

Flight Data File Crew Activity Plan STS 61-A (Cycle 2 Trajectory)

Spacelab D-1

Mission Operations Directorate
Operations Division

Final, Revision A
October 11, 1985

<u>EVENT</u>	<u>CST</u>		
Launch	11:00	Wed	Oct 30
GLOMR Deploy	23:34	Wed	Oct 30
Crew Conference	08:05	Tue	Nov 5
EDW Landing	11:39	Wed	Nov 6



National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas

MISSION OPERATIONS DIRECTORATE

STS 61-A CREW ACTIVITY PLAN
SPACELAB D-1

FINAL, REVISION A
October 11, 1985

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

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Incorporates 482

No: CAP-435

CAP-437

CAP-438

FDF-609

FDF-615

FDF-618

ACKNOWLEDGMENTS

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STS 61-A CREW ACTIVITY PLAN

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REV A 10/11/85

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3-16.....	CAP/61-A/FIN A		
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INTRODUCTION

The STS 61-A Crew Activity Plan is the flight data file article that contains the on-orbit timeline. It does not contain the detailed timelines that are covered in the Ascent, Post Insertion, Deorbit Prep and Entry checklists. For continuity, the entire flight is shown in the summary level timeline.

This on-orbit timeline satisfies the objectives specified in the Flight Definition and Requirements Directive and the requirements of the STS 61-A Flight Requirements Document (Rev A, June 1985).

The flight profile (Cycle 2 trajectory data) used for this Crew Activity Plan is for a launch time of 17:00 GMT on October 30, 1985. Orbiter inertial attitudes are expressed relative to a Mean of 1950 (M50) reference frame.

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STS 61-A OVERVIEW

FLIGHT STS 61-A EDITION FINAL REV A PUB. DATE 10/11/85

MET:000	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
RED	ASCENT	POST INSERTION	UCN ASSTION M	IMU	PSA	SLEEP						PSA	H/O GDP O/W R	VS 102-5	BR	BW	VS 102-3	IMU	MEAL	VS 102-1				R/D R/D D	H2O DUMP SURVEY
BLU	ASCENT	POST INSERTION	SL ACT		PL ACT	MEAL	VS 201-A	RMS C/O	V2 S01 -A	H2O DUMP SURVEY	VS 201-A	H/O	PSA	SLEEP						PSA					
DAY/NIGHT	[Day/Night Cycle]																								
ORBIT	[Orbit Cycle]																								
NOTES:	DMS 2: 175 X 175																								

MET:001	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
RED	PSA	VH I/P O	PSA	SLEEP								PSA	H/O	BW	ML	IMU	PK	MEAL	WL	BW	BR	VS 102-4	BW	BR
BLU	VH I/P O	BW	IMU	ML	VS 201-B	MEAL	VS 201-B	ML				H/O	PSA	SLEEP						PSA				
DAY/NIGHT	[Day/Night Cycle]																							
ORBIT	[Orbit Cycle]																							
NOTES:																								

MET:002	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
RED	HV I/O P	PSA	SLEEP								PSA	H/O	BR	VS 102-3	BR	ML	IMU	MEAL	BW	ML			BW	ML	H/O	PSA
BLU	HV I/O P	BW	ML	SOS	IMU	VS 201 C	MEAL	SOS	W R I S S C	W L F P M	S O G S	BR	W L F P M	PSA	H/O	PSA	SLEEP						PSA	H/O		
DAY/NIGHT	[Day/Night Cycle]																									
ORBIT	[Orbit Cycle]																									
NOTES:																										

MET:003	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
RED	PSA	SLEEP								PSA	H/O	PSA	MLHF	VS 102-3	IMU	MLHF	MEAL	ML				VS 102-4	H/O	PSA			
BLU	PK	VH I/P O	ML	BW	BR	BW	IMU	MEAL	BW	S O G S	B R I	PK	G S P	PK	B R I	PSA	H/O	PSA	SLEEP						PSA	H/O	MLHF
DAY/NIGHT	[Day/Night Cycle]																										
ORBIT	[Orbit Cycle]																										
NOTES:																											

MET:004	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
RED	PSA	SLEEP										PSA	H/O ML	BW	VS 102-3	ML	I W U	MEAL	BW	ML	BW	ML	H/O	VIP	PSA			
BLU	BR	W D I S S C	BR	BW	IMU	BIM	W D I S S C	MEAL	S O S	ML	BW	PSA	H/O	PSA	SLEEP										PSA	H/O	BW	H S U R V E Y
DAY/NIGHT	DRBT																											
NOTES:																												

MET:005	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
RED	PSA	SLEEP										PSA	H/O	BR	MD	BW	IMU	MEAL	VS 102-1					C C R O N E M F	H/O	BR
BLU	H2O DUMP SURVEY	VIP	IMU	VS 201-C	MEAL	VS 201-C	BW	VS 201-C	BW	PSA	H/O	PSA	SLEEP										PSA	H/O	BIM	ML
DAY/NIGHT	DRBT																									
NOTES:																										

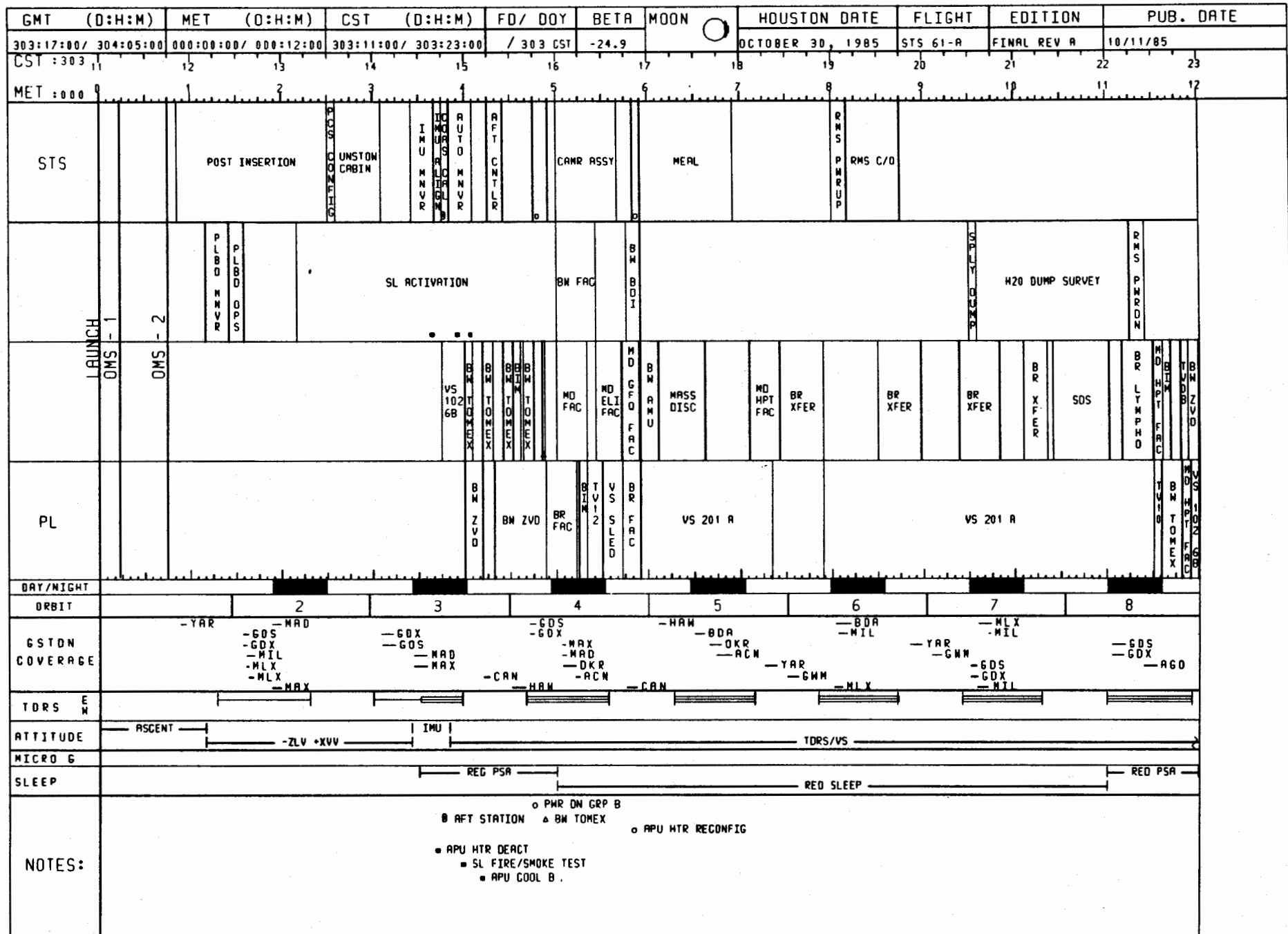
MET:006	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
RED	PSA	SLEEP										PSA	H/O	PSA	CABIN STOW	V I S O 2 - 5	MEAL	PL DEACT	SL DEACT	DEORBIT PREP					BURN	
BLU	H F O I T R E	FCS C/D	MEAL	VS 201 D	CABIN STOW	IMU	VS 201 D	PSA	H P S O A	SLEEP										PSA	DEORBIT PREP					BURN
DAY/NIGHT	DRBT																									
NOTES:																										

MET:007	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
RED	LANDING																							
BLU	EDN																							
DAY/NIGHT	DRBT																							
NOTES:																								

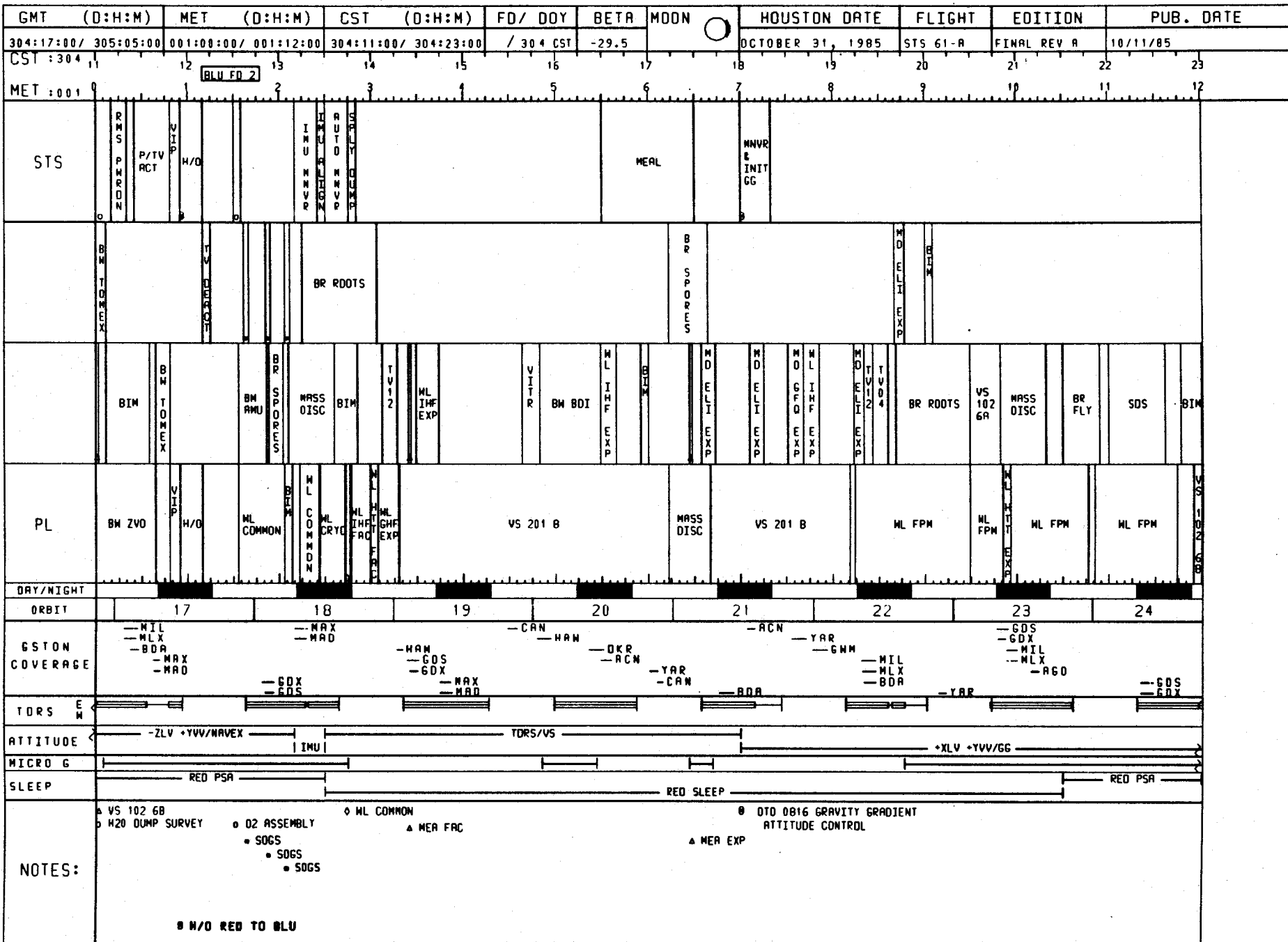
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SUMMARY TIMELINE

**SUMMARY
TIMELINE**



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FO/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE						
304:05:00 / 304:17:00	000:12:00 / 001:00:00	303:23:00 / 304:11:00	/ 303 CST	-27.2	☉	OCTOBER 30, 1985	STS 61-R	FINAL REV A	10/11/85						
CST: 303	23	0	2	3	4	5	6	7	8	9	10	11			
MET: 000	12	13	14	15	16	17	18	19	20	21	22	23	0		
STS	TRK MNVR	RUTO MNVR			IMU MNVR	ZLV MNVR	MEAL			RMS PWRUP	H2O DUMP SURVEY				
	H/O	GLOWR DPY								RAD DPY	MDAUMSTP H2O	P/TV SETUP	BW TOMEX		
	BW TOMEX	BW TOMEX	MD ELI EXP		BW TOMEX	TV15				BW TOMEX		TV12	BIM		
PL	H/O	BW ZVD		VS 102 5	MD ELI EXP	BR PLASMA	MD ELI EXP	VS 102 3	VS 102 3	MD HPT EXP		VS 102 1	VS 102 1	BR FLY	BW ZVD
DAY/NIGHT	[Shaded bars indicating day/night cycle]														
ORBIT	9 10 11 12 13 14 15 16														
GSTDN COVERAGE	-GDS -GDX -AGO -HAW -HAW -ACN -ACN -AGD -DKR -MAD -MAX -CAN -MAX -CAN -AGO -BDA -MAX -MAD -YAR -MLX -MIL -BDA -YAR														
TDRS E H	[Timeline bars for TDRS E H]														
ATTITUDE	DPY TDRS/VS IMU -ZLV +YVV/NAVEX														
MICRO G	[Timeline bars for MICRO G]														
SLEEP	BLU PSA BLU SLEEP BLU PSA														
NOTES:	▲ VS 102 68 ● -ZLV, +YVV ◊ MD HPT EXP ◊ MD GFD EXP ◊ MD GFD EXP ● DTD 0624 RADIATOR PERFORMANCE ● DTD 0325 WASTE AND SUPPLY WATER DUMP H/O BLU TO RED														



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
305:05:00 / 305:17:00	001:12:00 / 002:00:00	304:23:00 / 305:11:00	/ 304 CST	-31.9	☉	OCTOBER 31, 1985	STS 61-A	FINAL REV A	10/11/85				
CST : 304 23	RED FD 3 CST:305												
MET : 001 12													
STS	H/O		TERM GC	ZLV H NV R	MEAL				CNDS TK DUMP				
	FLTR IFM								P/TV SETUP P/TV ACT				
	VITR	BM TOMEX	BM TOMEX	TV 04	NL GHF EXP	BM TOMEX		TV 16	TV 08				
PL	H/O BIM SDS	ML FPM	ML IHF EXP	BN BGT	PK HOL FAC	BR SPORES	BR SPORES	ML IHF EXP	VS 102 4	BR BLOOD	BR BLOOD	BR BLOOD	
DAY/NIGHT													
ORBIT	25	26	27	28	29	30	31	32					
GSTON COVERAGE	--HAW	--HAW	--RCN	--GWM	--AGO	--RCN	--AGO	--HAW	--MAX	--CAN	--BDA	--BDA	--YAR
TDRS E W													
ATTITUDE	+XLV +YVV/GG												
MICRO G													
SLEEP	BLU PSA												BLU PSA
NOTES:	● FILTER CLEANING ▲ VS 102 6B		● -ZLV, -XVV		○ PK HOL EXP		○ BR BLOOD						
	● H/O BLU TO RED												

GMT (D:H:M) MET (D:H:M) CST (D:H:M) FD/DOY BETA MOON HOUSTON DATE FLIGHT EDITION PUB. DATE
 305:17:00/ 306:05:00 002:00:00/ 002:12:00 305:11:00/ 305:23:00 / 305 CST -34.3 NOVEMBER 1, 1985 STS 61-A FINAL REV A 10/11/85
 CST : 305 MET : 002

STS H/O VIP IMU MNRV ZGHLR RUCO RWRV RUCO RWRV MEAL MNVR & INIT GG

P/TV ACT T V U D O A C T T V U D O B W T O M E X B W T O M E X MASS DISC ML FPM VS 102 4 B W Z V D B R B L O O D B R B L O O D

ML IHF EXP V I T R MASS DISC T V U 2 B R L Y M P H O B W B O I V I T R B R S S O O P R S S T V U 2 T V U 4 B R P A R A M E C B R F L Y B W T O M E X B R R O O T S T V U 4 T V U 8 B W T O M E X T V U 6 V S 1 0 2 4

PL H/O VIP B W T O M E X B R L Y M P H O ML IHF EXP SOS B W T O M E X VS 201 C VS 201 C B W T O M E X SDS ML IHF EXP MASS DISC ML FPM B W Z V D B R B L O O D B W Z V D B W B G P

DAY/NIGHT ORBIT 32 33 34 35 36 37 38 39 40

GSTDN COVERAGE -MIL -MLX -BDA -MAX -MAD -MAD -MAX -CAN -HAM -GDS -GDX -MAD -MIL -MLX -BDA -MAX -MAD -CAN -HAM -GDS -GDX -MAD -YAR -GMM -BDA -MLX -MIL -YAR -GMM -GDS -GDX -MIL -MLX -BDA -GDS -GDX -AGO -GDS -GDX

TDRS E M

ATTITUDE -ZLV -XVV/NAVEX TORS/VS IMU *XLV *YVV/GG

MICRO G SLEEP RED PSA RED SLEEP RED PSA BLU PSA

NOTES:
 ▲ TV10
 ● BR BLOOD
 ● DTD 0816 GRAVITY GRADIENT ATTITUDE CONTROL
 ◇ SOGS
 ◇ SOGS
 ◇ SOGS
 ● W/O RED TO BLU

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
306:05:00 / 306:17:00	002:12:00 / 003:00:00	305:23:00 / 306:11:00	/ 305 CST	-36.7		NOVEMBER 1, 1985	STS 61-A	FINAL REV A	10/11/85				
CST : 305	RED FD 4	CST:306							BLU FD 4				
MET : 002													
STS	H/O		TURKISH ZLV MNR	MEAL					H/O				
	BR BLOOD							P/TV SETUP	P/TV ACT				
	BR LYMPHO	BR ROOTS	ML IHF EXP	BN BCP	BR LYMPHO	TV04	BN AMU	BN BCP	BN BCP	ML IHF EXP	TV04	ML SHP EXP	ML IHF EXP
PL	H/O	TV15	VS 102 3	TV15	ML FPM	TV04	PK HOL EXP	ML SHP EXP	ML FPM	BN BCP	BIM	H/O	BR BLOOD
DAY/NIGHT													
ORBIT	40	41	42	43	44	45	46	47	48				
GSTDN COVERAGE	-AGO	-HAM	-HAM	-ACN	-MAX	-GMM	-AGO	-MAX	-MAD	-YAR	-YAR	-MIL	-MLX
TORS													
ATTITUDE		+XLV +YVV/GG											
MICRO G													
SLEEP	BLU PSA				BLU SLEEP					BLU PSA			RED PSA
NOTES:		▲ VS 102 6B	▲ MD GFO EXP	▲ MD GFO EXP	● -ZLV, -YVV	○ MEA EXP	○ PK HOL EXP	○ MD GFO EXP					○ VS 102 6B
	● H/O BLU TO RED												● H/O RED TO BLU

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE											
306:17:00 / 307:05:00	003:00:00 / 003:12:00	306:11:00 / 306:23:00	/ 306 CST	-39.1		NOVEMBER 2, 1985	STS 61-A	FINAL REV A	10/11/85											
CST : 306 11 12 13 14 15 16 17 18 19 20 21 22 23 MET : 003 0 1 2 3 4 5 6 7 8 9 10 11 12																				
STS	VIP	SPLY	IMU	MNVR & INIT GC	MEAL				H/O											
P/TV SETUP	P/TV ACT	CS	BM BGP	BR FLY	PK HOL FAC	BM BGP	VITR	BM BGP	MD ELI EXP											
BM BGP	BIM	ML INF FAC	ML MHF EXP	ML MHF EXP	ML MHF EXP	ML MHF EXP	ML MHF EXP	ML MHF EXP	ML MHF EXP											
PK HOL EXP	VIP	PK HOL EXP	ML INF FAC	ML MHF EXP	ML MHF EXP	ML MHF EXP	GSP	BR L YPHO	BIM											
DAY/NIGHT	48		49		50		51		52		53		54		55		56			
ORBIT	48		49		50		51		52		53		54		55		56			
GSTDN COVERAGE	-GDX -GDS MIL -MAX -MAD		-MAD -MAX		-CAM -HAM -GDS		-YAR -CAM		-BDA -DKR -ACN		-MIL -MLX -BDA -YAR		-GDS -GDX -AGO							
TORS E M																				
ATTITUDE	-ZLV +YVV/NAVEX										IMU		+XLV +YVV/GG							
MICRO G	RED PSA										RED SLEEP						RED PSA			
SLEEP	RED PSA										RED SLEEP						BLU PSA			
NOTES:	▲ PK HOL EXP ● PK HOL EXP										○ MD HPT EXP ○ SOGS ○ SOGS						○ MD HPT EXP ○ BR LYMPHO			
											○ PK HOL EXP ■ DTD 0816 GRAVITY GRADIENT ATTITUDE CONTROL									
																	● N/O BLU TO RED			

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DDY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE		
307:05:00 / 307:17:00	003:12:00 / 004:00:00	306:23:00 / 307:11:00	/ 306 CST	-41.5	☾	NOVEMBER 2, 1985	STS 61-A	FINAL REV A	10/11/85		
CST : 306 23	0	2	3	4	5	6	7	8	9	10	11
MET : 003 12	13	14	15	16	17	18	19	20	21	22	23
STS										BLU FD 5	
PL											
DAY/NIGHT											
ORBIT	56	57	58	59	60	61	62	63	64		
GSTON COVERAGE	-RGO	-HAN									
TORS											
ATTITUDE											
MICRO G											
SLEEP											
NOTES:											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
307:17:00/ 308:05:00	004:00:00/ 004:12:00	307:11:00/ 307:23:00	/ 307 CST	-43.9		NOVEMBER 3, 1985	STS 61-A	FINAL REV A	10/11/85				
CST :307	11	12	13	14	15	16	17	18	19	20	21	22	23
MET :004	1	2	3	4	5	6	7	8	9	10	11	12	
STS													
PL													
DAY/NIGHT													
ORBIT	64	65	66	67	68	69	70	71	72				
GSTDN COVERAGE	MAX MAD	-GDS -GDX -MAX -MAD	-HAM -GDS -GDX -MAX -MAD -DKR	-HAM -BDR -DKR -ACN	-BDR -MIL -MLX -ACN	-MIL -MLX -BDR -YAR -GMM	-AGO -GDS -GDX -MIL -MLX	-GDS -GDX -AGO					
TORS E M													
ATTITUDE		-ZLV -XVV/NAVEX					+XLV +YV/GG						
MICRO G													
SLEEP		RED PSA									RED PSA	BLU SLEEP	BLU PSA
NOTES:		◊ PK IDS	◊ BR SLIME	● DTO OB16 GRAVITY GRADIENT ATTITUDE CONTROL			● MD HPT EXP	● FILTER CLEANING					

● H/O BLU TO RED

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
308:05:00 / 308:17:00	004:12:00 / 005:00:00	307:23:00 / 308:11:00	/ 307 CST	-46.2		NOVEMBER 3, 1985	STS 61-A	FINAL REV A	10/11/85
CST : 307									
MET : 004									
STS									
DAY/NIGHT									
ORBIT									
GSTDN COVERAGE									
TDRS E M									
ATTITUDE									
MICRO G									
SLEEP									
NOTES:	<p> ▲ MD HPT EXP ○ BR SLIME ● -ZLV, +YVV ● VS 102 6B ● DTG 0325 WASTE AND SUPPLY WATER DUMP ● SOGS ● SOGS ● SOGS </p>								

● H/O RED TO BLU

GMT (D:H:M)		MET (D:H:M)		CST (D:H:M)		FD/DOY		BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
308:17:00 / 309:05:00		005:00:00 / 005:12:00		308:11:00 / 308:23:00		/ 308 CST		-48.6		NOVEMBER 4, 1985	STS 61-A	FINAL REV A	10/11/85				
CST : 308		11	12	13	14	15	16	17	18	19	20	21	22	23			
MET : 005		0	1	2	3	4	5	6	7	8	9	10	11	12			
STS	M20 DUMP SURVEY	RMS PHRDN	VIP	IMU MNVR	IMU MNVR	MEAL						MNVR & INIT GG	H/O				
		P/TV SETUP	P/TV ACT														
		BM BGP	ML MHF EXP	BM BGP	TV 1 2	BM BGP	BR FLY	BM BGP	BM BGP	BM BGP	BM BGP	BM BOI	BR PARAM EC	TV 0 B	VITR	MASS DISC	
PL	MASS DISC	PK IDS	VIP	ML SHF EXP	PK IDS	VS 201 C		VS 201 C	VS 201 C		VS 201 C		BM ZVD	H/O		BR BLOOD	BR ANTI B I G
DAY/NIGHT																	
ORBIT	80	81		82		83		84		85		86		87			
GSTDN COVERAGE	MIL -MAX -MAD			-CAN -HAM -GOS			-BOA -DKR -ACN		-MIL		-YAR -GMM		-GOS -GDX -AGO				-AGO
TORS																	
ATTITUDE	-ZLV +YVV/NAVEX				TORS/VS						+XLV +YVV/GG						
MICRO G																	
SLEEP	RED PSA					RED SLEEP						RED PSA				BLU PSA	
NOTES:	BM ANU																

H/O BLU TO RED

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
309:05:00 / 309:17:00	005:12:00 / 006:00:00	308:23:00 / 309:11:00	/ 308 CST	-50.9		NOVEMBER 4, 1985	STS 61-A	FINAL REV A	10/11/85					
CST: 308 23 MET: 005 12 CST: 309 13 BLU FD 7														
STS	TERM G C		Z L V M N R V M N R V M N R V	MEAL	CREW CONF		H/O							
					P/TV SETUP	P/TV ACT	T V E R R O R	BR P L A S M A	BR BLOOD BR DNA					
	V I T R	V I T R		TV12		BIM	V I T R T V D 4	BIM						
PL	M D G F O E X P	BW BGT	M L G H F E X P	BR BLOOD	M D E L I E X P	BW BGT	VS 102 1	VS 102 1	H/O	M D E L I F A C	M D G F O E X P	M D E L I F A C	M L FPM	
DAY/NIGHT	[Shaded bars indicating day/night cycle]													
ORBIT	88	89	90	91	92	93	94	95						
GSTDN COVERAGE	-HAN	-HAN	-ACN	-ACN -DKR -MAD -MAX	-GWN	-AGD -DKR -MAD -MAX	-BDA -MAX -MAD	-BDA	-YAR	-MIL -MLX -BDA -MIL -MAX				
TDRS E M	[Horizontal bars representing TDRS events]													
ATTITUDE	+XLV +YVV/GG			-ZLV -XVV/NAVEX										
MICRO G	[Horizontal bars representing micro-g levels]													
SLEEP	BLU SLEEP						BLU PSR							
NOTES:	o MD GFO EXP		o VS 102 68 o -ZLV, -XVV				o SOGS o SOGS o SOGS				o MD FAC		o APU NR ACT	
										o H/O RED TO BLU				

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
309:17:00 / 310:05:00	006:00:00 / 006:12:00	309:11:00 / 309:23:00	/ 309 CST	-53.2	☾	NOVEMBER 5, 1985	STS 61-A	FINAL REV A	10/11/85				
CST: 309	11	12	13	14	15	16	17	18	19	20	21	22	23
MET: 006	0	1	2	3	4	5	6	7	8	9	10	11	12
STS	RFCSRE HOT	FCS C/D	MULTI-BANK	MEAL	AUTD MNV R				INU RECOV	INU MNV R	MNV R INIT PTC		H/D
		BIM											
PL	ML FPM												
DAY/NIGHT													
ORBIT	96	97	98	99	100	101	102	103					
ESTDN COVERAGE	-GDX -GDS -MAX -MAD	-MAD -MAX -DKR	-ACN	-YAR -CAN	-GWH	-MIL -MLX -BDA	-AGO	-GDS -GDX -AGO					
TDRS E H													
ATTITUDE													
MICRO G													
SLEEP													
NOTES:	▲ VS 102 68				▲ BW FAC ▲ MEA FAC			○ VS 102 68				○ SL FIRE/SMOKE TST ▲ VS 102 68	

● W/O BLU TO RED

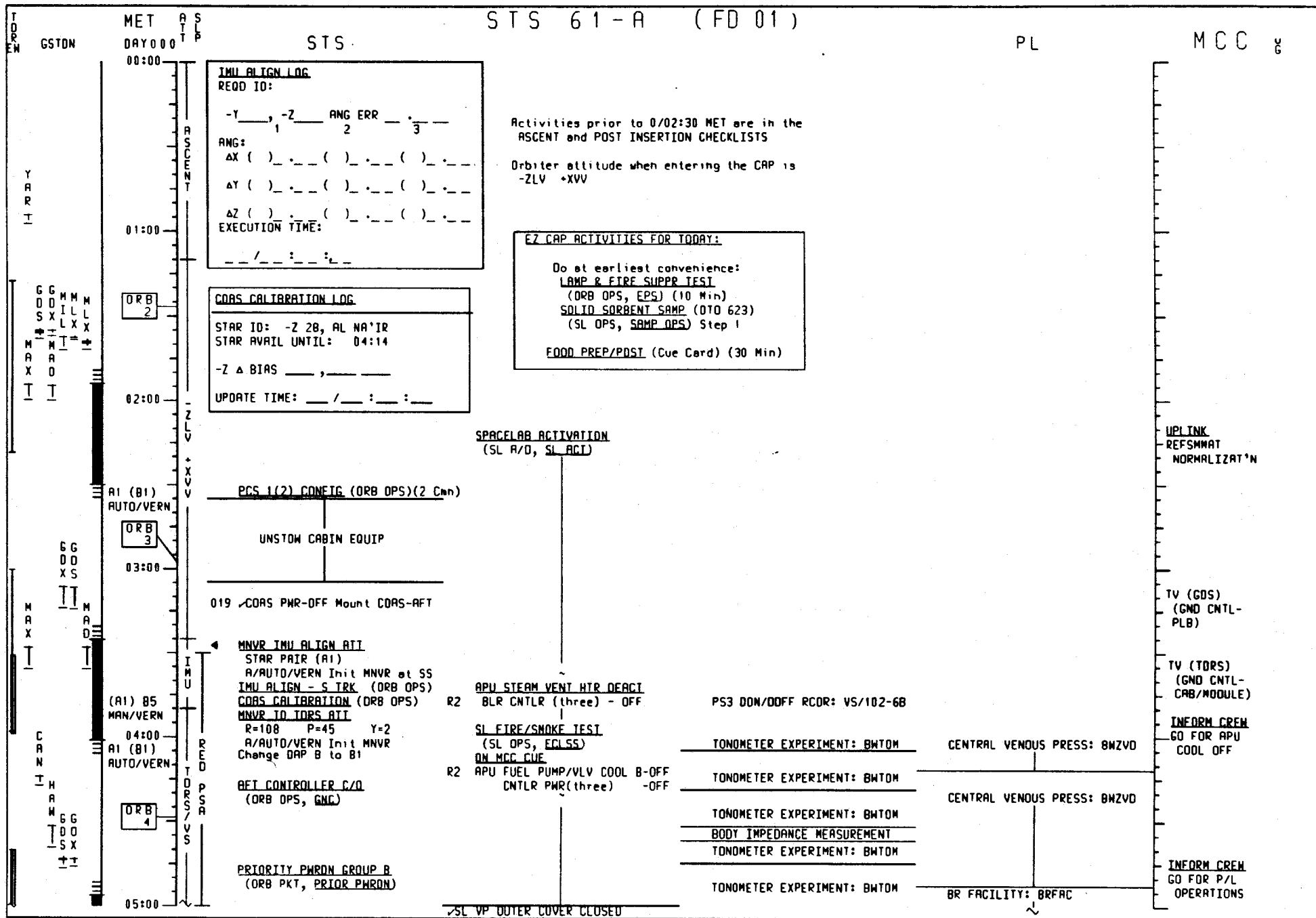
GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FO/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
310:05:00 / 310:17:00	006:12:00 / 007:00:00	309:23:00 / 310:11:00	/ 309 CST	-55.5		NOVEMBER 5, 1985	STS 61-A	FINAL REV A	10/11/85					
CST : 309 23	CST:310 13													
MET : 006 12					BLU FD B									
STS	CABIN STOW	MEAL	P/TV SETUP	P/TV ACT				DEORBIT PREP						
									DEORBIT BURN (6/23:39)					
PL														
DAY/NIGHT														
ORBIT	104	105	106	107	108	109	110	111						
GSTDN COVERAGE	-HAN		-ACN	-SWM	-AGO	-DGR	-ACN	-MAX	-MIL	-GDS	-MLX	-MLX	-MAX	-MAD
TDRS E M														
ATTITUDE				PTC										ENTRY
MICRO G														
SLEEP				BLU SLEEP										
NOTES:	o ML OFF		o VS 102 6B	o BR FAC		o PWR UP GRP B		o TV/VTR DEACT						

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
310:17:00/ 311:05:00	007:00:00/ 007:12:00	310:11:00/ 310:23:00	/ 310 CST	-57.7		NOVEMBER 6, 1985	STS 61-A	FINAL REV A	10/11/85				
CST : 310	11	12	13	14	15	16	17	18	19	20	21	22	23
MET : 007	0	1	2	3	4	5	6	7	8	9	10	11	12
STS													
	EDW LANDING (7:00:39)												
PL													
DAY/NIGHT													
ORBIT	112	113	114	115	116	117	118	119					
GSTON COVERAGE	-GDS -GDX -MAD -MAX	-GDX -MAD -MAX -DKR	-DKR -ACN	-YAR -GMM	-YAR -GMM	-GDS -GDX -MIL -MLX -BDR	-GDS -GDX -RGO	-GDS -GDX -RGO					
TORS E M	-CAN -HAW -GDS	-CAN -HAW -BDR	-CAN -HAW -BDR	-MLX -BDR -MTI	-MLX -BDR -MTI	-MLX -BDR -MTI	-MLX -BDR -MTI	-MLX -BDR -MTI	-HAW				
ATTITUDE	← ENTRY →												
MICRO G													
SLEEP													
NOTES:													

DETAILED TIMELINE

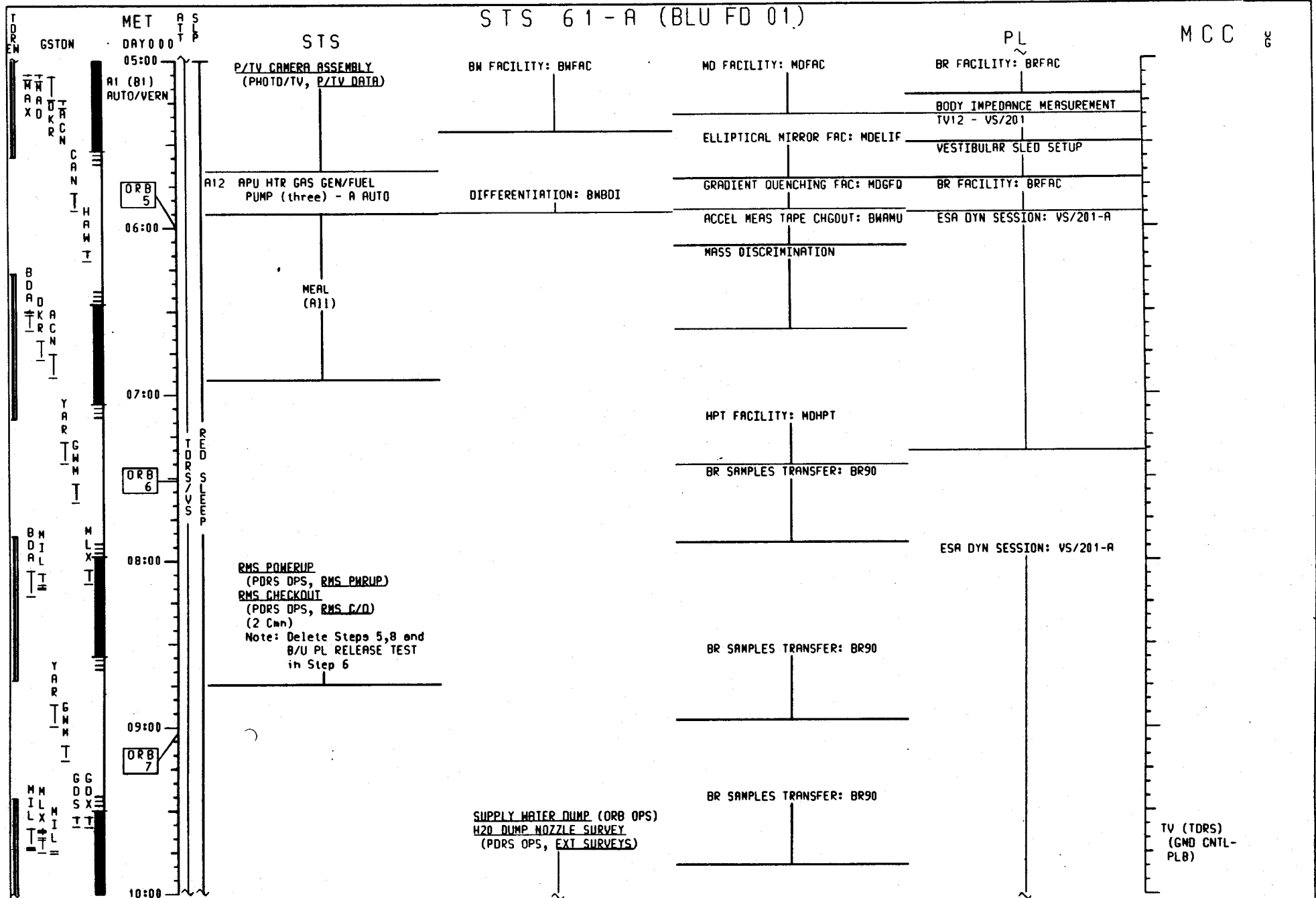
DETAILED
TIMELINE

DETAILED TIMELINE



STS 61-A (BLU FD 01)

MCC 8

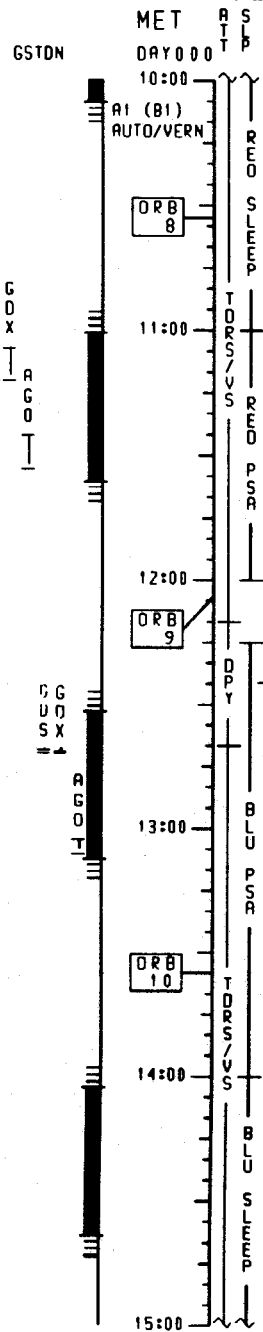


STS 61-A (BLU FD 01)

MCC 6

STS

PL



RED FZ CAP ACTIVITIES FOR TODAY:
 SL MODULE AIR SAMPLE
 (SL OPS, MODULE SAMPLE)
 EXERCISE (1 Hr/A11)

RED POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST
 EC PURGE - AUTO (Cue Card)
 KU-BAND ANT CABLE POSITION
 (ORB OPS, COMM INST)
 FOOD PREP/POST (Cue Card)
 SOLID SORBENT SAMP (OTO 623)
 (SL OPS, SAMP OPS) Step 3

A7U MUX 1L(2L) - PL1
 MUX 1R(2R) - PL2
 PAYLOAD - MUX 1(2)

MNVR (TRK) DPY ATT
 TG=2 BV=5
 P=180 Y=-43 OM=0
 A/AUTO/VERN (12:10) Init TRK

MNVR TO TDRS ATT
 R=107 P=351 Y=11
 A/AUTO/VERN (12:40) Init MNVR

H2O DUMP NOZZLE SURVEY
 (PDRS OPS, EXT SURVEYS)

RMS POWERDOWN
 (PDRS OPS, RMS PWDRN)
 Note: Do not stow MPMs

HANDOVER: BLU TO RED
DEPLOY OPERATIONS
 (ORB OPS, GLOMR DEPLOY)
 DEPLDY -0/12:34

BLU PRE SLEEP ACTIVITY
 MEAL
 SL CO2 ABS REPLACE (Cue Card)
 ORB CO2 ABS REPLACE (Cue Card)
 STATUS REPORT
 WCS CLEAN (URINE COLLECT
 Cue Card)
MED DATA REPORT
 (MED, GENERAL MED)

BR SAMPLES TRANSFER: BR90

SPATIAL DESCRIPTION: 925

LYMPHOCYTES: BR33

HPT FACILITY: MDHPT
 BODY IMPEDANCE MEASUREMENT

TV08 - BWZVD
 CENTRAL VENOUS PRESS: BWZVD

(RED FD 02)

TONOMETER EXPERIMENT: BWTOM

HEMATOCRIT EXP: BWZVD
 PS3 DON/OFF RCDR: VS/102-68

ELLIPTICAL MIRROR EXP: MOELI

ESA DYN SESSION: VS/201-A

TV10 - BWTOM
 TONOMETER EXPERIMENT: BWTOM

HPT FACILITY: MDHPT
 PS1 DON/OFF RCDR: VS/102-68

HANDOVER: BLU TO RED

CENTRAL VENOUS PRESS: BWZVD

TV17 - VS/102-5
 HOP & DROP: VS/102-5

ELLIPTICAL MIRROR EXP: MOELI
 PLASMA CELL STRUCTURE: BR48

TONOMETER EXPERIMENT: BWTOM

STS 61-A (RED FD 02)

GSTON

MET

DAY 000

STS

PL

MCC 8

15:00

ORB 11

A1 (B1)
AUTO/VERN

A7U MUX 1L(2L) - PL1
MUX 1R(2R) - PL2
PAYLOAD - MUX 1(2)

TONOMETER EXPERIMENT: BWTOM

ELLIPTICAL MIRROR EXP: MDELI

TV15 - VS/102-3

ROTATING DOME: VS/102-3

16:00

ORB 12

ROTATING DOME: VS/102-3

17:00

← MNVR IMU ALIGN AT1
STAR PAIR (A1)
A/AUTO/VERN Init MNVR at SS
IMU ALIGN - 5 TRK (ORB OPS)
MNVR (TRK) -7LV, +YVV
TG=2 BV=3 DM=27D
A/AUTO/VERN Init TRK

TV12 - VS/102

HIGH PRECISION THERMD: MDHPT

TONOMETER EXPERIMENT: BWTOM

NASA DYN SESSIONS: VS/102-1

18:00

ORB 13

MEAL
(A11)

19:00

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

ORB 14

20:00

TOR EN

H A M T

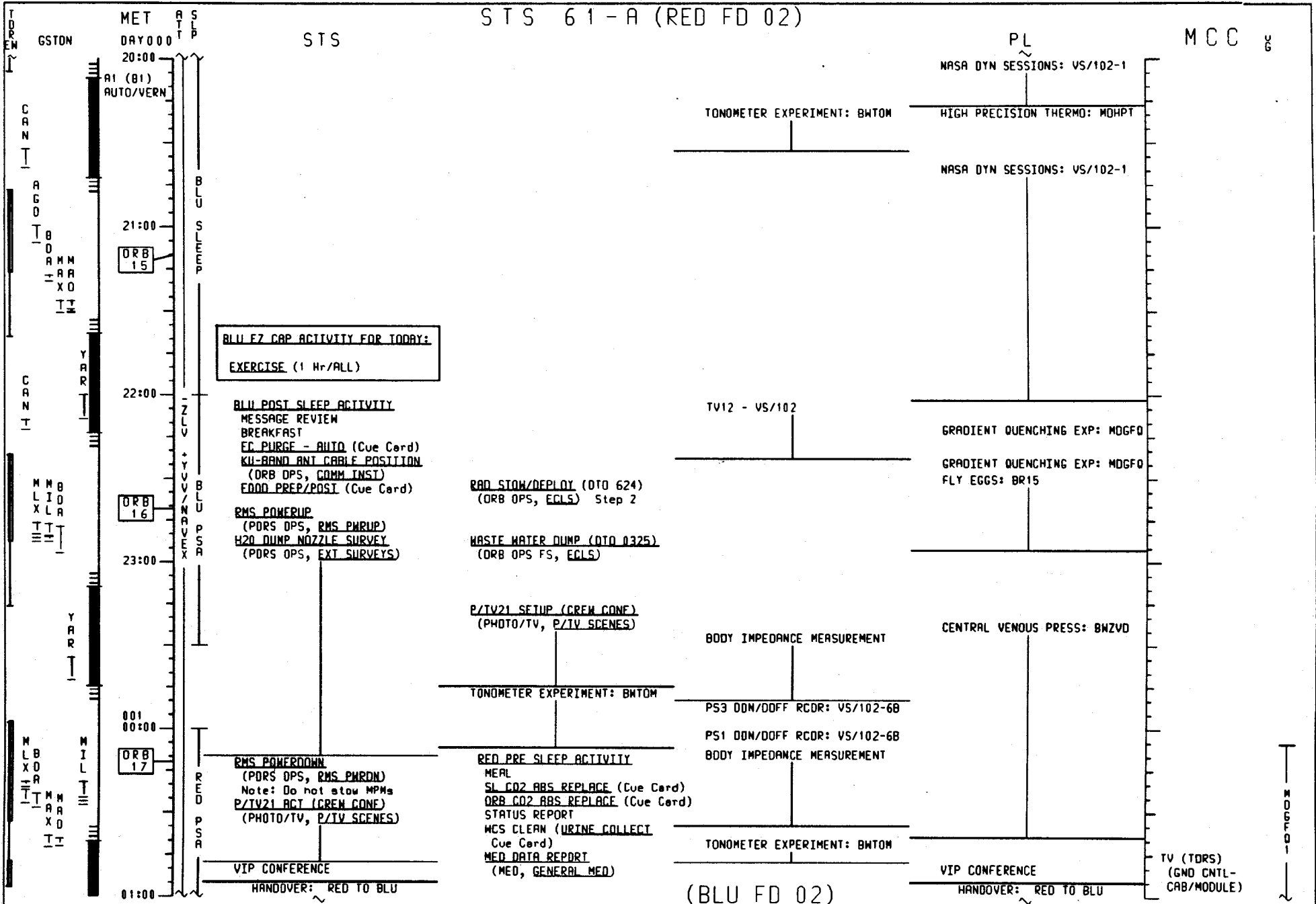
A C N T

A C N T
T R M
T O X

G M M

A G O T
D K R
M M
T O X

M O D E L



STS 61-A (BLU FD 02)

PL

MCC

GSTON

MET DAY 001

STS

HANDOVER: RED TO BLU

HANDOVER: RED TO BLU

6

MCC 01

MCC 01

01:00 A1 (B1) AUTO/VERN

ORB 18

02:00

03:00 ORB 19

04:00

05:00 ORB 20

06:00

AS P
ZLV
YVV
VAV
X
IMU
REDS/S

UNSTOW O2 BLEED ORIFICE ASSEMBLY

M032M LEH O2 5 vlv - CL
Insert O2 Bleed Orifice
Assembly into LEH O2 5 OD
LEH O2 5 vlv - OP
LEH O2 SPLY 1,2 vlv - OP

SL VP OUTER COVER CLOSED
MNVR IMU ALIGN ATT
STAR PAIR (A1)
A/AUTO/VERN Init MNVR at SS
IMU ALIGN - S TRK (ORB OPS)
MNVR TO TORR ATT
R-218 P-103 Y-322
A/AUTO/VERN Init MNVR
SUPPLY WATER DUMP (ORB OPS)

IMU ALIGN LOG
READ ID:

-Y	1	-Z	2	ANG ERR	3
ANG:					
ΔX	()	()	()	()	()
ΔY	()	()	()	()	()
ΔZ	()	()	()	()	()
EXECUTION TIME:	_ / _ : _ : _				

TV DEACT (Cue Card, IV/VTR)

SL OFFGASSING SAMPLING: SOGS

SL OFFGASSING SAMPLING: SOGS

SL OFFGASSING SAMPLING: SOGS

ROOTS: BR39

ACCEL MERS TAPE CHGOUT: BWRMU

SPORES: BR28

MASS DISCRIMINATION

BODY IMPEDANCE MEASUREMENT

TV12 - VS/201

MATERIAL EXP ASSEMBLY: MEA
ISOTHERMAL HEATING EXP: WLIHF

CHANGE VITR TAPE

DIFFERENTIATION: BWBOI

ISOTHERMAL HEATING EXP: WLIHF

BODY IMPEDANCE MEASUREMENT

WL COMMON EQUIP OPS: WLCOM

BODY IMPEDANCE MEASUREMENT

WL COMMON EQUIP OPS: WLCOM

WL CRYO OPS: WLCRYO

WL COMMON EQUIP OPS: WLCOM

ISOTHERMAL HEATING FAC: WLIHF

HIGH TEMP THERMO FAC: WLHTT

GRADIENT HEATING FAC: WLGHF

ESA DYN SESSION: VS/201-B

MEAL (A1)

GODS

MARX

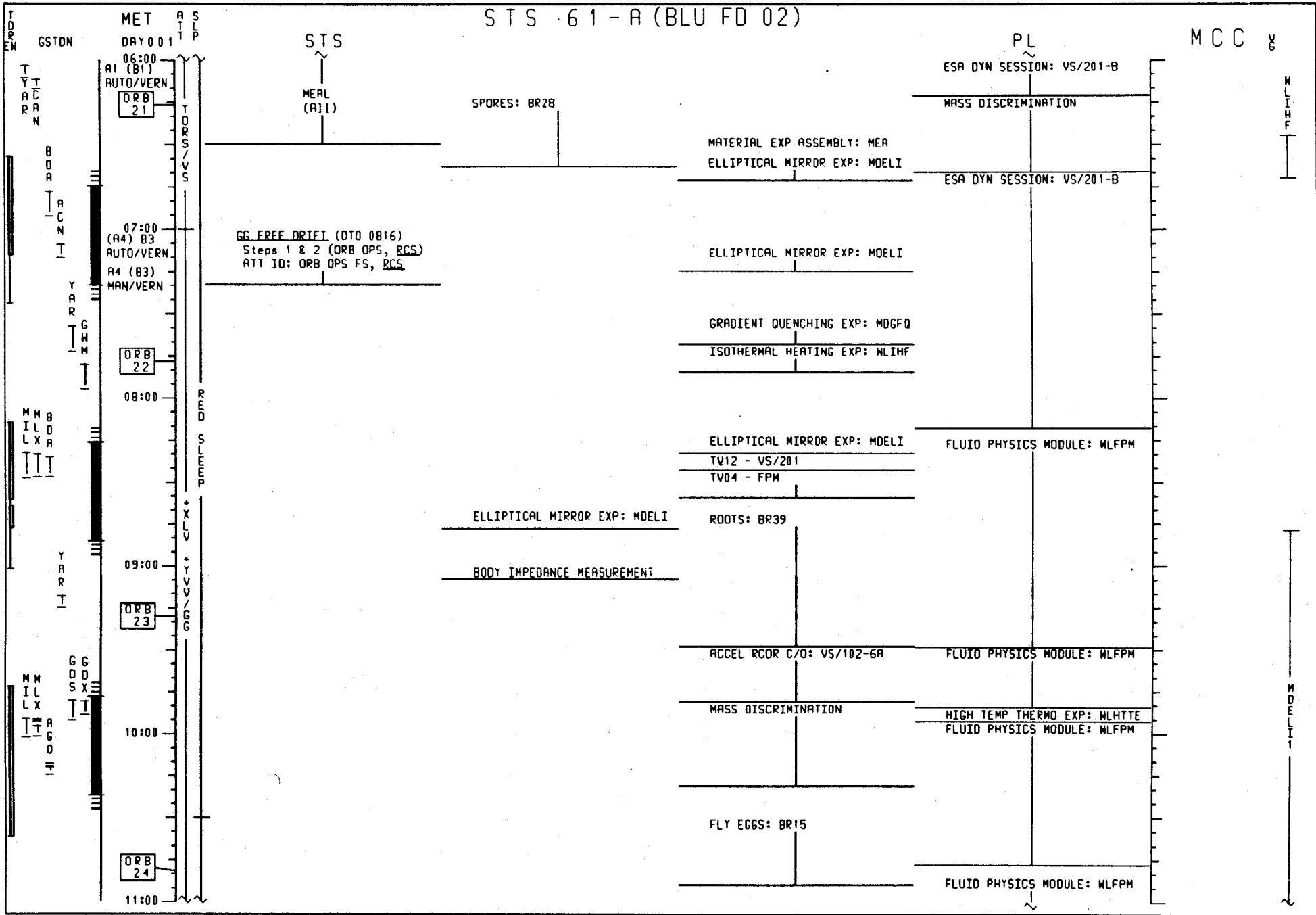
GODS
MARX

CANHAM

ACNT

STS - 61 - A (BLU FD 02)

MCC



MET DAY 001
 06:00 R1 (B1) AUTO/VERN
 ORB 21
 07:00 (A4) B3 AUTO/VERN
 R4 (B3) MAN/VERN
 ORB 22
 08:00
 ORB 23
 09:00
 ORB 24
 10:00
 11:00

GG FREE DRIEL (OTO 0816)
 Steps 1 & 2 (ORB OPS, RCS)
 ATT ID: ORB OPS FS, RCS

REDS
 X
 Y
 V
 G

SPORES: BR28

ELLIPITICAL MIRROR EXP: MOELI

BODY IMPEDANCE MEASUREMENT

MATERIAL EXP ASSEMBLY: MEA
 ELLIPITICAL MIRROR EXP: MOELI

ELLIPITICAL MIRROR EXP: MOELI

GRADIENT QUENCHING EXP: MDGFD
 ISOTHERMAL HEATING EXP: WLIHF

ELLIPITICAL MIRROR EXP: MOELI
 TV12 - VS/201
 TV04 - FPM

ROOTS: BR39

ACCEL RCOR C/O: VS/102-6A

MASS DISCRIMINATION

FLY EGGS: BR15

ESA DYN SESSION: VS/201-B

MASS DISCRIMINATION

ESA DYN SESSION: VS/201-B

FLUID PHYSICS MODULE: WLFPM

FLUID PHYSICS MODULE: WLFPM

HIGH TEMP THERMO EXP: WLHTTE
 FLUID PHYSICS MODULE: WLFPM

FLUID PHYSICS MODULE: WLFPM

TDR EN

GSTDN

MET

DAY 001

ATP

STS 61-A (BLU FD 02).

STS

PL

MCC

11:00

RED POST SLEEP ACTIVITY

MESSAGE REVIEW
 BREAKFAST
 EC PURGE - AUTO (Cue Card)
 KU-BAND ANT CABLE POSITION
 (ORB OPS, COMM INST)
 FOOD PREP/POST (Cue Card)
 SOLID SOLVENT SAMP (OTO 623)
 (SL OPS, SAMP OPS) Step 3

RED EZ CAP ACTIVITY FOR TODAY:

EXERCISE (1 Hr/All)

SPATIAL DESCRIPTION: SDS

FLUID PHYSICS MODULE: WLFPM

12:00

HANDOVER: BLU TO RED

ISOTHERMAL HEATING EXP: WLIHF (RED FD 03)

PS1 DON/OFF RCDR: VS/102-6B

HANDOVER: BLU TO RED

ORB 25

BLU PRE SLEEP ACTIVITY

MEAL
 SL CO2 ABS REPLACE (Cue Card)
 ORB CO2 ABS REPLACE (Cue Card)
 STATUS REPORT
 MCS CLEAN (URINE COLLECT)
 Cue Card
 MED DATA REPORT
 (MED, GENERAL MED)

FILTER CLEANING (IFM, SCHEDULED MAINTENANCE)

BODY IMPEDANCE MEASUREMENT

BODY IMPEDANCE MEASUREMENT

13:00

CHANGE VITR TAPE

SPATIAL DESCRIPTION: SDS

ORB 26

PS3 DON/OFF RCDR: VS/102-6B

TONOMETER EXPERIMENT: BWTOM

ISOTHERMAL HEATING EXP: WLIHF

14:00

FLUID PHYSICS MODULE: WLFPM

15:00

ORB 27

GG FREE DRIFI (ORB OPS, RCS)
 Step 3: VEH RECDV/FES RESTRT
 Change DAP A, B to A1, B1
 If reqd per MCC call:
 MNVR INU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at 55

TONOMETER EXPERIMENT: BWTOM

16:00

GG
DOX
TT
AGOT

H
H
H
H

H
H
H
H

BLU
OPS

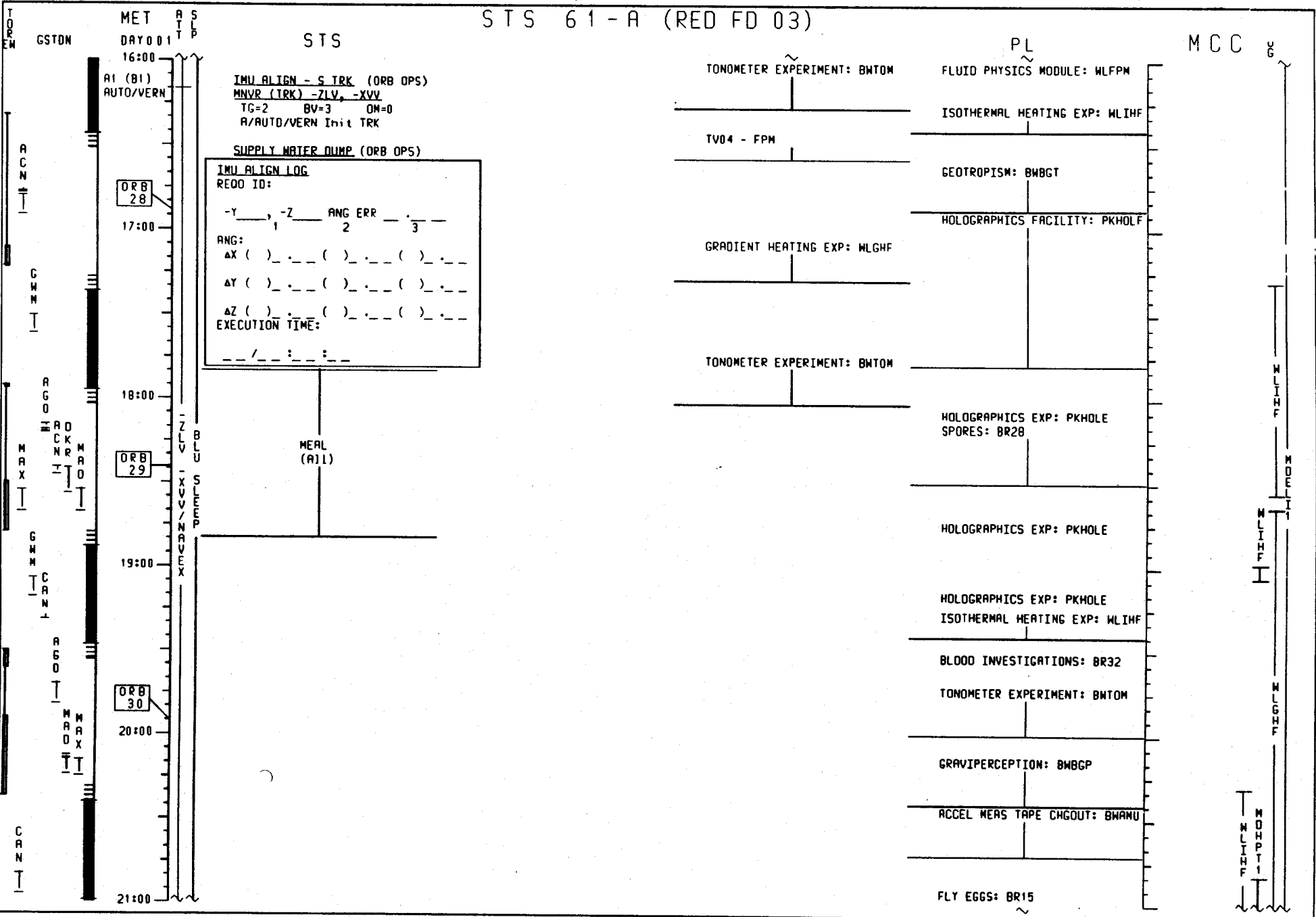
BLU
OPS

BLU
OPS

W
L
F
P
M

W
L
F
P
M

M
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D
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L
E



STS 61-A (RED FD 03)

MET
DAY 001
16:00
A1 (B1)
AUTO/VERN
ORB 28
17:00
ORB 29
18:00
ORB 30
19:00
20:00
ORB 30
21:00

STS
IMU ALIGN - S TRK (ORB OPS)
MNVR (TRK) -ZLV, -XVV
TG=2 BV=3 OM=0
A/AUTO/VERN Init TRK

SUPPLY WATER DUMP (ORB OPS)

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

MEAL (A11)

TONOMETER EXPERIMENT: BWTOM
TV04 - FPM
GRADIENT HEATING EXP: WLGHF
TONOMETER EXPERIMENT: BWTOM

FLUID PHYSICS MODULE: WLFPM
ISOTHERMAL HEATING EXP: WLIHF
GEOTROPISM: BWBGT
HOLOGRAPHICS FACILITY: PKHOLF
HOLOGRAPHICS EXP: PKHOLE
SPORES: BR28
HOLOGRAPHICS EXP: PKHOLE
HOLOGRAPHICS EXP: PKHOLE
ISOTHERMAL HEATING EXP: WLIHF
BLOOD INVESTIGATIONS: BR32
TONOMETER EXPERIMENT: BWTOM
GRAVIPERCEPTION: BWBGP
ACCEL WERS TAPE CHGOUT: BWAMU
FLY EGGS: BR15

MCC

STS 61-A (RED FD 03)

STS

PL

MCC

MET DAY 001
 21:00
 A1 (B1)
 AUTO/VERN
 ORB 31
 22:00
 ORB 32
 23:00
 002 00:00
 ORB 33
 01:00
 ORB 34
 02:00

BLU FZ CAP ACTIVITY FOR TODAY:
 EXERCISE (1 Hr/ALL)

BLU POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST
 EC PURGE - AUTO (Cue Card)
 KU-BAND ANT CABLE POSITION
 (ORB OPS, COMM INST)
 FOOD PREP/POST (Cue Card)

CONDENSATE TANK DUMP
 (SL OPS, ECLSS)

P/TV21 SETUP (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

P/TV21 ACT (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

HANDOVER: RED TO BLU

VIP CONFERENCE

RED PRE SLEEP ACTIVITY

MEAL
 SL CO2 ABS REPLACE (Cue Card)
 ORB CO2 ABS REPLACE (Cue Card)
 STATUS REPORT
 MCS CLEAN (URINE COLLECT)
 (Cue Card)
 MED DATA REPORT
 (MED, GENERAL MED)

TV DEACT (Cue Card, TV/VTR)

PS3 DON/DOFF RCDR: VS/102-6B
 TONOMETER EXPERIMENT: BWTOM

TV10 - BWTOM
 MASS DISCRIMINATION

TV16 - VS/102-4

TV08 - BWZVD

HIGH TEMP THERMO EXP: WLHTIE

TV08 - BWZVD

(BLU FD 03)

TV10 - BWTOM
 ISOTHERMAL HEATING EXP: WLHIF

CHANGE VTR TAPE

MASS DISCRIMINATION

FLY EGGS: BR15
 PLASMA CELL STRUCTURE: BR48

ISOTHERMAL HEATING EXP: WLHIF

POSITION AWARENESS: VS/102-4

CENTRAL VENOUS PRESS: BWZVD

BLOOD INVESTIGATIONS: BR32

CENTRAL VENOUS PRESS: BWZVD

BLOOD INVESTIGATIONS: BR32

CENTRAL VENOUS PRESS: BWZVD

BLOOD INVESTIGATIONS: BR32

HANDOVER: RED TO BLU

VIP CONFERENCE

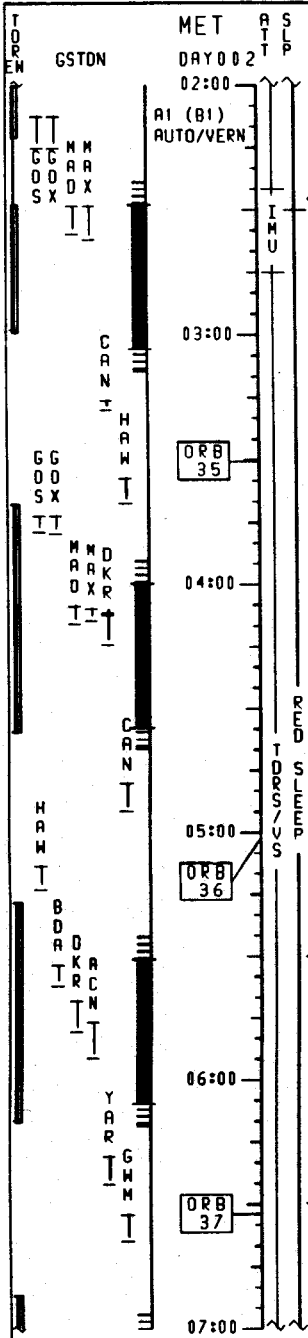
TONOMETER EXPERIMENT: BWTOM

LYMPHOCYTES: BR33

ISOTHERMAL HEATING EXP: WLHIF

SPATIAL DESCRIPTION: SDS

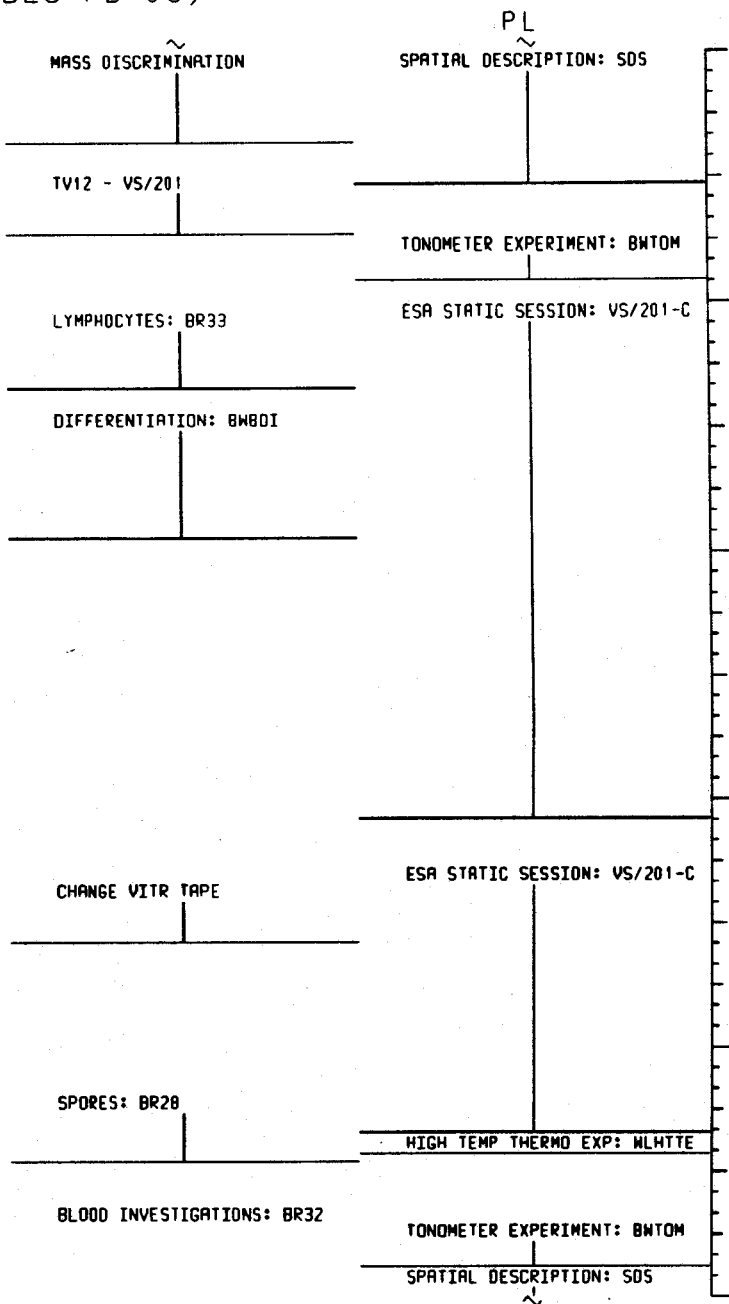
TV (TDRS)
 (GND CNTRL -
 CAB/MODULE)



✓SL VP OUTER COVER CLOSED
 MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at SS
 IMU ALIGN - S TRK (ORB OPS)
 MNVR TO TORR ATT
 R=212 P=100 Y=321
 A/AUTO/VERN Init MNVR
 SUPPLY WATER DUMP (ORB OPS)

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

MEAL
 (A11)



STS 61-A (BLU FD 03)

MCC 6

MET DAY 002
 07:00
 R1 (B1) AUTO/VERN
 (A4) B3 AUTO/VERN
 A4 (B3) MAN/VERN

08:00
 ORB 38

09:00

10:00
 ORB 39

11:00
 ORB 40

12:00

STATION: TDR EM, GSTON, TTT, WMM, BLI, OXL, A, YARR, GMM, T, GDX, L, M, N, B, O, A, R, H, S, D, G, G, S, X, T, A, G, O, T, T, G, O, S, X, T, T

ACTIVITY: R, E, A, D, S, L, E, E, P, X, L, V, Y, V, V, /, G, G, R, E, O, P, S, A, B, L, U, P, S, A

GG FREE DRIFT (DTO 0816)
 Steps 1 & 2 (ORB OPS, RCS)
 ATT ID: ORB OPS FS, RCS

FLUID PHYSICS MODULE: WLFPM

RED FZ CAP ACTIVITY FOR TODAY:
 EXERCISE (1 Hr/A11)

RED POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST
 FC PURGE - AUTO (Cue Card)
 KU-BAND ANT CABLE POSITION (ORB OPS, COMM INST)
 FOOD PREP/POST (Cue Card)
 SOLID SOLVENT SAMP (DTO 623) (SL OPS, SAMP OPS) Step 3

BLU PRE SLEEP ACTIVITY
 MEAL
 SL CO2 ABS REPLACE (Cue Card)
 ORB CO2 ABS REPLACE (Cue Card)
 STATUS REPORT
 MCS CLEAN (URINE COLLECT) (Cue Card)
 MED DATA REPORT (MED, GENERAL MED)

MUX 1L(2L) - PL1
MUX 1R(2R) - PL2
PAYLOAD - MUX 1(2)

POSITION AWARENESS: VS/102-4

CENTRAL VENOUS PRESS: BWZVD

BLOOD INVESTIGATIONS: BR32

BLOOD INVESTIGATIONS: BR32

TV12 - VS/201

TV04 - FPM

PARAMECIUM CELLS: BR21

FLY EGGS: BR15

TONOMETER EXPERIMENT: BWTOM

ROOTS: BR39

TV04 - FPM
TV08 - BWZVD

TV06 - BWBGP

PS1 DON/OFF RCOR: VS/102-6B

SPATIAL DESCRIPTION: SDS

ISOTHERMAL HEATING EXP: WLIHF

MASS DISCRIMINATION

SL OFFGASSING SAMPLING: SOGS

SL OFFGASSING SAMPLING: SOGS

SL OFFGASSING SAMPLING: SOGS

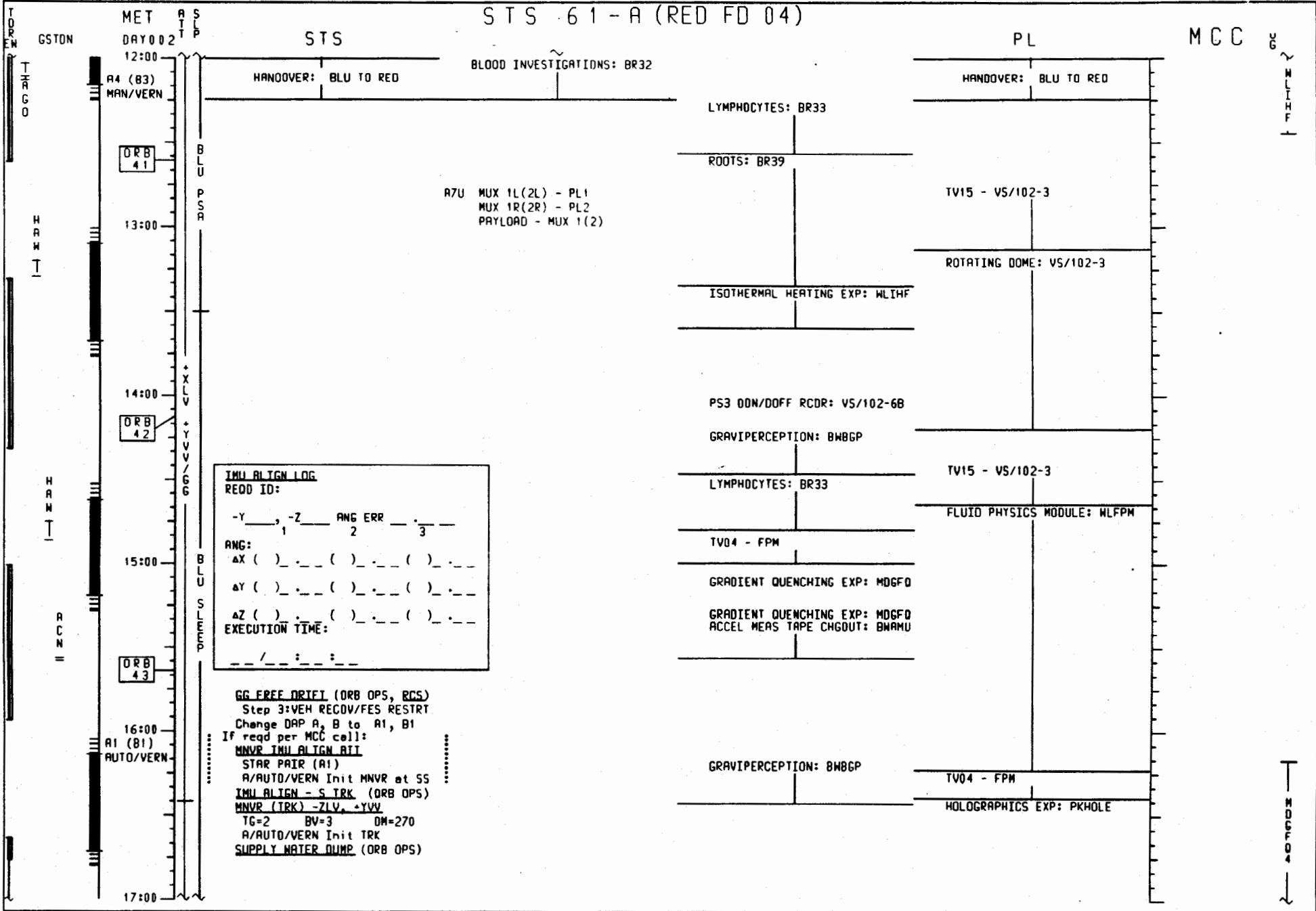
FLUID PHYSICS MODULE: WLFPM

CENTRAL VENOUS PRESS: BWZVD

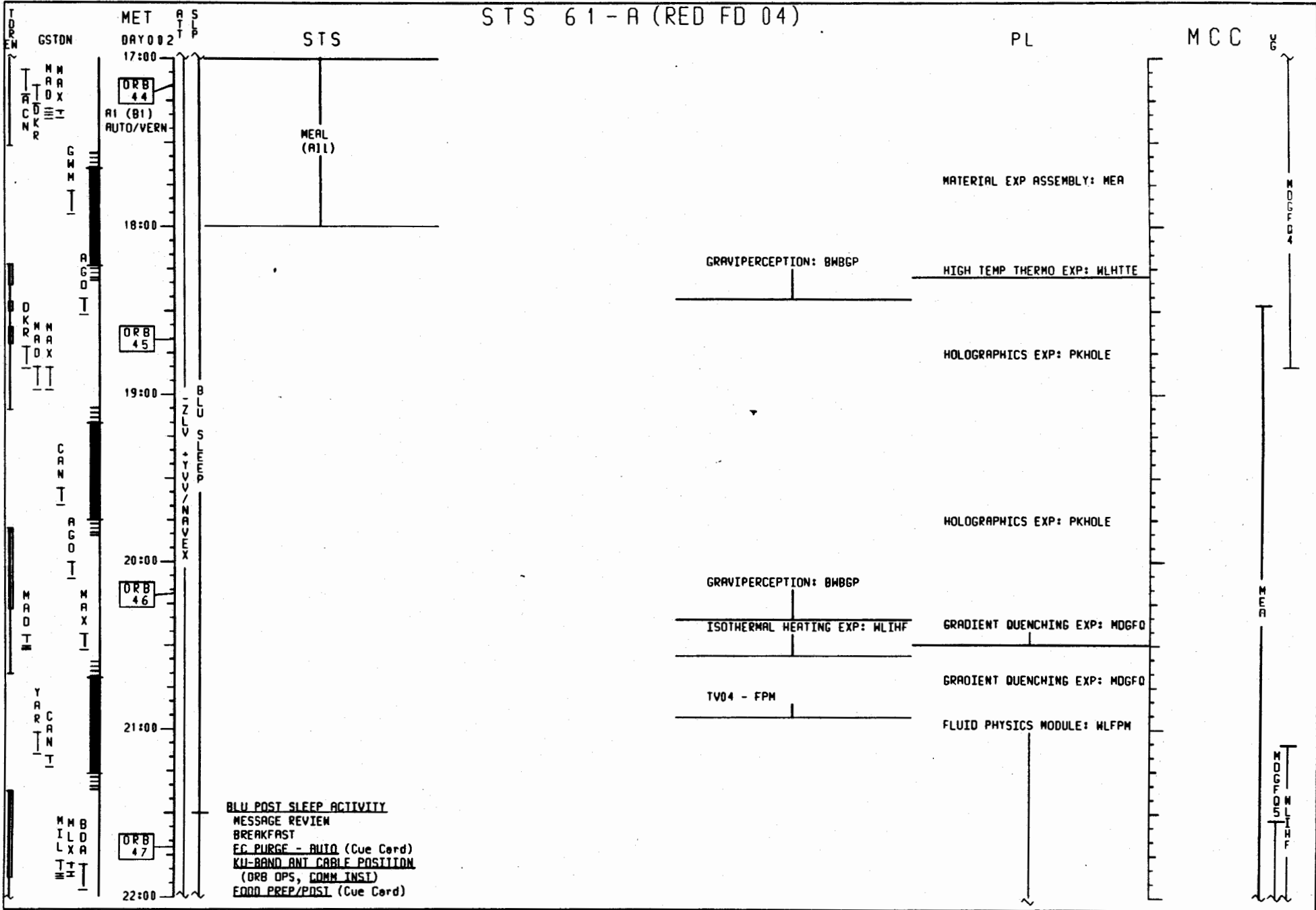
BLOOD INVESTIGATIONS: BR32

CENTRAL VENOUS PRESS: BWZVD

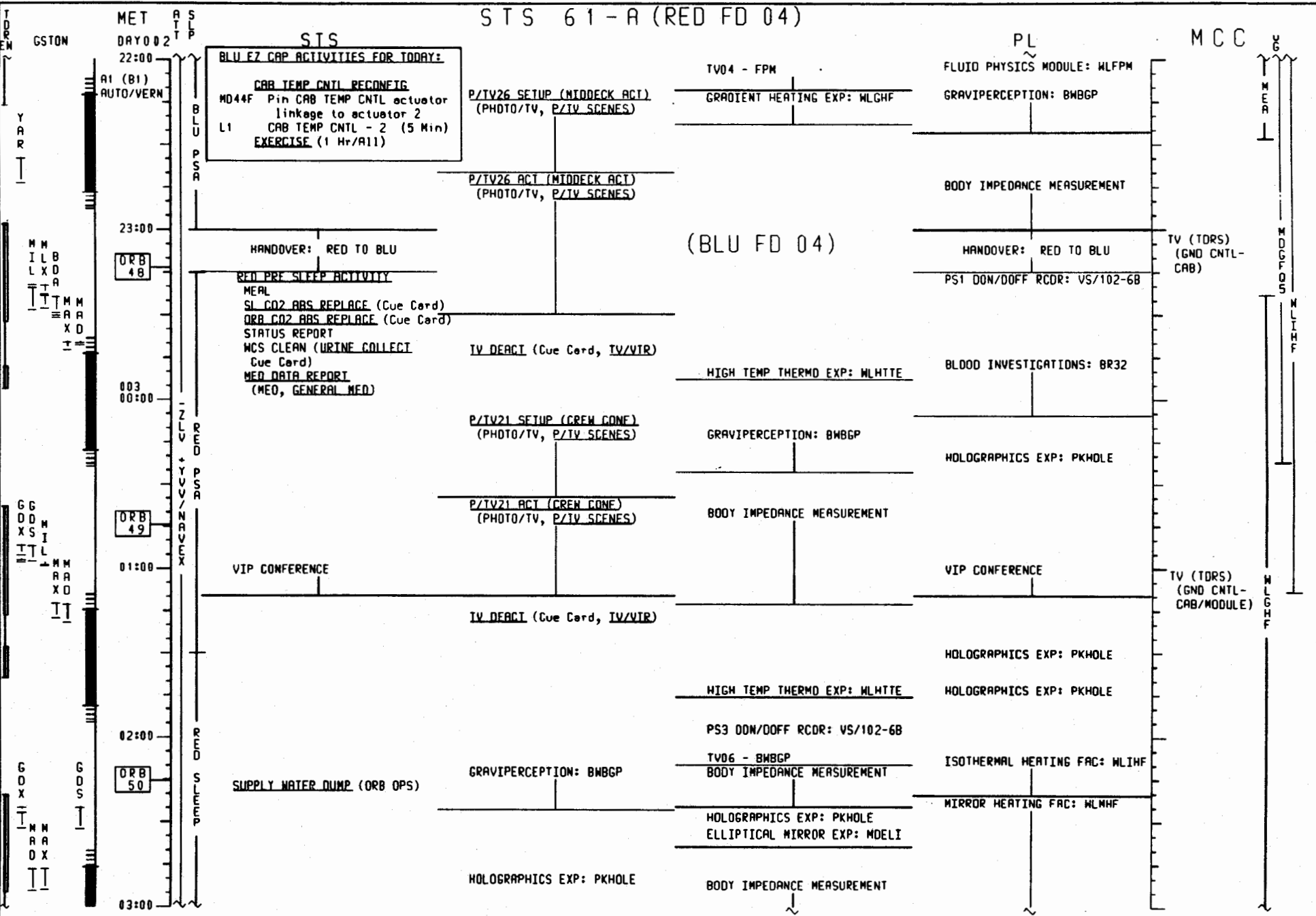
GRAVIPERCEPTION: BWBGP



STS 61-A (RED FD 04)



STS 61-A (RED FD 04)



MET
DAY 003
03:00
A1 (B1)
AUTO/VERN

ORB 51
04:00

(A4) B3
AUTO/VERN

A4 (B3)
MAN/VERN

ORB 52
05:00

06:00

ORB 53
07:00

08:00

Vertical axis labels: ZLV, YVV/NAVEX, IMU, S, XLV, YVV/GG

Left side labels: ORDN, GSTDN, CAN, H, R, S, D, G, R, K, D, C, N, Z, B, R, D, H, R, K, D, C, N, R, D, H, R, K, D, C, N, I, L, X, B, R, D

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

✓SL VP OUTER COVER CLOSED
MNVR IMU ALIGN ATT
STAR PAIR (A1)
A/AUTO/VERN Init MNVR at SS
IMU ALIGN - S TRK (ORB OPS)
GG FREE DRIET (OTO 0816)
Steps 1 & 2 (ORB OPS, RCS)
ATT ID: ORB OPS FS, RCS

MEAL (A11)

GRAVIPERCEPTION: BWBGP

GRAVIPERCEPTION: BWBGP

FLY EGGS: BR15
HOLOGRAPHICS FACILITY: PKHOLF
GRAVIPERCEPTION: BWBGP
BODY IMPEDANCE MEASUREMENT

BODY IMPEDANCE MEASUREMENT
ELLIPTICAL MIRROR EXP: MOELI
GRAVIPERCEPTION: BWBGP
TV06 - BWBGP
DIFFERENTIATION: BWBDI
MIRROR HEATING EXP: WLMHFE
ELLIPTICAL MIRROR EXP: MOELI
ELLIPTICAL MIRROR EXP: MOELI
MIRROR HEATING EXP: WLMHFE
HIGH TEMP THERMO EXP: WLHTE
GRAVIPERCEPTION: BWBGP

MIRROR HEATING FAC: WLMHF
MIRROR HEATING EXP: WLMHFE
MIRROR HEATING EXP: WLMHFE
HOLOGRAPHICS EXP: PKHOLE
HOLOGRAPHICS EXP: PKHOLE
MASS DISCRIMINATION
HOLOGRAPHICS EXP: PKHOLE
MIRROR HEATING EXP: WLMHFE
HIGH PRECISION THERMO: MDHPT
MIRROR HEATING EXP: WLMHFE
SL OFFGASSING SAMPLING: SOGS
SL OFFGASSING SAMPLING: SOGS
SL OFFGASSING SAMPLING: SOGS
PARAMECIUM CELLS: BR21

MCC

Vertical axis labels: S, G, M, J, C, I, L, 4

MET STS
DAY 003

STS

PL

MCC

RED EZ CAP ACTIVITIES FOR TODAY:

RCS REGULATOR RECONFIGURE
07/08 He PRESS A(three)-CL(tb-CL)
B(three)-GPC(tb-OP)
Perform A.M. (10 Min)
HEATER RECONFIG - B
(ORB OPS, EPS)
Perform A.M. (5 Min)
ECLSS REDUNDANT COMPONENT C/O
(ORB OPS, ECLSS) (10 MIN)
Inform MCC when complete
ASCS 2(1) RECONFIG
(SL OPS, ECLSS)
EXERCISE (1 Hr/All)
SL MODULE AIR SAMPLE
(SL OPS, MODULE SAMPLE)

RED POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST
EC PURGE - MANUAL (Cue Card)
KU-BAND ANT CABLE POSITION
(ORB OPS, COMM INST)
EODD PREP/POST (Cue Card)
SOL TO SOLAR SAMP (OTO 623)
(SL OPS, SAMP OPS) Step 3

HANDOVER: BLU TO RED

BLU PRE SLEEP ACTIVITY
MEAL
SL CO2 ABS REPLACE (Cue Card)
ORB CO2 ABS REPLACE (Cue Card)
STATUS REPORT
MCS CLEAN (URINE COLLECT)
Cue Card)
MED DATA REPORT
(MED, GENERAL MED)

A7U
MUX 1L(2L) - PL1
MUX 1R(2R) - PL2
PAYLOAD - MUX 1(2)

MARRANGONI CONV BDAT: PKMKB

PARAMECIUM CELLS: BR21

GESTURE AND SPEECH: GSP

MARRANGONI CONV BORT: PKMKB

HIGH PRECISION THERMO: MOHPT

MIRROR HEATING EXP: WLMHFE

BODY IMPEDANCE MEASUREMENT

GRAVIPERCEPTION: BMBGP

LYMPHOCYTES: BR33

ACCEL MEAS TAPE CHGOUT: BWAMU

BODY IMPEDANCE MEASUREMENT

MIRROR HEATING EXP: WLMHFE

ELLIPTICAL MIRROR EXP: MOELI

PST DUN/DUFF RCUR: VS/102-68

CHANGE VTR TAPE

GRAVIPERCEPTION: BMBGP

ELLIPTICAL MIRROR EXP: MOELI (RED FD 05)

HANDOVER: BLU TO RED

GRAVIPERCEPTION: BMBGP

TV 03 - WLMHF

HIGH PRECISION THERMO: MOHPT

MIRROR HEATING EXP: WLMHFE

ELLIPTICAL MIRROR EXP: MOELI

MARRANGONI CONV BORT: PKMKB

MIRROR HEATING EXP: WLMHFE

LYMPHOCYTES: BR33

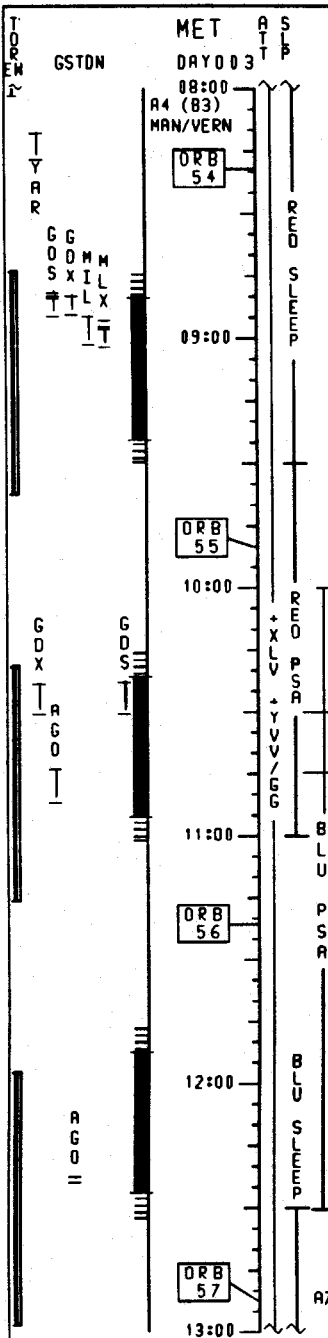
ELLIPTICAL MIRROR EXP: MOELI

MIRROR HEATING EXP: WLMHFE

TV15 - VS/102-3

ELLIPTICAL MIRROR EXP: MOELI

MIRROR HEATING EXP: WLMHFE



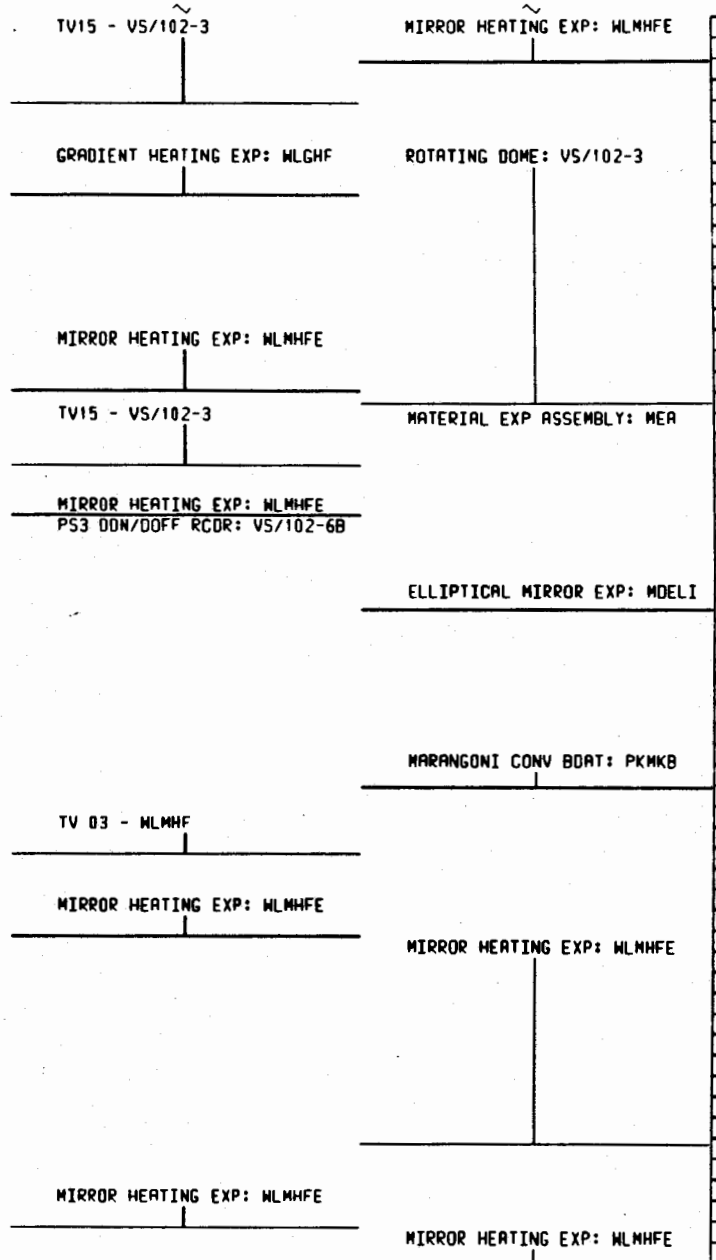
MET STS
 DAY 003
 13:00
 A4 (B3)
 MAN/VERN
 14:00
 ORB 58
 A1 (B1)
 AUTO/VERN
 15:00
 ORB 59
 16:00
 ORB 60
 17:00
 18:00

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

GG FREE DRIFT (ORB OPS, RCS)
 Step 3: VEH RECDV/FES RESTR
 Change DAP A, B to A1, B1
 If reqd per MCC call:
MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at SS
IMU ALIGN - S TRK (ORB OPS)
MNVR (TRK) -ZLV, -XVV
 TG=2 BV=3 OM=0
 A/AUTO/VERN Init TRK

SUPPLY WATER DUMP (ORB OPS)

MEAL (A11)



MCC

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GSTON

MET

DAY 003

18:00

AI (B1)
AUTO/VERM

ORB
61

19:00

20:00

ORB
62

21:00

ORB
63

22:00

23:00

STS

STS 61-A (RED FD 05)

PL

MCC

CHANGE VITR TAPE

MIRROR HEATING EXP: WLMHFE
HIGH TEMP THERMO EXP: WLHTE

SLIME: BR16

MIRROR HEATING EXP: WLMHFE

ELLIPTICAL MIRROR EXP: MDLI

GRADIENT QUENCHING EXP: MGFQ

BLU EZ CAP ACTIVITY FOR TODAY:

EXERCISE (1 Hr/ALL)

**CONDENSATE TANK DUMP
(SL OPS, ECLSS)**

BLU POST SLEEP ACTIVITY

MESSAGE REVIEW
BREAKFAST
EC PURGE - AUTO (Cue Card)
KUI-BAND ANT CABLE POSITION
(ORB OPS, COMM INST)
FOOD PREP/POST (Cue Card)

TV16 - VS/102-4

MIRROR HEATING EXP: WLMHFE

POSITION AWARENESS: VS/102-4

HANDOVER: RED TO BLU

(BLU FD 05)

HANDOVER: RED TO BLU

RED PRE SLEEP ACTIVITY

MEAL
SL CO2 ABS REPLACE (Cue Card)
ORB CO2 ABS REPLACE (Cue Card)
STATUS REPORT
MCS CLEAN (URINE COLLECT
Cue Card)
MED DATA REPORT
(MED, GENERAL MED)

PS1 DON/DOFF RCDR: VS/102-68

PLASMA CELL STRUCTURE: BR48

GRADIENT HEATING EXP: WLGHF

BODY IMPEDANCE MEASUREMENT

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MOHP T 2

TDR
GSTON
MET DAY 003
23:00
A1 (B1)
AUTO/VERN
ORB 64
004
00:00
ORB 65
01:00
ORB 66
02:00
03:00
(A4) B3
AUTO/VERN
A4 (B3)
MAN/VERN
04:00

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

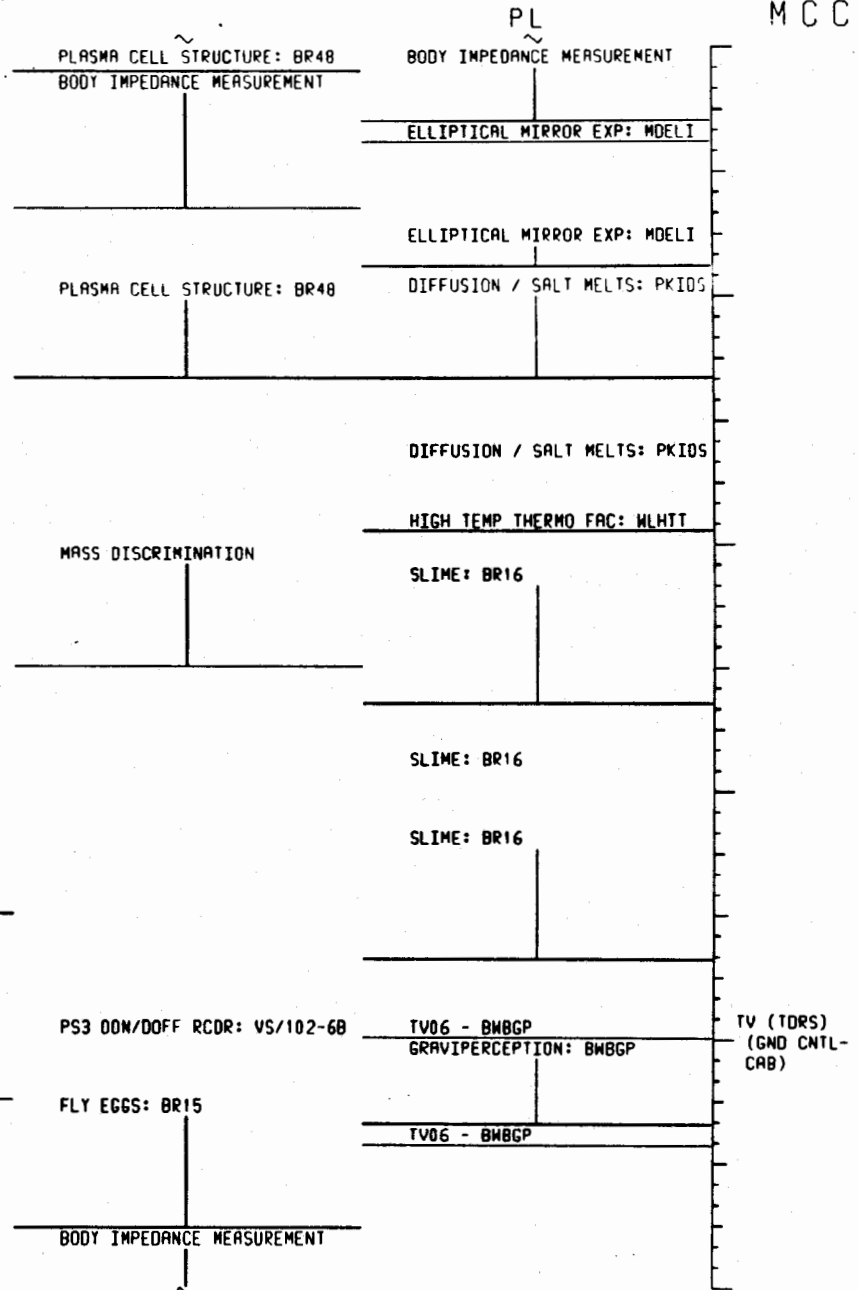
SUPPLY WATER DUMP (ORB OPS)

✓SL VP OUTER COVER CLOSED
 MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at SS
 IMU ALIGN - S TRK (ORB OPS)
 GG FREE DRIET (OTO 0016)
 Steps 1 & 2 (ORB OPS, RCS)
 ATT ID: ORB OPS FS, RCS

P/TV27 SETUP (FLT DECK ACT)
 (PHOTO/TV, P/TV SCENES)

P/TV27 ACT (FLT DECK ACT)
 (PHOTO/TV, P/TV SCENES)

TV DEACT (Cue Card, TV/VIR)



STS 61-A (BLU-FD 05)

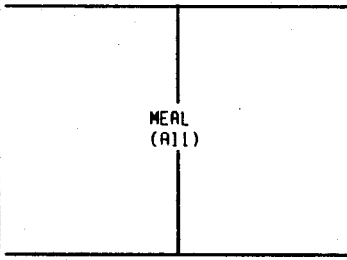
STS

PL

MCC

MET DAY 004
 04:00
 ORB 67
 A4 (B3)
 MAN/VERN
 05:00
 ORB 68
 MEAL (ALL)
 06:00
 +XLV +YVV/G
 07:00
 ORB 69
 08:00
 ORB 70
 09:00

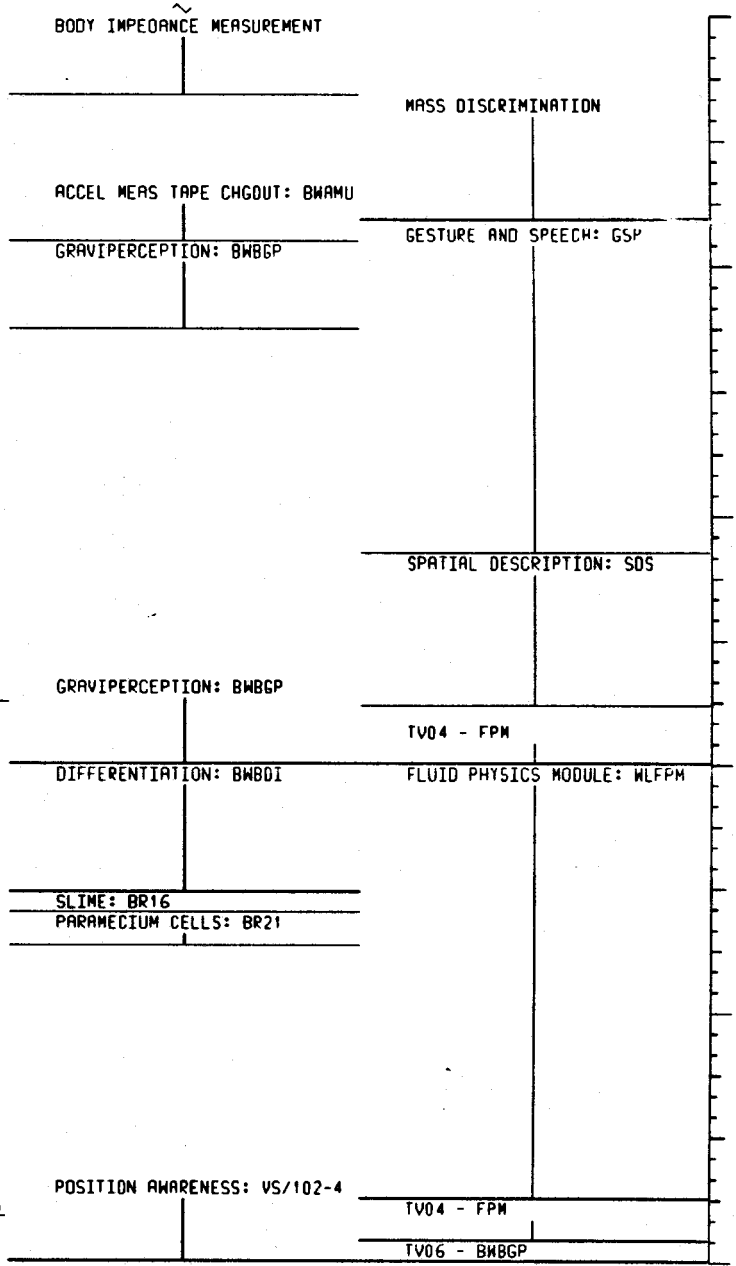
TDRM
 GSTDN
 THB
 WATT
 OOK
 RACN
 Y
 GMM
 B
 OIL
 L
 X
 H
 C
 GMM
 S
 OIL
 L
 X
 P
 O
 B



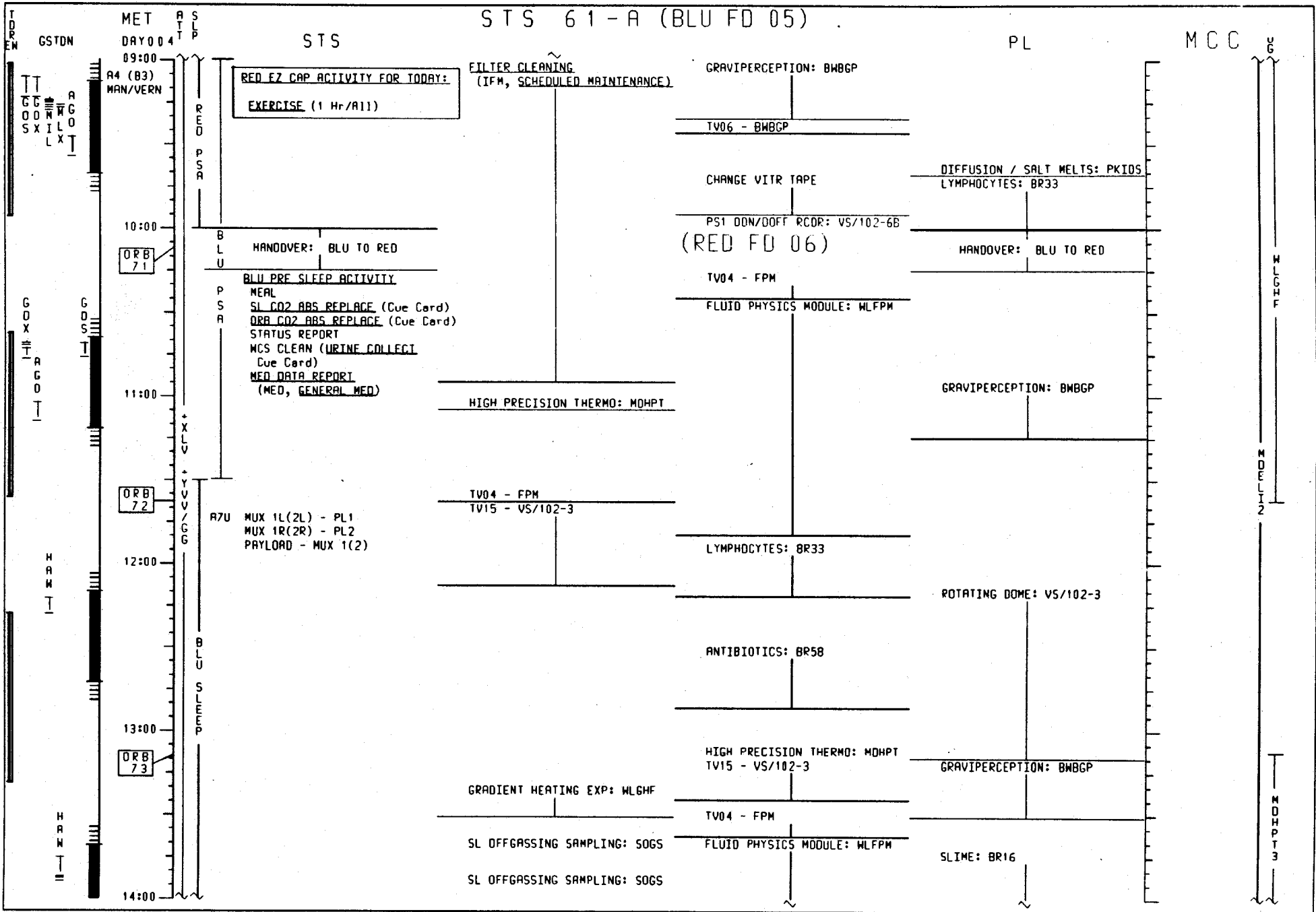
SPORES: BR28

HIGH PRECISION THERMO: MOMPT

FILTER CLEANING (IFM, SCHEDULED MAINTENANCE)



RED POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST
 EC PURGE - AUTO (Cue Card)
 KU-BAND ANT CABLE POSITION
 (ORB OPS, COMM INST)
 FOOD PREP/POST (Cue Card)
 SOLID SORBENT SAMP (OTD 623)
 (SL OPS, SAMP OPS) Step 3



STS 61-A (RED FD 06)

STS

PL

MCC

MET DAY 004
 14:00
 A4 (B3)
 MAN/VERN

15:00
 A1 (B1)
 AUTO/VERN

16:00

17:00

18:00

19:00

ORB 74

ORB 75

ORB 76

GG FREE DRIFI (ORB OPS, RCS)
 Step 3: VEM RECOV/FES RESTR
 Change DAP A, B to A1, B1
 If reqd per MCC call:
MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at SS
IMU ALIGN - S TRK (ORB OPS)
MNVR (TRK) -ZLV, +YVV
 TG=2 BV=3 DM=270
 A/AUTO/VERN Init TRK

SUPPLY WATER DUMP (ORB OPS)

MEAL (A1)

IMU ALIGN LOG
 RECO ID:

-Y ____ -Z ____ ANG ERR ____
 1 2 3

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

EXECUTION TIME:
 _ / _ : _ : _

SL OFFGASSING SAMPLING: SOGS

FLUID PHYSICS MODULE: WLFPM

SLIME: BR16

SLIME: BR16

SLIME: BR16

TV04 - FPM

GRAVIPERCEPTION: BWBGP

PS3 DOW/DIFF RCOR: VS/102-6B

ROTATING DOME: VS/102-3

HPT FACILITY: MOHPT

GRAVIPERCEPTION: BWBGP

DIFFUSION / SALT MELTS: PKIDS

TV06 - BWBGP
GRAVIPERCEPTION: BWBGP

MOHPT 3

MOHPT 2

MJST 1

STS 61-A (RED FD 06)

PL

MCC

STS

MET
DAY 004
19:00
ORB 77
R1 (B1)
AUTO/VERN
20:00
ORB 78
21:00
ORB 79
22:00
ORB 80
005
00:00

BLU EZ CAP ACTIVITY FOR TODAY:
EXERCISE (1 Hr/ALL)

BLU POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST
EC PURGE - AUTO (Cue Card)
KU-BAND ANT CABLE POSITION
(ORB OPS, COMM INST)
FOOD PREP/POST (Cue Card)

P/TV21 SETUP (CREW CONF)
(PHOTO/TV, P/TV SCENES)

HANDOVER: RED TO BLU

(BLU FD 06)

HANDOVER: RED TO BLU

P/TV21 ACT (CREW CONF)
(PHOTO/TV, P/TV SCENES)

VIP CONFERENCE

MIRROR HEATING EXP: WLMHFE

VIP CONFERENCE

RED PRE SLEEP ACTIVITY
MEAL
SI CO2 ABS REPLACE (Cue Card)
ORB CO2 ABS REPLACE (Cue Card)
STATUS REPORT
MCS CLEAN (URINE COLLECT)
(Cue Card)
MED DATA REPORT
(MED, GENERAL MED)

PS1 DON/DOFF RCDR: VS/102-68

MIRROR HEATING EXP: WLMHFE

GRAVIPERCEPTION: BWBGP

TV DEACT (Cue Card, TV/VIR)

TV06 - BWBGP

RMS POWERUP
(PORS OPS, RMS PHRUP)
H2O DUMP NOZZLE SURVEY
(PORS OPS, EXT SURVEYS)

WASTE WATER DUMP (DTD 0325)
(ORB OPS FS, ECLS)

MIRROR HEATING EXP: WLMHFE

CHANGE VITR TAPE

ACCEL MEAS TAPE CHGOUT: BWANU

TV (TORS)
(GND CNTL-
CAB/MODULE)

TV (TORS)
(GND CNTL-
PLB)

STS 61-A (BLU FD 06)

MCC

20

MET DAY 005
 00:00
 A1 (81)
 AUTO/VERN
 01:00
 ORB 81
 02:00
 ORB 82
 03:00
 ORB 83
 04:00
 05:00

READ
 ZLV
 YVV
 NNA
 VEX
 I MU
 TDRS
 V/S

STS
 H2O DUMP NOZZLE SURVEY
 (PDRS OPS, EXT SURVEYS)

RMS POWERDOWN
 (PDRS OPS, RMS PWDRN)

VIP CONFERENCE

✓SL VP OUTER COVER CLOSED
 MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at 55
 IMU ALIGN - S TRK (ORB OPS)
 MNVR TO TDRS ATT
 R=162 P=73 Y=344
 A/AUTO/VERN Init MNVR

SUPPLY WATER DUMP (ORB OPS)

MEAL
 (A1)

P/TV21 SETUP (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

P/TV21 ACT (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

TV DEACT (Cue Card, TV/VR)

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

GRAVIPERCEPTION: BMBGP

MIRROR HEATING EXP: WLMHFE

TV06 - BMBGP

GRAVIPERCEPTION: BMBGP

TV12 - VS/201

GRAVIPERCEPTION: BMBGP

FLY EGGS: BR15

PL
 ACCEL MEAS TAPE CHGOUT: BWMU
 MASS DISCRIMINATION

DIFFUSION / SALT MELTS: PKIDS

VIP CONFERENCE

GRADIENT HEATING EXP: WLGHF

DIFFUSION / SALT MELTS: PKIDS

PS3 OOM/DFFF RCDR: VS/102-68
 ESA STATIC SESSION: VS/201-C

ESA STATIC SESSION: VS/201-C

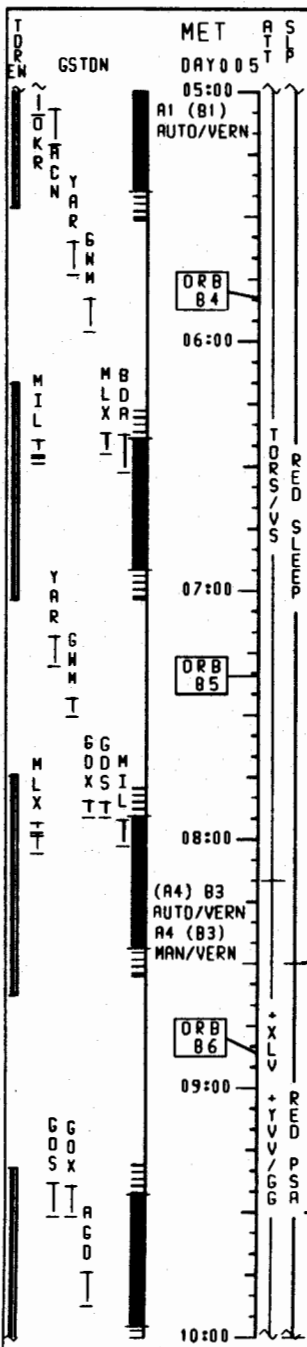
TV (TDRS)
 (GND CNTL-
 CAB/MODULE)

M JUNE 11

STS

PL

MCC



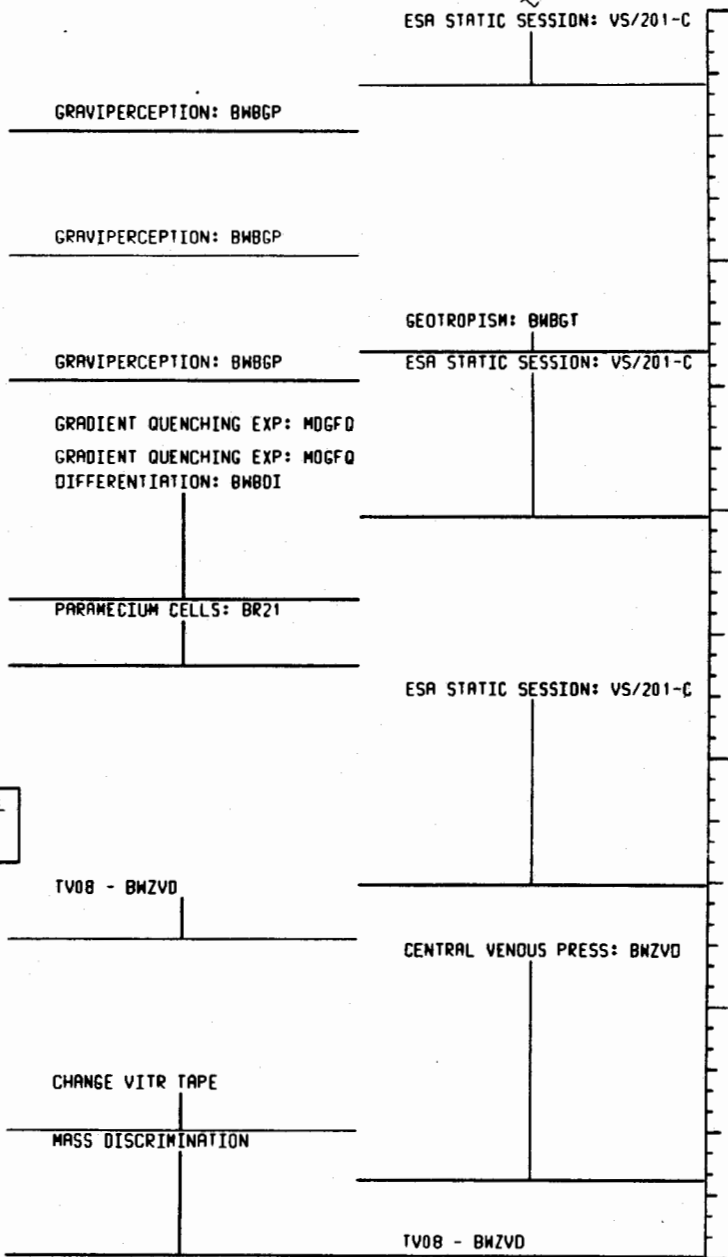
GG FREE DRIFT
Steps 1 & 2 (ORB OPS, RCS)
ATT ID: ORB OPS FS, RCS

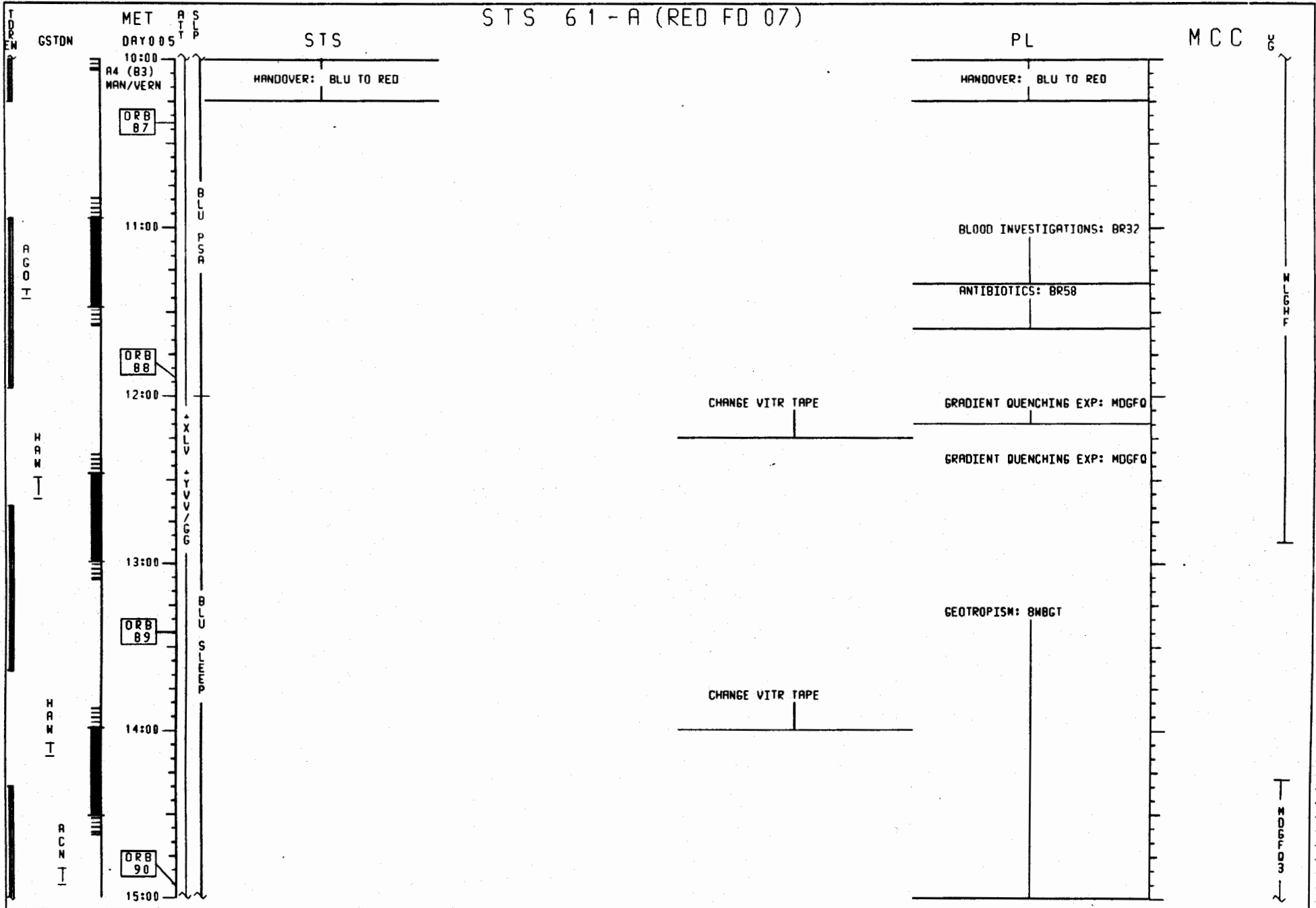
RED E7 CAP ACTIVITY FOR TODAY:
EXERCISE (1 Hr/A11)

A7U MUX 1L(2L) - PL1
MUX 1R(2R) - PL2
PAYLOAD - MUX 1(2)

RED POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST
EC PURGE - AUTO (Cue Card)
KU-BAND ANT CABLE POSITION
(ORB OPS, COMM INST)
FOOD PREP/POST (Cue Card)
SOLID SORBENT SAMP (OTO 623)
(SL OPS, SAMP OPS) Step 3
PSI DOWN/OFF RCOR: VS/102-6B

BLU PRE SLEEP ACTIVITY
MEAL
SI CO2 ABS REPLACE (Cue Card)
ORB CO2 ABS REPLACE (Cue Card)
STATUS REPORT
WCS CLEAN (URINE COLLECT
Cue Card)
MED DATA REPORT
(MED, GENERAL MED)



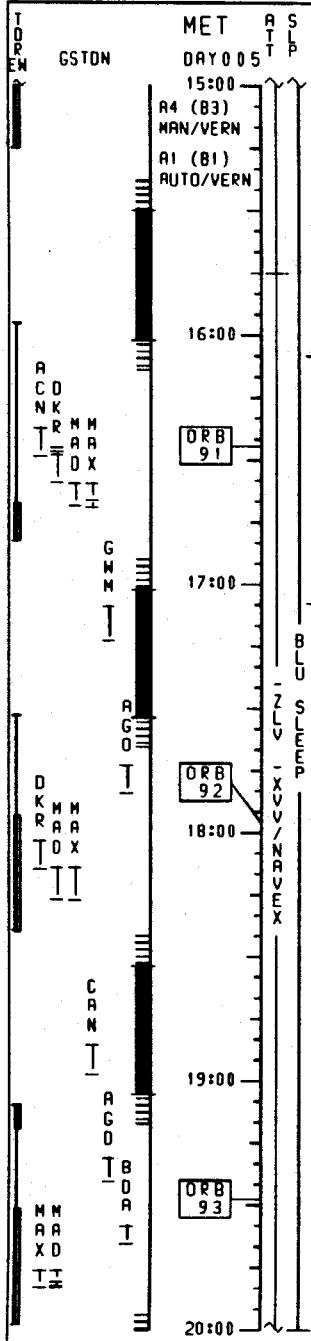


STS 61-A (RED FD 07)

STS

PL

MCC



GG FREE DRIFT (ORB OPS, RCS)
 Step 3: VEH RECOV/FES RESTR
 Change DAP A, B to A1, B1
 If reqd per MCC coll:
MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at SS
IMU ALIGN - S TRK (ORB OPS)
MNVR (TRK) -ZLV, -XVV
 TG=2 BV=3 DM=0
 A/AUTO/VERN Init TRK
SUPPLY WATER DUMP (ORB OPS)

MEAL
(A11)

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

TV12 - VS/102

GRADIENT HEATING EXP: WLGHF
 PS3 DOW/OFF RCOR: VS/102-68
 BLOOD INVESTIGATIONS: BR32
 ELLIPTICAL MIRROR EXP: MDELI
 GEOTROPISM: BMBGT
 NASA DYN SESSIONS: VS/102-1
 ACCEL MEAS TAPE CHGOUT: BHWNU
 NASA DYN SESSIONS: VS/102-1

P/TV21 SETUP (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

STS 61-A (RED FD 07)

MET DAY 085
 20:00
 R1 (B1) AUTO/VERN
 ORB 94
 21:00
 R3 (B1) MAN/NORM
 ORB 95
 R1 (B1) AUTO/VERN
 23:00
 R1 (B1) MAN/VERN
 R1 (B1) AUTO/VERN
 006 00:00
 ORB 96
 01:00

STS

BLU POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST
 EC PURGE - AUTO (Cue Card)
 KU-BAND ANT CABLE POSITION
 (ORB OPS, COMM INST)
 FOOD PREP/POST (Cue Card)

BLU EZ CAP ACTIVITY FOR TODAY:
 EXERCISE (1 Hr/ALL)

CREW CONF (All)

HANOVER: RED TO BLU

P/TV21 SETUP (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

P/TV21 ACT (CREW CONF)
 (PHOTO/TV, P/TV SCENES)

TV DEACT (Cue Card, TV/VTR)

PLASMA CELL STRUCTURE: BR48

BLOOD INVESTIGATIONS: BR32

DNA: BR 7

APU STEAM VENT HTR ACT
 R2 BLR CNTLR PMR/HTR(three)-B
 CNTLR(three) -ON

015:F MMU 2 - ON

BGS HOT FIRE TEST
 (ORB OPS, BGS) (2 Cmn)
 Change DAP A to A1, A/AUTO/VERN
ECS CHECKOUT
 (ORB OPS, GNC) (2 Cmn)

RED PRE SLEEP ACTIVITY
 MEAL
SI CO2 ABS REPLACE (Cue Card)
ORA CO2 ABS REPLACE (Cue Card)
 STATUS REPORT
 MCS CLEAN (URINE COLLECT)
 Cue Card)
MED DATA REPORT
 (MED, GENERAL MED)

BODY IMPEDANCE MEASUREMENT

(BLU FD 07)

TV12 - VS/102
 CHANGE VITR TAPE

TV04 - FPM

BODY IMPEDANCE MEASUREMENT

BODY IMPEDANCE MEASUREMENT

PS1 DDN/DOFF RCDR: VS/102-6B

TV04 - FPM

PL
 NASA DYN SESSIONS: VS/102-1

HANOVER: RED TO BLU

SL OFFGASSING SAMPLING: SOGS

SL OFFGASSING SAMPLING: SOGS

SL OFFGASSING SAMPLING: SOGS
 ELLIPTICAL MIRROR FAC: MOELIF

GRADIENT QUENCHING FAC: MOGFO

ELLIPTICAL MIRROR FAC: MOELIF

GRADIENT QUENCHING FAC: MOGFO

MD FACILITY: MOFAC
 FLUID PHYSICS MODULE: WLFPM

FLUID PHYSICS MODULE: WLFPM

MCC

TV (TDRS)
 (GND CNTL - CAB)

NE

MLCH F

STS 61-A (BLU FD 07)

PL

MCC 6

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

STS

ECS CHECKOUT
 (ORB OPS, GNC)
 (2 Cmn)

BODY IMPEDANCE MEASUREMENT

CHANGE VITR TAPE

ORB 97

DIS:F MNV 2 - OFF

SUPPLY WATER PUMP (ORB OPS)

PS3 DDN/DOFF RCDR: VS/102-68
 BODY IMPEDANCE MEASUREMENT

INFORM CREW
 60 FOR APU
 COOL OFF

MIRROR HEATING EXP: WLMHFE

ON MCC CUE
 R2 APU FUEL PUMP/VLV COOL A-OFF
 CNTLR PWR(three) -OFF
 DNA: BR 7

GRADIENT HEATING FAC: WLGHF

MEAL (A11)

ORB 98

SL VP OUTER COVER CLOSED
 If reqd per MCC cell:
MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR at SS
IMU ALIGN - S TRK (ORB OPS)
MNVR TO TRS ATT
 R=183 P=79 Y=320
 A/AUTO/VERN Init MNVR

DIFFERENTIATION: BWBOI

MIRROR HEATING FAC: WLMHF

MIRROR HEATING FAC: WLMHF

ORB 99

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

TV12 - VS/201

FLUID PHYSICS MODULE: WLFPM

ESA DYN SESSION: VS/201-D

BLOOD INVESTIGATIONS: BR32

CABIN CONFIG/STOW (A11)

BW FACILITY: BWFAC
 MATERIAL EXP ASSEMBLY: MEA

MET ATSLP
 DAY 006
 06:00
 ORB 100
 A1 (B1)
 AUTO/VERN
 07:00
 ORB 101
 08:00
 A2 (B1)
 AUTO/NORM
 09:00
 ORB 102
 A2 (B1)
 AUTO/VERN
 10:00
 ORB 103
 11:00

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

CABIN CONFIG/STOW
 (A11)

IMU RECOVERY
 (MAL, GNC, FRP-3)
 MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A/AUTO/VERN Init MNVR
 IMU ALIGN - S TRK (ORB OPS)
 MNVR (TRK) PTC ATT
 TG=4 BV=5
 P=270 Y=0 OM=270
 A/AUTO/VERN (08:30) Init TRK
 0.4 DEG/SEC PTC (ORB OPS)
 Step 2-Init PTC Rotation

BLU PRE SLEEP ACTIVITY
 MEAL
 SL CO2 ABS REPLACE (Cue Card)
 DRB CO2 ABS REPLACE (Cue Card)
 STATUS REPORT
 WCS CLEAN (URINE COLLECT
 Cue Card)
 MED DATA REPORT
 (MED, GENERAL MED)

BODY IMPEDANCE MEASUREMENT

PL
 ESA DYN SESSION: VS/201-D

ESA DYN SESSION: VS/201-D

PS3 DON/OOFF RCDR: VS/102-68
 BR SAMPLES TRANSFER: BR90

STS 61-A (BLU FD 07)

MCC 8

MET
DAY 006

STS

PL

GSTDN

11:00

SL FIRE/SMOKE TEST
(SL OPS, ECLSS)

RED POST SLEEP ACTIVITY

MESSAGE REVIEW
BREAKFAST
FC PURGE - AUTO (Cue Card)
KV-BAND ANT CABLE POSITION
(ORB OPS, COMM INST)
FOOD PREP/POST (Cue Card)
SOLID SORBENT SAMP (DIO 623)
(SL OPS, SAMP OPS) Step 3

BR SAMPLES TRANSFER: BR90

PS3 DON/OFF RCDR: VS/102-6B
(RED FD 08)

HANDOVER: BLU TO RED

12:00

ORB 104

RED E2 CAP ACTIVITY FOR TODAY:

SL MODULE AIR SAMPLE
(SL OPS, MODULE SAMPLE)

ACCEL RCDR STOW: VS/102-6D

PS1 DON/OFF RCDR: VS/102-6B

WL FACILITY DEACT
WL CRYO OPS: WLCRYO

13:00

ORB 105

CABIN CONFIG/STOW
(A11)

WL FACILITY DEACT

VESTIBULAR SLED SHUTDOWN

BR SAMPLES TRANSFER: BR90

14:00

DIFFERENTIATION: BWBOI

TV17 - VS/102-5

SUPPLY WATER DUMP (ORB OPS)

HOP & DROP: VS/102-5

15:00

ORB 106

MEAL
(A11)

TV17 - VS/102-5

PS1 DON/OFF RCDR: VS/102-6B
ACCEL RCDR STOW: VS/102-6D

P/TV25 SETUP (S/L DEACT)
(PHOTO/TV, P/TV SCENES)

BW FACILITY: BWFAC

16:00

MET AT S
 DAY 006 T T P
 16:00
 A2 (B1)
 AUTO/VERN
 17:00
 18:00
 A2 (B1)
 AUTO/NORM
 A1 (B1)
 AUTO/VERN
 19:00
 20:00
 21:00

STS

P/TV25 SETUP (S/L DEACT)
 (PHOTO/TV, P/TV SCENES)

P/TV25 ACT (S/L DEACT)
 (PHOTO/TV, P/TV SCENES)

SPACE LAB DEACTIVATION
 (SL A/D, SL DEACT)

PRIORITY PWRUP GROUP B
 (ORB PKT, PRIOR PWRON)

TV/VTR DEACT
 (Cue Card, IV/VIR)

BLU POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST
EC PURGE - AUTO (Cue Card)
KU-BAND ANT CABLE POSITION
 (ORB OPS, COMM INST)

0.4 DEG/SEC PIC (ORB OPS)
 Step 3-Term PTC Rotation
 Change DAP A to A1
MNVR (TRK) -XSI ATT
 TG=4 BV=5
 P=184 Y=0 DM=145
 A/AUTO/VERN (18:45) Init TRK

BM FACILITY: BWFAC

BR FACILITY: BRFAC

EZ CAP ACTIVITIES BEFORE LEAVING CAP:

AIR SAMPLE
 Rcd MET on bottle

FLUID LOADING PREP
 Fill 4 drink containers with
 8 oz H2O each (per person)

SOLID SORBENT SAMP (DTO 0623)
 (SL OPS, SAMP OPS) Step 2

STOW O2 BLEED ORIFICE ASSEMBLY
 M032M LEH O2 5 vlv - CL
 Remove and stow O2 Bleed orifice
 M032M LEH O2 5 vlv - As Req.

Update: CRT TIMER SETUP PAD
 in NOMINAL DEORBIT PREP

GO TO DEORBIT PREP at 6/19:39

UPDATE
 CRT TIMER
 SETUP PAD

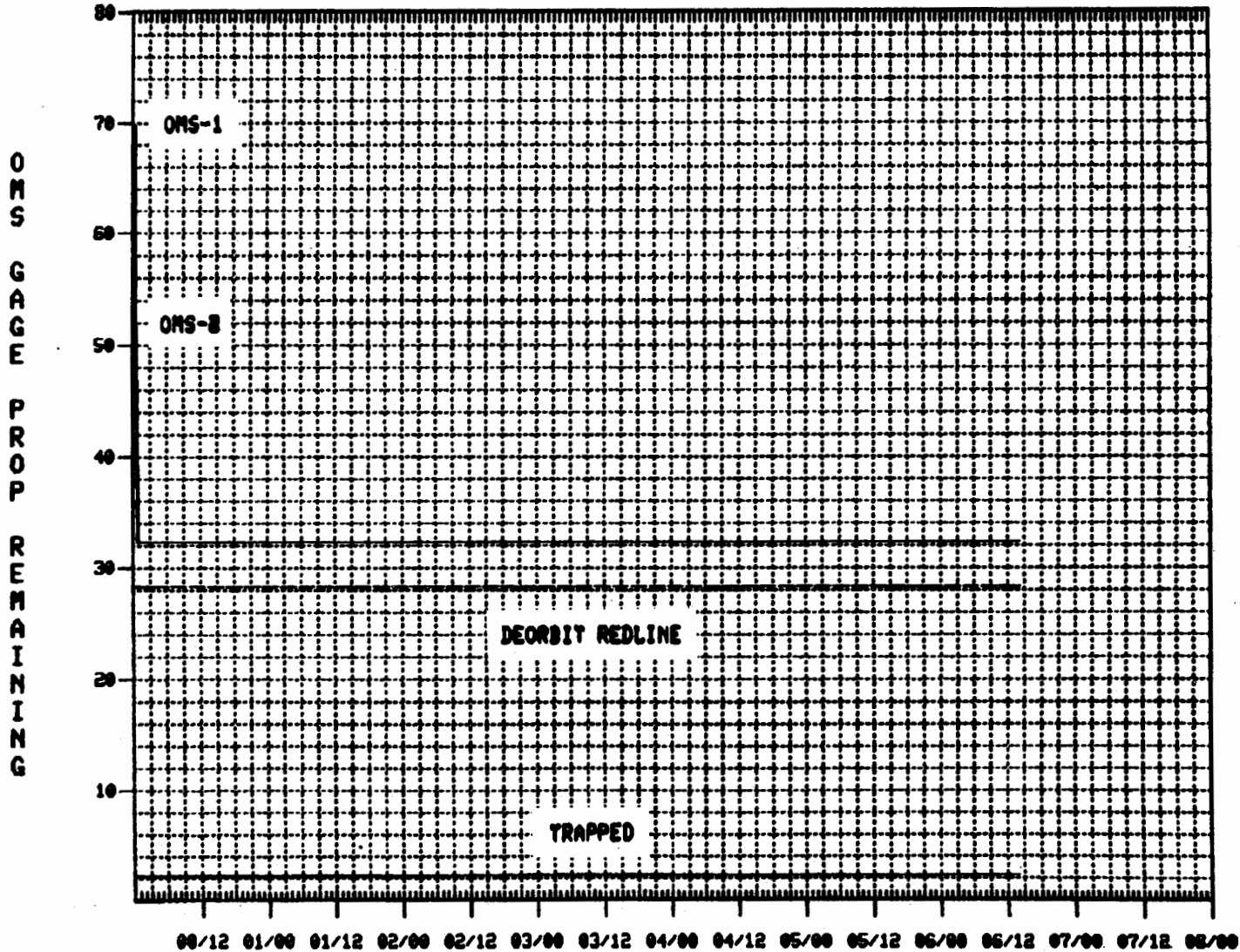
CONSUMABLES CURVES

CONSUMABLES
CURVES

CONSUMABLES
CURVES

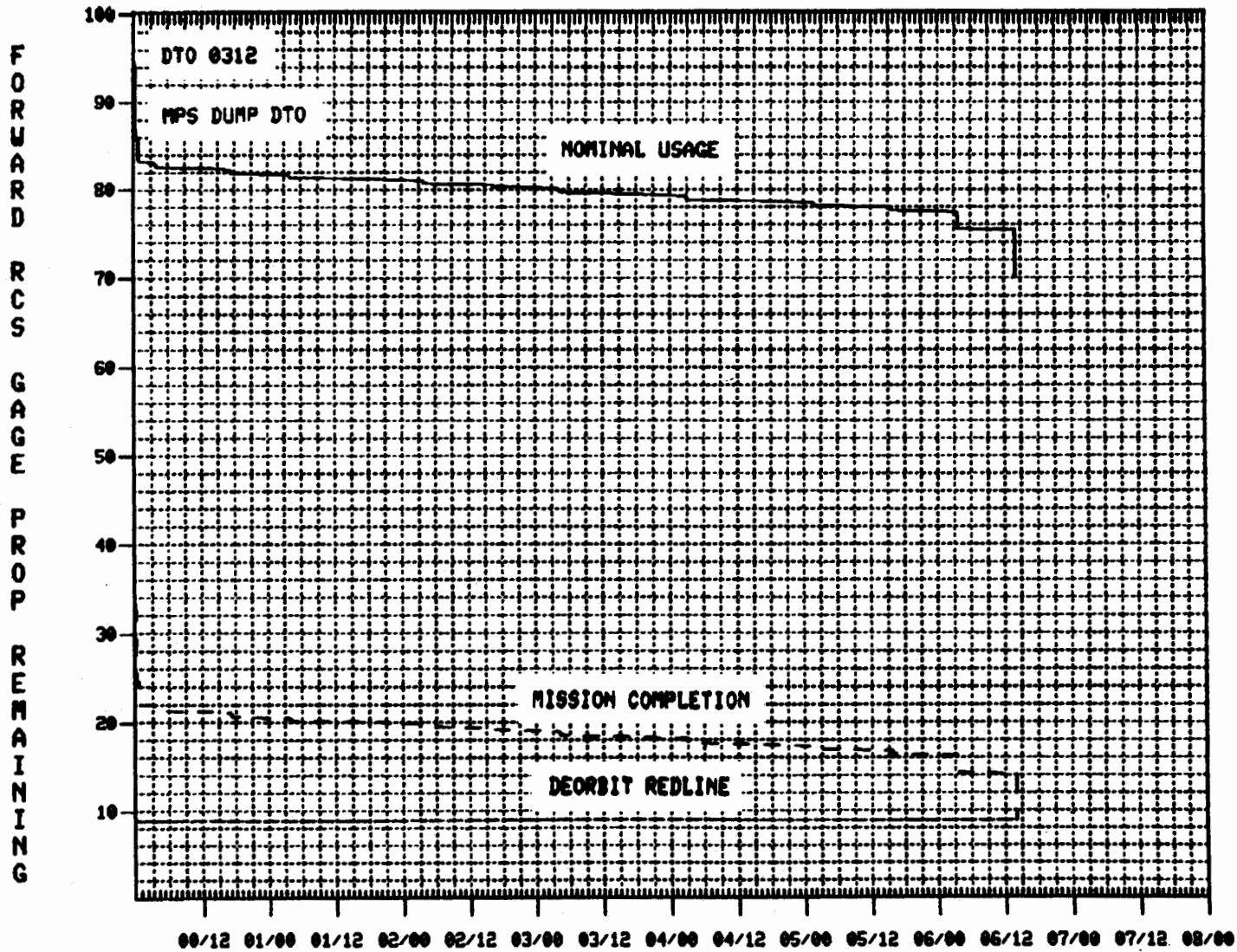
P.M. KULESA/MDTSCO
DATA SUBMITTAL BARS 7/16/85
JSC-20395 (CAP) 6/18/85
CHECKED BY *Bill Hollister*

61-A OMS PROP REMAINING(% GAGE)



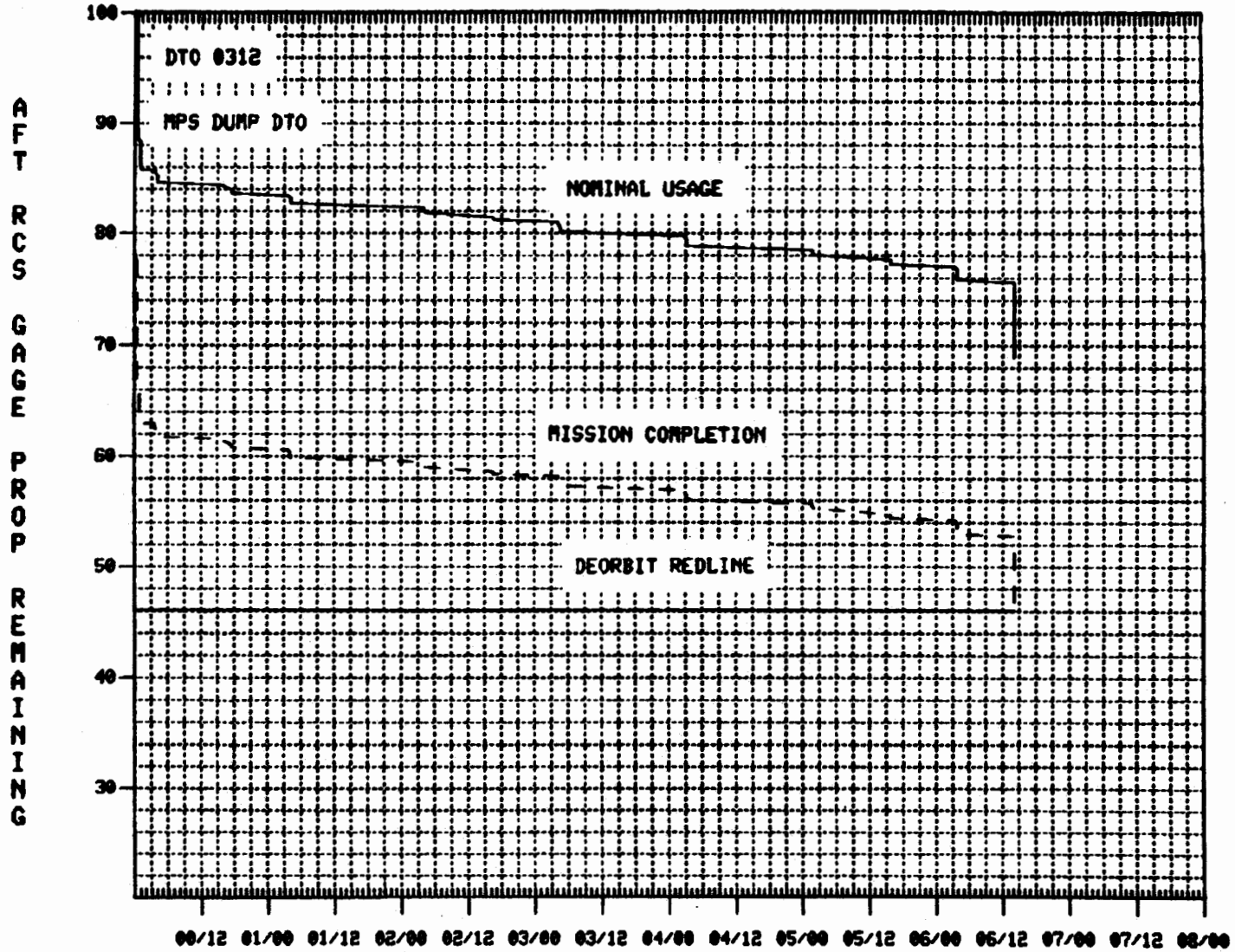
MISSION ELAPSED TIME IN DAYS/HOURS

61-A FORWARD RCS PROP REMAINING(% GAGE)



MISSION ELAPSED TIME IN DAYS/HOURS

61-A AFT RCS PROP REMAINING(X GAGE)



MISSION ELAPSED TIME IN DAYS/HOURS

MISSION OPERATIONS DIRECTORATE - SYSTEMS DIVISION

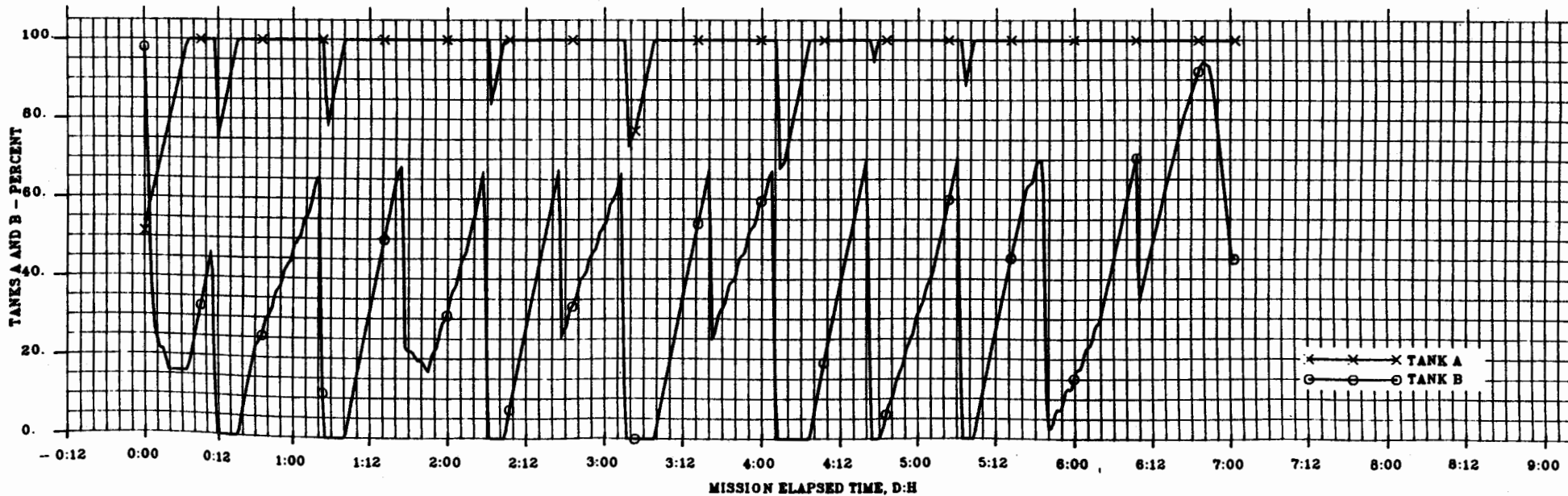
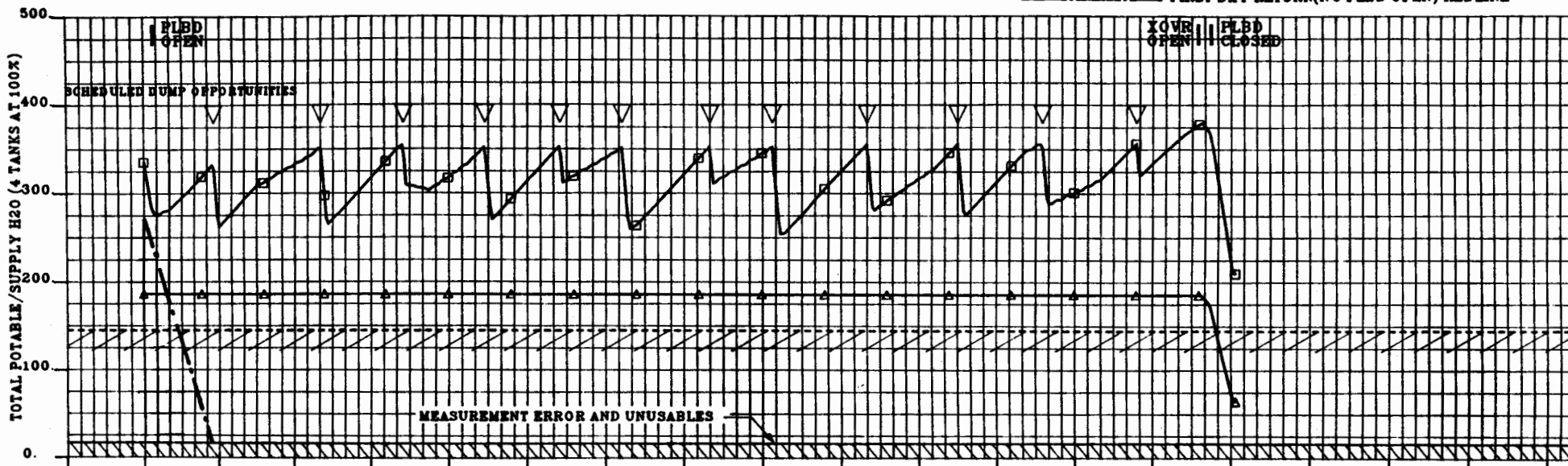
CHIP TERRACINA
JSC-20395 (CAP) 8/18/85
DATA CONFIRMED

[Signature]

TRAJECTORY: OFF CYCLE 2
CAP: BASIC 6/18/85
ANALYSIS DATE: 8/30/85

□ TANKS A-D
△ TANKS C+D

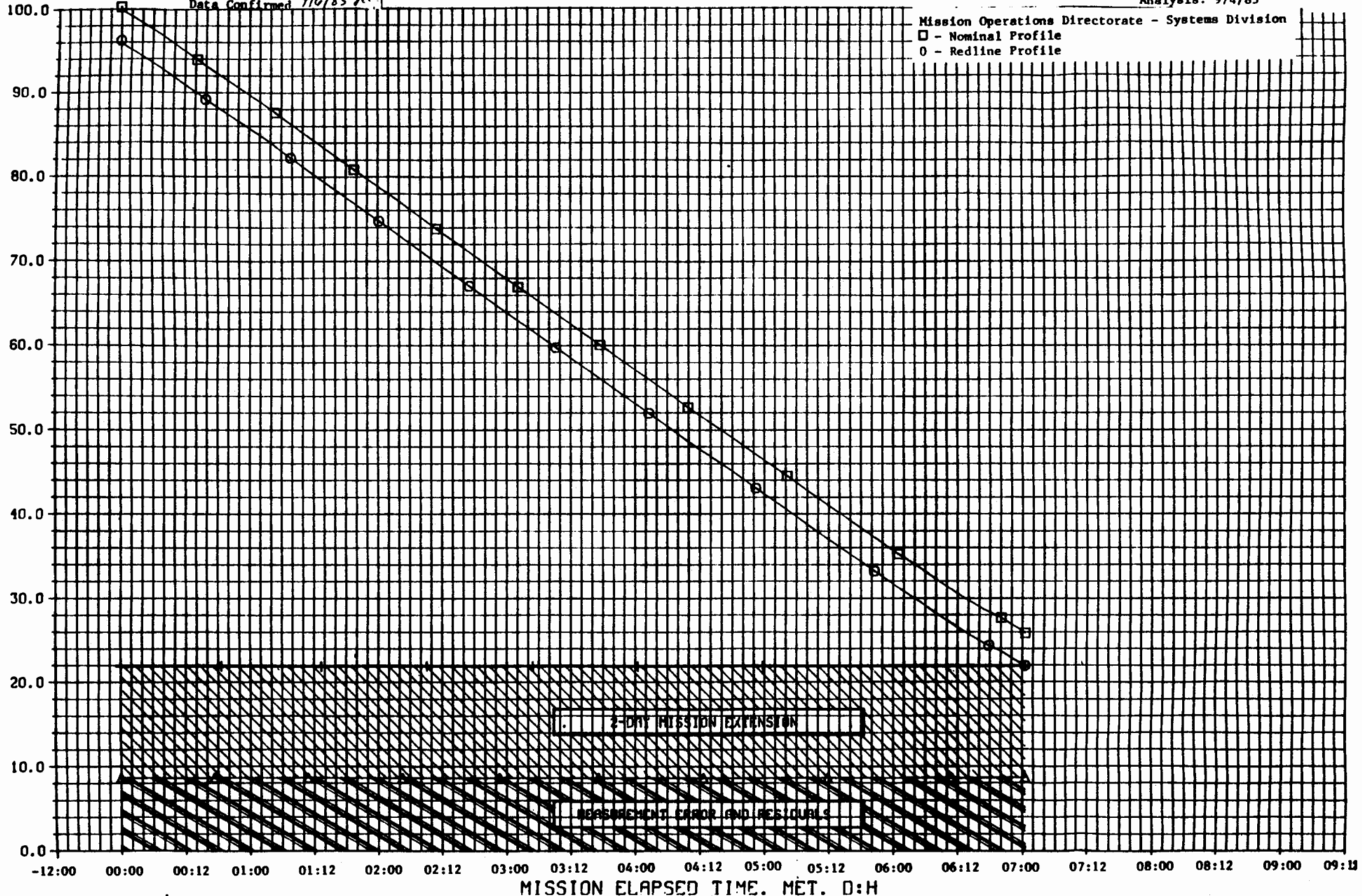
----- ANYTIME CONTINGENCY DEORBIT REDLINE
----- FIRST DAY RETURN(NO PLBD OPEN) REDLINE



J. Landisman
Data Source JSC-20395
Data Confirmed 9/6/85 ggc

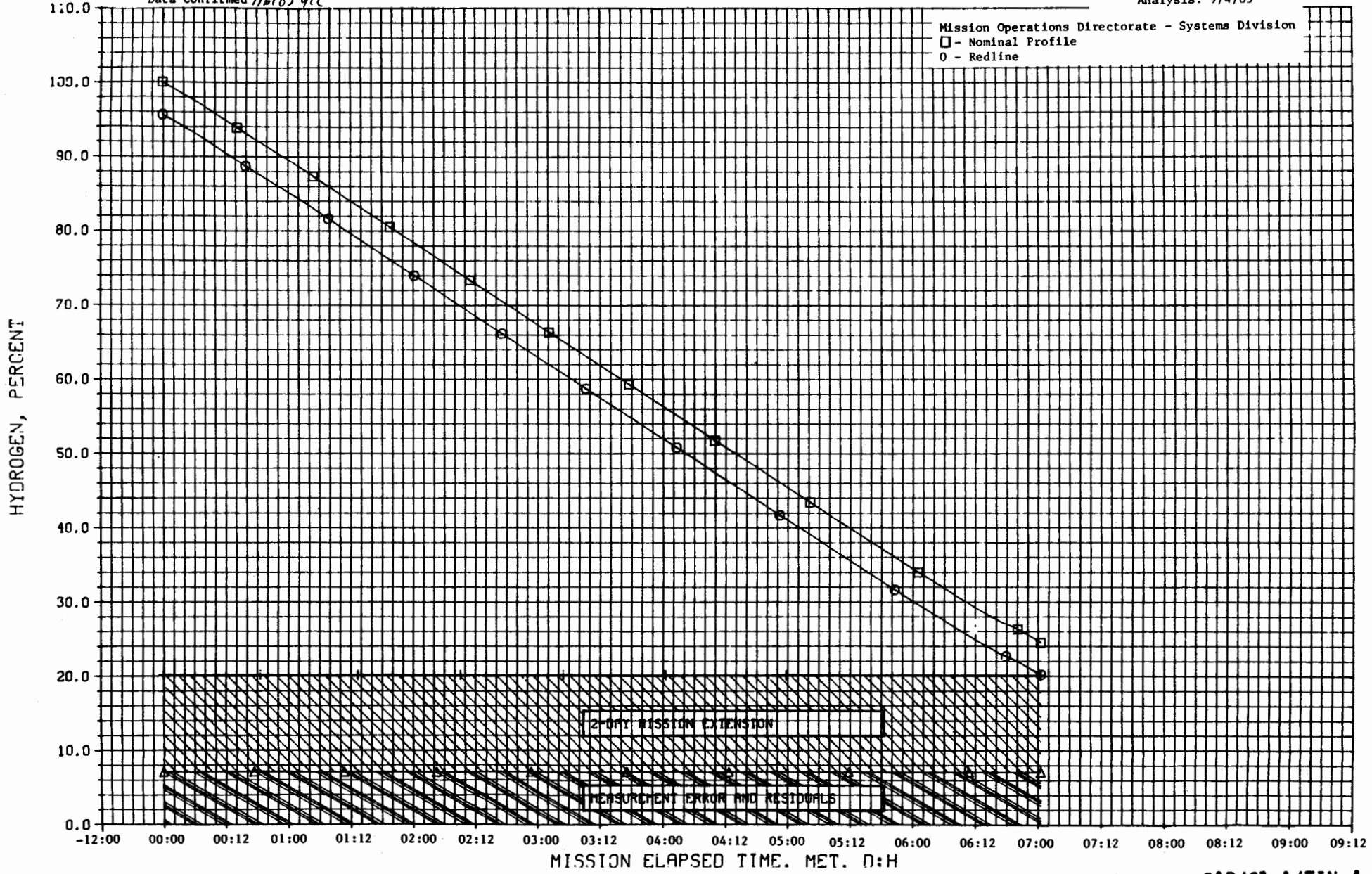
Trajectory OFF Cycle 2
CAP: BASIC 6/18/85
Analysis: 9/4/85

Mission Operations Directorate - Systems Division
□ - Nominal Profile
○ - Redline Profile



J. Landisman
Data Source JSC - 20395
Data Confirmed 9/6/85 qcc

Trajectory OFF Cycle 2
CAP: BASIC 6/18/85
Analysis: 9/4/85



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

STS 61-A DAP BOOK

DAP A CONFIGURATIONS..... 5-2
DAP B CONFIGURATIONS..... 5-3
STS 61-A DAP BOOK..... 5-4

DAP BOOK

DAP A CONFIGURATIONS

	A1*	A2	A3	A4	A5	A6	A7	A8	A9	A10
<u>TRANSLATION</u>										
PULSE ft/sec	0.10	0.10	0.10	0.10	0.10	0.10		0.10	0.10	0.05
<u>ROTATION</u>										
DSC RT NORM %/sec	0.200	0.400	0.200	0.200	0.200	0.200		0.500	0.200	0.200
VERN %/sec	0.200	0.400	0.200	0.008	0.200	0.200		0.200	0.200	0.200
PULSE NORM %/sec	0.10	0.10	0.30	0.10	0.10	0.10		0.10	0.10	0.10
VERN %/sec	0.010	0.010	0.010	0.010	0.050	0.010		0.010	0.010	0.010
COMP NORM %/sec	.00	.00	.00	.00	.00	.00		.00	.00	.00
VERN %/sec	.000	.000	.000	.000	.000	.000		.000	.000	.000
<u>DEADBAND</u>										
ATT NORM (deg)	5.00	1.00	5.00	1.00	5.00	5.00		3.00	2.00	2.00
VERN (deg)	1.000	1.000	1.000	0.070	1.000	1.000		1.000	1.000	1.000
RATE NORM %/sec	0.20	0.20	0.20	0.20	0.20	0.20		0.20	0.20	0.20
VERN %/sec	.020	.020	.020	.010	.020	.020		.020	.020	.020
<u>JET OPT</u>										
P	1	1	3	1	1	3		1	1	1
Y	1	1	3	3	1	3		1	1	1
<u>CNTL ACCEL</u>										
	0	0	0	0	0	0		0	0	0

*I-LOADED OPS-2 DAP Configuration

DAP B CONFIGURATIONS

	B1*	B2	B3	B4	B5	B6	B7	B8	B9
<u>TRANSLATION</u>									
PULSE ft/sec	0.02	0.02	0.02	0.02	0.02	0.05	0.01		0.02
<u>ROTATION</u>									
DSC RT NORM %/sec	0.500	0.200	0.200	0.200	0.200	0.500	0.200		0.200
VERN %/sec	0.200	0.200	0.200	0.008	0.016	0.200	0.200		0.016
PULSE NORM %/sec	0.04	0.04	0.04	0.04	0.04	0.04	0.04		0.04
VERN %/sec	0.002	0.002	0.002	0.002	0.002	0.002	0.002		0.002
COMP NORM %/sec	.00	.00	.00	.00	.00	.00	.00		.00
VERN %/sec	.000	.000	.000	.000	.000	.000	.000		.000
<u>DEADBAND</u>									
ATT NORM (deg)	3.00	3.00	3.00	0.30	3.00	2.00	2.00		3.00
VERN (deg)	1.000	1.000	1.000	0.100	0.033	1.000	1.000		0.200
RATE NORM %/sec	0.20	0.20	0.20	0.20	0.20	0.20	0.20		0.20
VERN %/sec	.020	.020	.020	.010	.020	.020	.020		.020
<u>JET OPT</u>									
P	1	3	1	3	3	1	1		3
Y	1	3	1	3	3	1	1		3
<u>CNTL ACCEL</u>	0	0	0	0	0	0	0		0

*I-LOADED OPS-2 DAP Configuration

DAP BOOK

**HOOK
VELCRO**

CAP/61-A/O/BAS

CAP/61-A/O/BAS

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

G20 DAP CONFIG	
CNTL ACCEL = 0	Orbiter alone
JET OPT = 1	Normal
= 2	Nose only
= 3	Tail only

TOP

DAP

PURPOSE

- A1 - NOMINAL
IMU ALIGN
LOSS OF VERN
(NOSE & TAIL)
- A2 - PTC
- A3 - RCS HOT FIRE
- A4 - GG
- A5 - IMU ALIGN (ROTATING)
- A6 - LOSS OF VERN
(TAIL ONLY)
- A7 - (Blank)
- A8 - PRE/POST DEPLOY
- A9 - RENDEZVOUS
- A10 - PROX OPS

CAP/61-A/O/FIN

A1

TOP

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 4 PULSE NORM
0.0 1 0 5 VERN
.0 0 6 COMP NORM
.0 0 7 VERN

DEADBAND
5.0 0 8 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

CAP/61-A/O/BAS

CAP/61-A/O/BAS

A2

TOP

TOP

A1

DAP A2

PURPOSE:
PTC

0.1 0

1 TRANSLATION PULSE

0.4 0 0

2 ROTATION DSC RT NORM

0.4 0 0 0

3 VERN

0.1 0 0 0

4 PULSE NORM

0.0 1 0 0 0

5 VERN

.0 0 0 0

6 COMP NORM

.0 0 0 0

7 VERN

DEADBAND

1.0 0 0

8 ATT NORM

1.0 0 0 0

9 VERN

0.2 0 0

10 RATE NORM

0.2 0 0

11 VERN

1

12 JET OPT P

1

13 Y

0

14 CNTL ACCEL

CAP/61-A/O/BAS

CAP/61-A/O/BAS

A3

TOP

TOP

A2

DAP A3

PURPOSE:

RCS HOT FIRE

0.1 0

1 TRANSLATION PULSE

0.2 0 0

2 ROTATION DSC RT NORM

0.2 0 0 0

3 VERN

0.3 0 0

4 PULSE NORM

0.0 1 0 0 0

5 VERN

.0 0 0 0

6 COMP NORM

.0 0 0 0

7 VERN

DEADBAND

5.0 0 0

8 ATT NORM

1.0 0 0 0

9 VERN

0.2 0 0

10 RATE NORM

0.2 0 0

11 VERN

3

12 JET OPT P

3

13 Y

0

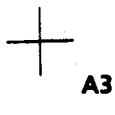
14 CNTL ACCEL

CAP/61-A/O/BAS

CAP/61-A/O/BAS

A4

TOP



TOP



DAP A4

A4

PURPOSE:

GG

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

1.0 0 8 DEADBAND ATT NORM
 0.0 7 0 9 VERN

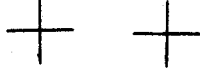
0.2 0 10 RATE NORM
 .0 1 0 11 VERN

1 12 JET OPT P
 3 13 Y

0 14 CNTL ACCEL

CAP/61-A/O/BAS

CAP/61-A/O/BAS

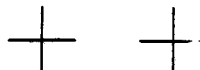


A5



TOP

TOP



A4



DAP A5

A5

PURPOSE:

IMU ALIGN (ROTATING)

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 5 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

5.0 0 8 DEADBAND ATT NORM
 1.0 0 0 9 VERN

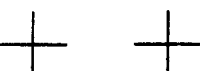
0.2 0 10 RATE NORM
 .0 2 0 11 VERN

1 12 JET OPT P
 1 13 Y

0 14 CNTL ACCEL

CAP/61-A/O/FIN

CAP/61-A/O/BAS



A6



TOP

TOP

A5

DAP A6

PURPOSE:

LOSS OF VERN
(TAIL ONLY)

A6

0.1 0 1 TRANSLATION PULSE

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

DEADBAND	
5.0 0	8 ATT NORM
1.0 0 0	9 VERN

0.2 0	10 RATE NORM
.0 2 0	11 VERN

3	12 JET OPT	P
3	13	Y

0 14 CNTL ACCEL

CAP/61-A/O/BAS

CAP/61-A/O/BAS

A7

TOP

TOP

A6

DAP A7

PURPOSE: (Blank)

A7

-. - - 1 TRANSLATION PULSE

ROTATION	
-. - -	2 DSC RT NORM
-. - -	3 VERN
-. - -	4 PULSE NORM
-. - -	5 VERN
-. - -	6 COMP NORM
-. - -	7 VERN

DEADBAND	
-. - -	8 ATT NORM
-. - -	9 VERN

-. - -	10 RATE NORM
-. - -	11 VERN

-	12 JET OPT	P
-	13	Y

- 14 CNTL ACCEL

CAP/61-A/O/BAS

CAP/61-A/O/BAS

A8

TOP



A7



TOP



DAP A8

A8

PURPOSE:

PRE/POST DEPLOY

0.1 Q

1 TRANSLATION PULSE

ROTATION

0.5 Q Q

2 OSC RT NORM

0.2 Q Q Q

3 VERN

0.1 Q

4 PULSE NORM

0.0 1 Q Q

5 VERN

.0 Q Q

6 COMP NORM

.0 Q Q

7 VERN

DEADBAND

3.0 Q Q

8 ATT NORM

1.0 Q Q Q

9 VERN

0.2 Q

10 RATE NORM

.0 2 Q

11 VERN

1

12 JET OPT P

1

13 Y

Q

14 CNTL ACCEL

CAP/61-A/O/FIN

CAP/61-A/O/FIN



TOP



A9



A8



TOP



DAP A9

A9

PURPOSE:

RENDEZVOUS

0.1 Q

1 TRANSLATION PULSE

ROTATION

0.2 Q Q

2 OSC RT NORM

0.2 Q Q Q

3 VERN

0.1 Q

4 PULSE NORM

0.0 1 Q Q

5 VERN

.0 Q Q

6 COMP NORM

.0 Q Q

7 VERN

DEADBAND

2.0 Q Q

8 ATT NORM

1.0 Q Q Q

9 VERN

0.2 Q

10 RATE NORM

.0 2 Q

11 VERN

1

12 JET OPT P

1

13 Y

Q

14 CNTL ACCEL

CAP/61-A/O/FIN

CAP/61-A/O/FIN



TOP



A10



TOP

A9

DAP A10

PURPOSE:

PROX OPS

A10

0.0 5	1	TRANSLATION	
		PULSE	
		ROTATION	
0.2 0 0	2	DSC RT	NORM
0.2 0 0	3	VERN	VERN
0.1 0 0	4	PULSE	NORM
0.0 1 0	5	VERN	VERN
0.0 0 0	6	COMP	NORM
0.0 0 0	7	VERN	VERN
		DEADBAND	
2.0 0 0	8	ATT	NORM
1.0 0 0	9		VERN
		RATE	
0.2 0 0	10		NORM
0.2 0 0	11		VERN
		JET OPT	P
1	12		
1	13		Y
		CNTL ACCEL	
0	14		

CAP/61-A/O/FIN

CAP/61-A/O/FIN

TOP

TOP

A10

DAP PURPOSE

- B1 - NOMINAL
 PRCS IMU ALIGN
 OMS & RCS BURNS
- B2 - LOSS OF VERN
 (TAIL ONLY)
- B3 - LOSS OF VERN
 (NOSE & TAIL)
 GG MNVR
- B4 - SUSS DEPLOY
- B5 - COAS CAL
- B6 - RENDEZVOUS
- B7 - PROX OPS
- B8 - (Blank)
- B9 - GG UNSTABLE

CAP/61-A/O/FIN

CAP/61-A/O/FIN

B1

TOP



TOP



DAP B1

B1

PURPOSE:
NOMINAL
PRCS IMU ALIGN
OMS & RCS BURNS

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

CAP/61-A/O/BAS

CAP/61-A/O/BAS



B2



TOP

TOP



B1

DAP B2

B2

PURPOSE:
LOSS OF VERN
(TAIL ONLY)

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

CAP/61-A/O/BAS

CAP/61-A/O/BAS



B3



TOP

TOP

B2

DAP B3

PURPOSE:

LOSS OF VERN
(NOSE & TAIL)
GG MNVR

B3

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT NORM 16 0.2 0 0

VERN 17 0.2 0 0

PULSE NORM 18 0.0 4

VERN 19 0.0 0 2

COMP NORM 20 0.0 0

VERN 21 0.0 0

DEADBAND

ATT NORM 22 3.0 0

VERN 23 1.0 0 0

RATE NORM 24 0.2 0

VERN 25 0.2 0

JET OPT P 26 1

Y 27 1

CNTL ACCEL 28 0

CAP/61-A/O/BAS

CAP/61-A/O/BAS

B4

TOP

TOP

B3

DAP B4

PURPOSE:

SSUS DEPLOY

B4

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT NORM 16 0.2 0 0

VERN 17 0.0 0 0

PULSE NORM 18 0.0 4

VERN 19 0.0 0 2

COMP NORM 20 0.0 0

VERN 21 0.0 0

DEADBAND

ATT NORM 22 0.3 0

VERN 23 0.1 0 0

RATE NORM 24 0.2 0

VERN 25 0.1 0

JET OPT P 26 3

Y 27 3

CNTL ACCEL 28 0

CAP/61-A/O/FIN

CAP/61-A/O/FIN

B5

TOP

TOP

B4

DAP B5

PURPOSE:

COAS CAL

B5

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT	NORM	16	0.2	0	0
	VERN	17	0.0	1	6
PULSE	NORM	18	0.0	4	
	VERN	19	0.0	0	2
COMP	NORM	20	.0	0	0
	VERN	21	.0	0	0

DEADBAND

ATT	NORM	22	3.0	0	
	VERN	23	0.0	3	3

RATE	NORM	24	0.2	0	
	VERN	25	.0	2	0

JET OPT	P	26		3	
	Y	27		3	

CNTL ACCEL 28 0

CAP/61-A/O/BAS

CAP/61-A/O/BAS

B6

TOP

TOP

B5

DAP B6

PURPOSE:

RENDEZVOUS

B6

TRANSLATION
PULSE

15 0.0 5

ROTATION

DSC RT	NORM	16	0.5	0	0
	VERN	17	0.2	0	0
PULSE	NORM	18	0.0	4	
	VERN	19	0.0	0	2
COMP	NORM	20	.0	0	0
	VERN	21	.0	0	0

DEADBAND

ATT	NORM	22	2.0	0	0
	VERN	23	1.0	0	0

RATE	NORM	24	0.2	0	
	VERN	25	.0	2	0

JET OPT	P	26		1	
	Y	27		1	

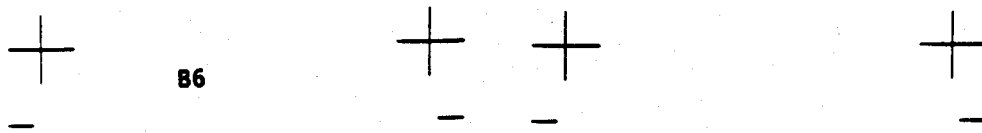
CNTL ACCEL 28 0

CAP/61-A/O/FIN

CAP/61-A/O/FIN

B7

TOP



86

DAP 87

PURPOSE:
PROX OPS

CAP/61-A/O/FIN



TOP



87

DAP 88

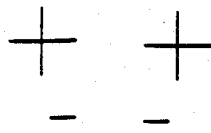
PURPOSE: (Blank)

CAP/61-A/O/FIN



TOP

(reduced copy)



TOP

87

TRANSLATION			
PULSE	15	0.0	1
ROTATION			
DSC RT	NORM 16	0.2	0 0
	VERN 17	0.2	0 0
PULSE	NORM 18	0.0	4
	VERN 19	0.0	2
COMP	NORM 20	.0	0 0
	VERN 21	.0	0 0
DEADBAND			
ATT	NORM 22	2.0	0
	VERN 23	1.0	0 0
RATE	NORM 24	0.2	0
	VERN 25	.0	2 0
JET OPT	P 26		1
	Y 27		1
CNTL ACCEL	28		0

CAP/61-A/O/FIN

88

TOP

88

TRANSLATION			
PULSE	15	---	---
ROTATION			
DSC RT	NORM 16	---	---
	VERN 17	---	---
PULSE	NORM 18	---	---
	VERN 19	---	---
COMP	NORM 20	---	---
	VERN 21	---	---
DEADBAND			
ATT	NORM 22	---	---
	VERN 23	---	---
RATE	NORM 24	---	---
	VERN 25	---	---
JET OPT	P 26		---
	Y 27		---
CNTL ACCEL	28		---

CAP/61-A/O/FIN

89

TOP



B8



DAP B9

B9

PURPOSE:

GG UNSTABLE

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT NORM 16 0.2 0 0

VERN 17 0.0 1 0

PULSE NORM 18 0.0 1 0

VERN 19 0.0 2 0

COMP NORM 20 0.0 1 0

VERN 21 0.0 1 0

DEADBAND

ATT NORM 22 3.0 0

VERN 23 0.2 0 0

RATE NORM 24 0.2 0

VERN 25 0.2 0

JET OPT P 26 3

Y 27 3

CNTL ACCEL 28 0

CAP/61-A/O/FIN

CAP/61-A/O/FIN



TOP



B9

CAP/61-A/O/FIN



TOP

TOP
BACK COVER 'DAP BOOK'



CAP/61-A/O/BAS



ATTITUDE TIMELINE

Attitude Timeline

ATTITUDE
TIMELINE

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 0/01:10:00	TRK TGT=2 BV=3(90.00, 0.00) OM=180.00	A1 AUTO NORM	DSC 0.200 DB AT 5.00 DB RT 0.20	EARTH 0 90 0 0	LVLH R+180 P+ 0 Y+ 0	-ZLV +XVV
2 0/03:25:00 34:27	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 109 0 95	STAR PR A1 -Z COAS: 28 -Y ST: 52	IMU ALIGN COAS CAL
3 0/03:50:00 04:03:10	MNVR R+108.00 P+ 45.00 Y+ 2.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 114 0 215		TDRS/VESTIB SLED #1
4 0/12:10:00 24:46	TRK TGT=2 BV=5(180.00, -43.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 137 0 270	LVLH R+ 0 P+ 90 Y+317	GLOMR DEPLOY
5 0/12:40:00 48:34	MNVR R+107.00 P+351.00 Y+ 11.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 156 0 179		TDRS/VESTIB SLED #2
6 0/17:05:00 18:39	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 110 0 95	STAR PAIR A1	IMU ALIGN
7 0/17:25:00 36:47	TRK TGT=2 BV=3(90.00, 0.00) OM=270.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 90 0 360	LVLH R+ 0 P+180 Y+ 90	-ZLV +YVV NAVEX
8 1/02:10:00 24:42	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 110 0 94	STAR PAIR A1	IMU ALIGN
9 1/02:30:00 38:17	MNVR R+218.00 P+103.00 Y+322.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 47 0 127		TDRS/VESTIB SLED #3
10 1/07:00:00 13:50	TRK TGT=2 BV=5(357.83, 0.12) OM=263.50	B3 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 2 0 186	LVLH R+264 P+270 Y+358	GG
11 1/16:10:00 20:24	TRK TGT=2 BV=3(90.00, 0.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 90 0 0	LVLH R+ 0 P+180 Y+ 0	-ZLV -XVV NAVEX
12 2/02:25:00 33:34	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 110 0 93	STAR PAIR A1	IMU ALIGN

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 2/02:45:00 53:25	MNVR R+212.00 P+100.00 Y+321.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 48 φ 132		TDRS/VESTIB SLED #4
2 2/07:20:00 33:36	TRK TGT=2 BV=5(357.83, 0.12) OM=263.50	B3 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 2 φ 186	LVLH R+264 P+270 Y+358	GG
3 2/16:25:00 32:41	TRK TGT=2 BV=3(90.00, 0.00) OM=270.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 90 φ 360	LVLH R+ 0 P+180 Y+ 90	-ZLV +YVV NAVEX
4 3/04:15:00 29:11	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 111 φ 92	STAR PAIR A1	IMU ALIGN
5 3/04:35:00 46:26	TRK TGT=2 BV=5(357.83, 0.12) OM=263.50	B3 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 2 φ 186	LVLH R+264 P+270 Y+358	GG
6 3/15:10:00 20:24	TRK TGT=2 BV=3(90.00, 0.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 90 φ 0	LVLH R+ 0 P+180 Y+ 0	-ZLV -XVV NAVEX
7 4/03:00:00 08:36	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 111 φ 92	STAR PAIR A1	IMU ALIGN
8 4/03:20:00 31:13	TRK TGT=2 BV=5(357.83, 0.12) OM=263.50	B3 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 2 φ 186	LVLH R+264 P+270 Y+358	GG
9 4/15:25:00 32:41	TRK TGT=2 BV=3(90.00, 0.00) OM=270.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 90 φ 360	LVLH R+ 0 P+180 Y+ 90	-ZLV +YVV NAVEX
10 5/01:50:00 02:04:16	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 112 φ 91	STAR PAIR A1	IMU ALIGN
11 5/02:10:00 18:53	MNVR R+162.00 P+ 73.00 Y+344.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 78 φ 161		TDRS/VESTIB SLED #5
12 5/08:10:00 23:08	TRK TGT=2 BV=5(357.83, 0.12) OM=263.50	B3 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 2 φ 186	LVLH R+264 P+270 Y+358	GG

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 5/15:45:00 55:24	TRK TGT=2 BV=3(90.00, 0.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 90 0 0	LVLH R+ 0 P+180 Y+ 0	-ZLV -XVV NAVEX
2 6/03:50:00 04:03:40	MNVR R+183.00 P+ 79.00 Y+320.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 60 0 149		TDRS/VESTIB SLED #6
3 6/08:10:00 19:14	MNVR R+229.00 P+ 96.00 Y+ 61.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 113 0 90	STAR PAIR A1	IMU ALIGN
4 6/08:30:00 38:33	TRK TGT=4 BV=5(270.00, 0.00) OM=270.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 90 0 180	INRTL R+ 47 P+221 Y+ 30	PTC ROTATION START ATT
5 6/08:45:00	ROT BV=1(0.00, 0.00)	A2 AUTO NORM	DSC 0.400 DB AT 1.00 DB RT 0.20		ROT R+ 47 START P+221 ATT Y+ 30	PTC ROTR
6 6/18:35:00	CANCEL	A2 AUTO NORM	DSC 0.400 DB AT 1.00 DB RT 0.20	SUN 0 90 0 60	INRTL R+167 P+221 Y+ 30	PTC ROTR STOP
7 6/18:45:00 52:40	TRK TGT=4 BV=5(184.00, 0.00) OM=145.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 176 0 184	INRTL R+ 86 P+339 Y+ 36	TAIL SUN
8 6/20:39:00 45:15	MNVR R+ 91.00 P+ 37.00 Y+348.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 105 0 222	-Z ST: 13 -Y ST: 17	IMU ALIGN
9 6/20:59:00 21:00:08	MNVR R+103.00 P+ 23.00 Y+ 17.00	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN 0 136 0 217	-Z ST: 34 -Y ST: 39	IMU VERIF
10 6/21:24:00 28:23	MNVR R+175.00 P+288.00 Y+323.00	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN 0 90 0 58		DEORBIT BURN ATT
11 6/23:39:06	OMS IGNITION	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30			DEORBIT BURN

CREW ACTIVITY PLAN NOTES

CREW..... 7-2
PAYLOADS..... 7-2
MODEL NAMES..... 7-3

CAP NOTES

A. CREW

1. There will be 8 crewmen onboard divided into teams as follows:

RED team - MS2, MS3, PS1

BLU team - PLT, MS1, PS2

The PS3 is not assigned to a team but works with both teams.

The CDR is not assigned to a team and is free to establish his own work hours.

Each team works for approximately 12 hrs, then is off duty for 12 hrs. This allows continuous 24 hrs/day payload operations.

B. PAYLOADS

There will be 8 experiment facilities onboard D-1, each of which will be used to perform various payload activities. The facilities and their designators are:

1. WL - Werkstofflabor

A materials processing double rack (R6 and R7) containing an isothermal heating facility (IHF), a mirror heating facility (MHF), a fluid physics module (FPM), a gradient heating facility (GHF), and a high temperature thermostat facility (HTT).

2. PK - Prozesskammer

A standard double rack (R8 and R9) containing 3 optical diagnostic facilities; a holographic interferometric apparatus (HOL), an interdiffusion facility (IDS), and a Marangoni convection facility (MKB).

3. MD - MEDEA (Material Science Experiments Double Rack for Experiment modules and Apparatus)

A material science double rack (L3 and L4) containing a gradient furnace with quenching (GFQ), a monoellipsoidal mirror heating facility (ELLI), and a high precision thermostat (HPT).

4. BW - Biowissenschaften

A life science experiment package located in the Systems Rack (R3 and R4) with some equipment stowed elsewhere in the module and in the orbiter middeck.

5. VS - Vestibular Sled

A low g dynamic apparatus mounted on rails along the centerline of the module floor and controlled from rack L10.

6. BR - Biorack

A single rack (L5) containing a freezer-cooler and an incubator for storage and processing of live specimens. These specimens are loaded into the middeck just before launch and transferred to the module after SL activation.

7. NX - NAVEX (Navigation Experiment)

A navigation experiment located in the bay on the unique support structure (USS). It transmits to and receives signals from 3 European ground stations.

8. ME - MEA (Materials Experiment Assembly)

Also mounted on the USS, it contains 3 materials processing experiments and is controlled from the System Support Rack (R4).

C. MODEL NAMES

The following is a list, by facility, of the model names that appear in the timeline and a brief description of each model.

1. WL

WLCOM - common equipment operations (ops)
WLIHF - isothermal heating facility ops
WLMHF - mirror heating facility ops
WLFPM - fluid physics module ops
WLGHF - gradient heating facility ops
WLHTT - high temperature thermostat ops
WLCRYO - cryostat ops

2. PK

PKHOL - Holop facility ops
PKIDS - interdiffusion in salt melts
PKMKB - Marangoni convection boat

3. MD

MDFAC - facility activation/deactivation
MDELI - elliptical mirror heating facility ops
MDHPT - high precision thermostat facility ops
MDGFQ - gradient heating facility with quenching ops

4. BW

BWFAC - facility activation/deactivation
BWAMU - acceleration measurement unit (AMU) cassette
changeout
BWBGP - graviperception
BWBGT - geotropism
BWB DI - differentiation
BWTOM - TOMEX (tonometer experiment - intraocular eye
pressure)
BWZVD - central venous pressure

5. VS

NASA dynamic sled runs

- VS 102-1 - sled objectives
- VS 102-3 - rotating dome
- VS 102-4 - position awareness
- VS 102-5 - hop and drop
- VS 102-6A - acceleration recording unit (ARU) scope checkout
- VS 102-6B - ARU (DAILY USE)
- VS 102-6D - ARU stowage in middeck

ESA dynamic sled runs

- VS 201-A - All sled objectives (MET DAY 0)
- VS 201-B - Static, Sled Optokinetic & Provocative (MET DAY 1)
- VS 201-C - static sessions (MET DAYS 2 and 5)
- VS 201-D - All sled objectives (MET DAY 6)

6. BR

- BRFAC - facility act/deact
- BR XFER - BR samples transfer
- BR DNA - interaction of E. coli bacteria
- BR FLY - oogenesis of drosophila eggs
- BR SLIME - frequency of protoplasmic streaming in physarum
- BR PARAMEC - structure and kinetics of proliferation of paramecium
- BR SPORES - growth and differentiation of bacteria subtilus
- BR BLOOD - blood investigations
- BR LYMPHO - effect of spaceflight on lymphocyte activation
- BR ROOTS - structure and function of lentil seeds
- BR PLASMA - plasma cell structure
- BR ANTIBIO - cell proliferation/function

7. NX (All activities performed by ground operations)

8. ME

- MEA FAC - activation/shutdown
- MEA EXP - acoustic levitator/iso furnace/grad furnace

FLIGHT DATA FILE
CORE DISTRIBUTION
10/08/85

JSC

AP/Director
AP3/Support (2)
Pub. Information
CA7/Chief
DF/Chief
DF24/INCO (4)
DF6/Sys. Analysis Sect.
DF63/Head
DG4/Crew Sys. (2)
DG6/Rockwell
DH4/DFD MGR
FAO
T/L
Flt. Act Br (17)
DH6/Branch Off.
EC/Chief
EC2/Support (4)
EH3/Chief
Support
EH4/Chief
EH5/Chief
Support
EX/DFD CPCB Rep.
FE42/Head
JM2/Technical Library (3)
JM24/COD Pub Center
MF/GFE Project Office
Support (RIC)
NS/Safety Div.
SD2/Surgeon
Support
SP4/Head
VF/Manager
VF3/Support
VF5/CPCB Rep.
ZR1/MMC Library (2)
ZR2/Mission Support (2)

Barrios

A. T. McDowell (2)

Boeing

HS-04/D. Bennett

NASA Headquarters

M/C. Lee
TX-1/J. G. Maley

Kennedy Space Center

SE-PEO-A/L. C. Ellis
SO-A/Astronaut Office (2)
ZK-25/Rockwell Tech Data
LSO-233/A. Grenville

Marshall Space Flight Center

MDAC-HVL, Bldg 4708
DCC/L. White
MS12A/K. Jackson
MS17C/J. R. Hutchins
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