment (CTE)

CTE demonstrates communication between onboard and ground computer-based documentation files (text, graphics, photos) combined with real-time graphical inputs by the crewmember and the ground. The CTE is intended to enhance the effectiveness of payload operations, maintenance, and scientific return.

b. USS Experiments

(i) Modular Optoelectronic Multispectral/Stereo Scanner (MOMS)

MOMS is an imaging and sensing instrument that will provide photogrammetric mapping and thematic mapping applications.

(ii) Galactic Ultrawide-Angle Schmidt System (GAUSS)
GAUSS will provide wide-angle photographic coverage of the Milky Way.

(iii) Atomic Oxygen Exposure Tray (AOET)

AOET will obtain insitu reaction-rate measurements for various materials interacting with atomic oxygen.

C. Get-Away-Special (GAS) Canisters

(i) Reaction Kinetics in Glass Melts (RKGM)

RKGM provides data on mass transfer by pure diffusion within a glass melt. Mass transfer is controlled by either diffusion or buoyancy convection. Once on-orbit, the crew enables and activates the RKGM payload. Once activated, experiment electronics run an automatic experiment control sequence.

2. Shuttle Amateur Radio Experiment - II (SAREX-II)

The SAREX-II payload provides voice communications between the Orbiter and amateur radio operators on the Earth. The SAREX will be operated at the discretion of the licensed crewmembers. Crewmembers are licensed radio operators for STS-55. SAREX will fly a modified configuration C on STS-55.

F. ON-ORBIT DTOs

1. Cabin Air Monitoring (DTO 623)

This DTO will use the solid sorbent sampler to continuously sample the Orbiter atmosphere throughout the flight. The solid sorbent sampler is to be flown on all Spacelab manned module flights.

2. Thermal Impulse Printer System (TIPS) Demonstration (DTO 660)

This DTO will evaluate the operational capability of the TIPS to uplink text and graphics via the Orbiter voice/Ku-band communication link. This printer will be evaluated as an alternative to the onboard Text and Graphic System (TAGS) hardcopier and teleprinter.

3. Acoustical Noise Dosimeter Data (DTO 663)

This DTO will measure and record decibel levels in the middeck, the sleep stations, and the Spacelab module. Additionally, crewmembers will complete a questionnaire during the flight regarding noise levels.

4. Acoustical Noise Sound Level Data (DTO 665)

This DTO will use a Sound Level Meter to obtain baseline data of octave-band acoustical noise levels in the middeck, flight deck, sleep stations, and Spacelab module during routine Orbiter and experiment operations.

G. ON-ORBIT DSOs

1. Evaluation of Samples Obtained from the Urine Monitoring System (UMS) (DSO 323)

The purpose of this DSO is to determine if the in-flight dilution of samples collected from the UMS is different from the dilution

that occurs in ground testing. In-flight volume measurements will also be checked to determine if middeck atmospheric pressure changes affect the measurements differently from that experienced in ground testing.

2. Physical Examination in Space (DSO 486)

This DSO will implement the use of a standardized examination to identify normal physiologic adaptations to the microgravity environment and to provide a baseline for differentiation of normal changes from pathologic changes. Differences in the reported examinations will be analyzed for their physiological and statistical significance.

3. Orthostatic Function During Entry, Landing, and Egress (DSO 603B)

The objective of this DSO is to measure the changes in orthostatic function of crewmembers during the actual stresses of entry, landing, and egress from the Orbiter. Crewmembers will don equipment prior to donning the LES during deorbit preparation. Equipment consists of a blood pressure monitor, accelerometers, an Impedance Cardiograph, and Transcranial Doppler hardware. The crewmembers wear the equipment and record verbal comments throughout entry. This will be flown as a DSO of opportunity.

4. Evaluation of Functional Skeletal Muscle Performance Following Space Flight (DSO 617)

The purpose of this DSO is to determine the physiological effect of long duration space flight on skeletal muscle strength, endurance, and power. On-orbit activities consist of maintaining an exercise log.

5. Effects of Intense Exercise Duration Space Flight on Aerobic Capacity and Orthostatic Function (DSO 618)

The purpose of this DSO is to evaluate the effects of cycle ergometer exercise prior to landing with similar exercise performed immediately postflight, to quantify deconditioning that occurs over the duration of the flight, and to compare preflight, in-flight, and postflight heart rate responses to cycle ergometry.

6. Documentary Television (DSO 901)

The DSO requires live television transmission or VTR dumps of crew activities and spacecraft functions which include: Payload Bay Views, STS and Payload Crew Activities, VTR Downlink of Crew Activities, In-flight Crew Conference, and unscheduled TV Activities.

7. Documentary Motion Picture Photography (DSO 902)

DSO 902 requires documentary and public affair motion picture photography of significant activities which best depict the basic capabilities of the space shuttle and key objectives. This DSO includes motion picture photography of Spacelab module activities, flight deck activities, middeck activities, and any unscheduled motion picture photography.

8. Documentary Still Photography (DSO 903)

This DSO requires still photography of crew activities in the Orbiter, Spacelab, and mission-related scenes of general public and historical interest. Still photography with 70mm format for exterior photography and 35mm format for interior photography is required.

FLIGHT DATA FILE
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55 FLT PLN FIN A

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