

*Whitney  
350*

# Flight Data File Crew Activity Plan 41-B (STS-11)

## Cycle 2 (Revision A) Trajectory

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Mission Operations Directorate  
Operations Division

Final  
December 19, 1983



National Aeronautics and  
Space Administration

**Lyndon B. Johnson Space Center**  
Houston, Texas

## FLIGHT DATA FILE

### CONTROL

Ascent Checklist

Post Insertion

Crew Activity Plan

Deorbit Prep

Entry Checklist

### SUPPORT

Cue Cards Book

EVA Checklist

Flight Maps and Charts Book

Orbit Operations Checklist

Payload Deploy Checklist\*

Payload Operations Checklist\*

PDRS Operations Checklist\*

Photo/TV Checklist

Rendezvous/Proximity Operations\*

### OFF-NOMINAL

Ascent Pocket Checklist

Orbit Pocket Checklist

Entry Pocket Checklist

Ascent/Entry Systems Procedures

Contingency Deorbit Prep

Contingency EVA Operations

In-Flight Maintenance Checklist

Medical Checklist

Payload Systems Data and Malfunction Procedures\*

Malfunction Procedures

### REFERENCE

Data Processing System Dictionary

Reference Data

Systems Data

\*If required

120683

MISSION OPERATIONS DIRECTORATE

41-B(STS-11) CREW ACTIVITY PLAN

FINAL  
December 19, 1983

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CHANGE CONTROL RECORD

STS-11 Crew Activity Plan

CONTROL NO.	FDF EDITION INCORPORATED		DISAPPROVED OR OTHER DISPOSITION
	TITLE	DATE	
	BASIC	10/07/83	
CAP(11)-124	FINAL	12/19/83	
CAP(11)-126	FINAL	12/19/83	
CAP(11)-127	FINAL	12/19/83	
CAP(11)-128	FINAL	12/19/83	
CAP(11)-129	FINAL	12/19/83	
CAP(11)-130A	FINAL	12/19/83	
CAP(11)-131	FINAL	12/19/83	
CAP(11)-134	FINAL	12/19/83	
CAP(11)-135	FINAL	12/19/83	
CAP(11)-136	FINAL	12/19/83	
CAP(11)-137	FINAL	12/19/83	
CAP(11)-138	FINAL	12/19/83	
CAP(ALL)-139	FINAL	12/19/83	
CAP(11)-140	FINAL	12/19/83	
CAP(11)-141	FINAL	12/19/83	
FDF(ALL)-321	FINAL	12/19/83	
FDF(ALL)-322	FINAL	12/19/83	
CAP(11)-143	FINAL	12/19/83	
CAP(11)-144	FINAL	12/19/83	
FDF(ALL)-324	FINAL	12/19/83	

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FINAL 12/19/83

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9-15.....	STS-11/FIN		
9-16.....	STS-11/FIN		
9-17.....	STS-11/FIN		
9-18.....	STS-11/FIN		
9-19.....	STS-11/FIN		
9-20.....	STS-11/FIN		
9-21.....	STS-11/FIN		
9-22.....	STS-11/FIN		
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DAP A2.....	9-13	STS-11/0/BAS
A2.....	9-13	STS-11/0/BAS
DAP A3.....	9-13	STS-11/0/BAS
A3.....	9-13	STS-11/0/BAS
DAP A4.....	9-14	STS-11/0/BAS
A4.....	9-14	STS-11/0/BAS
DAP A5.....	9-14	STS-11/0/BAS
A5.....	9-14	STS-11/0/BAS
DAP A6.....	9-15	STS-11/0/BAS
A6.....	9-15	STS-11/0/BAS
DAP A7.....	9-15	STS-11/0/BAS
A7.....	9-15	STS-11/0/BAS
DAP A8.....	9-16	STS-11/0/BAS
A8.....	9-16	STS-11/0/BAS
DAP A9.....	9-16	STS-11/0/BAS
A9.....	9-16	STS-11/0/BAS
DAP A10.....	9-17	STS-11/0/BAS
A10.....	9-17	STS-11/0/BAS
DAP A11.....	9-17	STS-11/0/BAS
A11.....	9-17	STS-11/0/BAS
DAP A12.....	9-18	STS-11/0/BAS
A12.....	9-18	STS-11/0/BAS
(Blank).....	9-18	STS-11/0/BAS
DAP B TOC.....	9-18	STS-11/0/BAS
DAP B1.....	9-19	STS-11/0/BAS
B1.....	9-19	STS-11/0/BAS
DAP B2.....	9-19	STS-11/0/BAS
B2.....	9-19	STS-11/0/BAS
DAP B3.....	9-20	STS-11/0/BAS
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## INTRODUCTION

STS-11 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, EVA, Rendezvous 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 (Ref. 1) and the requirements of the STS-11 Flight Requirements Document (Ref. 2). Additionally, FRD changes up to #2 (December 1983) have been implemented.

The flight profile (Cycle 2, Revision A, trajectory data, Ref. 3) used for this Crew Activity Plan is for a launch date of January 29, 1984, 13:00 GMT. The GMT times and dates on the summary timeline as well as the inertial attitudes in the attitude timeline have been updated to reflect the scheduled launch date of January 30, 1984, 13:00 GMT.

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TIMELINE FORMAT SYMBOL NOMENCLATURE

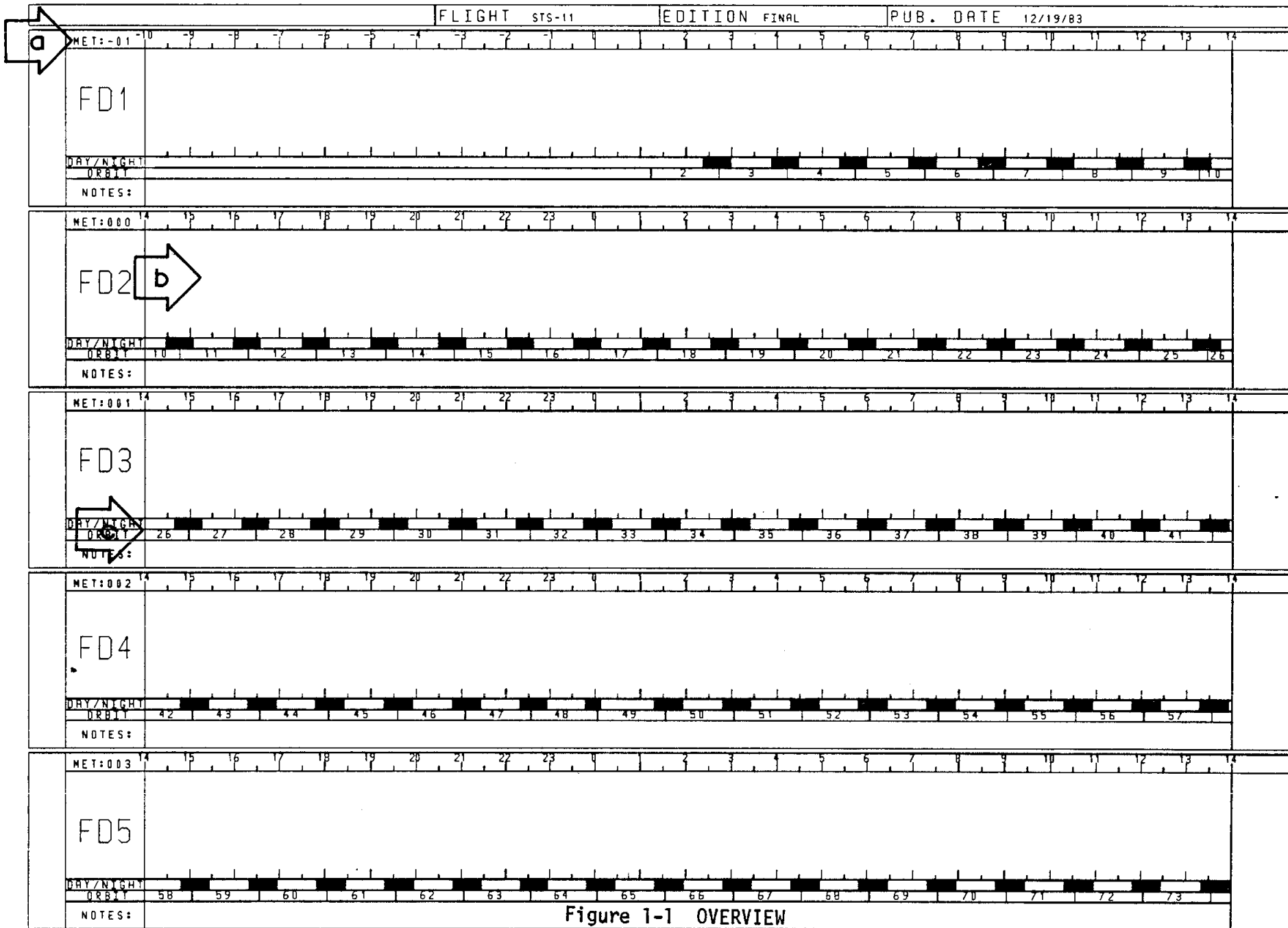


Figure 1-1 OVERVIEW

## A. FORMAT SYMBOL NOMENCLATURE

### 1. Overview Timeline

The following letters (a-c) refer to those highlighted in Figure 1-1.

- a. **TIMESCALE** - The time reference used on this format is cumulative Mission Elapsed Time (MET) expressed in days and hours. MET is referenced to liftoff, which occurs at 0/00:00:00 (days, hours, minutes, seconds).
- b. **ACTIVITY COLUMN** - This column presents an overview of activities scheduled during the flight. For clarity of presentation, only major activities are presented, and activity durations are sometimes lengthened. Abbreviated activity titles can be found in the Abbreviations/Acronyms section of this CAP.
- c. **ORBIT and DAY/NIGHT**
  - 1) **Orbit** - Indicates which orbit the spacecraft is in by numerical sequence. The beginning of an orbit occurs when the Orbiter crosses the Earth's equator going from the southern to the northern hemisphere (ascending node). The succession of orbits is numbered in this column starting with Orbit 1 for launch.
  - 2) **Day/Night** - The orbital day/night intervals are delineated with black bars indicating when the Orbiter is in darkness.

### 2. Summary Level Timeline (12-Hr Timespan)

The following letters (a-f) refer to those highlighted in Figure 1-2.

- a. **TIMESCALES** - Two time references are presented in this section of the summary timeline format. The time references used are Greenwich Mean Time (GMT), and Mission Elapsed Time (MET). MET is referenced to liftoff, beginning 0/00:00:00 (days, hours, minutes, seconds).
- b. **CREWMAN (CDR, PLT, MS1, MS2, MS3)** - This is the crewman column of the format, where titles of scheduled activities are shown for the commander (CDR), pilot (PLT), and each mission specialist (MS1, MS2, MS3) at the appropriate times in the flight.



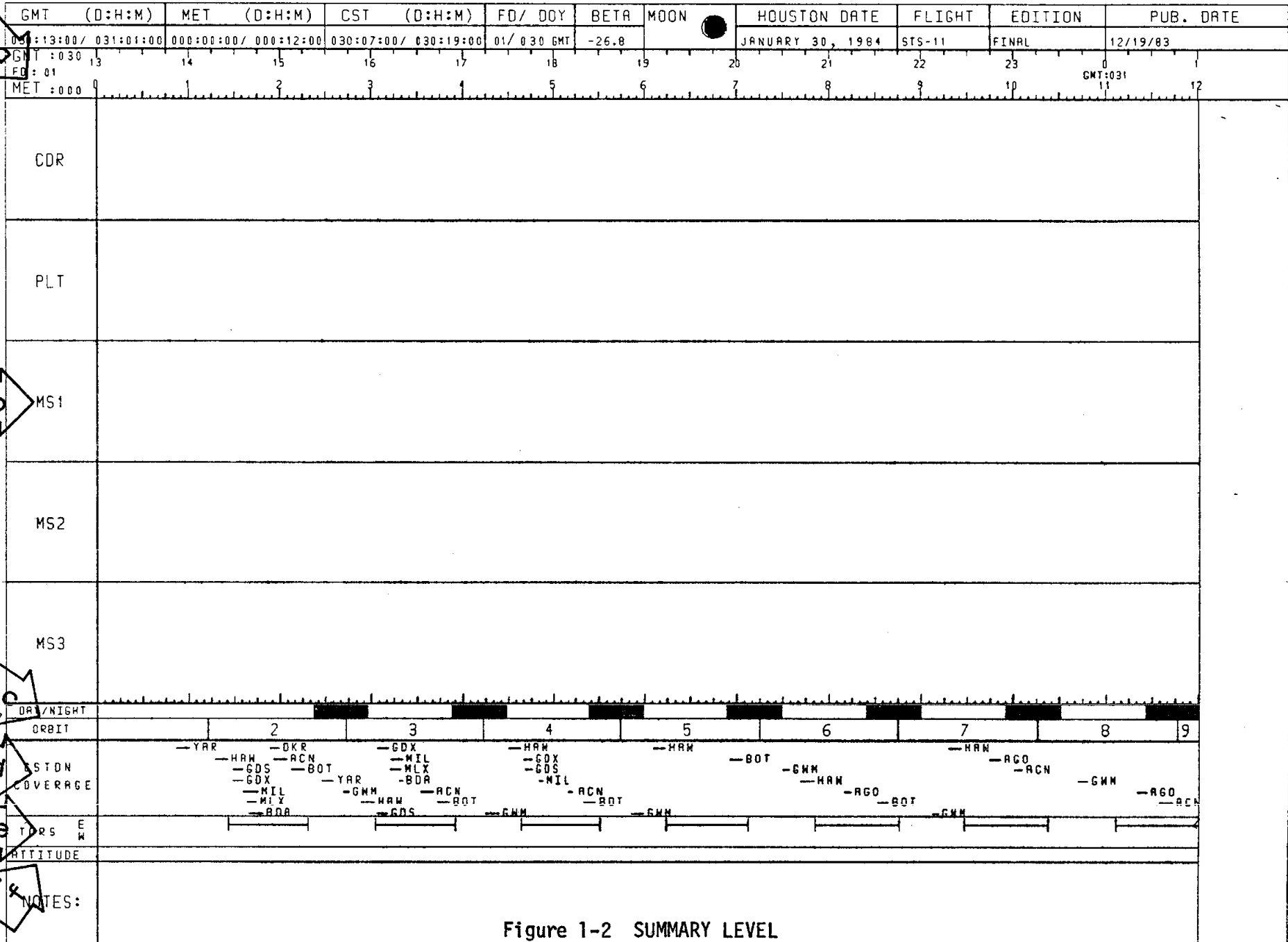


Figure 1-2 SUMMARY LEVEL

c. DAY/NIGHT and ORBIT

- 1) Day/Night - The orbital day/night intervals are delineated with black bars indicating when the Orbiter is in darkness.
- 2) Orbit - Indicates which orbit the spacecraft is in by numerical sequence. The beginning of an orbit occurs when the Orbiter crosses the Earth's equator going from the southern to the northern hemisphere (ascending node). The succession of orbits is numbered in this column starting with Orbit 1 for launch.

d. GSTDN COVERAGE - The GSTDN communication coverage periods are identified in this area with a horizontal line indicating when communication is available; the GSTDN site is identified to the right of the line.

e. TDRS - The TDRS communication coverage periods are identified in this area, with a horizontal line indicating when there is a line-of-sight between TDRS and the Orbiter. The boxed areas indicate when there is Ku-Band communication which is based upon an unblocked line-of-sight between the Ku-Band antenna and TDRS.

f. ATTITUDE - The attitude of the vehicle (-ZLV, IMU, etc.) is shown in this column.

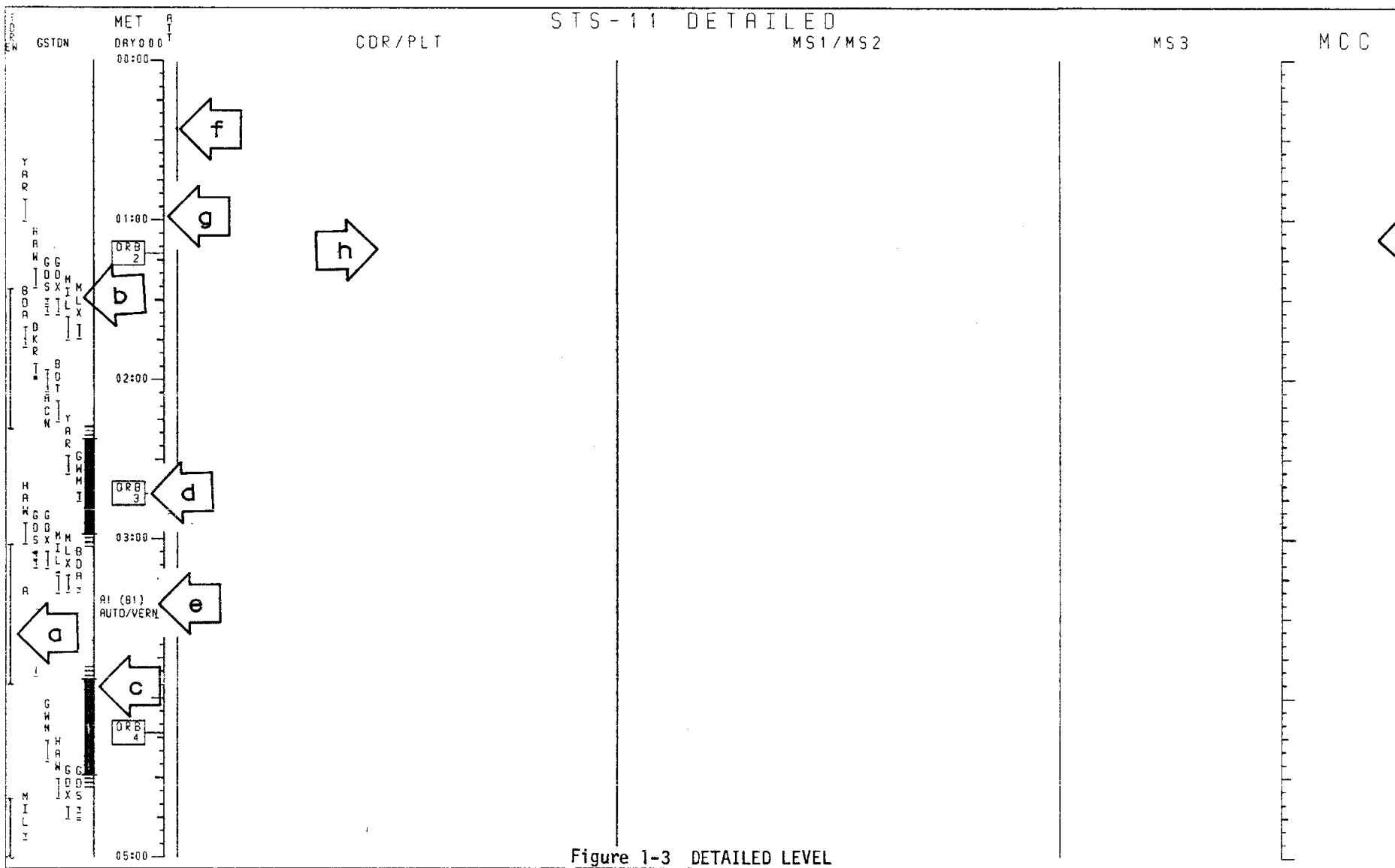


Figure 1-3 DETAILED LEVEL

### 3. Detailed Level Timeline (5-Hr Timespan)

The following letters (a-i) refer to those highlighted in Figure 1-3.

- a. TDRS - The TDRS communication coverage periods are identified in this area, with a vertical line indicating when there is a line-of-sight between TDRS and the Orbiter. The boxed areas indicate when there is Ku-Band communication which is based upon an unblocked line-of sight between the Ku-Band antenna and TDRS.
- b. GSTDN COVERAGE - In this column the GSTDN sites and their acquisition periods are identified.
- c. DAY/NIGHT CYCLE - In this column a solid bar indicates the period when the Orbiter and Earth are in darkness. A slashed line indicates when the Orbiter is in daylight but the Earth beneath the Orbiter is still in darkness (terminator).
- d. ORBIT - Indicates which orbit the spacecraft is in by numerical sequence. Orbit 1 begins at liftoff with subsequent orbits starting when the Earth's equator is crossed (ascending node).
- e. In the timescale a DAP A and DAP B CONFIG reference will be included. A number is associated with both DAPs A and B; each number indicates a particular DAP configuration either DAP A or DAP B. The DAP reference without parentheses indicates the 'active' DAP for that time period on the page. Table 9-11 identifies the various configurations for DAP A and DAP B that are used.
- f. ATTITUDE - Indicates Orbiter attitude.
- g. MET TIMESCALE - This format is a 5-hour format with 5-minute tick marks on the vertical timescale referenced to Mission Elapsed Time (MET) with liftoff occurring at 0/00:00:00.
- h. CREWMAN COLUMNS - The activities for the CDR, PLT, MS1, MS2 and MS3 are scheduled in this area.
- i. MCC COLUMN - Any uplinks, commands or updates required are scheduled at the appropriate time in this column. TV coverage is also identified in this column.

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SUMMARY TIMELINE

SUMMARY  
TIMELINE

# SUMMARY TIMELINE

GMT (D:H:M)		MET (D:H:M)		CST (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
030:13:00 / 031:01:00		000:00:00 / 000:12:00		030:07:00 / 030:19:00		01 / 030 GMT	-26.8		JANUARY 30, 1984	STS-11	FINAL	12/19/83
GMT : 030												GMT:031
FD : 01												
MET : 000												
CDR		POST INSERTION		IMU	ZLV	MNV	MNV	UNSTON CABIN	MEAL			PRE SLEEP ACT
PLT		POST INSERTION	UNSTON CABIN	MNV	ZLV	MNV	MNV	UNSTON CABIN	MEAL			PRE SLEEP ACT
MS1	LAUNCH	POST INSERTION	UNSTON CABIN	MNV	ZLV	MNV	MNV	UNSTON CABIN	MEAL			PRE SLEEP ACT
MS2		POST INSERTION	UNSTON CABIN	MNV	ZLV	MNV	MNV	UNSTON CABIN	MEAL			PRE SLEEP ACT
MS3		POST INSERTION	UNSTON CABIN	MNV	ZLV	MNV	MNV	UNSTON CABIN	MEAL			PRE SLEEP ACT
DAY/NIGHT												
ORBIT		2		3		4		5		6		7
GSTDN COVERAGE		-YAR -HAW -GDS -GDX -MIL -MLX -BDA		-DKR -ACN -BOT -YAR -GMM -HAW -RCN -BOT -GDS		-GDX -MIL -MLX -BDA		-HAW -GDS -GDX -MIL -RCN -BOT		-GMM -HAW -RCN -BOT		-HAW -RCN -BOT
TORS												
ATTITUDE		ASCENT		-ZLV BIASED		IMU		-ZLV		DEPLOY   SEP   WIN		-ZLV   IMU   -ZLV
NOTES:		8 ACTIVATE CINEMA 360 HEATERS		8 -ZLV, +XVV		8 APU HTR DEACT		8 APU HTR RECONFIG		8 -ZLV, +XVV		8 AFT STATION 8 -ZLV, +XVV

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
031:01:00 / 031:13:00	000:12:00 / 001:00:00	030:19:00 / 031:07:00	002 / 031 GMT	-24.9		JANUARY 30, 1984	STS-11	FINAL	12/19/83			
GMT : 031	2	3	4	5	6	7	8	9	10	11	12	13
FD : 01								FD:02				FD:02
MET : 000	12	13	14	15	16	17	18	19	20	21	22	23
CDR	SLEEP						POST SLEEP ACT	POST SLEEP ACT	EXERCISE			
PLT	SLEEP						POST SLEEP ACT	POST SLEEP ACT				
MS1	SLEEP						POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT
MS2	SLEEP						POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT
MS3	SLEEP						POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT
DRY/NIGHT	[Bar chart showing day/night cycles]											
ORBIT	9	10	11	12	13	14	15	16				
GSTDN COVERAGE	-GMM	-RGD -ACN -DKR	-GMM -RGD -DKR	-DKR -MAD -MAX	-DKR -MAD -MAX	-YAR	-MIL -MLX -BDA -DKR -MAD -MAX	-YAR	-MIL -MLX -BDA -DKR	-YAR	-MLX -MIL -BDA -DKR	-YAR
TDRS	[Bar chart showing TDRS coverage]											
ATTITUDE	-ZLV IMU -ZLV, +XVV											
NOTES:												



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FO/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
031:13:00 / 032:01:00	001:00:00 / 001:12:00	031:07:00 / 031:19:00	02 / 031 GMT	-22.8	●	JANUARY 31, 1984	STS-11	FINAL	12/19/83					
GMT :031	13	14	15	16	17	18	19	20	21	22	23	0	11	12
FO :02														
MET :001														
CDR		MEAL	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY
PLT	EXERCISE	MEAL	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY
MS1	VTR SETUP MLR CHECK TV ACT	MEAL	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY
MS2	HRM DEACT	MEAL	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY
MS3	MEAL PREP	MEAL	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY	DEPLOY
DAY/NIGHT														
ORBIT	17	18	19	20	21	22	23	24						
GSTON COVERAGE	HAW -ACN -GOS -BOT -GDX -MIL -BDA -MLX -DKP	-MLX -BDA -ACN -BOT -YAR -HAW -GDX -GOS -MTI	-GOS -GDX -MLX -ACN -BOT -YAR -GMM -HAW	-HAW -GDX -GOS -BOT -GMM -HAW	-HAW -GDX -GOS -BOT -GMM -HAW	-GMM -HAW -ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI	-ACN -BOT -YAR -HAW -GDX -GOS -MTI
TDRS E W														
ATTITUDE		-ZLV	DEPLOY	SEP	MIN		-ZLV	IMU		-ZLV				
NOTES:		◇ DP WESTAR SNSHD		● DTD 0316 UPPER STAGE PLUME DAMAGE MODEL VERIFICATION				● -ZLV, -XVV						

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
032:01:00 / 032:13:00	001:12:00 / 002:00:00	031:19:00 / 032:07:00	02 / 032 GMT	-20.6	●	JANUARY 31, 1984	STS-11	FINAL	12/19/83					
GMT :032	2	3	4	5	6	7	8	9	10	11	12	13		
FD :02							FD:03					FD:03		
MET :001	12	13	14	15	16	17	18	19	20	21	22	23	0	
CDR	SLEEP						POST SLEEP ACT	IMU ALIGN (ROLL)	POST SLEEP ACT	RCS R E G I S T R E D I O S C /	FC P U R G E H T R O N O F F	EXERCISE		
PLT	SLEEP						POST SLEEP ACT			GAP MEAS	TAPE MEAS	EXERCISE		
MS1	SLEEP						POST SLEEP ACT	POST SLEEP ACT			VTR S E T U P	VTR R E L E A S E	VTR D I R E C T I O N	7 0 X E M U L A T O R
MS2	SLEEP						POST SLEEP ACT			GAP MEAS	TAPE MEAS	MEAL PREP		
MS3	SLEEP						POST SLEEP ACT							
DAY/NIGHT	[Day/Night Cycle]													
ORBIT	25	26	27	28	29	30	31	32						
GSTDN COVERAGE	-GMM	-AGD -ACN -DKR	-GMM	-DKR	-MAD -MAX	-DKR	-ORR	-MIL -MLX -BDA -DKR -MAD -MAX	-YAR -ORR	-MIL -MLX -BDA -DKR	-ORR	-CDX -GDS -MIL -BDA -MLX -DKR	-ACN -BOT -YAR	
TDRS E M	[Timeline with markers]													
ATTITUDE	-ZLV						IMU			-ZLV				
NOTES:	<ul style="list-style-type: none"> <li>○ FC PURGE HTR ON</li> <li>○ FC PURGE HTR OFF</li> <li>● MANUAL</li> <li>● DTD 0321 CREW COMPARTMENT STRUCTURE DEFLECTION INVESTIGATION</li> </ul>													

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
032:13:00 / 033:01:00	002:00:00 / 002:12:00	032:07:00 / 032:19:00	03 / 032 GMT	-18.5	●	FEBRUARY 1, 1984	STS-11	FINAL	12/19/83			
GMT : 032	13	14	15	16	17	18	19	20	21	22	23	0
FD : 03												GMT:033
MET : 002	0	1	2	3	4	5	6	7	8	9	10	11
CDR	MEAL	RCS DTO	OMS BURN	RENDEZVOUS	PRE SLEEP ACT	OPTICS	PRE SLEEP ACT	SLEEP				
PLT	MEAL	RCS DTO	OMS BURN	RENDEZVOUS	PRE SLEEP ACT	OPTICS	PRE SLEEP ACT	SLEEP				
MS1	MEAL	REACT	TV ACT	EXERCISE	PRE SLEEP ACT	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP				
MS2	MEAL	ALN MARKS		EXERCISE	PRE SLEEP ACT	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP				
MS3	MEAL		EXERCISE	RENDEZVOUS	PRE SLEEP ACT	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP				
DAY/NIGHT	[Day/Night Cycle]											
ORBIT	33 34 35 36 37 38 39 40											
GSTDN COVERAGE	-HAW -RCN -MIL -GDX -BOT -GWN -HAM -AGO -RCN -RCN -GDS -BOT -YAR -MLX -BDA -GDS -MIL -ACN -GWN -HAM -AGO -RCN -MIL -GWN -ACN -BOT -GWN -HAM -AGO -BOT -GWN -HAM -AGO -RCN -MLX -BDA -GDS -BOT -GWN -HAM -GWN -HAM -GWN -HAM -AGO -OKP -GDX -HAM											
TORS E W	[TORS E W Cycle]											
ATTITUDE	-ZLV RCS OMS -XLV -XLV,-ZVV IMU -ZLV											
NOTES:	<p>▲ MLR POST DEACT</p> <p>● -ZLV, -XVV</p> <p>● DTO 0811 RENDEZVOUS, SHORT RANGE</p> <p>● DTO 0403 OMS TO RCS INTERCONNECT TEST</p> <p>● DTO 0321 CREW COMPARTMENT STRUCTURE DEFLECTION INVESTIGATION</p>											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
033:01:00 / 033:13:00	002:12:00 / 003:00:00	032:19:00 / 033:07:00	03 / 033 GMT	-16.3		FEBRUARY 1, 1984	STS-11	FINAL	12/19/83
GMT :033									
FD :03									
MET :002									
CDR	SLEEP					POST SLEEP ACT	RENDEZVOUS	MEAL	RENDEZVOUS
PLT	SLEEP					POST SLEEP ACT	RENDEZVOUS	MEAL	RENDEZVOUS
MS1	SLEEP					POST SLEEP ACT	EXERCISE	MEAL	RENDEZVOUS
MS2	SLEEP					POST SLEEP ACT	EXERCISE	MEAL PREP	MEAL
MS3	SLEEP					POST SLEEP ACT	RENDEZVOUS	MEAL	RENDEZVOUS
DAY/NIGHT	[Day/Night Cycle Diagram]								
ORBIT	41	42	43	44	45	46	47	48	
GSTDN COVERAGE	-ACN -DKR	-GWN -AGO -DKR	-DKR -MAD -MAX	-YAR -DKR -MAD -MAX	-YAR -DKR -MAD -MAX	-MLX -DKR -BDA	-YAR -DKR -MAD -MAX	-HAW -GDS -GDX -BOT	-YAR -DKR -MAD -MAX
TORS	[TORS Diagram]								
ATTITUDE	-ZLV   IMU   -ZLV   [OMS] +XLV   RCS   +XLV, -ZUV   [OMS] TRK ATT								
NOTES:	8 DTO 0812 RENDEZVOUS, LONG RANGE 8 DTO 0602 CABIN ATMOSPHERE VERIFICATION								

GMT (D:H:M)		MET (D:H:M)		CST (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE											
033:13:00 / 034:01:00		003:00:00 / 003:12:00		033:07:00 / 033:19:00		04 / 033 GMT	-14.2		FEBRUARY 2, 1984	STS-11	FINAL	12/19/83											
GMT :033	13	14	15	16	17	18	19	20	21	22	23	GMT:034											
FD :04												12											
MET :003	0	1	2	3	4	5	6	7	8	9	10												
CDR	RENDEZVOUS VBAR PRDX DPS SEP			EXERCISE 10-2 PREP 10.2 CABIN DEPRESS		10-2 CHECKING DOWN		PRE SLEEP ACT		IMU ALIGN (ROLL)		PRE SLEEP ACT		SLEEP									
PLT	RENDEZVOUS		EXERCISE		RENDEZVOUS		MASS SPEC CAL 10-2 PREP 10.2 CABIN DEPRESS		10-2 CHECKING DOWN ZLV		PRE SLEEP ACT		SLEEP										
MS1	RENDEZVOUS *			MASS SPEC CAL		ACT STARS		GAS GRP 8		A K L T 3 0 0		C S T E M P R		K E S I S D L E		R E C T I L 12		PRE SLEEP ACT		PRE SLEEP ACT		SLEEP	
MS2	RENDEZVOUS		RENDEZVOUS		LEH PREBREATHE		H R M D E R C T		ENU 3 C/O		PRE SLEEP ACT		SLEEP										
MS3	RENDEZVOUS			LEH PREBREATHE		ENU 3 C/O		PRE SLEEP ACT		SLEEP													
DAY/NIGHT													56										
ORBIT													56										
GSTDN COVERAGE													-RCN -GMM -AGD										
TDRS E M													-AGD										
ATTITUDE													-ZLV										
NOTES:													8 DTO 0012 RENDEZVOUS, LONG RANGE										
													* DSO 0201 ATMOSPHERIC DRAG/DENSITY STUDIES										

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE									
034:01:00/ 034:13:00	003:12:00/ 004:00:00	033:19:00/ 034:07:00	04/ 034 GMT	-12.0	●	FEBRUARY 2, 1984	STS-11	FINAL	12/19/83									
GMT :034																		
FD :04																		
MET :003																		
CDR	SLEEP				POST SLEEP ACT			EVA PREP	A/D L/P R/S S/S	EVA SUPPORT								
PLT	SLEEP				POST SLEEP ACT	IMU ALIGN (ROLL)		POST SLEEP ACT	S TRKR TRACK	RMS PWRUP	TRK MNR	EVA SUPPORT						
MS1	SLEEP				POST SLEEP ACT			POST SLEEP ACT	3 SMM SETUP	1 SMM SETUP	2 OFF	3 SMM SETUP	CRMS	1 SMM SUB-D	7 OKN SUB-D	TV ACT	EVA SUPPORT	
MS2	SLEEP				POST SLEEP ACT			EVA PREP									A/D L/P R/S S/S	EVA
MS3	SLEEP				POST SLEEP ACT			EVA PREP									A/D L/P R/S S/S	EVA
DRY/NIGHT																		
ORBIT	57	58	59	60	61	62	63	64										
GSTON COVERAGE	-ACN -DKR	-GMM -DKR		-DKR -MAD -MAX	-YAR -ORR	-BDA -DKR -MAD -MAX	-MIL -BDA -DKR	-BDA -DKR BOT	-YAR	-MIL -GOS -MAX	-YAR	-MIL -GOS -MAX	-YAR	-MIL -GOS -MAX	-YAR	-MIL -GOS -MAX	-YAR	-MIL -GOS -MAX
TDRS E W																		
ATTITUDE		-ZLV			IMU	-ZLV		-XLV										+ZVV BIASED
NOTES:																		

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE															
034:13:00 / 035:01:00	004:00:00 / 004:12:00	034:07:00 / 034:19:00	05 / 034 GMT	-9.9		FEBRUARY 3, 1984	STS-11	FINAL	12/19/83															
GMT: 034	13	14	15	16	17	18	19	20	21	22	23	0	1											
FD: 05												GMT:035	11											
MET: 004	1	2	3	4	5	6	7	8	9	10	11	12												
CDR	EVA SUPPORT				AR/L PRESS	POST EVA	PRE SLEEP ACT	I M U M N V R Z L V M N V R	PRE SLEEP ACT	SLEEP														
PLT	EVA SUPPORT						PRE SLEEP ACT			SLEEP														
MS1	EVA SUPPORT				AR/L OFF	EVA SUPPORT	PRE SLEEP ACT	T U D S L E E P	PRE SLEEP ACT	SLEEP														
MS2	M M U C H E C K O U T	T R A N S L A T I O N S	T P A R D O H P E S C K O U T	M M U O P S	M M U O P S	EVA E B	AR/L PRESS	POST EVA	PRE SLEEP ACT	SLEEP														
MS3	E C K O U T	A R P E S C K O U T	P E S C K O U T	E S	M M U O P S	EVA I M	AR/L PRESS	POST EVA	PRE SLEEP ACT	SLEEP														
DAY/NIGHT																								
ORBIT	65			66			67			68			69			70			71			72		
GSTDN COVERAGE	--HAW --BOT --MIL --RCN --BOT --GDS --YAR --GMM --RCN --BOT --MIL --HAW --GMM --HAW --BOT --MIX --GDS --HAW --BDR --RCN --MIX																							
TORS																								
ATTITUDE	+ZVV BIASED												IMU			-ZLV								
NOTES:	@ DTO 0607 MMU CAPABILITY DEMO @ DTO 0614 MFR EVAL @ -ZLV, +XVV																							

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETR	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE								
035:01:00 / 035:13:00	004:12:00 / 005:00:00	034:19:00 / 035:07:00	05 / 035 GMT	-7.9		FEBRUARY 3, 1984	STS-11	FINAL	12/19/83								
GMT : 035	2	3	4	5	6	7	8	9	10	11	12	13					
FD : 05					FD:06							FD:06					
MET : 004	12	13	14	15	16	17	18	19	20	21	22	23					
CDR	SLEEP				POST SLEEP ACT	IMU ALIGN (ROLL)	POST SLEEP ACT	EXERCISE									
PLT	SLEEP				POST SLEEP ACT			MASS ON	GLOW I	YAW MNVR TEST	ZSI MNVR	ZLV MNVR	GLOW II				
MS1	SLEEP				POST SLEEP ACT	POST SLEEP ACT			MASS ON	GLOW I	GAS GRP C	GLOW I	YAW MNVR TEST	SOLAR CELL OPS	ATR SAMP	IGMM SETUP	EXERCISE
MS2	SLEEP				POST SLEEP ACT			EMU MAINT/RECHARGE			MEAL PREP			CINEMA 360			
MS3	SLEEP				POST SLEEP ACT			EMU MAINT/RECHARGE			SETUP 360	TV SETUP	TV ACT	CINEMA 360 MIDDECK			
DAY/NIGHT	[Day/Night Cycle]																
ORBIT	73	74	75	76	77	78	79	80									
GSTON COVERAGE	-DKR -ACN	-GMM	-DKR	-YAR	-BDA -DKR -MAD -MAX	-MIL -MLX -BDA -DKR -MAD	-YAR -ORR	-MIL -MLX -BDA -DKR	-YAR -ORR	-GOS -MIL -BDA -MLX -DKR -ACN	-YAR	-DKR -ACN	-HAW -GOS -GDX -MIL -MLX -BDA	-DKR -ACN -BOT			
TDRS	[TDRS Coverage]																
ATTITUDE	-ZLV				IMU	-ZLV			GLOW I	YAW	-ZSI	-ZLV					
NOTES:	<ul style="list-style-type: none"> <li>-ZLV, +XUV</li> <li>OTO 0602 CABIN ATMOSPHERE VERIFICATION</li> </ul>																



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FO/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
035:13:00 / 036:01:00	005:00:00 / 005:12:00	035:07:00 / 035:19:00	06 / 035 GMT	-5.9		FEBRUARY 4, 1984	STS-11	FINAL	12/19/83			
GMT : 035	14	15	16	17	18	19	20	21	22	23	0	1
FO : 06											GMT:036	
MET : 005	1	2	3	4	5	6	7	8	9	10	11	12
CDR	MEAL							PRE SLEEP ACT		SLEEP		
PLT	GLOW II	MEAL	YAW MNVR TEST	YAW MNVR TEST	EXERCISE	ZSI MNVR	ZLV MNVR	PRE SLEEP ACT	TRK MNVR	IMU ALIGN (ROLL)	PRE SLEEP ACT	SLEEP
MS1	MEAL	YAW MNVR TEST	YAW MNVR TEST			SOLAR CELL OPS		PRE SLEEP ACT		BACKGROUND	PRE SLEEP ACT	SLEEP
MS2	MEAL					EXERCISE		PRE SLEEP ACT			PRE SLEEP ACT	SLEEP
MS3	MEAL	EXERCISE				EXERCISE		PRE SLEEP ACT			PRE SLEEP ACT	SLEEP
DAY/NIGHT	[Day/Night Cycle]											
ORBIT	[Orbit Cycle]											
STATION COVERAGE	[Station Coverage Diagram]											
TORS E W	[Torsion Diagram]											
ATTITUDE	[Attitude Diagram]											
NOTES:	[Notes Section]											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FO/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE							
036:01:00 / 036:13:00	005:12:00 / 006:00:00	035:19:00 / 036:07:00	06 / 036 GMT	-3.9	☉	FEBRUARY 4, 1984	STS-11	FINAL	12/19/83							
GMT : 036	2	3	4	5	6	7	8	9	10	11	12	13				
FO : 06				FO:07								FO:07				
MET : 005	12	13	14	15	16	17	18	19	20	21	22	23				
CDR	SLEEP			POST SLEEP ACT			EVA PREP			AD/ELP/RESS	EVA SUPPORT					
PLT	SLEEP			PA OCT S L E E P	IMU ALIGN (ROLL)	Z L V M N V R	POST SLEEP ACT			TRK M N V R	DE A C T S P A S P R E P A R T I T I O N M A S S S U M E S U N D E R S P A S M A S S P R E P H A Z A R D S U N D E R S U N D E R S U N D E R S	EVA SUPPORT				
MS1	SLEEP			PA OCT S L E E P	B A C K G R O U N D	POST S L E E P A C T	POST SLEEP ACT			7 0 K M S E T U P 1 5 K M S E T U P	TV A C T	EVA SUPPORT				
MS2	SLEEP			POST SLEEP ACT			EVA PREP			P R E B R E	AD/ELP/RESS	M M U O P S	EVA	M M U O P S		
MS3	SLEEP			POST SLEEP ACT			EVA PREP			H T H E	AD/ELP/RESS	EVA				
DAY/NIGHT	89		90		91		92		93		94		95		96	
ORBIT	89		90		91		92		93		94		95		96	
GSTDN COVERAGE	-DKR	-DKR -HAD	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX	-DKR -HAD -MAX
TORS E W	←		←		←		←		←		←		←		←	
ATTITUDE	+XLV, -ZVV		IMU		-ZLV		EVA ATT									
NOTES:	<p style="text-align: center;">-ZLV, +XVV</p>															

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
036:13:00 / 037:01:00	006:00:00 / 006:12:00	036:07:00 / 036:19:00	07 / 036 GMT	-2.0		FEBRUARY 5, 1984	STS-11	FINAL	12/19/83
GMT :036									
FD :07									GMT:037
MET :006									
CDR	EVA SUPPORT		ARR PRESSES	POST EVA		PRE SLEEP ACT		SLEEP	
PLT	EVA SUPPORT		ARR PRESSES	CABIN REPRESS	PRE SLEEP ACT	IMU ZLV MNV R	PRE SLEEP ACT	SLEEP	
MS1	EVA SUPPORT		ARR PRESSES	ARR PRESSES		PRE SLEEP ACT		SLEEP	
MS2	BERTH SUPPORT S EVA	HYDRA Z ENGINEER ING	ARR PRESSES	POST EVA		PRE SLEEP ACT		SLEEP	
MS3	SUPPORT S EVA	ENGINEER ING EVAL	ARR PRESSES	POST EVA		PRE SLEEP ACT		SLEEP	
DAY/NIGHT									
ORBIT	97	98	99	100	101	102	103	104	
GSTON COVERAGE	-GMM -HAW -GDS -SDX -MIL -MLX	-BOT -GMM -HAW -GDS -GOX	-HAW	-BOT -GMM -HAW -AGO	-HAW -AGO -BOT	-HAW -AGO -RCN	-GMM -AGO -RCN	-GMM -AGO -RCN -DKR	-GMM
TDRS									
ATTITUDE	EVA ATT	MMU ATT	EVA ATT	IMU	-ZLV				
NOTES:	■ DTD 0808 EVA FLUID TRANS			▲ RF DEACTIVATION		■ -ZLV, -XVV			
				■ DTD 0602 CABIN ATMOSPHERE VERIFICATION					

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
037:01:00 / 037:13:00	006:12:00 / 007:00:00	036:19:00 / 037:07:00	07 / 037 GMT	0.2		FEBRUARY 5, 1984	STS-11	FINAL	12/19/83
GMT : 037									
FD : 07									
MET : 006									

CDR	PLT	MS1	MS2	MS3	DAY/NIGHT																	
					ORBIT	105	106	107	108	109	110	111	112									

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
037:13:00 / 038:01:00	007:00:00 / 007:12:00	037:07:00 / 037:19:00	08 / 037 GMT	1.5		FEBRUARY 6, 1984	STS-11	FINAL	12/19/83				
GMT : 037 FD : 08 MET : 007	13	14	15	16	17	18	19	20	21	22	23	0	1
	0	1	2	3	4	5	6	7	8	9	10	11	12
CDR	MEAL	CABIN STOW	EXERCISE	CABIN STOW	PRE SLEEP ACT	IMU ALIGN (ROLL)	PRE SLEEP ACT	SLEEP					
PLT	MEAL	EXERCISE	CABIN STOW	CABIN STOW	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP						
MS1	MEAL	CABIN STOW	EXERCISE	CABIN STOW	TV STOW	TV STOW	PRE SLEEP ACT	SLEEP					
MS2	MEAL	CABIN STOW	CABIN STOW	CABIN STOW	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP						
MS3	MEAL	CABIN STOW	CABIN STOW	CABIN STOW	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP						
DRY/NIGHT	[Bar chart showing dry/night status]												
ORBIT	113	114	115	116	117	118	119	120					
GSTDN COVERAGE	-GMM -HAM -GDX -GDS -MIL -MLX	-BOT -GMM -HAM	-BOT -GMM -HAM	-BOT -GMM -HAM	-BOT -GMM -HAM	-AGO -ACN -GMM -HAM	-AGO -ACN -GMM -HAM	-AGO -ACN -GMM -HAM	-AGO -ACN -GMM -HAM	-AGO -ACN -GMM -HAM	-AGO -ACN -GMM -HAM	-DGR -ACN -GMM	-GMM
TORS E W	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]
ATTITUDE		-ZLV	-ZLV	-ZLV	IMU	-ZLV	-ZLV						
NOTES:	▲ 16 MM SETUP												

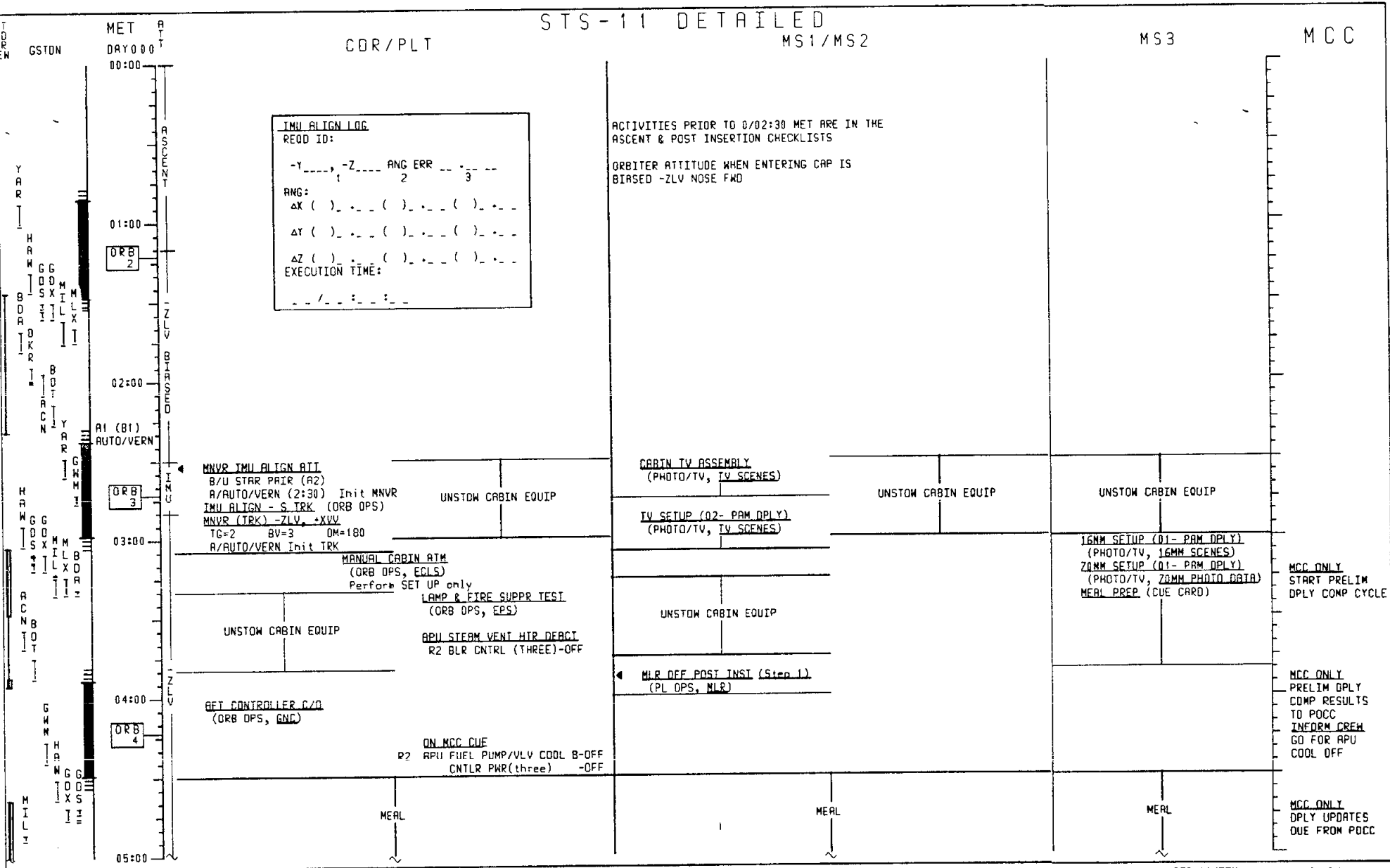
GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FO/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
038:01:00 / 038:13:00	007:12:00 / 008:00:00	037:19:00 / 038:07:00	08 / 038 GMT	3.1		FEBRUARY 6, 1984	STS-11	FINAL	12/19/83
GMT : 038									
FO : 08									
MET : 007									
CDR	SLEEP		POST SLEEP ACT	I U N V R	TRK MNR	POST SLEEP ACT	DEORBIT	PL80 OPS	DEORBIT PREP
PLT	SLEEP		POST SLEEP ACT		K U - B D S T O W	POST SLEEP ACT	DEORBIT	PL80 OPS	DEORBIT PREP
MS1	SLEEP		POST SLEEP ACT			POST SLEEP ACT	DEORBIT		DEORBIT PREP
MS2	SLEEP		POST SLEEP ACT				DEORBIT		DEORBIT PREP
MS3	SLEEP		POST SLEEP ACT				DEORBIT		DEORBIT PREP
DAY/NIGHT									
DRBIT	121	122	123	124	125	126	127	128	
GSTON COVERAGE	-DKR	-DKR -MAD -MAX	-BDR -DKR -MAD -MAX	-MLX -BDR -DKR -MAD	-MLX -BDR -DKR	-MIL -MLX -BDR	-HAW -RCN -GDX -BOT	-MLX -MIL -RCN -BOT	
TORS		-YAR ORR	-YAR ORR	-YAR ORR	-YAR ORR	-HAW -GDX -RCN -BOT	-YAR	-GMM	-HAW -GDX
ATTITUDE		-ZLV		IMU	XSI	IMU	DEORBIT	ENTRY	
NOTES:	<ul style="list-style-type: none"> <li>• HI LOAD HTR ON</li> <li>• FES CNTLR CHECK</li> <li>▲ MLR DEORBIT</li> <li>▲ DEORBIT PREP</li> </ul>								

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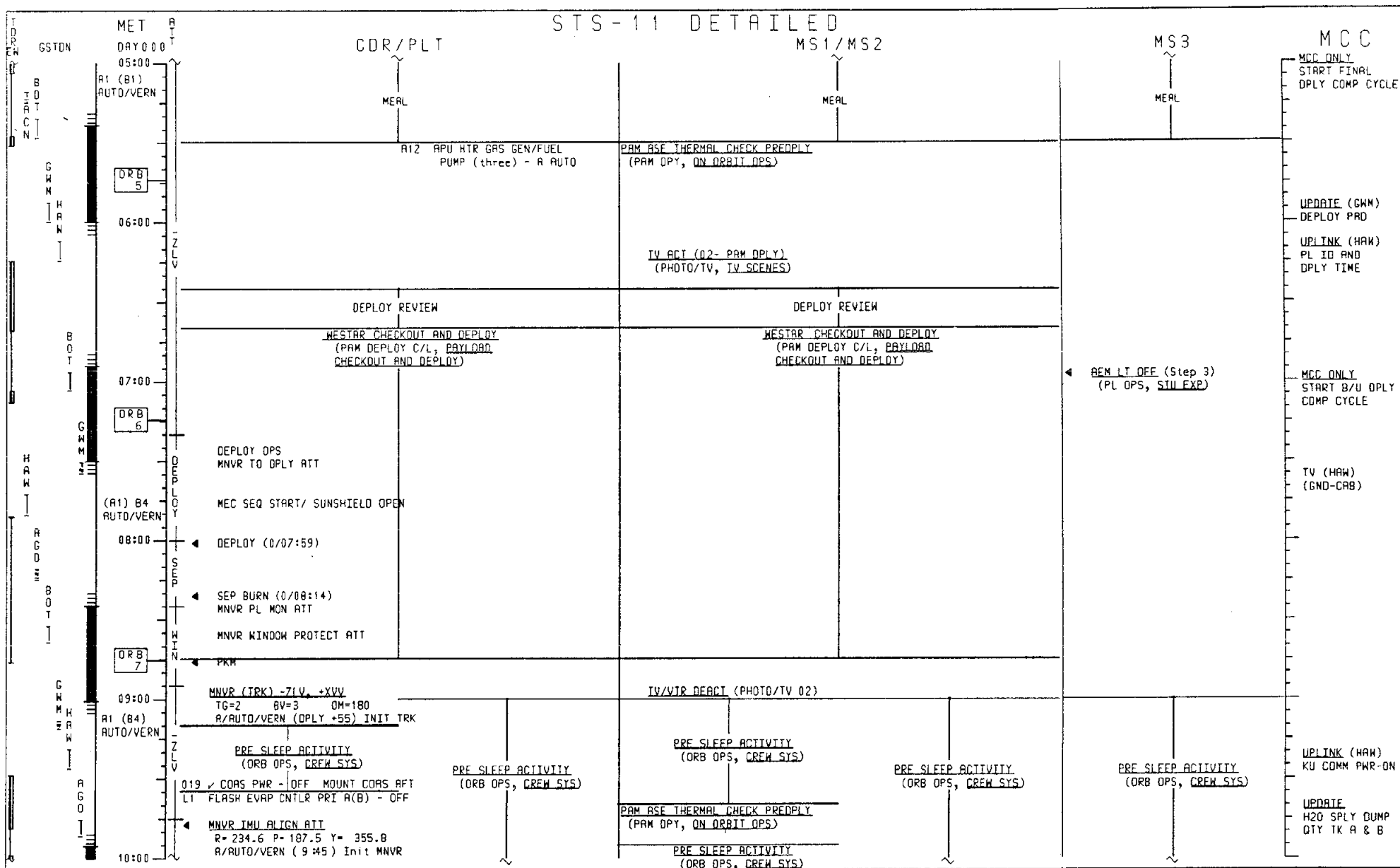
DETAILED TIMELINE

DETAILED  
TIMELINE

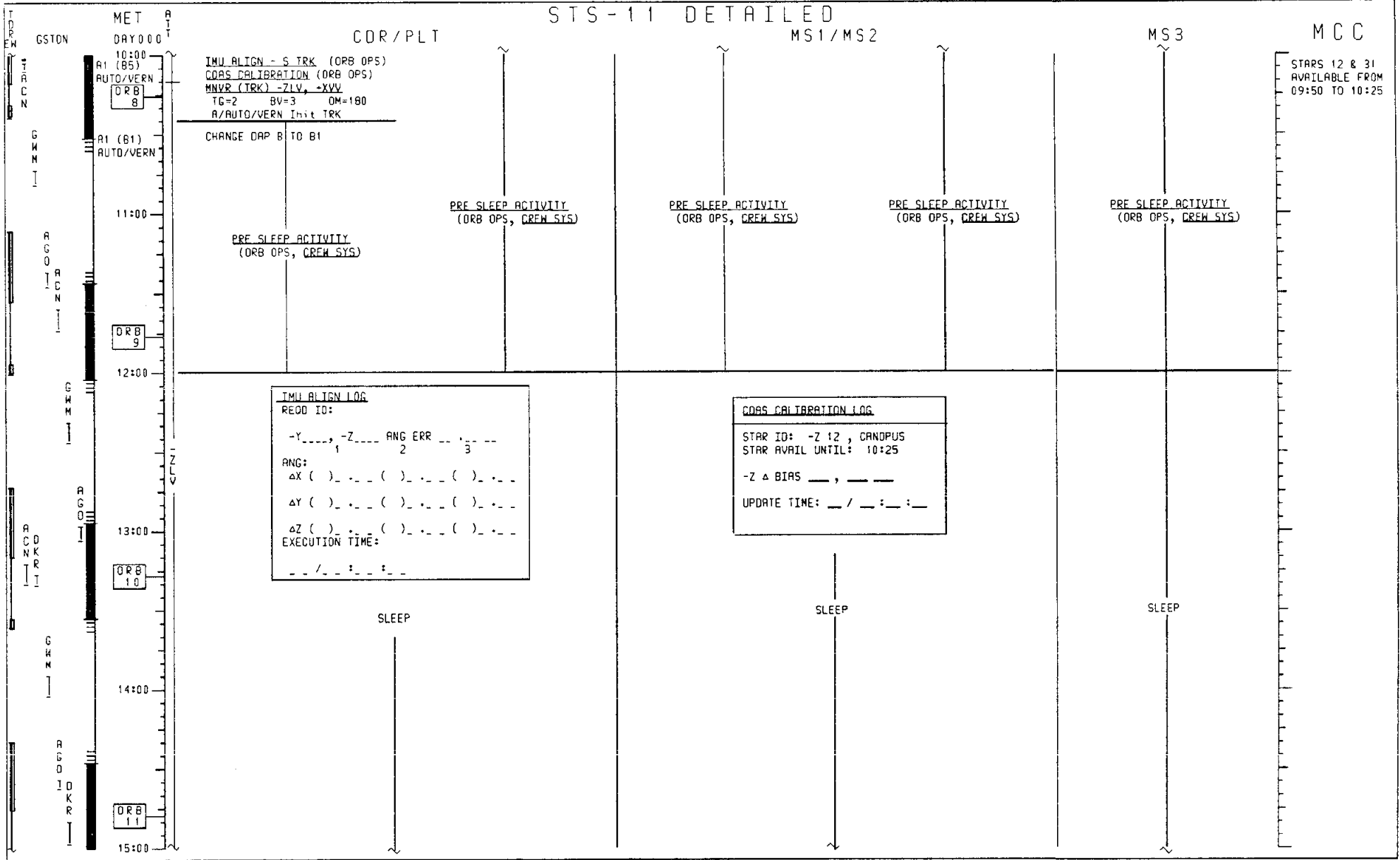




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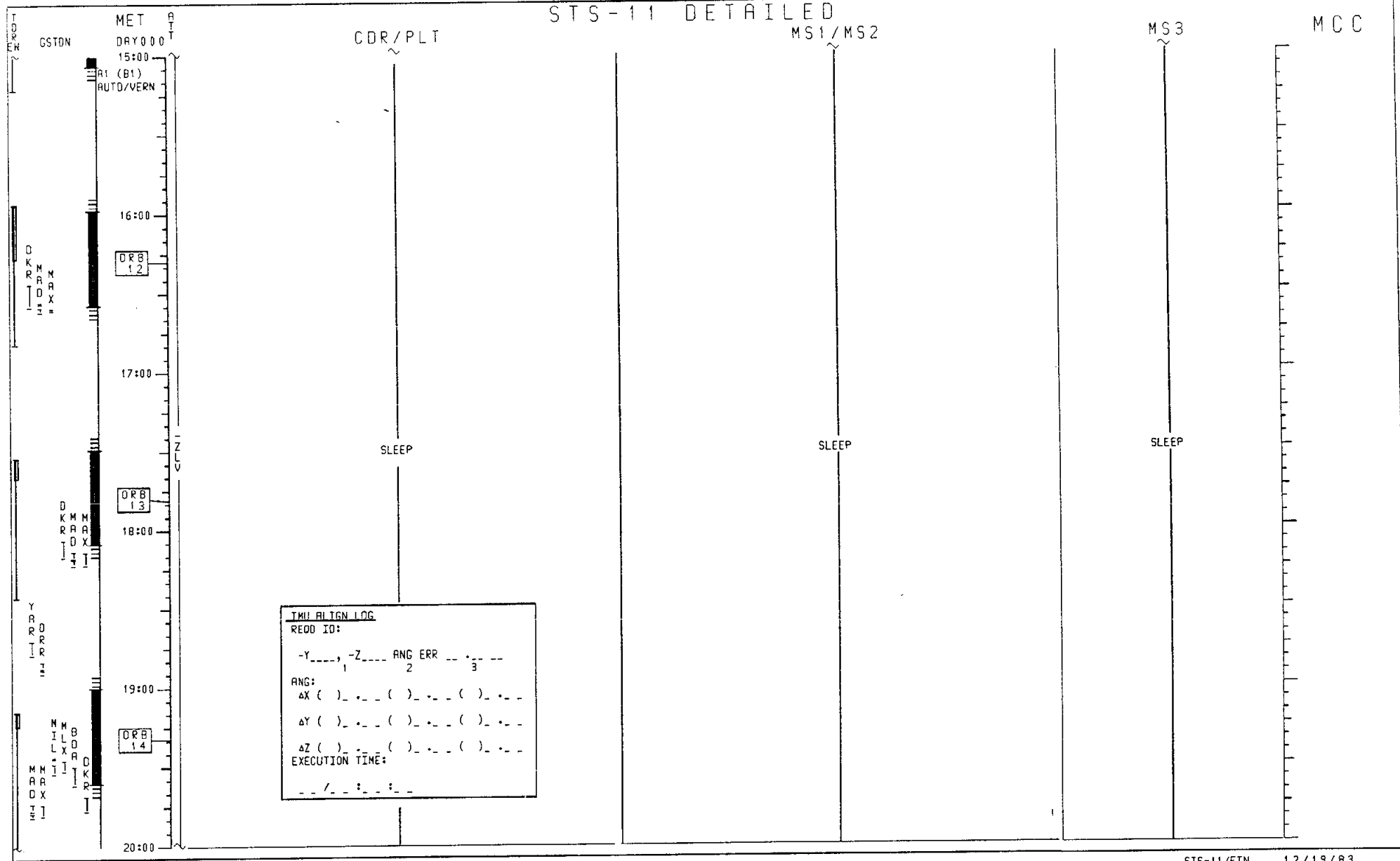


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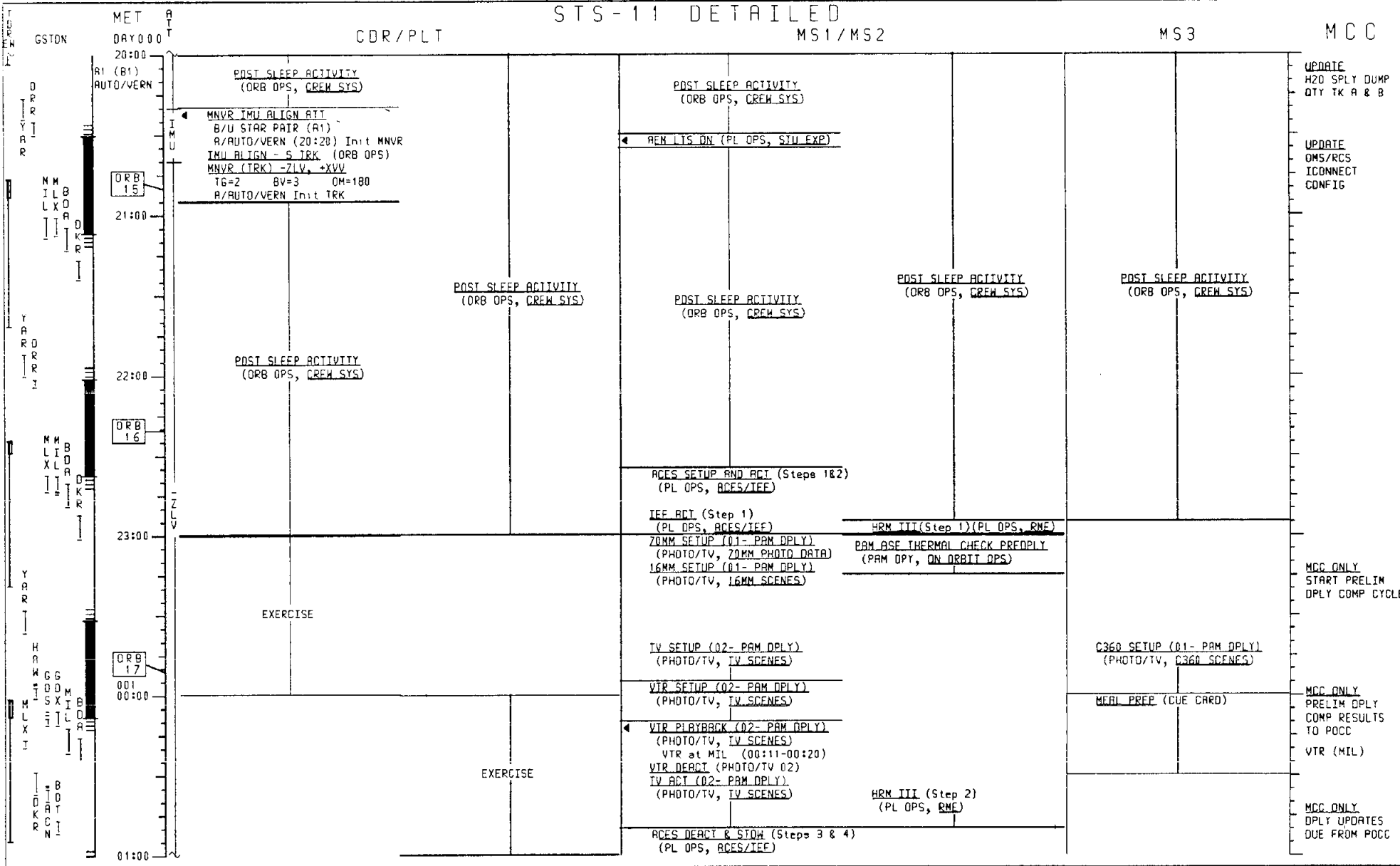
STARS 12 & 31  
AVAILABLE FROM  
09:50 TO 10:25

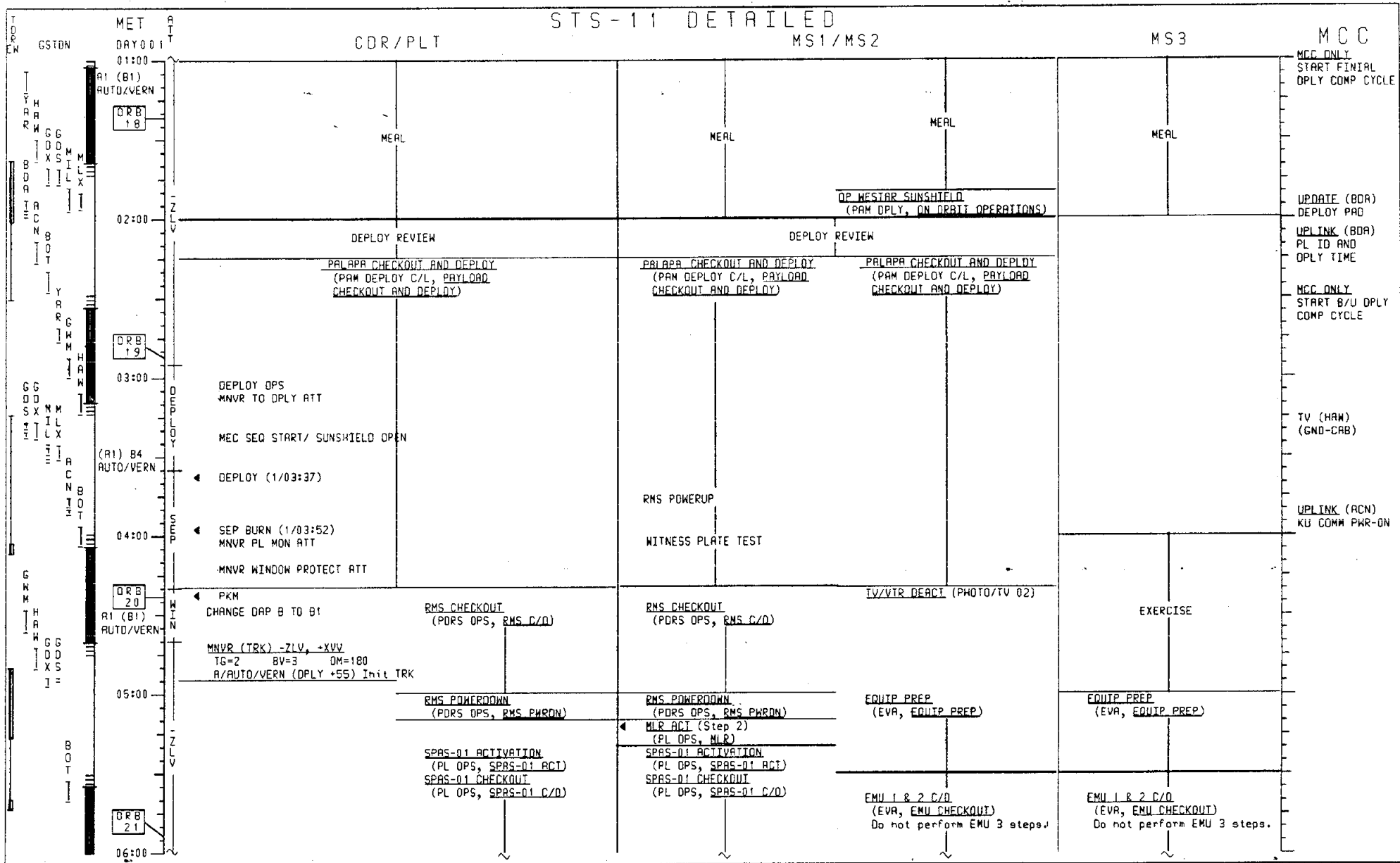
STS-11 DETAILED



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

# STS-11 DETAILED





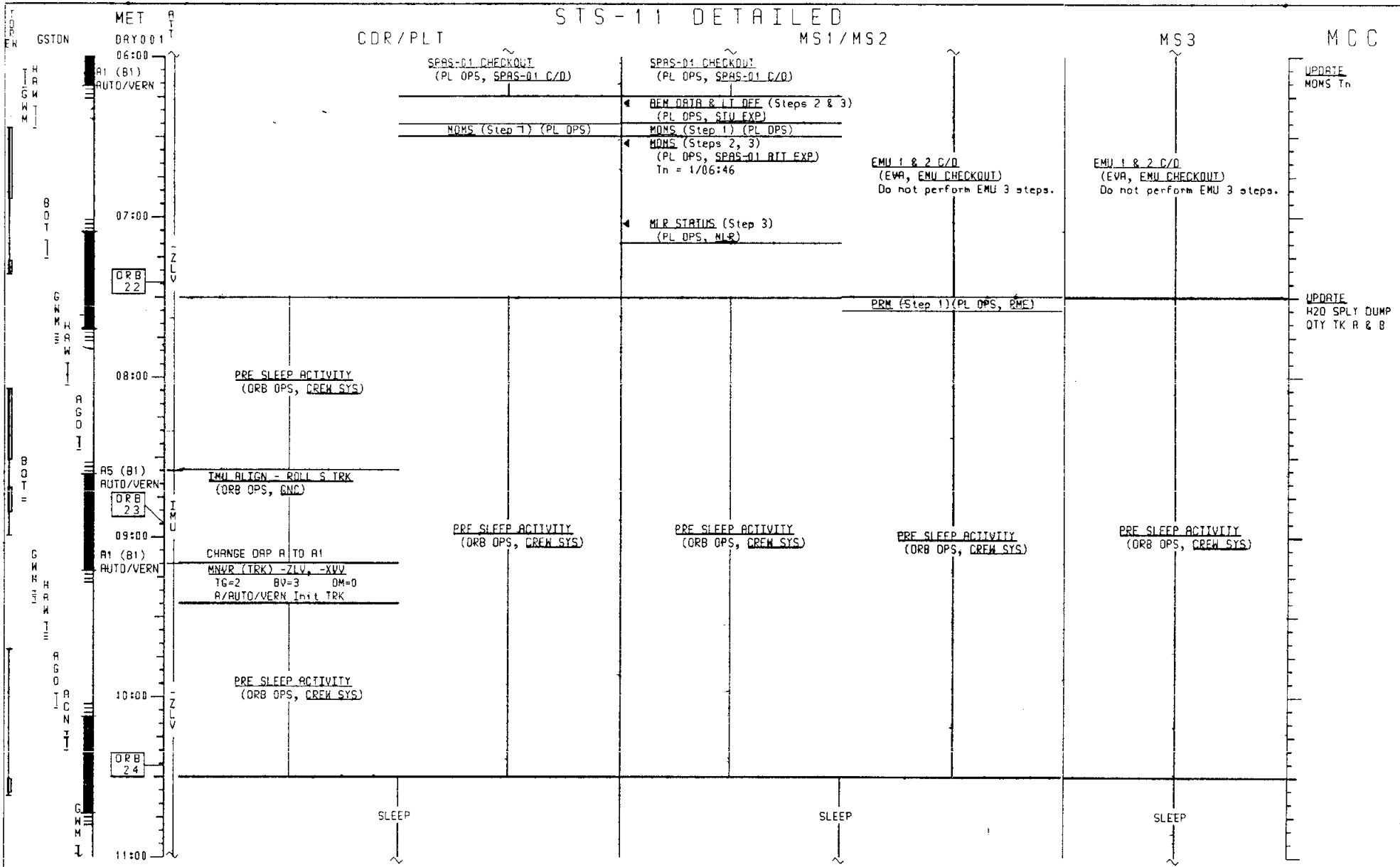
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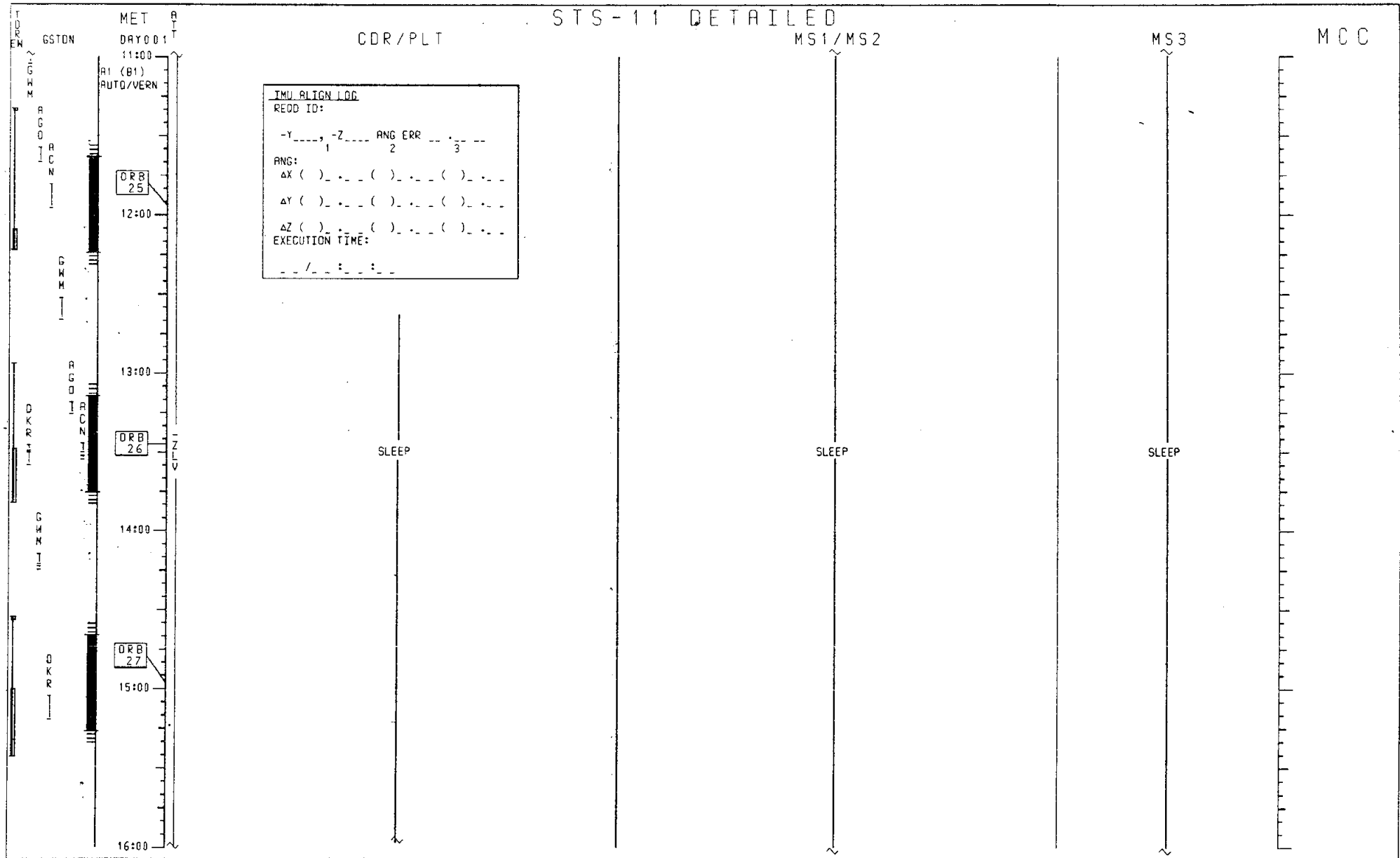
COR/PLT

MS1/MS2

MS3

MCC







# STS-11 DETAILED

CDR/PLT

MS1/MS2

MS3

MCC

MET  
DAY 001

16:00

A1 (B1)  
AUTO/VERN

ORB  
28

17:00

18:00

ORB  
29

19:00

A5 (B1)  
AUTO/VERN

ORB  
30

A1 (B1)  
AUTO/VERN

20:00

21:00

IMU\_ALIGN\_LOG

REQD ID:

-Y\_\_\_\_, -Z\_\_\_\_ ANG ERR \_\_\_\_

L                    2                    3

ANG:

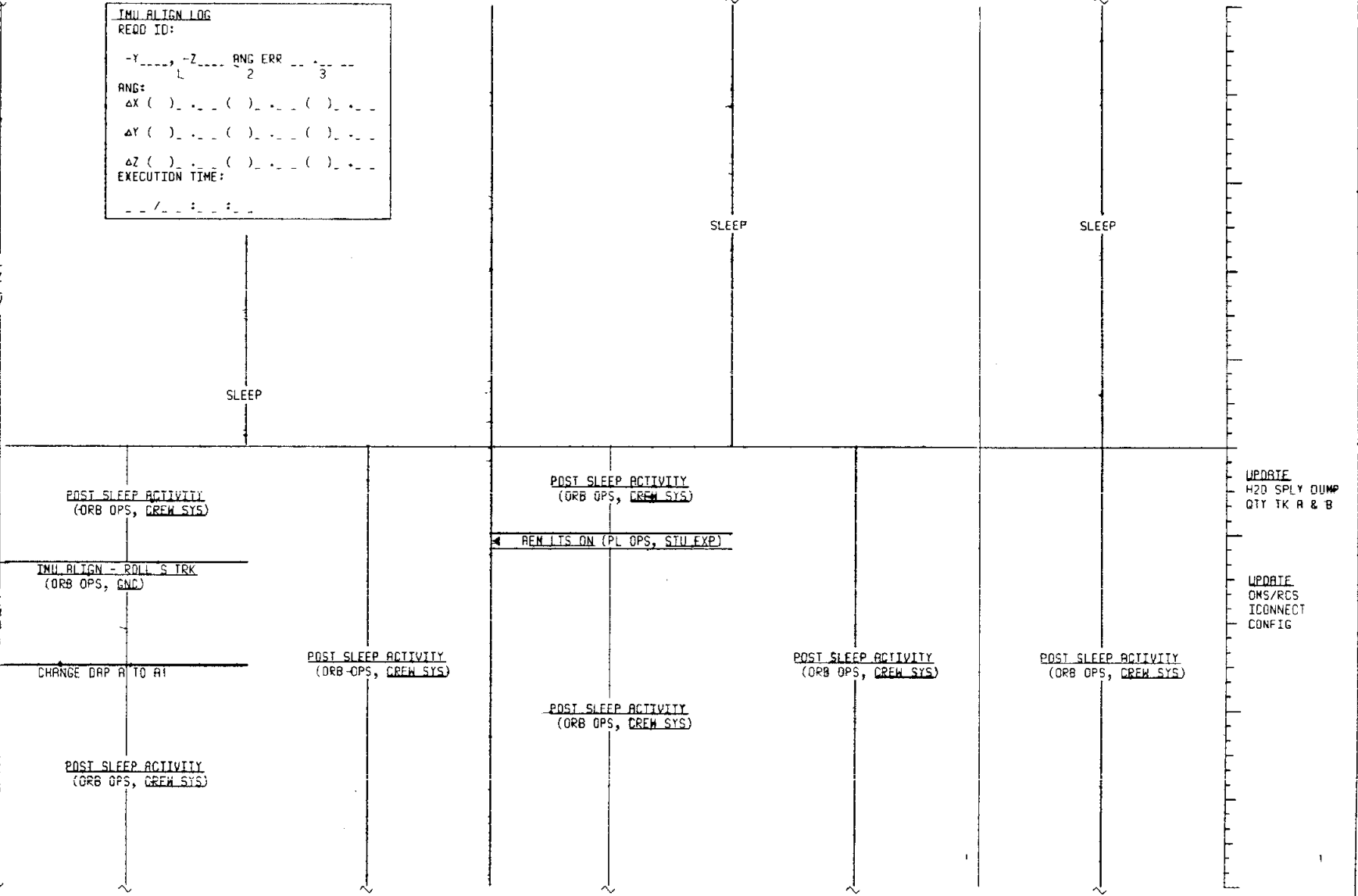
ΔX ( ) . . . ( ) . . . ( ) . . .

ΔY ( ) . . . ( ) . . . ( ) . . .

ΔZ ( ) . . . ( ) . . . ( ) . . .

EXECUTION TIME:

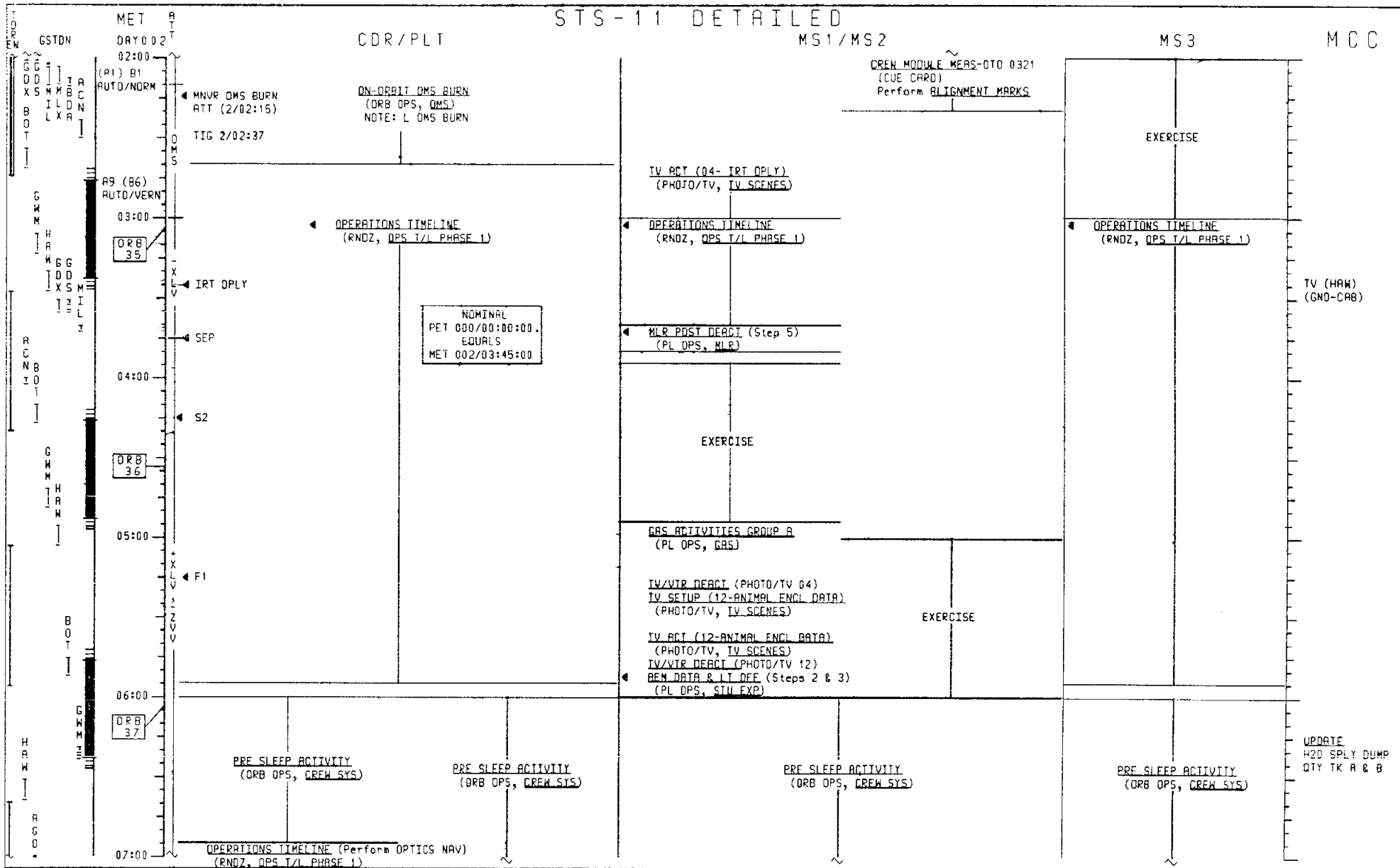
\_\_ / \_\_ : \_\_ : \_\_

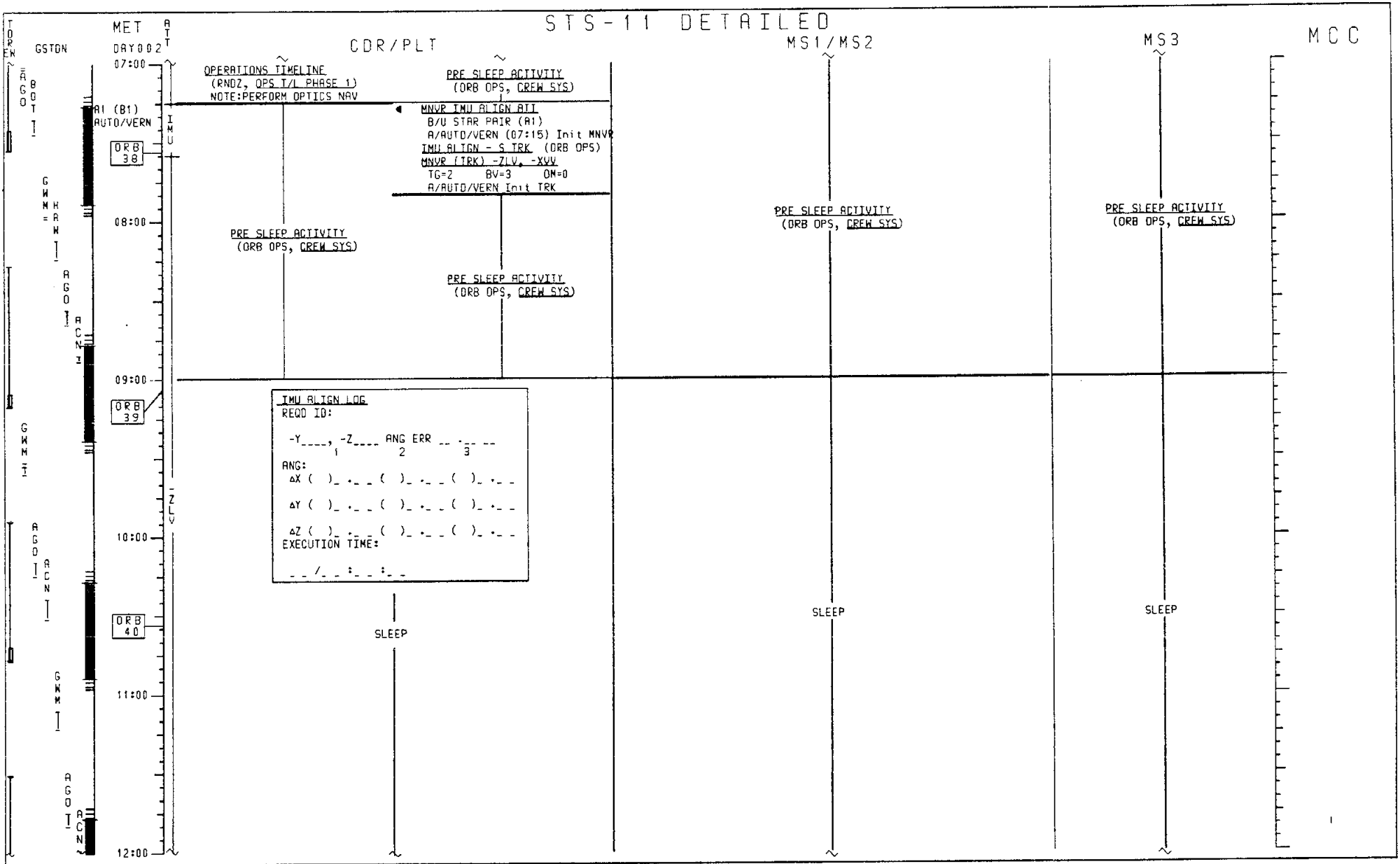


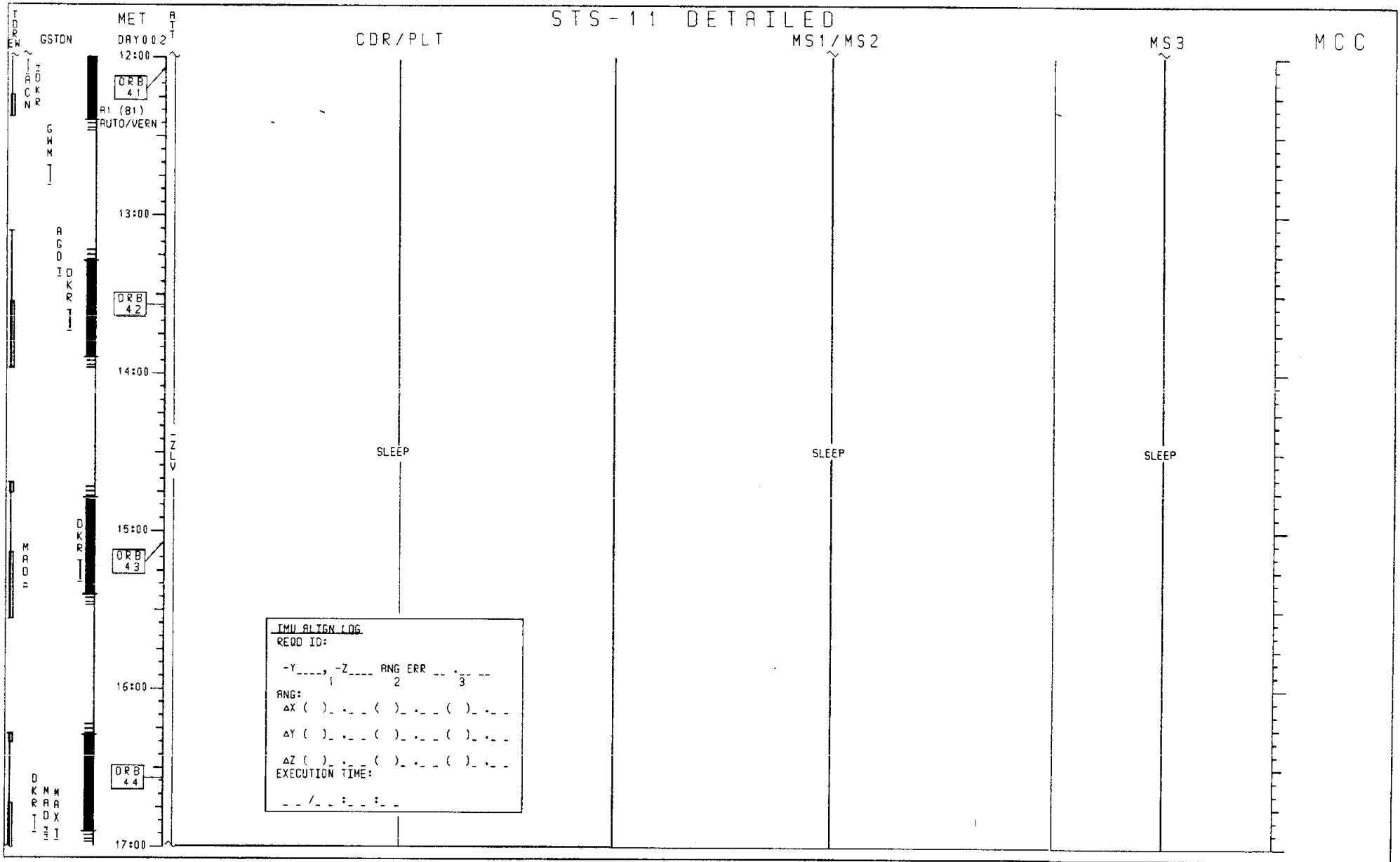
# STS-11 DETAILED

	CDR/PLT	MS1/MS2	MS3	MCC
<p>MET DAY 001 21:00</p> <p>ORB 31</p> <p>AI (B1) AUTO/VERN</p> <p>22:00</p> <p>ORB 32</p> <p>23:00</p> <p>002 00:00</p> <p>ORB 33</p> <p>01:00</p> <p>ORB 34</p> <p>(A1) B1 MAN/VERN</p> <p>02:00</p>	<p style="text-align: center;">POST SLEEP ACTIVITY (ORB OPS, CREW SYS)</p> <p>R12U FC PURGE HTR - ON RCS REGULATOR RECONFIGURE 07/08 HE PRESS A(three)-CL(tb-CL) B(three)-GPC(tb-DP)</p> <p>ECLSS REDUNDANT COMPONENT C/Q (ORB OPS, ECLS)</p> <p>FC PURGE - MANUAL (CUE CARD) HEATER RECONFIG-B (ORB OPS)</p> <p>R12U FC PURGE HTR - OFF, then GPC</p> <p>EXERCISE</p> <p>EXERCISE</p> <p>MEAL</p> <p>◀ MNVR RCS BURN ATT (2/01:20) OMS/RCS T*CONNECT TEST (ORB OPS, RCS DTG)</p> <p>TIG 2/01:50</p>	<p style="text-align: center;">POST SLEEP ACTIVITY (ORB OPS, CREW SYS)</p> <p>CREW MODULE MEAS- DTG 0321 (CUE CARD) Perform GAP MEASUREMENTS</p> <p>CREW MODULE MEAS-DTG 0321 (CUE CARD) Perform TAPE MEASUREMENTS</p> <p>EXERCISE</p> <p>EXERCISE</p> <p>MEAL</p> <p>◀ MLR DEACT (Step 4) (PL OPS, MLR) SPAS-01 DEACTIVATION (PL OPS, SPAS-01 DEACT) TV SETUP (04- IRT DPLY) (PHOTO/TV, TV SCENES)</p>	<p style="text-align: center;">POST SLEEP ACTIVITY (ORB OPS, CREW SYS)</p> <p>CREW MODULE MEAS- DTG 0321 (CUE CARD) Perform GAP MEASUREMENTS</p> <p>CREW MODULE MEAS-DTG 0321 (CUE CARD) Perform TAPE MEASUREMENTS</p> <p>PRM (Step 2)(PL OPS, RME)</p> <p>MEAL PREP (CUE CARD)</p> <p>CREW MODULE MEAS-DTG 0321 (CUE CARD) Perform ALIGNMENT MARKS</p>	<p style="text-align: center;">POST SLEEP ACTIVITY (ORB OPS, CREW SYS)</p> <p>VTR (MIL)</p> <p>UPLINK (TDRE) ORB &amp; IRT SV</p> <p>UPDATE (ACN) OMS/RCS BURN PADS IRT SEP TIG AND WT</p>

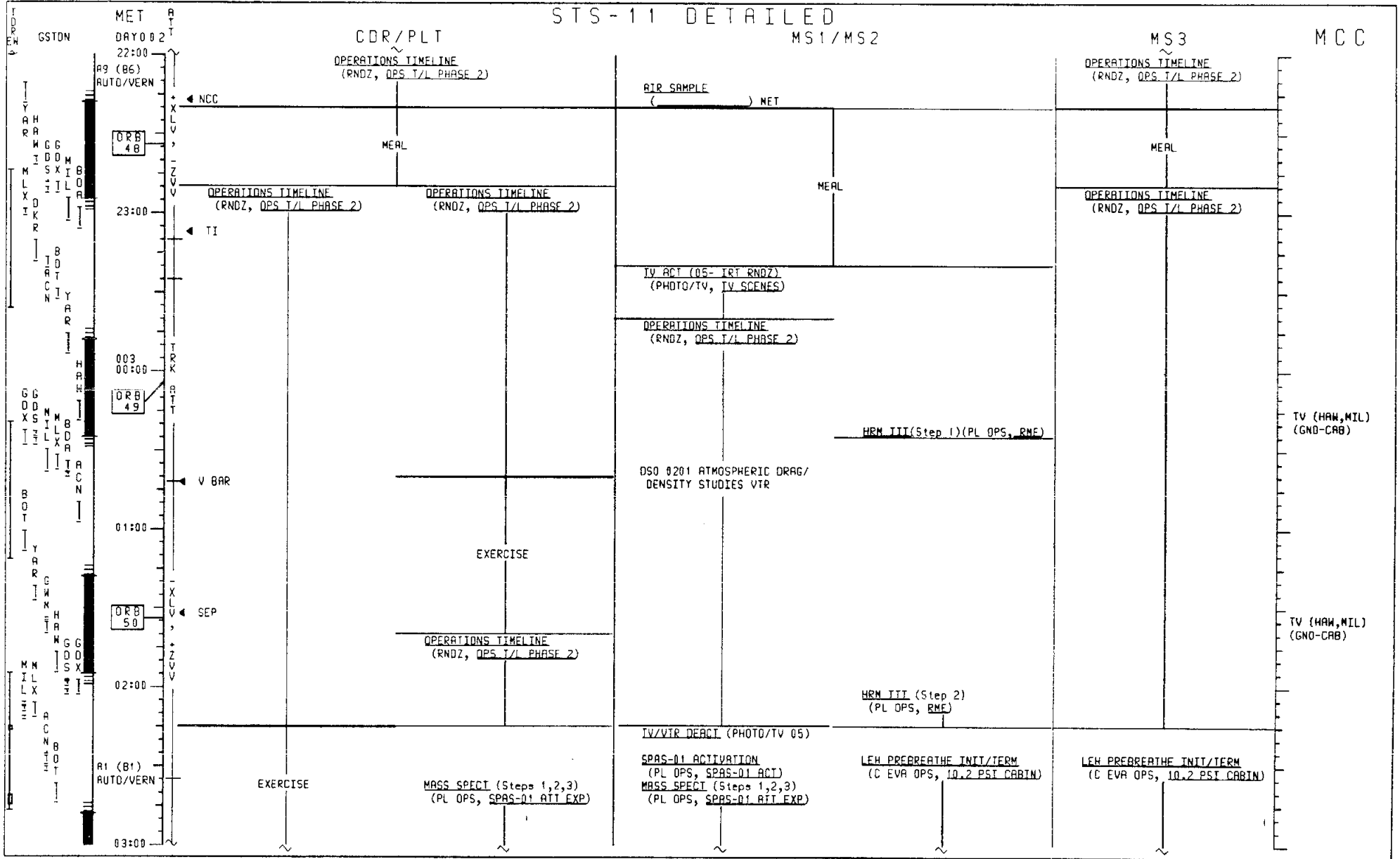
# STS-11 DETAILED









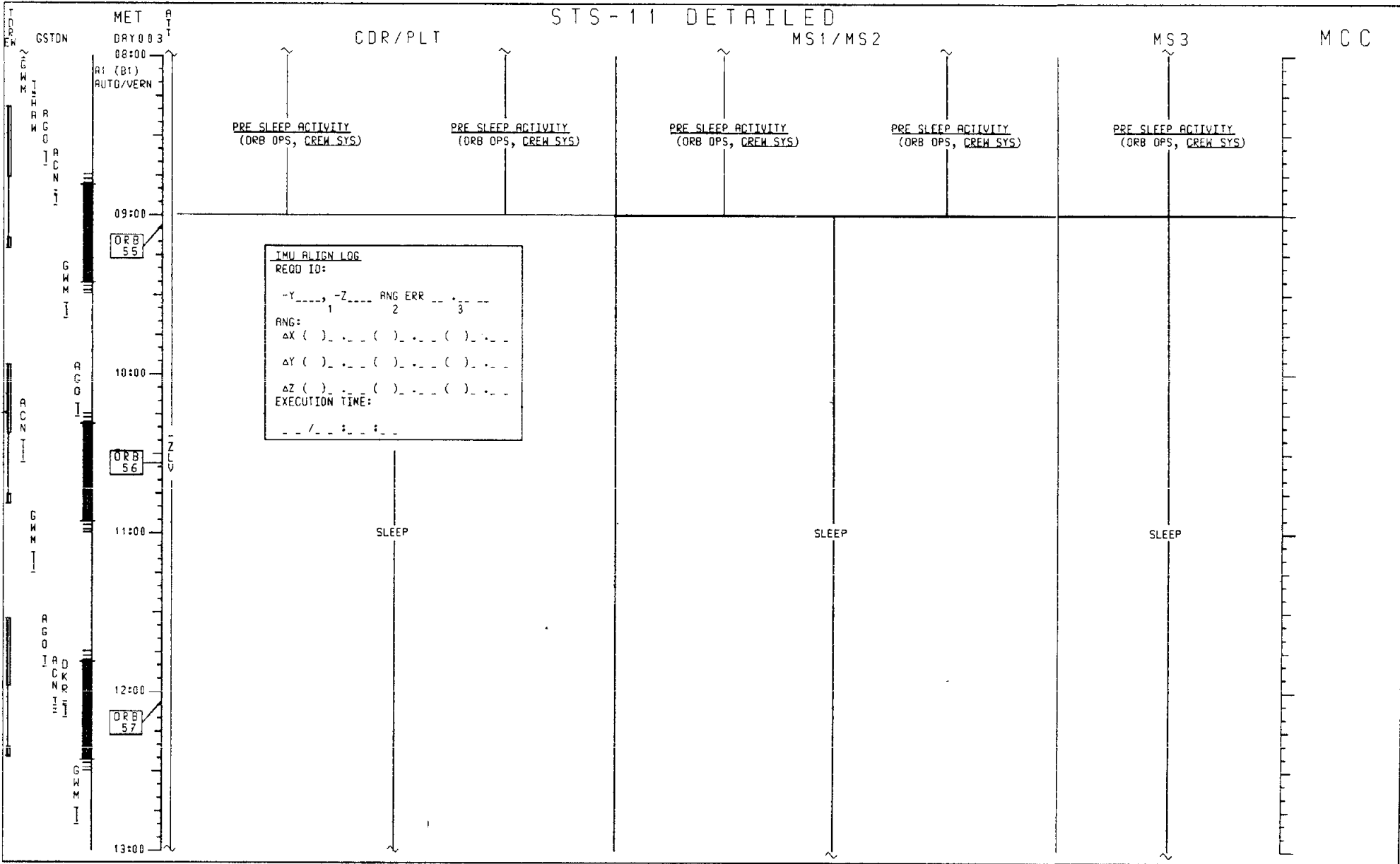


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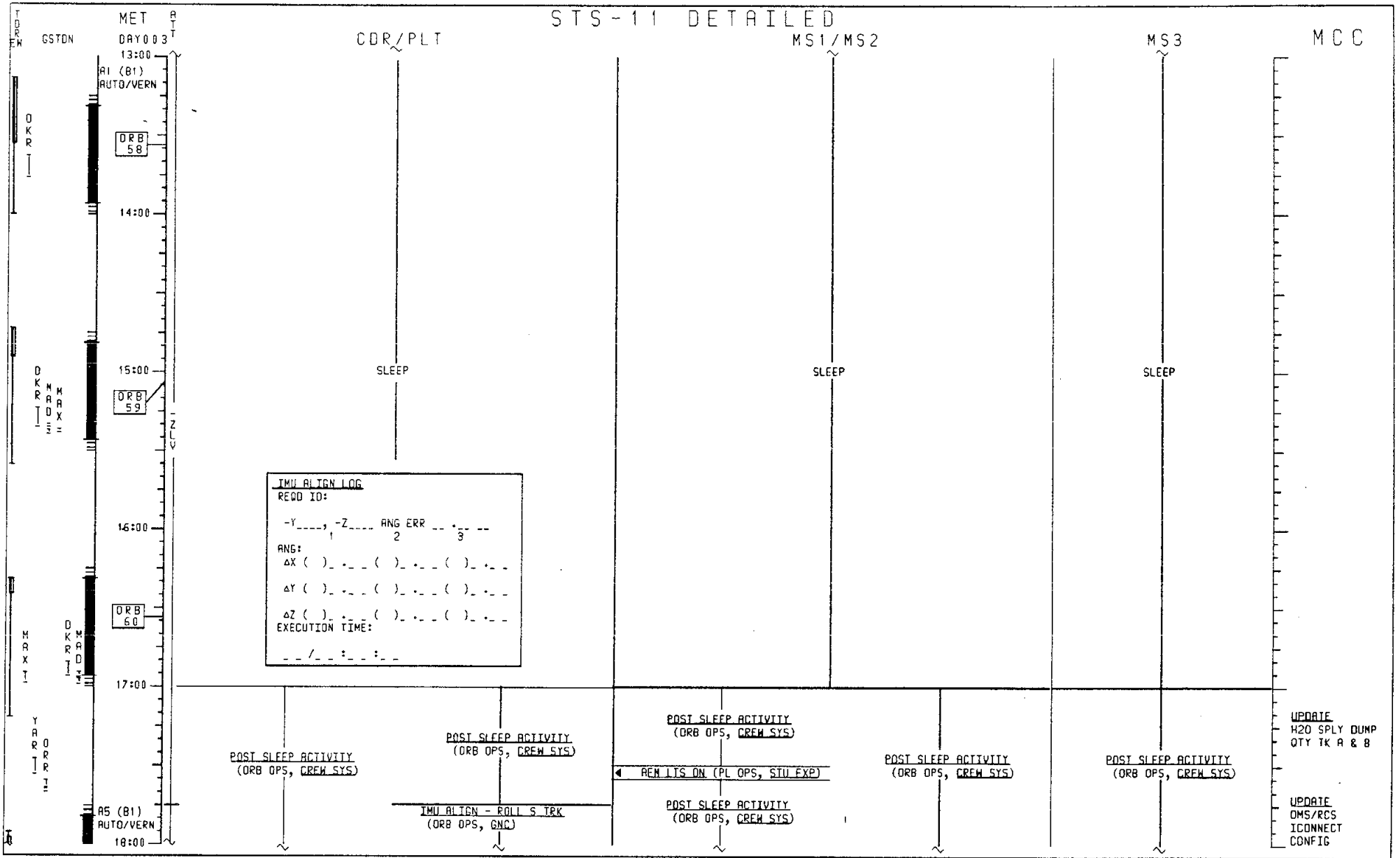
	MET DAY 003	CDR/PLT	MS1/MS2	MS3	MCC
03:00 04:00 05:00 06:00 07:00 08:00	03:00 A1 (B1) AUTO/VERN ORB 51 04:00 ORB 52 05:00 ORB 53 06:00 ORB 54 A1 (B1) AUTO/VERN 08:00	EXERCISE MASS SPECT (Steps 1,2,3) (PL OPS, SPAS-01 ATT EXP) PREP 10.2 CABIN (C EVA OPS, 10.2 PSI CABIN) 10.2 PSI CABIN DEPRESS (C EVA OPS, 10.2 PSI CABIN) 10.2 PSI CABIN CONEIG (C EVA OPS, 10.2 PSI CABIN) LT FLASH EVAP CNTLR PRI A(B) - ON MNRV (TRK) -ZLV, +XVV TG=2 BV=3 ON=100 A/AUTO/VERN Init TRK PRE SLEEP ACTIVITY (ORB OPS, CREW SYS) PRE SLEEP ACTIVITY (ORB OPS, CREW SYS) INU ALIGN - ROLL S TRK (ORB OPS, GND) CHANGE DRP A TO A1 PRE SLEEP ACTIVITY (ORB OPS, CREW SYS)	MASS SPECT (Steps 1,2,3) (PL OPS, SPAS-01 ATT EXP) Verify Step 3 MAUS (Step 1) (PL OPS) GAS ACTIVITIES GROUP B (PL OPS, GAS) REM DATA & LT OFF (Steps 2 & 3) (PL OPS, STU EXP) C360 SETUP (03-RMS) (PHOTO/TV, C360 SCENES) MASS SPECT (Step 7) (PL OPS, SPAS-01 ATT EXP) HEAT PIPE (Steps 1, 2) (PL OPS, SPAS-01 ATT EXP) MAUS-1 ACT (Step 1)(PL OPS) MAUS-2 ACT (Step 1)(PL OPS) PRE SLEEP ACTIVITY (ORB OPS, CREW SYS)	LEH PREBREATH INIT/TERM (C EVA OPS, 10.2 PSI CABIN) EMU 3 C/O (EVA, EMU CHECKOUT) Perfom thru EMU 3 TEMP STOWAGE PRE SLEEP ACTIVITY (ORB OPS, CREW SYS)	LEH PREBREATH INIT/TERM (C EVA OPS, 10.2 PSI CABIN) EMU 3 C/O (EVA, EMU CHECKOUT) Perfom thru EMU 3 TEMP STOWAGE PRE SLEEP ACTIVITY (ORB OPS, CREW SYS) UPDATE H2O SPLY DUMP QTY TK A & B

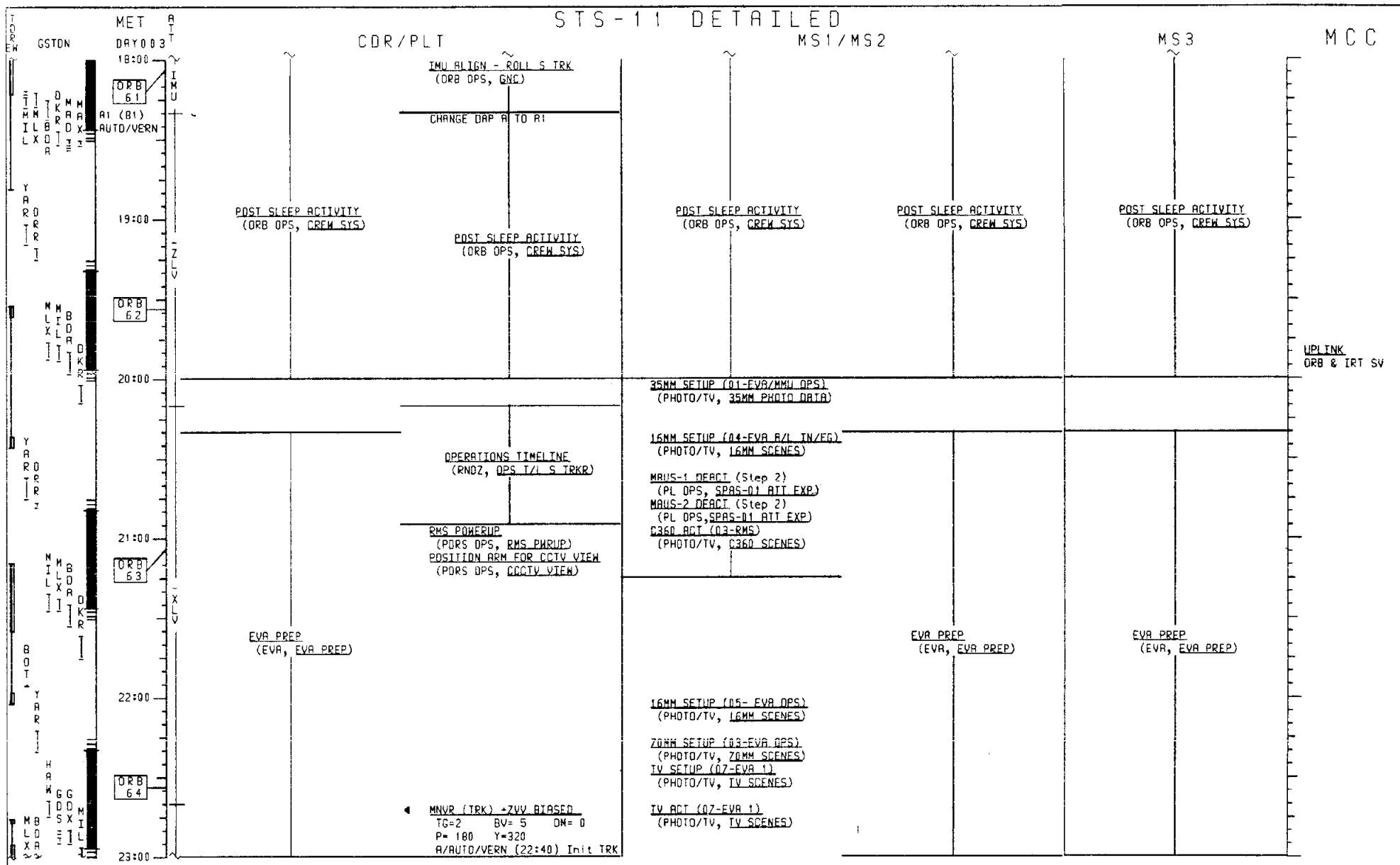


STS-11 DETAILED



# STS-11 DETAILED





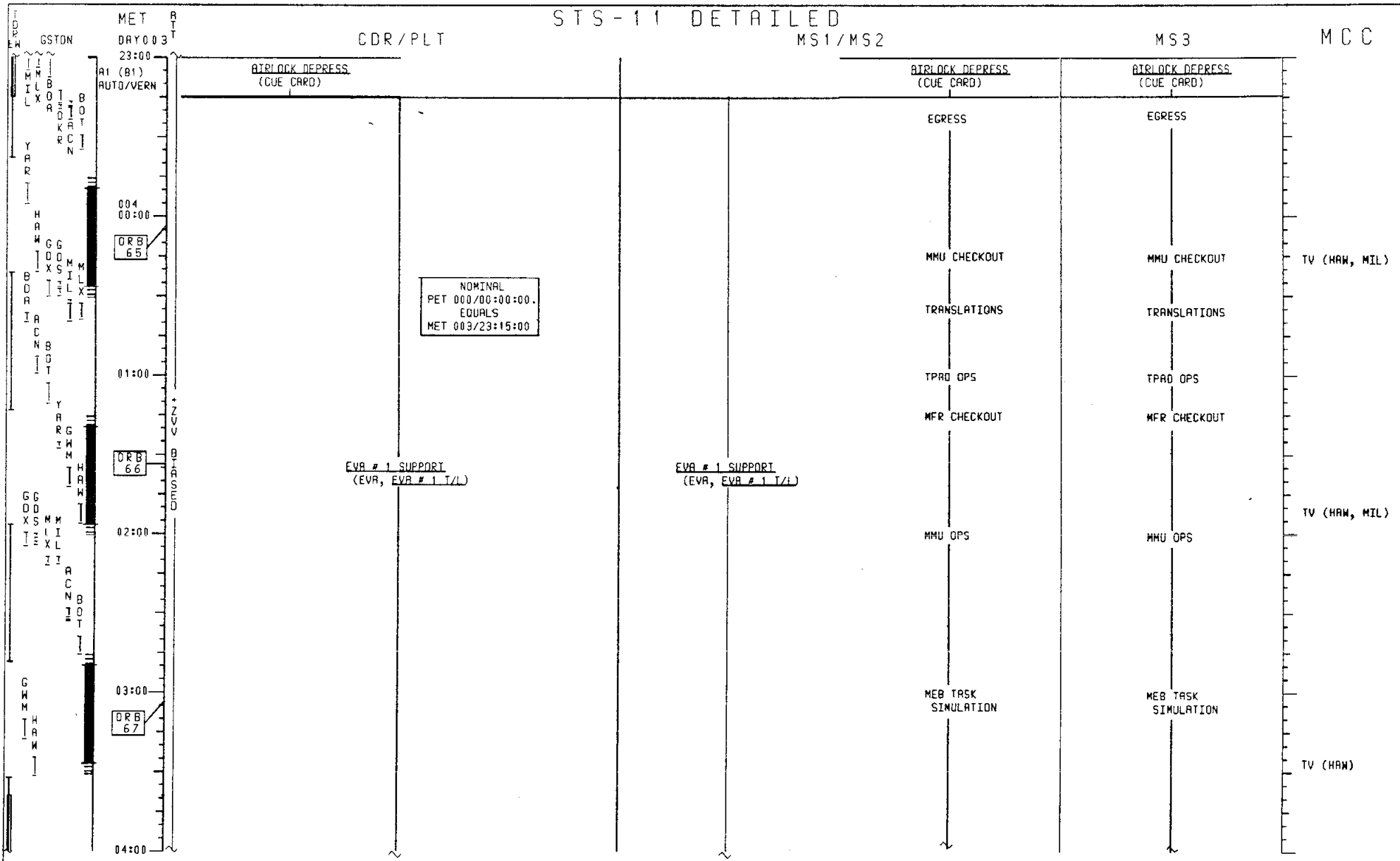
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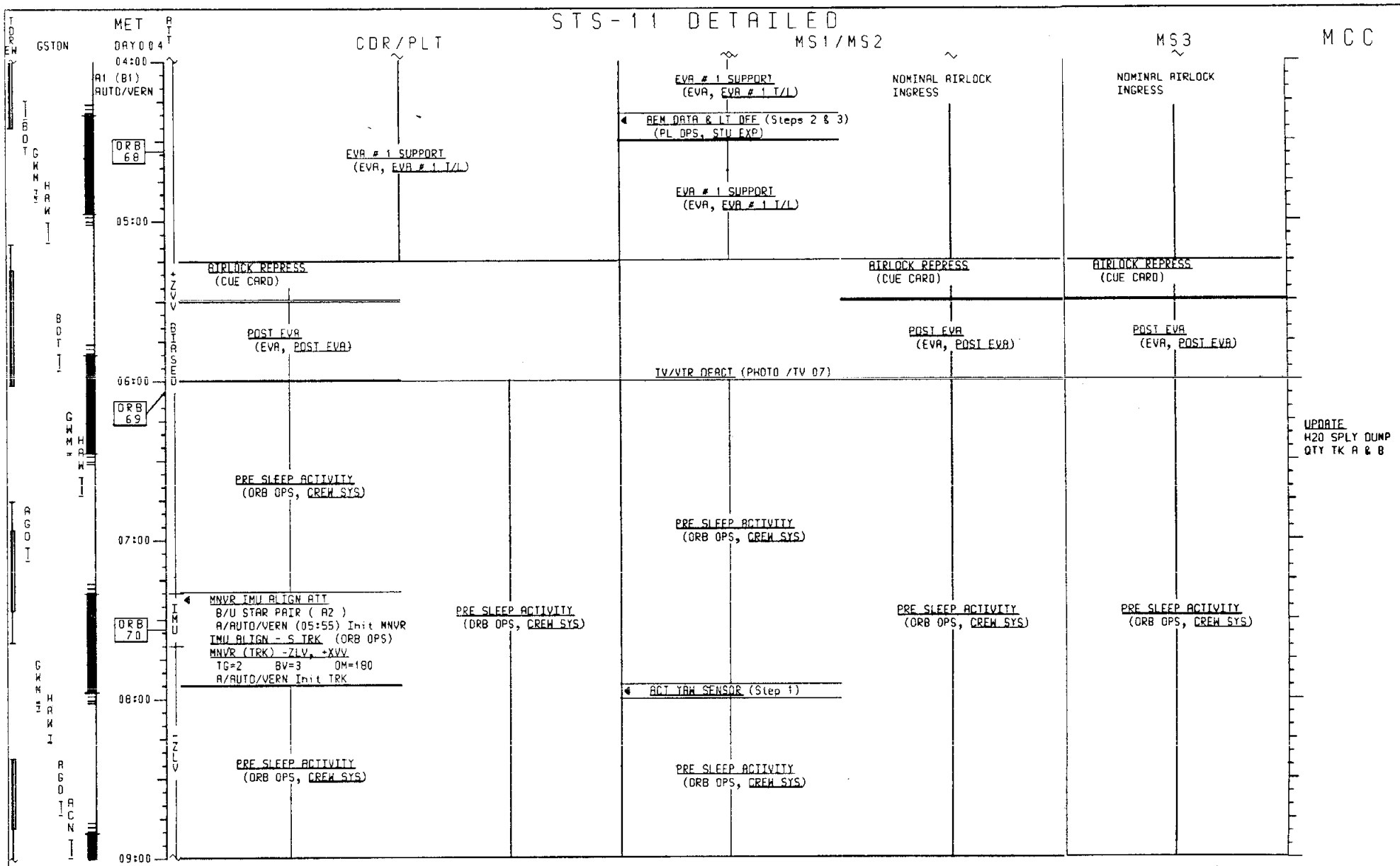
CDR/PLT

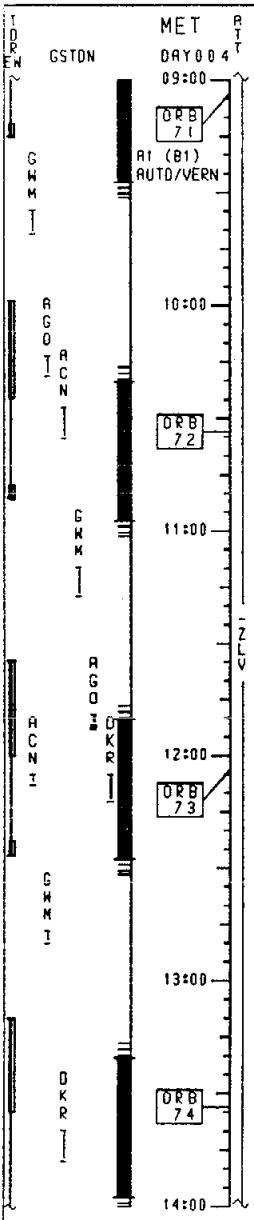
MS1/MS2

MS3

MCC







STS-11 DETAILED

CDR/PLT

MS1/MS2

MS3

MCC

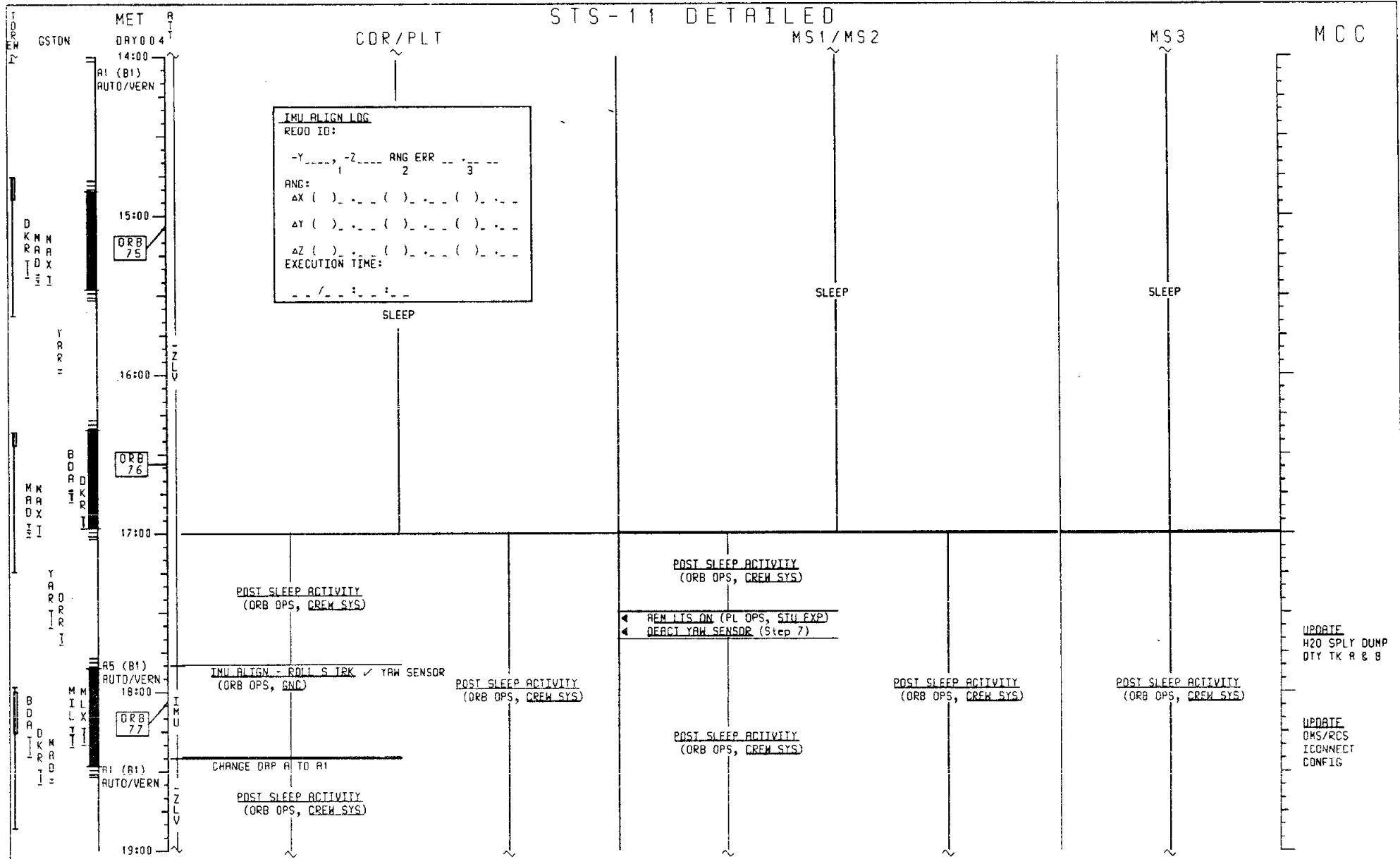
IMU ALIGN LOG  
 RECD ID:  
 -Y\_\_\_\_, -Z\_\_\_\_ ANG ERR \_\_\_\_  
           1          2          3  
 ANG:  
 ΔX ( ) . . . ( ) . . . ( ) . . .  
 ΔY ( ) . . . ( ) . . . ( ) . . .  
 ΔZ ( ) . . . ( ) . . . ( ) . . .  
 EXECUTION TIME:  
 \_ / \_ : \_ : \_

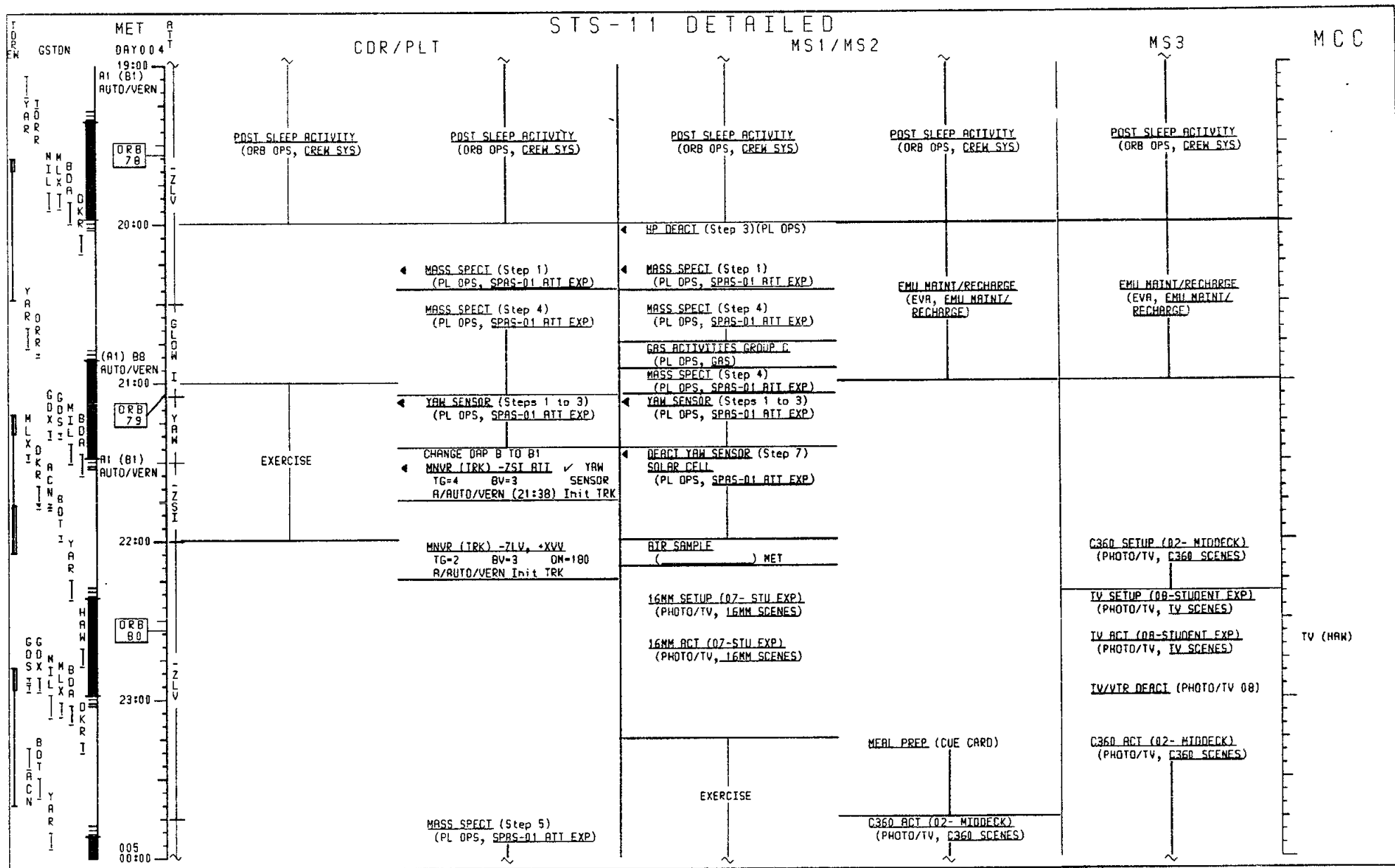
SLEEP

SLEEP

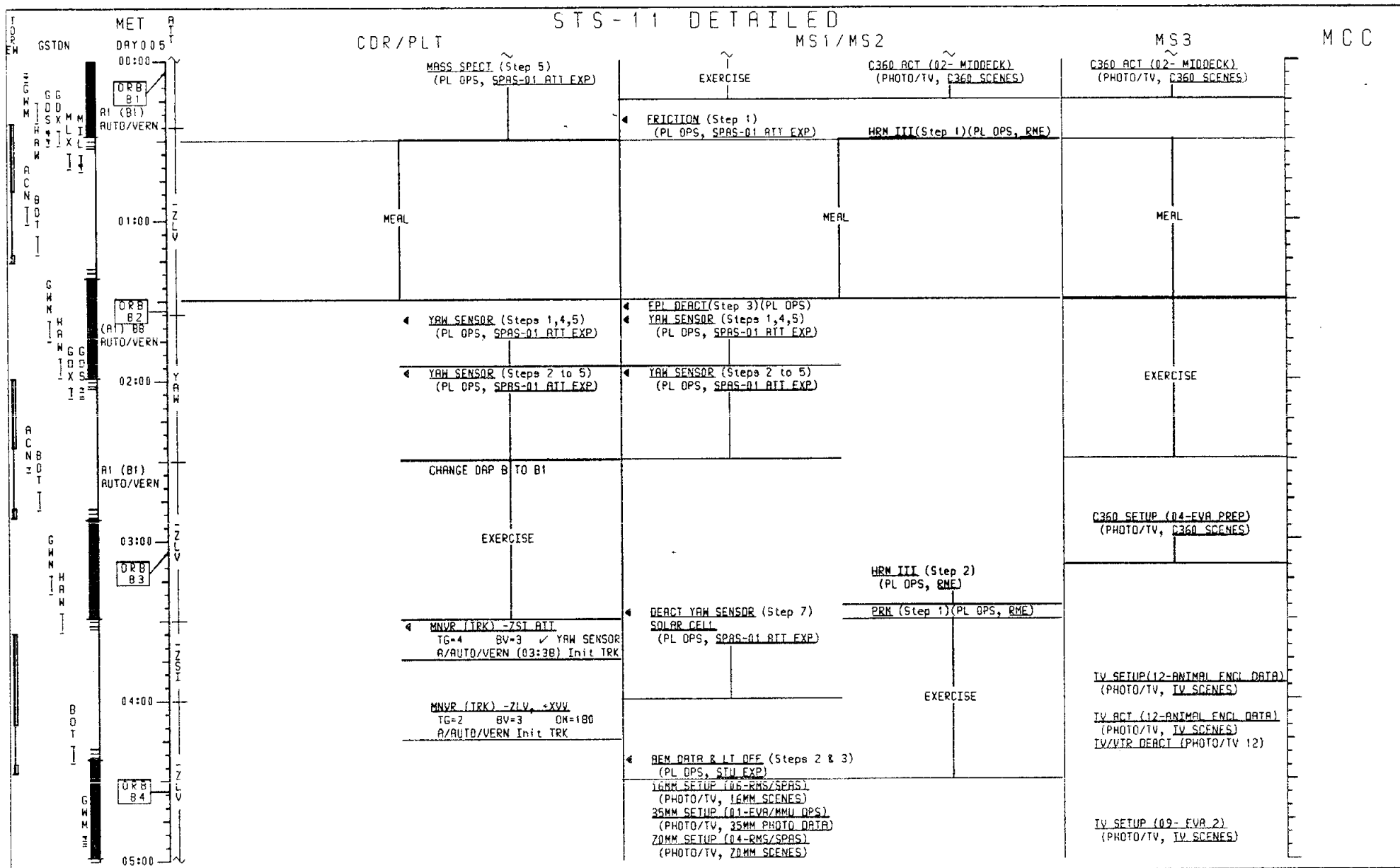
SLEEP

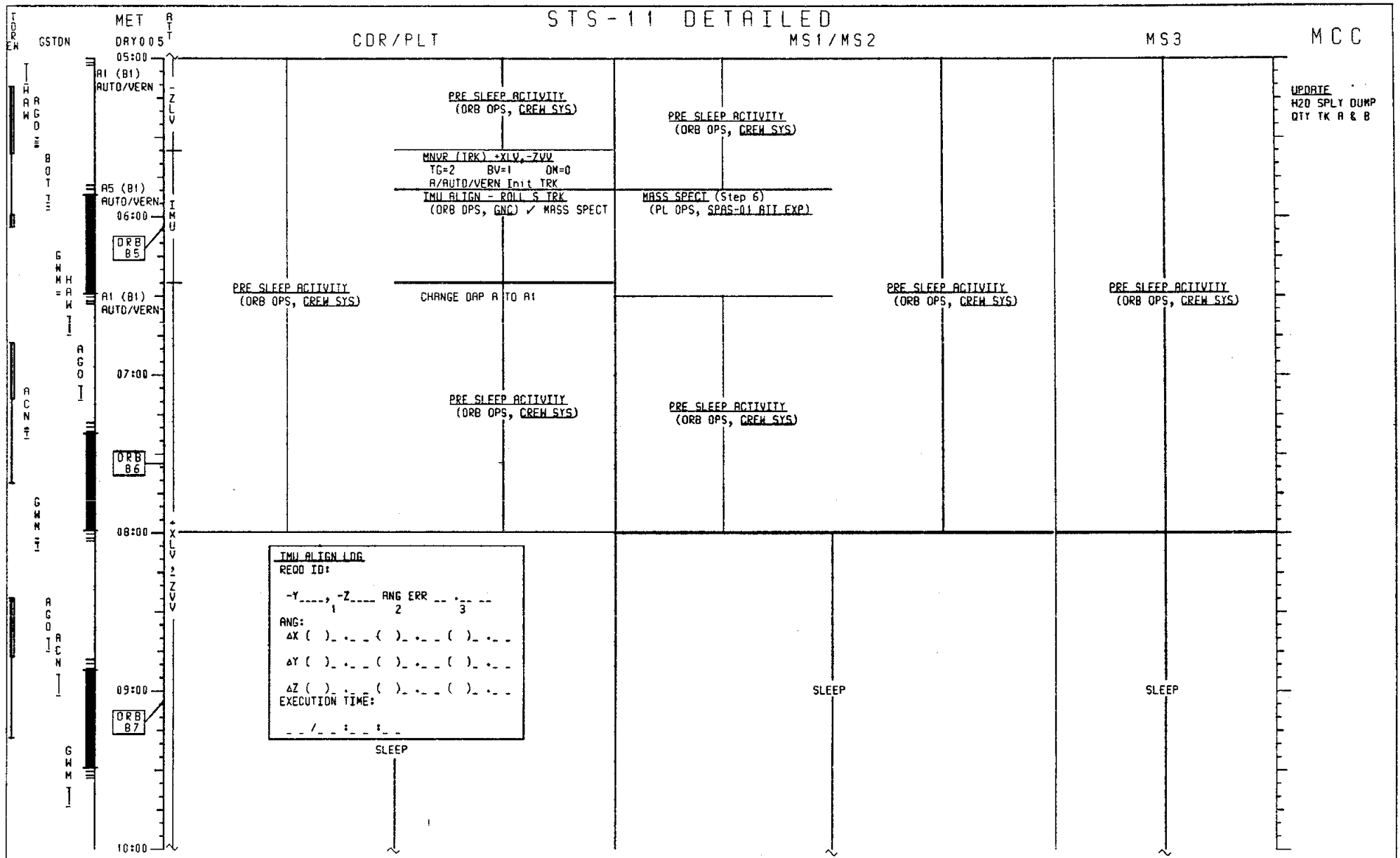
STS-11 DETAILED











STS-11 DETAILED

MET  
 DAY 005  
 10:00  
 R1 (B1)  
 AUTO/VERN  
 ORB 88  
 11:00  
 ORB 89  
 12:00  
 ORB 90  
 13:00  
 14:00  
 15:00

I D R E N  
 G S T D N  
 T A C K R I  
 A C M I  
 G M M I  
 M O G B  
 M R K D  
 D I R K T I O N

CDR/PLT

MS1/MS2

MS3

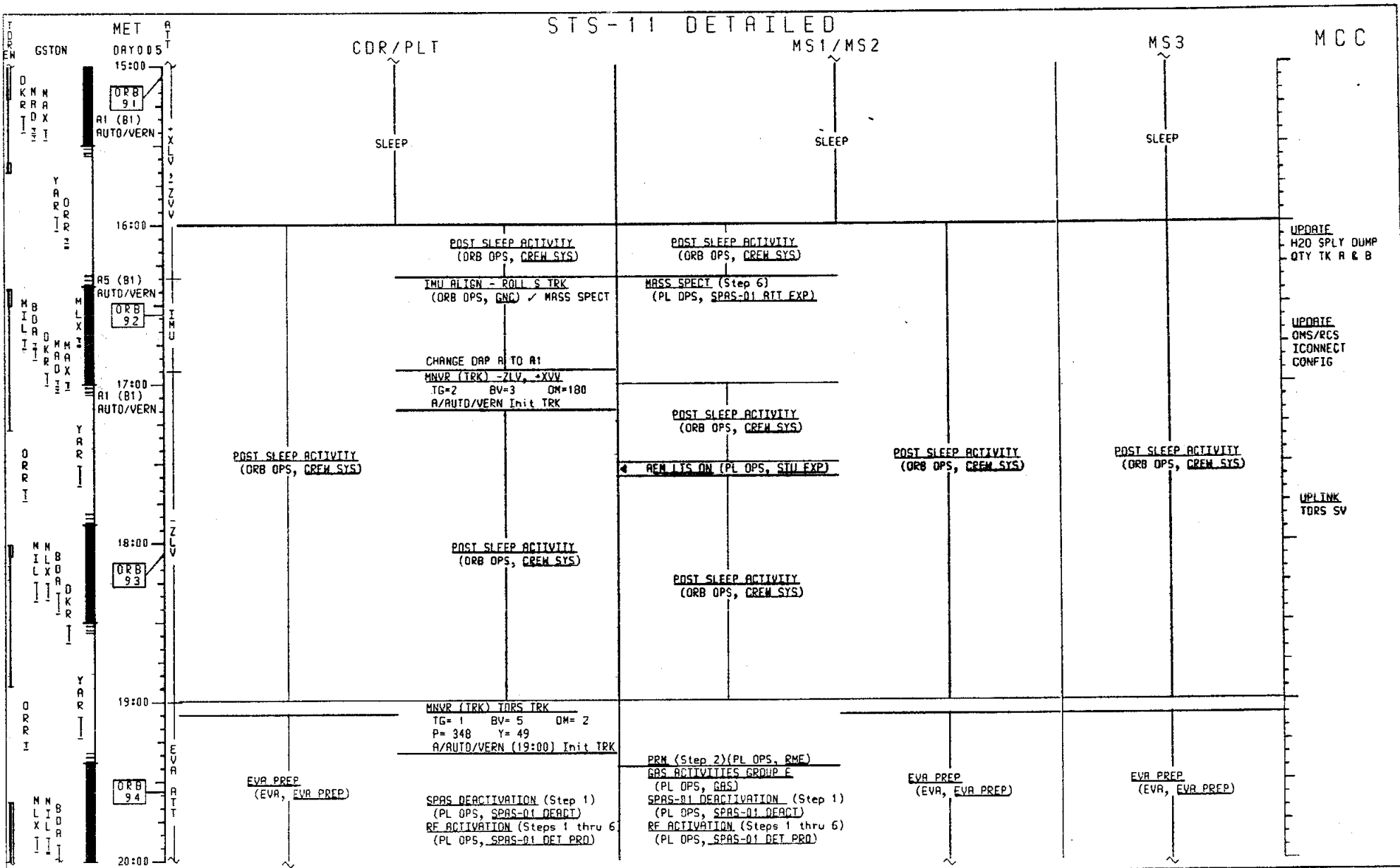
MCC

SLEEP

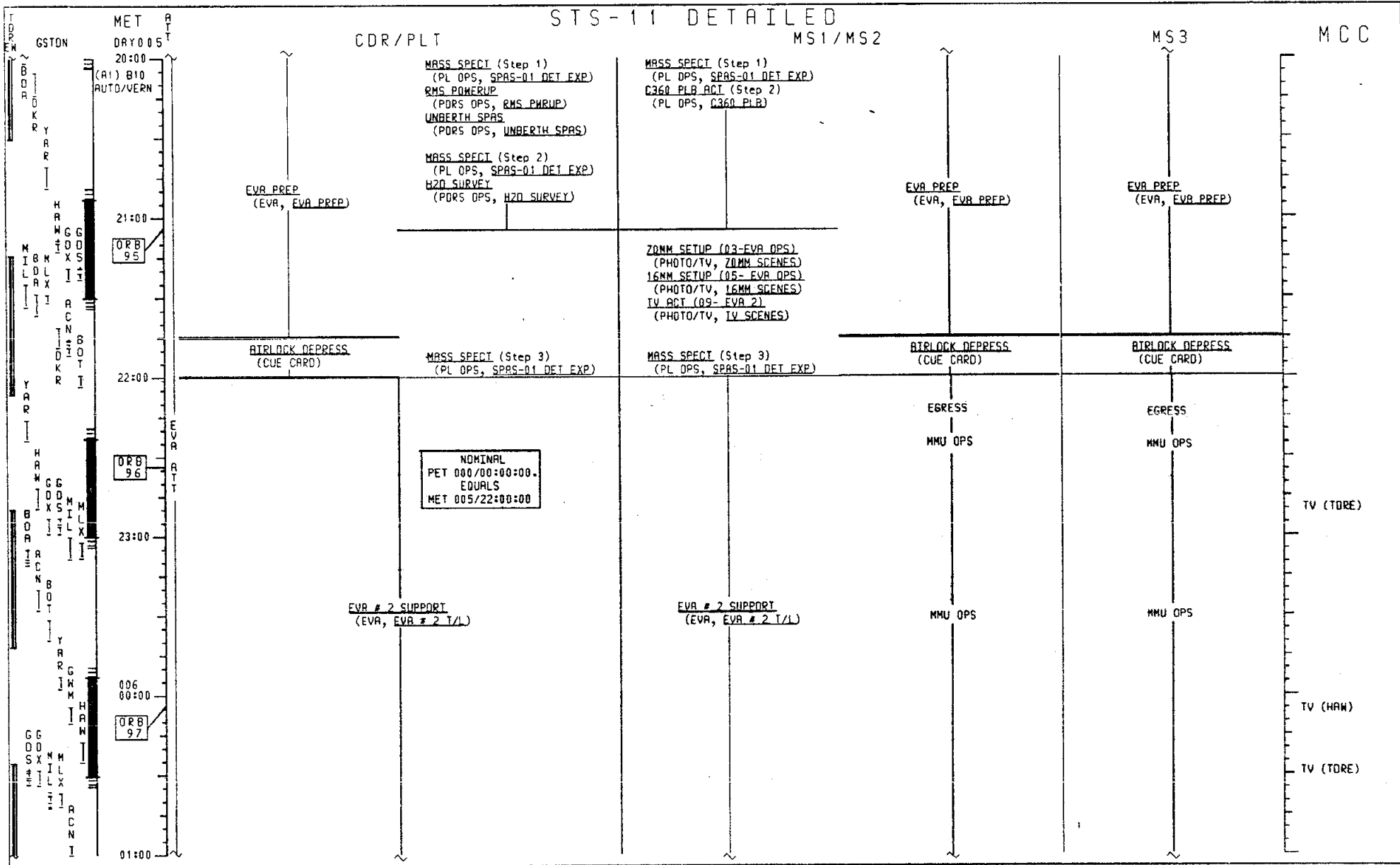
SLEEP

SLEEP

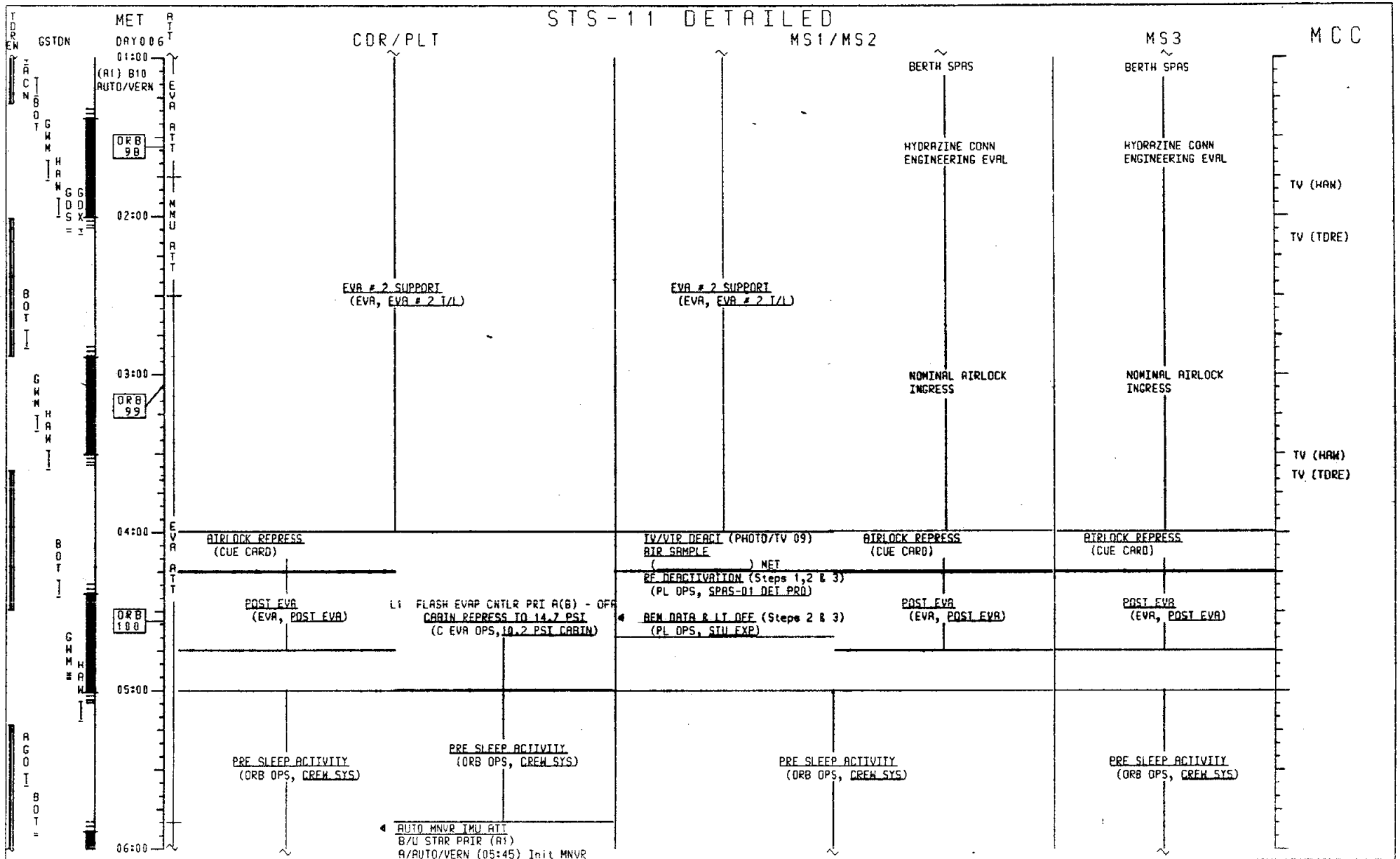
TIME ALIGN LOG  
 RECD ID:  
 -Y\_\_\_\_, -Z\_\_\_\_ ANG ERR \_\_\_\_  
   1      2      3  
 ANG:  
 ΔX ( )\_ . \_ ( )\_ . \_ ( )\_ . \_  
 ΔY ( )\_ . \_ ( )\_ . \_ ( )\_ . \_  
 ΔZ ( )\_ . \_ ( )\_ . \_ ( )\_ . \_  
 EXECUTION TIME:  
 \_ / \_ : \_ : \_

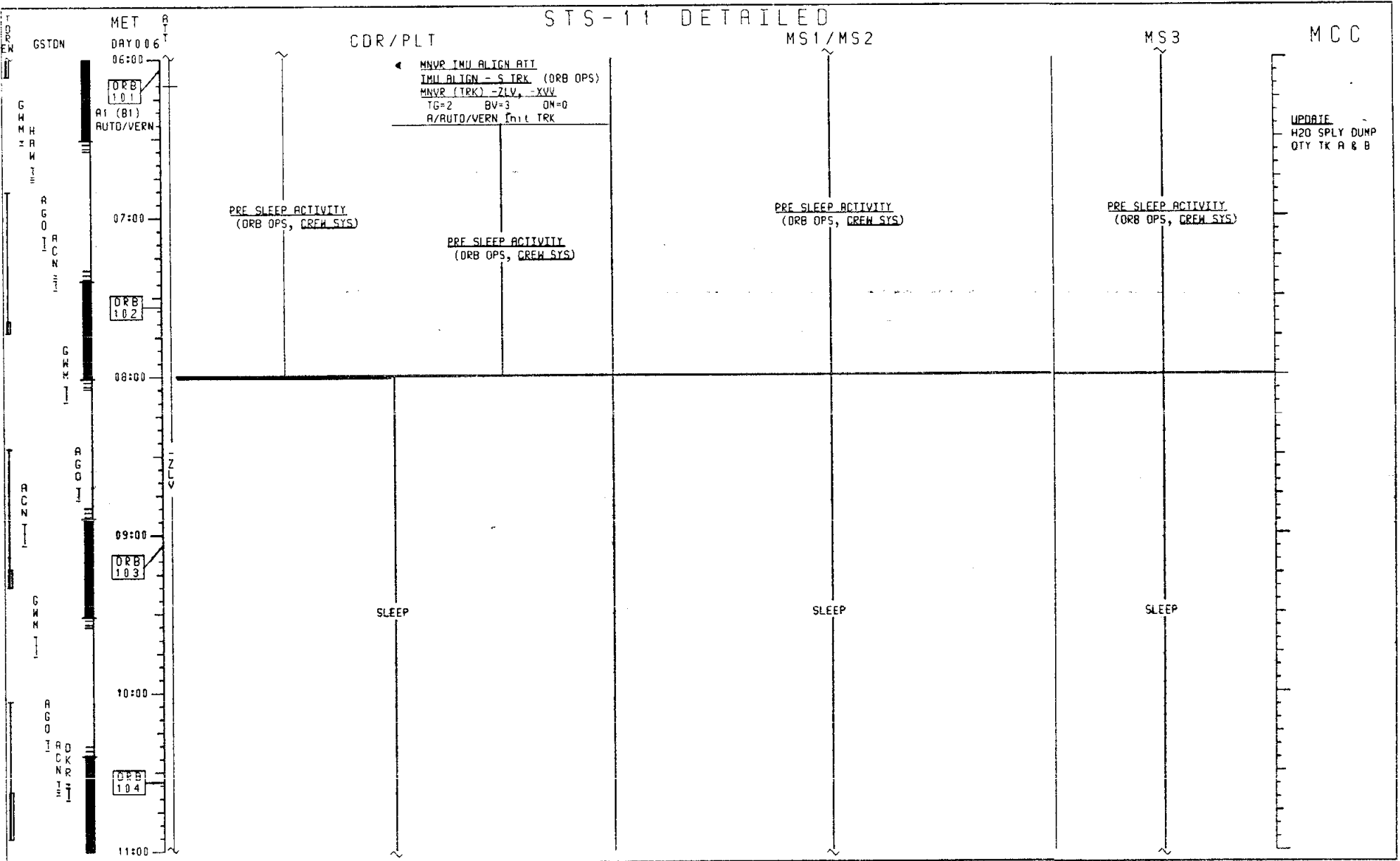


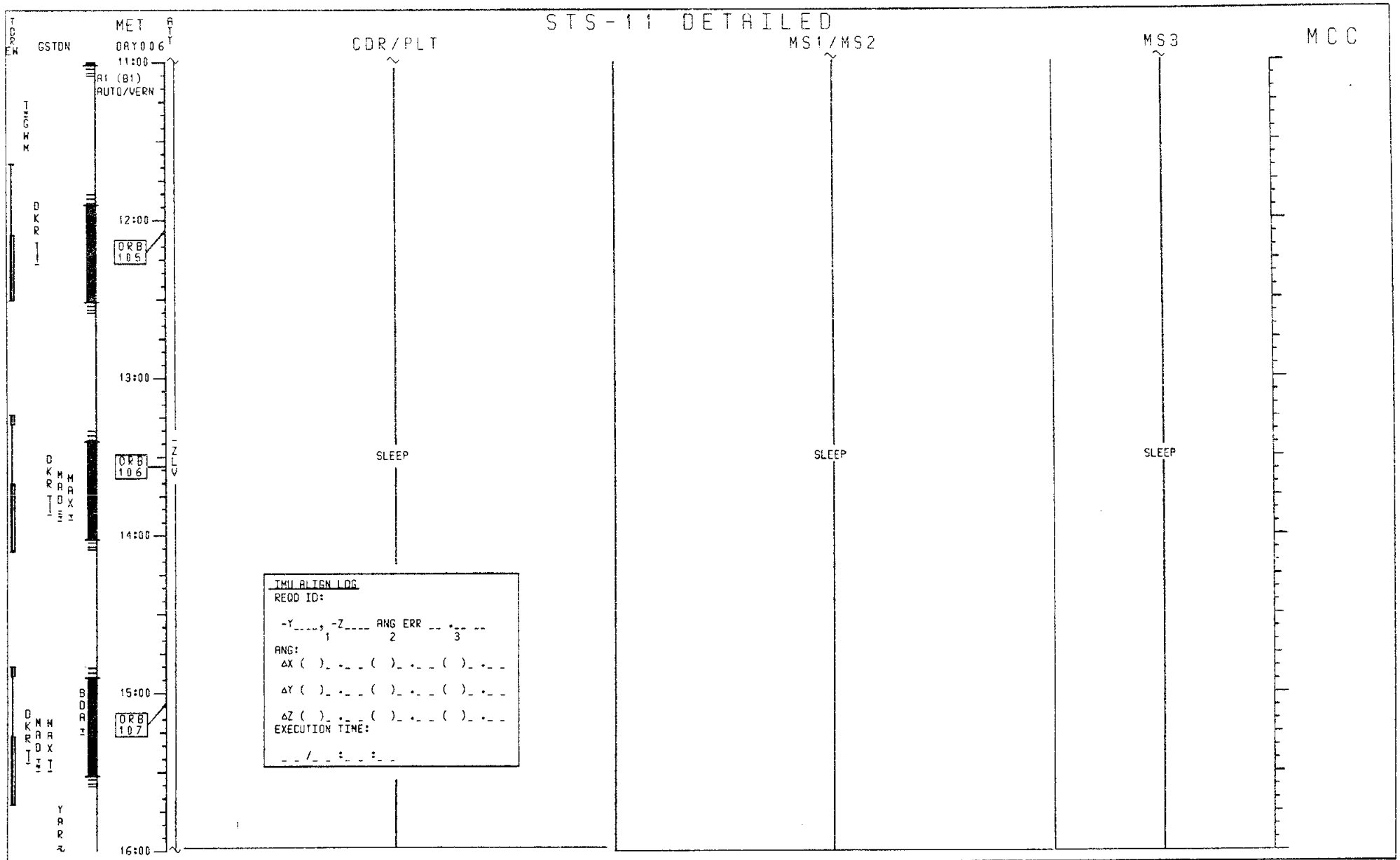
# STS-11 DETAILED



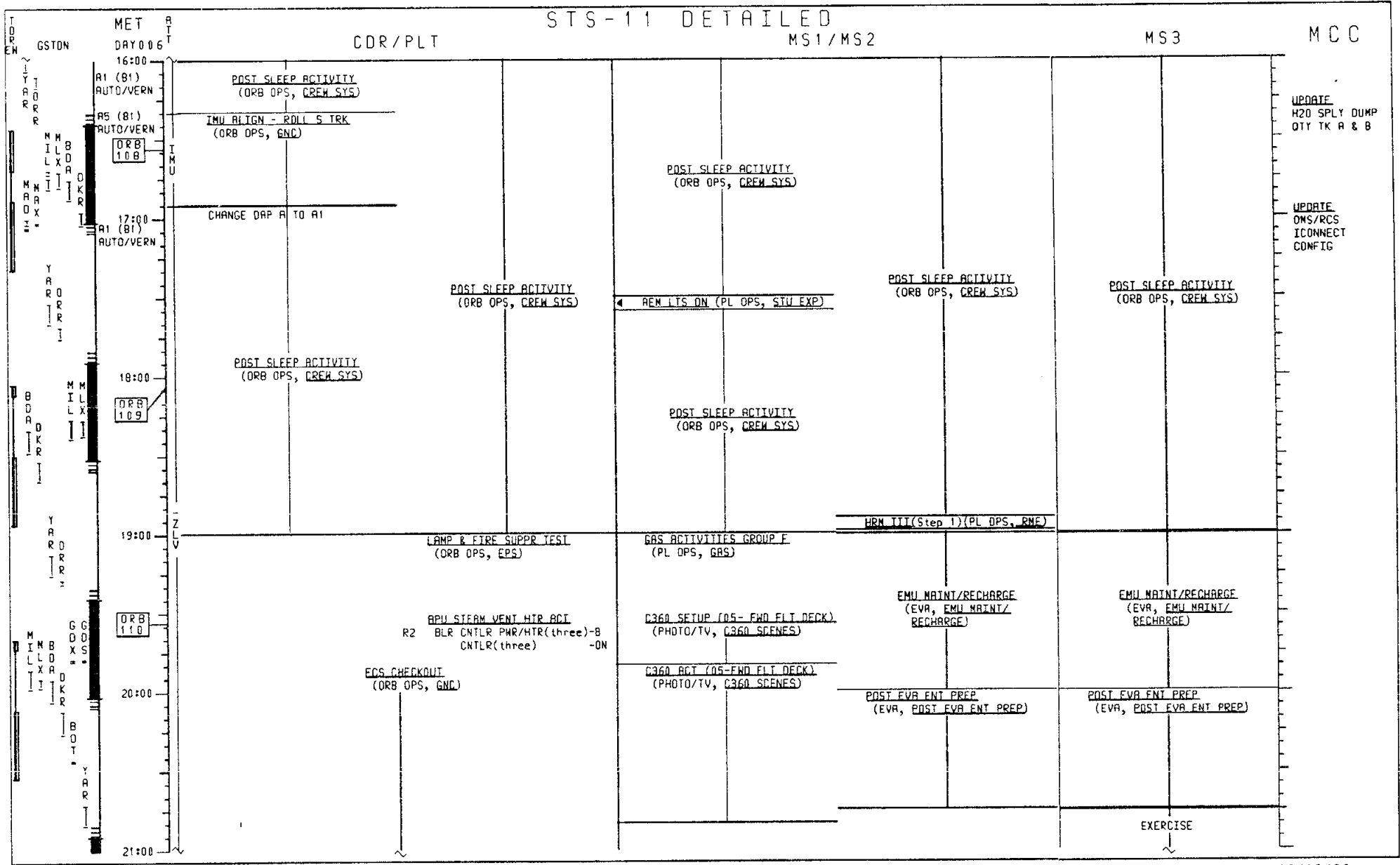
NOMINAL  
 PET 000/00:00:00.  
 EQUALS  
 MET 005/22:00:00

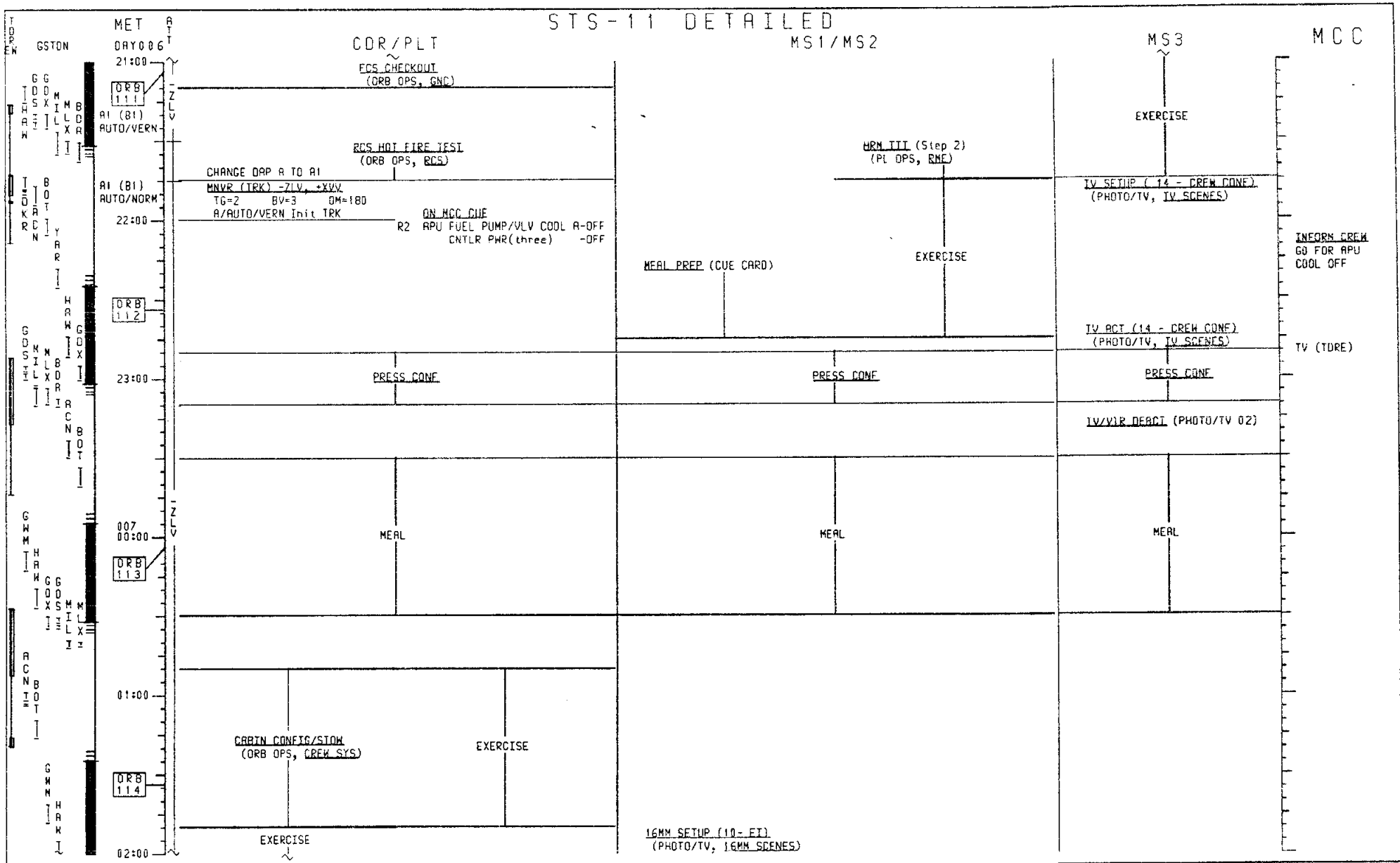


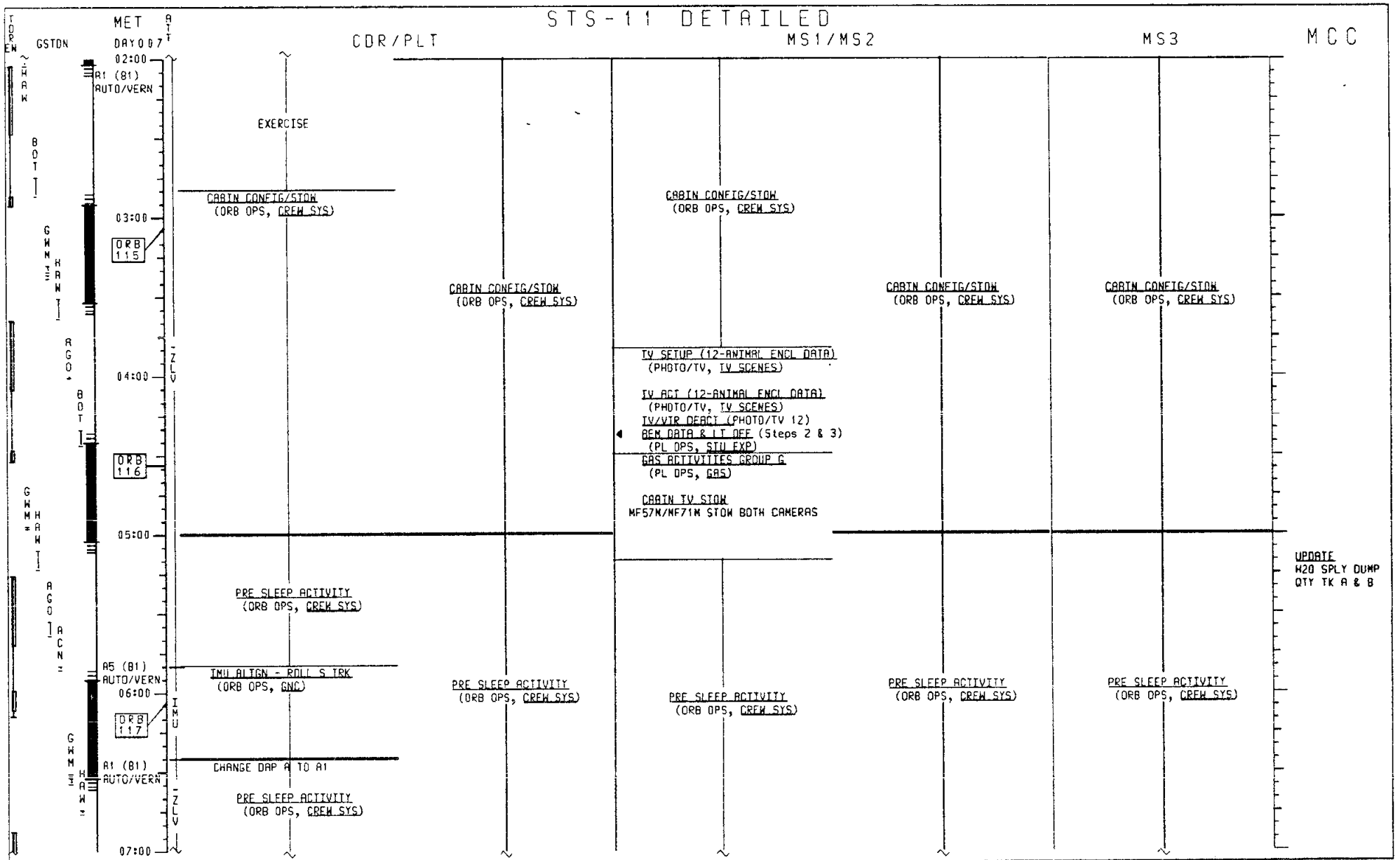












STS-11 DETAILED

MS1/MS2

MS3

MCC

CDR/PLT

MET

DRY 007

07:00

A1 (B1)

AUTO/VERN

ORB 118

08:00

09:00

ORB 119

10:00

ORB 120

11:00

12:00

PRE SLEEP ACTIVITY  
(ORB OPS, CREW SYS)

PRE SLEEP ACTIVITY  
(ORB OPS, CREW SYS)

PRE SLEEP ACTIVITY  
(ORB OPS, CREW SYS)

PRE SLEEP ACTIVITY  
(ORB OPS, CREW SYS)

PRE SLEEP ACTIVITY  
(ORB OPS, CREW SYS)

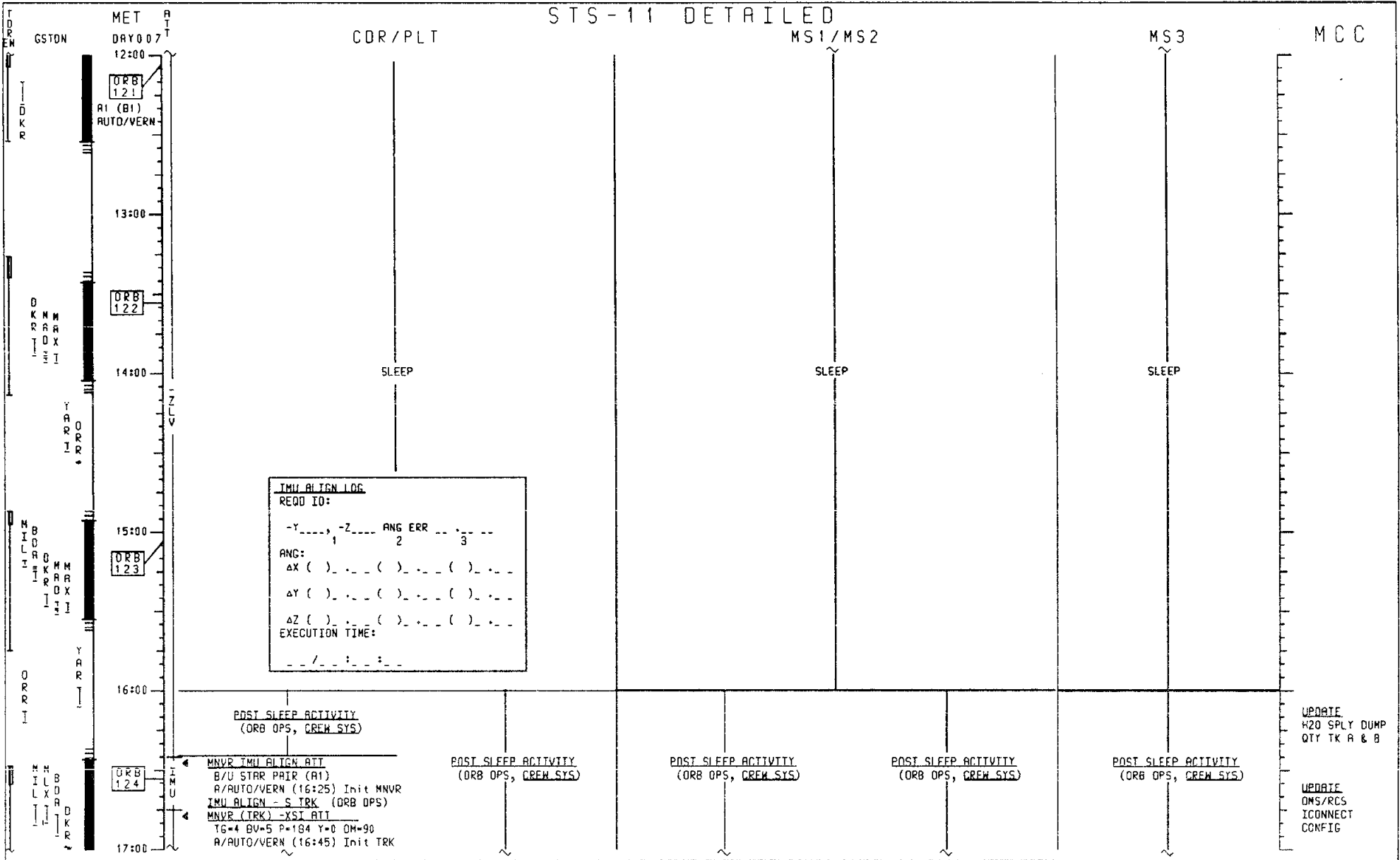
IMU ALIGN LOG  
RECD ID:  
-Y\_\_\_\_, -Z\_\_\_\_ ANG ERR \_\_\_\_  
          1          2          3  
ANG:  
ΔX ( ) ( ) ( )  
ΔY ( ) ( ) ( )  
ΔZ ( ) ( ) ( )  
EXECUTION TIME:  
- / - : - : -

SLEEP

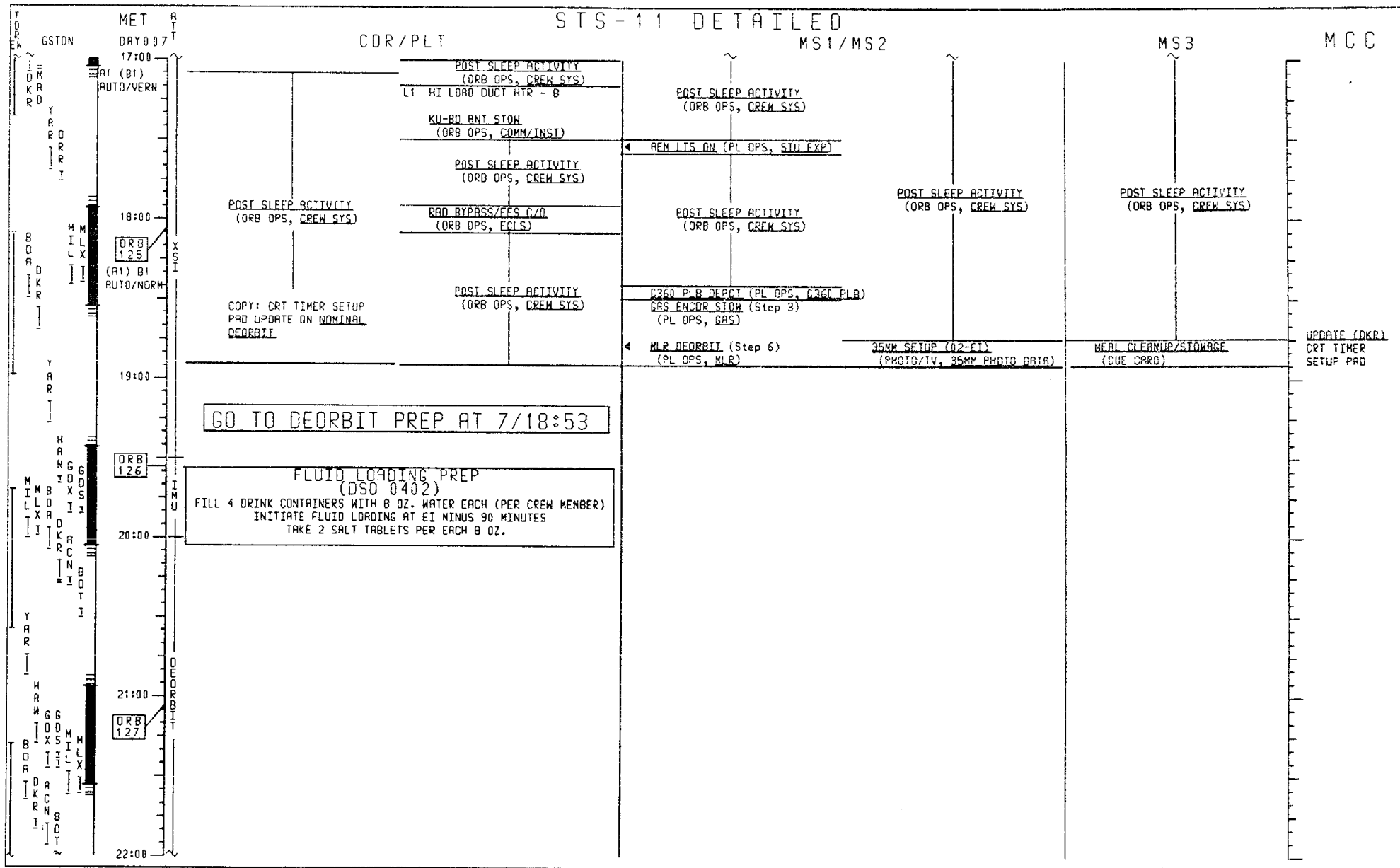
SLEEP

SLEEP

# STS-11 DETAILED



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



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CONTINGENCY TIMELINES

CONTINGENCY  
TIMELINES



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## FLIGHT DAY 3 DEPLOYMENT

### OVERVIEW

The Flight Day 3 PAM DEPLOY timeline is designed to accommodate delaying either WESTAR or PALAPA deployment until the 33A PKM opportunity. Flight Days 1 and 2 were assumed to have been otherwise nominal. The FD3 DEPLOY timeline is entered immediately following the 20A PKM opportunity at MET 1/04:25. Return to the nominal timeline at MET 2/01:20, for DTO 0811 RENDEZVOUS, SHORT RANGE, with exceptions detailed on attached timeline.

RMS - The following guidelines for RMS operations are implemented:

- The RMS Witness Plate Operations will be scheduled for the second PAM/PAYLOAD deployment, either Westar or Palapa.
- The RMS Checkout will be rescheduled to occur after the second PAM/PAYLOAD deployment. In that case, however, it will be rescheduled to occur on FD4, during a VRCS Attitude Hold period of the Long Range Rendezvous Test.

PAM/PAYLOAD THERMAL CONDITIONING - An opportunity is available to orient the orbiter Top-to-Sun on orbits 21 and 22, if required for PAM/PAYLOAD thermal conditioning.

MLR - In the case of a FD3 DEPLOY, it is preferred to meet the requirement to activate the MLR within 36 hours after launch and accept the consequences of violation of the Low-G constraint.

### ACTIVITIES TO BE RESCHEDULED IN REAL-TIME

<u>ACTIVITY</u>	<u>NOMINAL MET</u>
● RMS CHECKOUT	1/04:25
● CREW MODULE MEAS - DTO 321 - GAP MEASUREMENTS	1/21:25
● CREW MODULE MEAS - DTO 321 - TAPE MEASUREMENTS	1/22:10
● CREW MODULE MEAS - DTO 321 - ALIGNMENT MARKS	2/01:20
● VTR SETUP (02 - PAM DPLY)	1/22:35
● VTR PLAYBACK (02 - PAM DPLY)	1/22:45

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
031:13:00 / 032:01:00	001:00:00 / 001:12:00	031:07:00 / 031:19:00	02 / 03: GMT	-22.8		JANUARY 31, 1984	STS-11	FINAL	12/19/83			
GMT :031												
FD :02									GMT:032			
MET :001												
CDR			Z L V M N V R				PRE SLEEP ACT	IMU ALIGN (ROLL) M N V R	PRE SLEEP ACT	SLEEP		
PLT	<div style="border: 1px solid black; padding: 5px;">           ENTER FROM NOMINAL TIMELINE ASSUMING:            - INDICATED TRAJECTORY REFLECTS OMS            BURNS ON REVS 6 AND 19            - PCMMU FORMAT IS 101/178            - RNS C/D WILL BE RESCHEDULED AFTER            PAN/PAYLOAD DEPLOYMENT ON FD 3         </div>				R M S P R O O N	A C T S P R S	S F R S O K	A C T M O M S		PRE SLEEP ACT	SLEEP	
MS1			R M S P R O O N	K E L E T R O N	P R O C E D U R E S	S F R S O K	C O M M O N S	C O M M O N S	F L P S T A T U S	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP
MS2					E V A E Q U I P P R E P		EMU 1&2 C/D		P R O C E D U R E S		PRE SLEEP ACT	SLEEP
MS3			EXERCISE		E V A E Q U I P P R E P		EMU 1&2 C/D				PRE SLEEP ACT	SLEEP
DAY/NIGHT												
ORBIT	17	18	19	20	21	22	23	24				
GSTON COVERAGE	HAW -RCN -GDS -BOT -GDX -YAR -MLX -BDR	-MLX -BDR -HAW -ACK -GUX -BOT -GDS -TRK -MLX -GMM -DKR -RTI	-GDS -HAW -GDX -GDX -MLX -MLX -HAW -RCN -GMM -BOT	-HAW -GDX -GDS -GDS -BOT -BOT -GMM -GMM	-GMM -HAW -BOT -BOT	-GMM -HAW -BOT -BOT	-GMM -HAW -BOT -BOT	-GMM -HAW -BOT -BOT				
TDRS E W												
ATTITUDE												
NOTES:	FD 3 DEPLOY											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
032:01:00 / 032:13:00	001:12:00 / 002:00:00	031:19:00 / 032:07:00	02 / 032 GMT	-20.6		JANUARY 31, 1984	STS-11	FINAL	12/19/83	
GMT : 032	2	3	4	5	6	7	8	9	10	
FD : 02									11	
MET : 001	12	13	14	15	16	17	18	19	20	
									21	
									22	
									23	
									24	
									25	
									26	
									27	
									28	
									29	
									30	
									31	
									32	
CDR		SLEEP				POST SLEEP ACT				
PLT		SLEEP				POST SLEEP ACT				
MS1		SLEEP				POST SLEEP ACT				
MS2		SLEEP				POST SLEEP ACT				
MS3		SLEEP				POST SLEEP ACT				
DAY/NIGHT										
ORBIT	25	26	27	28	29	30	31	32		
GSTON COVERAGE	-GWH	--RCN --DKR	-GWH	-DKR	-DKR --MAX	-BDA --DKR --MAX	-MIL --MLX --BDA --DKR --MAX	-ORR --MIL --MLX --BDA --DKR	-BDA --DKR --MAX	-BOT --YAR
TORS										
ATTITUDE			-ZLV			IMU	-ZLV BIASED		DEPLOY	SEP
NOTES:	FD 3 DEPLOY									

GMT (O:H:M)	MET (O:H:M)	CST (O:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
032:13:00 / 033:01:00	002:00:00 / 002:12:00	032:07:00 / 032:19:00	03 / 032 GMT	-18.5		FEBRUARY 1, 1984	STS-11	FINAL	12/19/83
GMT :032									
FD :03									GMT:033
MET :002									
CDR	MEAL								
PLT	MEAL								
MS1	MEAL								
MS2	MEAL								
MS3	MEAL								
DAY/NIGHT									
ORBIT	33	34	35	36	37	38	39	40	
GSTON COVERAGE	-HAW -ACN -GDS -BOT -GDX	-MIL -MLX -BDA	-GDX -GDS -MIL	-BOT -GMM -HAW	-BOT -GMM -HAW	-BOT -GMM -HAW	-GMM -HAW -RCN	-RCN -GMM	-RCN
TORS E W									
ATTITUDE	-ZLV	RCS	OMS	-XLV	-XLV, -ZVV				
NOTES:	<ul style="list-style-type: none"> <li>● -ZLV, +XVV</li> <li>● 70MM SETUP(02-IRT DPLY/RNDZ)</li> <li>● FC PURGE HTR ON</li> <li>● FC PURGE HTR OFF</li> <li>● MANUAL</li> <li>● FC PURGE HTR OFF</li> <li>● FORMAT 116/179</li> <li>● 16MM SETUP(03-IRT DPLY/RNDZ)</li> </ul>								
	<b>FD 3 DEPLOY</b>								

RETURN TO NOMINAL TIMELINE AT 002:01:20 EXCEPT:

PLT - ADD: ORBITER C/O ACTIVITIES AS OUTLINED AT LEFT

MS1 - ADD: RNDZ 70MM AND 16MM CAMERA SCENES AS OUTLINED AT LEFT

MS1 - DELETE: DEACT SPAS AT 2/01:25

MS2 - DELETE: ALIGN MARKS AT 2/01:20

IF TIME PERMITS, SCHEDULE CDR AND PLT FOR EXERCISE

## WAVE-OFF (1 DAY LATE ENTRY)

The Timeline provided in this section is designed to follow a Deorbit Prep Backout on FD9. It therefore assumes that the nominal timeline has already been accomplished.

A Perigee Adjust burn is required at MET 007:22:22 in order to yield a daylight landing opportunity on FD10.

The primary landing site on FD10 is for KSC at MET 008:23:09 which is 2 min 22 sec after sunrise. The crossrange is 679 nm.

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
038:01:00 / 038:13:00	007:12:00 / 008:00:00	037:19:00 / 038:07:00	08 / 038 GMT	3.8		FEBRUARY 5, 1984	STS-11	FINAL	12/19/83			
GMT : 038	2	3	4	5	6	7	8	9	10	11	12	13
FD : 08									FD:09			
MET : 007	12	13	14	15	16	17	18	19	20	21	22	23
CDR							DEORBIT PREP		BACKOUT		BACKOUT	
PLT	<div style="border: 1px solid black; padding: 5px;">           USE NOMINAL TIMELINE UNTIL            MET 007:22:22             A PERIGEE ADJUST BURN IS            REQUIRED INSTEAD OF            DEORBIT BURN         </div>						DEORBIT PREP		BACKOUT		BACKOUT	
MS1							DEORBIT PREP		BACKOUT		BACKOUT	
MS2							DEORBIT PREP		BACKOUT		BACKOUT	
MS3							DEORBIT PREP		BACKOUT		BACKOUT	
DRY/NIGHT												
ORBIT	121	122	123	124	125	126	127	128				
GSTON COVERAGE	-DKR -MAD	-DKR -ARG -MAX	-MIL -MLX -BDA -DKR -MAD -MAX	-DKR -MLX -BDA -DKR -MAD	-DKR -MLX -BDA -DKR -MAD	-DKR -MLX -BDA -DKR -MAD	-GDS -COX -MIL -MLX -BDA -DKR -MAD	-BOT -YAR -HAW -ACN -GDS -BOT -YAR -GWS -MLX	-GDS -COX -MIL -MLX -ACN			
TORS												
ATTITUDE	-XSI   IMU   DEORBIT											
NOTES:	HAVEOFF											■ ACTIVATE CINEMA 360 HEATERS

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
038:13:00 / 039:01:00	008:00:00 / 008:12:00	038:07:00 / 038:19:00	09 / 038 GMT	5.2		FEBRUARY 7, 1984	STS-11	FINAL	12/19/83
GMT : 038									
FD : 09									
MET : 008									GMT:039
CDR	BACKOUT	SNACK UNSTOW CABIN	EXERCISE		CABIN STOW	PRE SLEEP ACT	IMU ALIGN (ROLL)	PRE SLEEP ACT	SLEEP
PLT	BACKOUT	SNACK UNSTOW CABIN	EXERCISE		CABIN STOW	PRE SLEEP ACT			SLEEP
MS1	BACKOUT	SNACK UNSTOW CABIN			CABIN STOW	PRE SLEEP ACT			SLEEP
MS2	BACKOUT	SNACK UNSTOW CABIN			CABIN STOW	PRE SLEEP ACT			SLEEP
MS3	BACKOUT	SNACK UNSTOW CABIN			CABIN STOW	PRE SLEEP ACT			SLEEP
DAY/NIGHT									
ORBIT	129	130	131	132	133	134	135	136	
GSTDN COVERAGE	-GMM -HAK -GDS -GDX		--BOT	-GMM -HAK		-ACN	-GMM	-ACN -DKR	
TDRS E M		--BOT	-GMM -HAK		-BOT	-HAK	-ACN	-GMM	-DKR
ATTITUDE			-ZLV			IMU		-ZLV	
NOTES:	<b>HAVEOFF</b>								



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
039:01:00 / 039:13:00	008:12:00 / 009:36:00	038:19:00 / 039:07:00	09 / 039 GMT	6.7		FEBRUARY 7, 1984	STS-11	FINAL	12/19/83			
GMT :039	2	3	4	5	6	7	8	9	10	11	12	13
FD :09								FD:10				
MET :008	12	13	14	15	16	17	18	19	20	21	22	23
CDR	SLEEP		POST SLEEP ACT	I M U M N V R	T R K M N V R	POST SLEEP ACT	OPER ORBIT	PLBO OPS	DEORBIT PREP			
PLT	SLEEP		POST SLEEP ACT	K U B S T O W	POST SLEEP ACT	R A D B Y P	POST SLEEP ACT	OPER ORBIT	PLBO OPS	DEORBIT PREP		
MS1	SLEEP		POST SLEEP ACT	DE M I T D N	POST SLEEP ACT	G S T D O M E N C D R	M L R D E G R B	OP S N S H L D	DEORBIT PREP			
MS2	SLEEP		POST SLEEP ACT				3 S M M S E T U P	DEORBIT PREP				
MS3	SLEEP		POST SLEEP ACT				C L E A R A N C E	DEORBIT PREP				
DAY/NIGHT												
ORBIT	137	138	139	140	141	142	143	144				
GSTDN COVERAGE	-DKR	-DKR -MAD MAX	-MLX -BDA -DKR -MAX	-MIL -MLX -BDA -DKR	-MLX -BDA -DKR	-MIL -MLX -BDA -DKR	-YAR -HAW -GOS -GDX	-RCN -BOT -YAR -GWN	-MIL -MLX -RCN -BOT	-MIL -MLX -RCN -BOT	GMM	
TDRS	E		-MTI	-ORR	-MTI							
ATTITUDE	-ZLV		IMU		-XSI		IMU		DEORBIT		ENTRY	
NOTES:	<p>HI LOAD HTR ON      DEORBIT PREP</p> <p>FES CNTLR CHECK</p> <p><b>HAVEOFF</b></p>											

## HI-PRIORITY MISSION

- The HI-PRIORITY MISSION is a 96-hr mission with landing on FD5.
- The following priority activities, as defined by the FRD are scheduled:
  - (1) PALAPA - B Deployment
  - (1) WESTAR Deployment
  - (2) DTO 0607 - MMU
  - (3) DTO 0614 - MFR
  - (3) MLR
  - (4) DTO 0811,0812 - RENDEZVOUS, ONE DAY TEST
- Other activities will be scheduled to the maximum extent possible.

Activities considered as shopping list are:

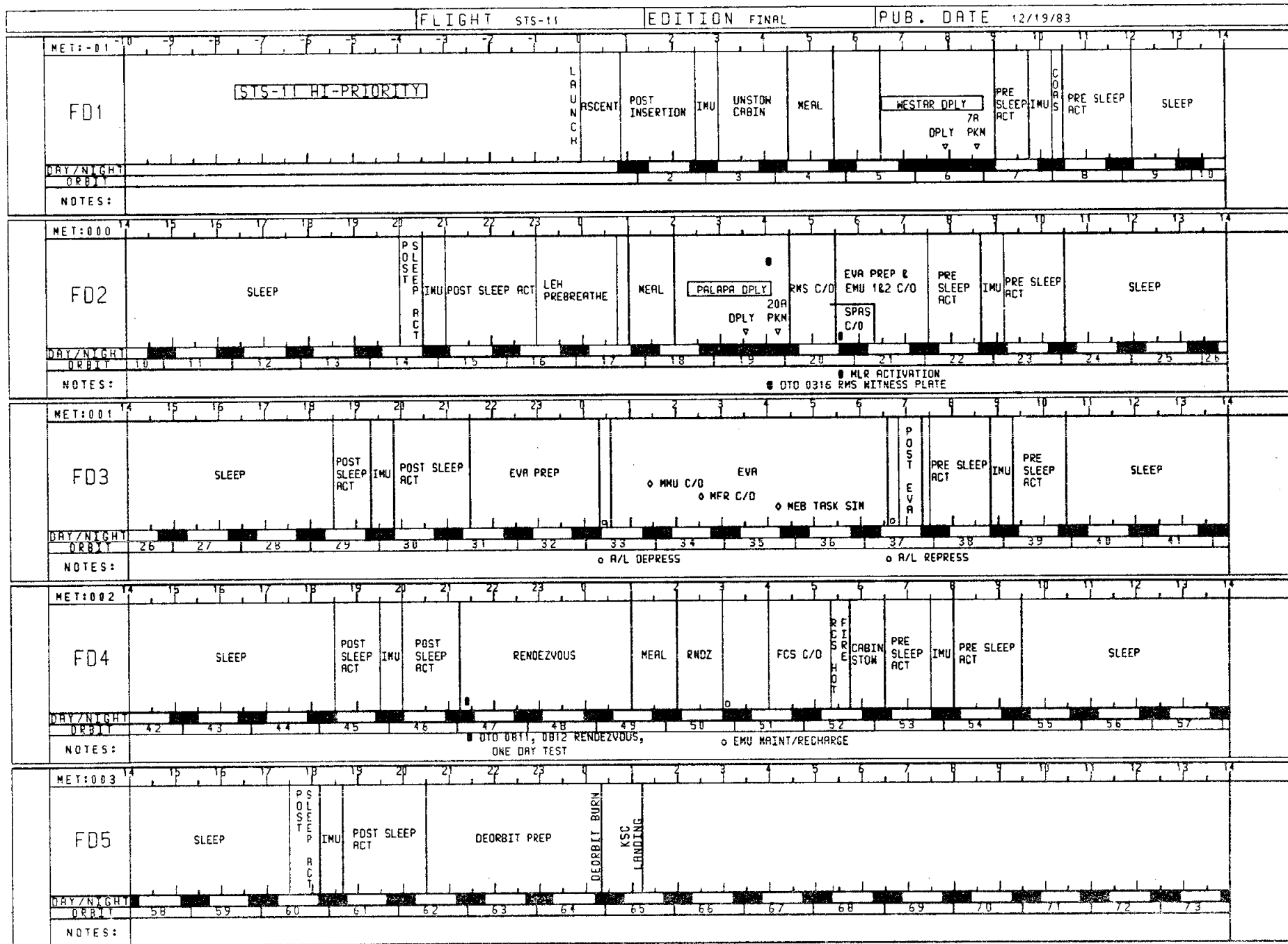
Cinema 360 In-Cabin Middeck Activities  
 Balance of RME Data Takes  
 GAS  
 DTO 321 Crew Compartment Structure Deflection  
 DTO 777 CCTV Laser Ranging  
 DSO 201 Atmospheric Drag/Density Studies  
 DSO 901,902,903 Balance of Photo/TV opportunities

Activities considered not possible to schedule:

Cinema 360 In-Cabin RMS operator, EVA Prep, and FWD FLT Deck Activities  
 Cinema 360 PLB SPAS Grapple, SPAS Unberth, and SPAS Docking Activities  
 SPAS Solar Cell, Mass Spectrometer, Yaw Sensor Maneuver and Friction Tests  
 DTO 808 EVA Fluid Transfer Connector Demo

- FD1 and FD2 are nominal, except that the LEH PREBREATHE and 10.2 CABIN DEPRESS are scheduled on FD2 in preparation for the FD3 EVA.
- The primary landing site on FD5 is for KSC at MET 4/01:09, which is approximately 2 minutes after sunrise. The crossrange is 433 nm.
- ALTERNATE LANDING OPPORTUNITIES:

<u>SITE</u>	<u>ORBIT</u>	<u>X-RNG</u> <u>(NM)</u>	<u>MET</u>
EDW	66	568	4/02:37
KSC	80	231	4/23:47
EDW	81	444	5/01:14



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE																																				
030:13:00/ 031:01:00	000:00:00/ 000:12:00	030:07:00/ 030:19:00	01/ 030 GMT	-26.3		JANUARY 30, 1984	STS-11	FINAL	12/19/83																																				
GMT: 030 FD : 01 MET : 000	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	GMT: 031	11	12																							
CDR		POST INSERTION		IMU MNVRR	ZLV MNVRR	CABIN ATTM	UNSTON CABIN		RAFT CONTROL		MEAL		PRE SLEEP ACT	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR				PRE SLEEP ACT																							
PLT		POST INSERTION		IMU MNVRR	ZLV MNVRR	CABIN ATTM	UNSTON CABIN		RAFT CONTROL		MEAL		PRE SLEEP ACT	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR				PRE SLEEP ACT																							
MS1	LAUNCH OMS-1	POST INSERTION		CINEMA CORR SIGNAL SHOLD	TV SET 02	UNSTON CABIN		MEAL PREP	MEAL		MEAL		PRE SLEEP ACT	ASK TEMP	ASK TEMP	ASK TEMP	ASK TEMP					PRE SLEEP ACT																							
MS2		POST INSERTION		IMU MNVRR	ZLV MNVRR	CABIN ATTM	UNSTON CABIN		RAFT CONTROL		MEAL		PRE SLEEP ACT	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR				PRE SLEEP ACT																							
MS3		POST INSERTION		IMU MNVRR	ZLV MNVRR	CABIN ATTM	UNSTON CABIN		RAFT CONTROL		MEAL		PRE SLEEP ACT	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR	IMU MNVRR				PRE SLEEP ACT																							
DAY/NIGHT	[Shaded blocks representing day/night cycles]																																												
ORBIT		2		3		4		5		6		7		8		9																													
GSTON COVERAGE		YAR	HAW	DKR	ACN	GOS	MIL	MLX	BDA	HAW	GOS	GDX	MLX	MIL	BDA	HAW	GOS	GDX	MLX	MIL	BDA	HAW	GOS	GDX	MLX	MIL	BDA	HAW	GOS	GDX	MLX	MIL	BDA	HAW	GOS	GDX	MLX	MIL	BDA	HAW	GOS	GDX	MLX	MIL	BDA
TDRS E M																																													
ATTITUDE	ASCENT		-ZLV BIASED		IMU			-ZLV								DEPLOY	SEP	WIN			-ZLV	IMU			-ZLV																				
NOTES:	<p>● ACTIVATE CINEMA 360 HEATERS      ● APU HTR DEACT</p> <p>● -ZLV, +XVV      ● APU HTR RECONFIG      ● -ZLV, +XVV      ● RAFT STATION</p> <p>● -ZLV, +XVV</p>																																												
	<b>HI-PRIORITY</b>																																												

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
031:01:00 / 031:13:00	000:12:00 / 001:00:00	030:19:00 / 031:07:00	01 / 031 GMT	-24.2		JANUARY 30, 1984	STS-11	FINAL	12/19/83				
GMT : 031	2	3	4	5	6	7	8	9	10	11	12	13	
FD : 01										FD:02			
MET : 000	12	13	14	15	16	17	18	19	20	21	22	23	
CDR	SLEEP						POST SLEEP ACT	POST SLEEP ACT				10:2 PREP	
PLT	SLEEP						POST SLEEP ACT	POST SLEEP ACT	EXERCISE			10:2 PREP	
MS1	SLEEP						POST SLEEP ACT	POST SLEEP ACT	RECEIVES	70MM SET 01	16MM SET 01	MEAL PREP	
MS2	SLEEP						POST SLEEP ACT	POST SLEEP ACT	CRACK	LEH PREBREATHE			
MS3	SLEEP						POST SLEEP ACT	POST SLEEP ACT	ATR	LEH PREBREATHE			
DAY/NIGHT	[Day/Night Cycle]												
ORBIT	9	10	11	12	13	14	15	16					
GSTDN COVERAGE	-GMM	-AGD -ACN -DKR	-DKR	-DKR -MAD -MAX	-ORR	-MAX -YAR -ORR	-MAD -MAX -MAD -MIL -MLX -BDA -DKR	-BDA -DKR -YAR -ORR	-YAR -ORR	-YAR -ORR	-DKR	-YAR	
TDRS		-GMM	-AGD -AGD		-ORR	-DKR -MAD	-MIL -MLX -BDA -DKR	-MIL -MLX					
ATTITUDE	-ZLV						IMU	-ZLV, +XVV					
NOTES:	HI-PRIORITY												

8 070 0602 CABIN ATMOSPHERE VERIFICATION !

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE		
031:13:00 / 032:01:00	001:00:00 / 001:12:00	031:07:00 / 031:19:00	02 / 031 GMT	-22.0		JANUARY 31, 1984	STS-11	FINAL	12/19/83		
GMT :031 13	14	15	16	17	18	19	20	21	22	23	24
FD :02											
MET :001											
CDR	10.2 CABIN DEPRESS	MEAL	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN
PLT	10.2 CABIN DEPRESS	MEAL	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN
MS1	MEAL	MEAL	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN
MS2	MEAL	MEAL	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN
MS3	MEAL	MEAL	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN	DRY CLEAN
DAY/NIGHT											
ORBIT	17	18	19	20	21	22	23	24			
STATION COVERAGE	HAW -ACN -GDX -BOT -GDS	MIL -BDA -ACN -HAW -BOT -GDX -GDS	-GDX -MIL -GDS -MLX -BDA	-HAW -ACN -BOT -GMM	-HAW -GDS -GDX	-BOT -GMM -HAW	-AGD -ACN -HAW -AGD -BOT -GMM	-GMM -HAW	-AGD -ACN -GMM	-AGD -ACN	-AGD -ACN
TORS E H											
ATTITUDE		-ZLV	DEPLOY	SEP	WIN		-ZLV	IMU		-ZLV	
NOTES:	♦ DP WESTAR SNSHD ⊗ C-360 PAM DPLY/01 ⊙ -ZLV, +XVV ⊙ DTD 0316 UPPER STAGE PLUME DAMAGE MODEL VERIFICATION ⊙ -ZLV, +XVV										
<b>HI-PRIORITY</b>											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
032:01:00 / 032:13:00	001:12:00 / 002:00:00	031:19:00 / 032:07:00	02 / 032 GMT	-19.9		JANUARY 31, 1984	STS-11	FINAL	12/19/83			
GM : 032	2	3	4	5	6	7	8	9	10	11	12	13
FD : 02								FD:03				
MET : 001	12	13	14	15	16	17	18	19	20	21	22	23
CDR	SLEEP						POST SLEEP ACT			EVA PREP		
PLT	SLEEP						POST SLEEP ACT	INU ALIGN (ROLL)	POST SLEEP ACT	FC PURGE	HTR ON	FC PURGE HTR OFF
MS1	SLEEP						POST SLEEP ACT	POST SLEEP ACT	POST SLEEP ACT	FC PURGE SET 01	16MM SET 04	35MM SET 03
MS2	SLEEP						POST SLEEP ACT			EVA PREP		
MS3	SLEEP						POST SLEEP ACT			EVA PREP		
DAY/NIGHT	[Day/Night Cycle]											
ORBIT	25	26	27	28	29	30	31	32				
GSTON COVERAGE	[Coverage Diagram]											
TDRS E H	[TDRS Coverage]											
ATTITUDE	[Attitude Diagram]											
NOTES:	<b>HI-PRIORITY</b> • FC PURGE HTR ON • POSITION ARM • DTO 0602 CABIN • ATMOSPHERE VERIFICATION • MANUAL • FC PURGE HTR OFF											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
032:13:00 / 033:01:00	002:00:00 / 002:12:00	032:07:00 / 032:19:00	03 / 032 GMT	-17.8		FEBRUARY 1, 1984	STS-11	FINAL	12/19/83				
GMT : 032	13	14	15	16	17	18	19	20	21	22	23	24	25
FD : 03													
MET : 002	0	1	2	3	4	5	6	7	8	9	10	11	12
CDR	EVA PREP	AD/REPRESS	EVA SUPPORT					AD/REPRESS	POST EVA	PRE SLEEP ACT	IMU MNV ZLV MLX RCN BOT	PRE SLEEP ACT	SLEEP
PLT	TRK MNVR	EXERCISE	EVA SUPPORT						CABIN REPRESS	PRE SLEEP ACT		PRE SLEEP ACT	SLEEP
MS1	TV ACT 07	EVA SUPPORT	M LR DEACT	EVA SUPPORT			MLR DEACT	EVA SUPPORT		PRE SLEEP ACT		PRE SLEEP ACT	SLEEP
MS2	EVA PREP	AD/REPRESS	M U C H E C T O U T	T R A P E S	T P A S	M R A N S O	M U O P S	EVA	M E B T A S K	AD/REPRESS	POST EVA	PRE SLEEP ACT	SLEEP
MS3	EVA PREP	AD/REPRESS	K O U T	I O U T	S K O U T	C T S	EVA	S I M	AD/REPRESS	POST EVA	PRE SLEEP ACT	PRE SLEEP ACT	SLEEP
DAY/NIGHT	[Day/Night Cycle Diagram]												
ORBIT	33	34	35	36	37	38	39	40					
GSTON COVERAGE	-HAW -RCN -GDX -GDS -MIL -MLX -BDA -YAR -GWM	-MIL -MLX -BDA -HAW -GDX -GDS -RCN -BOT	-GDS -GDX -MIL -MLX -RCN -BOT -HAW -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -HAW -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM	-HAW -GDX -GDS -MIL -MLX -RCN -BOT -GWM
TORS E W	[TORS E W Diagram]												
ATTITUDE	-ZVV BIASED   IMU   -ZLV												
NOTES:	• DTO 0607 MMU CAPABILITY DEMO • DTO 0614 MFR EVAL ▲ MLR POST DEACT ■ DTO 0602 CABIN ATMOSPHERE VERIFICATION ■ -ZLV, +XVV												
<b>HI-PRIORITY</b>													



GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
033:01:00 / 033:13:00	002:12:00 / 003:00:00	032:19:00 / 033:07:00	03 / 033 GMT	-15.7		FEBRUARY 1, 1984	STS-11	FINAL	12/19/83					
GMT : 033	2	3	4	5	6	7	8	9	10	11	12	13		
FD : 03							FO:04							
MET : 002	12	13	14	15	16	17	18	19	20	21	22	23		
CDR	SLEEP						POST SLEEP ACT	IMU ALIGN (ROLL)	POST SLEEP ACT	RENDEZVOUS				
										IRT DPLY	SEP	52	F1	
PLT	SLEEP						POST SLEEP ACT			RENDEZVOUS				
MS1	SLEEP						POST SLEEP ACT	POST SLEEP ACT	RENDEZVOUS	CABIN STOW	TV SET 05	TV ACT 05	DEFECT SPARS	EXERCISE
MS2	SLEEP						POST SLEEP ACT			CABIN STOW	EXERCISE		DEFECT	
MS3	SLEEP						POST SLEEP ACT			RENDEZVOUS				
DRY/NIGHT	[Bar chart showing dry/night periods]													
ORBIT	41	42	43	44	45	46	47	48						
GSTON COVERAGE	-ACN -DKR	-GWM	-AGD -DKR -ACN	-MAX -NAD	-DKR -MAX -NAD	-MIL -MLX -BDA -DKR -MAX -NAD	-DKR -YAR -ORR	-MLX -MIL -BDA -DKR	-YAR -ORR	GDS -MIL -MLX -BDA -DKR	-YAR -ORR	-HAW -ACN	-GDS-ACN -GDX-ACN -MIL-ACN -MLX-ACN -BDA -DKR	-YAR -ORR
TORS	[Torsion diagram with E and W markers]													
ATTITUDE	-ZLV						IMU	-ZLV	-XLV	+XLV, -ZVV				
NOTES:	<p>HI-PRIORITY</p> <p>■ DTO 0811, 0812 RENDEZVOUS, ONE DAY RNOZ</p>													

GMT (D:H:M)		MET (D:H:M)		CST (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
033:13:00 / 034:01:00		003:00:00 / 003:12:00		033:07:00 / 033:19:00		04 / 033 GMT	-13.6		FEBRUARY 2, 1984	STS-11	FINAL	12/19/83
GMT : 033												GMT : 034
FD : 04												
MET : 003												
CDR	RENDEZVOUS F3 TI	MEAL	RNDZ FIN SEP	CABIN STOW	FCS C/O	RF CIR SRE HOT	EXERCISE	PRE SLEEP ACT			SLEEP	
PLT	RENDEZVOUS	MEAL	RNDZ	EXERCISE	FCS C/O	RF CIR SRE HOT	CABIN STOW	PRE SLEEP ACT	IMU ALIGN (ROLL)	PRE SLEEP ACT	SLEEP	
MS1	EXERCISE	CABIN STOW	MEAL	CABIN STOW	CABIN STOW	TV SET 12	TV ACT 12	TV STOW	PRE SLEEP ACT			SLEEP
MS2	MEAL PREP	CABIN STOW	MEAL	CABIN STOW	EMU MAINT/RECHARGE	POST EVA ENT PREP	CABIN STOW	PRE SLEEP ACT			SLEEP	
MS3	RENDEZVOUS	MEAL	RNDZ	EMU MAINT/RECHARGE	POST EVA ENT PREP	CABIN STOW	PRE SLEEP ACT			SLEEP		
DAY/NIGHT	[Day/Night Cycle]											
ORBIT	49 50 51 52 53 54 55 56											
GSTDN COVERAGE	-YAR -HAW -GDX -GDS -ACN -BDT -MIL -MLX -MIL -GDS -ACN -BOT -GMM -HAW -AGO -ACN -GMM -AGD -ACN -GMM -MIL -HAW -GDX -GDS -ACN -BOT -GMM -HAW -AGO -BOT -GMM -HAW -AGO -GMM -HAW -AGO											
TDRS E M	[TDRS Coverage]											
ATTITUDE	-XLV, -ZUV   IMU   -ZLV											
NOTES:	<b>HI-PRIORITY</b>											

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
034:01:00 / 034:13:00	003:12:00 / 004:00:00	033:19:00 / 034:07:00	04 / 034 GMT	-11.5		FEBRUARY 2, 1984	STS-11	FINAL	12/19/83				
GMT : 034	2	3	4	5	6	7	8	9	10	11	12	13	
FD : 04				FD:05									
MET : 003	12	13	14	15	16	17	18	19	20	21	22	23	0
CDR	SLEEP			POST SLEEP ACT	I M U M N V R	TRK M N V R	POST SLEEP ACT	DEORBIT PLBO DPS	DEORBIT PREP				
PLT	SLEEP			POST SLEEP ACT	K U - B O S T O W	R A D B Y P	POST SLEEP ACT	DEORBIT PLBO DPS	DEORBIT PREP				
MS1	SLEEP			POST SLEEP ACT	M I S S I O N R E C O R D	S T O W	POST SLEEP ACT	DEORBIT PLBO DPS	DEORBIT PREP				
MS2	SLEEP			POST SLEEP ACT	C O M M U N I C A T I O N		POST SLEEP ACT	DEORBIT PLBO DPS	DEORBIT PREP				
MS3	SLEEP			POST SLEEP ACT			POST SLEEP ACT	DEORBIT PLBO DPS	DEORBIT PREP				
DRY/NIGHT	[Bar chart showing dry/night periods]												
ORBIT	57	58	59	60	61	62	63	64					
GSTDN COVERAGE	-AGD -RCN -DKR	-GMM -DKR	-MAD -YAR -ORR	-BDA -DKR -MAX -MAD	-YAR -ORR	-MLX -MIL -BDA -DKR -MAD	-YAR -ORR	-MLX -MIL -BDA -DKR	-YAR -ORR	-GDX -GDS -MIL -MLX -BDA -DKR	-BOT -YAR	-BDA -DKR -AC	-BOT
TDRS E M													
ATTITUDE		-ZLV			IMU		-XSI		IMU			DEORBIT	
NOTES:	<p>• HI LOAD HTR ON      ▲ DEORBIT PREP</p> <p>● FES CNTLR CHECK</p> <p><b>HI-PRIORITY</b></p>												

GMT (D:H:M)	MET (D:H:M)	CST (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
034:13:00 / 035:01:00	004:00:00 / 004:12:00	034:07:00 / 034:19:00	05 / 034 GMT	-9.4		FEBRUARY 3, 1984	STS-11	FINAL	12/19/83					
GMT : 034	13	14	15	16	17	18	19	20	21	22	23	0	11	12
FD : 05														
MET : 004	0	1	2	3	4	5	6	7	8	9	10			
CDR	PER ORBIT													
PLT	PER ORBIT													
MS1	PER ORBIT													
MS2	PER ORBIT													
MS3	PER ORBIT													
DAY/NIGHT	[Day/Night bar chart]													
ORBIT	64	65	66	67	68	69	70	71	72					
GSTDN COVERAGE	--YAR --GMM --BOR --ACN --MIL --MLX --GMM --HAW --ARGO --BOT --RCN --BOT --GMM --ARGO --RCN --GMM --GDX --GDS --GMM --HAW --BOT --GMM --HAW --ARGO --BOT --GMM --HAW --ARGO --RCN --GMM --ARGO --MIL --MLX --GDS --GMM --HAW --BOT --GMM --HAW --ARGO --RCN --GMM --ARGO													
TORS E H	[TORS E H bar chart]													
ATTITUDE	ENTRY													
NOTES:	<b>HI-PRIORITY</b>													

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5C-12

STS-11/FIN

CONSUMABLES CURVES

D. HEATH, E.E. FISHER

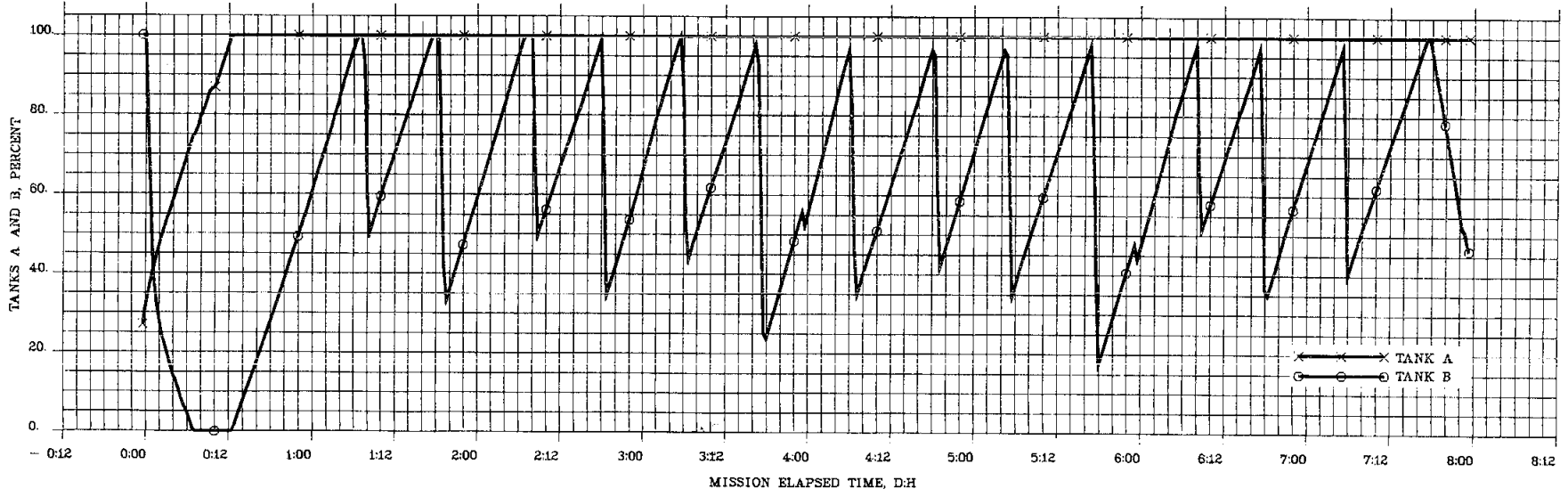
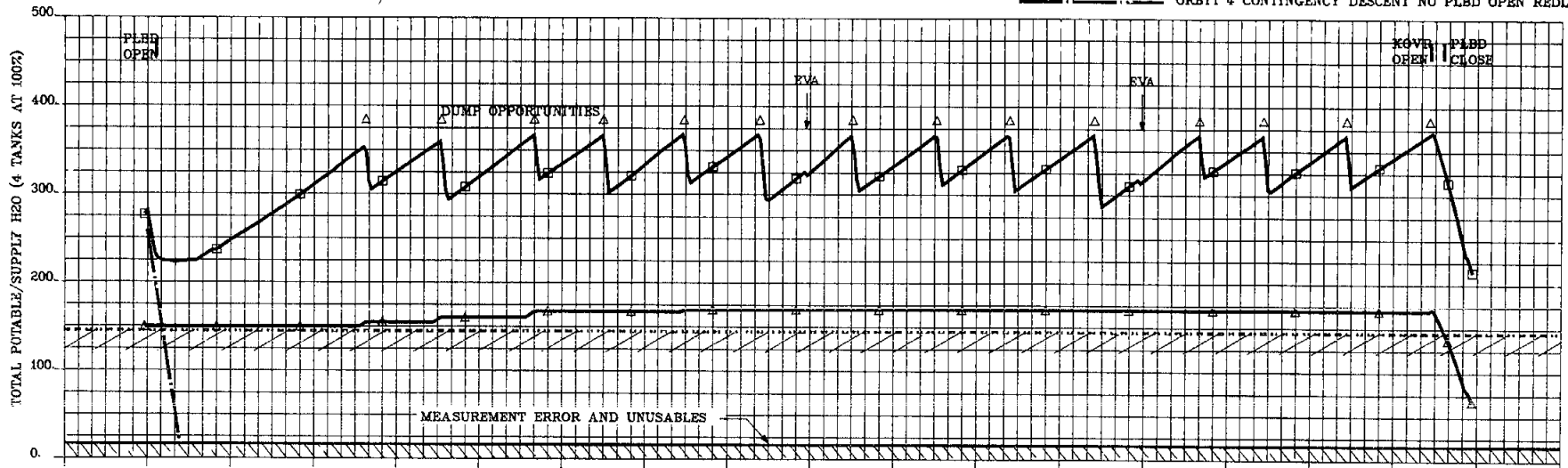
DATA SOURCE JSC-18840 (CAP) 10/07/83

DATA CONFIRMED *E.E. Fisher*

TRAJECTORY: OFF CYCLE 2, REV.  
CAP: BASIC 10/07/83  
ANALYSIS DATE: 09/30/83

□—□ TANKS A-D  
△—△ TANKS C-D

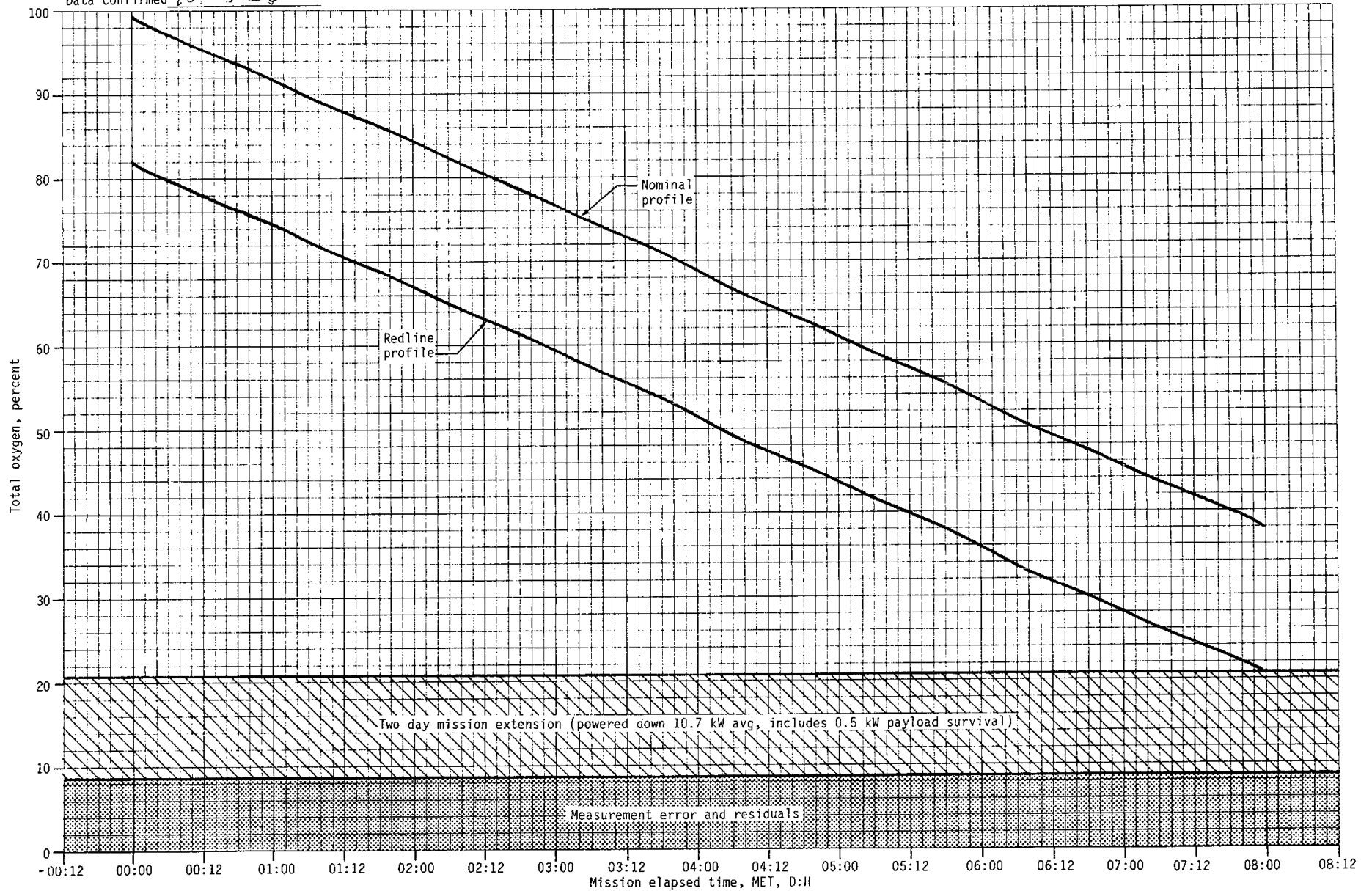
----- ANYTIME CONTINGENCY DEORBIT (165 MIN) REDLINE  
—— ORBIT 4 CONTINGENCY DESCENT NO PLBD OPEN REDLINE



STS-11 SUPPLY WATER

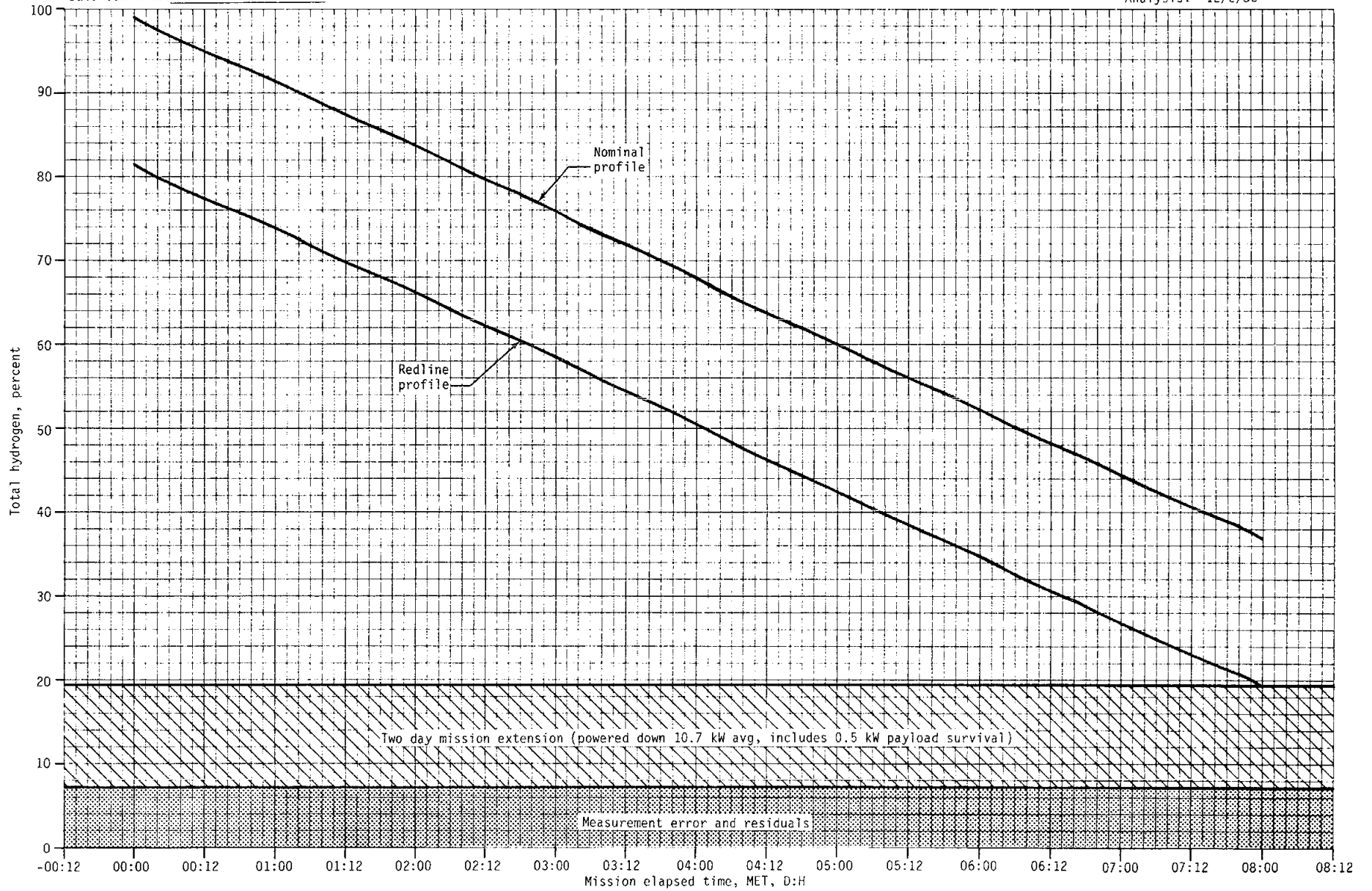
S. Price/FPB/MPAD  
Data source JSC 18840 (CAP) 10/7/83  
Data confirmed *W. S. Smith*

Trajectory: Cycle 2 (Rev A)  
CAP: Basic 10/7/83  
Analysis: 12/2/83



Flight 41-B cryogenic oxygen profile.





Flight 41-B cryogenic hydrogen profile.

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

CREW ACTIVITY PLAN NOTES  
(CONSTRAINTS AND GUIDELINES)

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CREW ACTIVITY PLAN NOTES  
(CONSTRAINTS AND GUIDELINES)

A. FLIGHT DESCRIPTION

STS-11 (OV099) will launch from KSC on January 30, 1984, into a 165-nm orbit at an inclination of 28.45°. The mission duration will be 8 days (~191 hrs). Nominal landing occurs at KSC on February 7, 1984.

Landing opportunities are:

		<u>LANDING ORBIT NO.</u>	<u>SITE</u>	<u>LOCAL TIME</u>
Nominal	Primary	128	KSC	7:19 EST
	Backup	129	EDW**	5:47 PST
	Weather Alternate	129	EDW**	5:47 PST
1 Day Late*	Primary	144	KSC	7:10 EST
	Backup	NONE		
	Weather Alternate	144	EDW**	4:01 PST
2 Days Late*	Primary	159	KSC**	5:25 EST
	Backup	NONE		
	Weather Alternate	160	EDW**	3:51 PST

\*Requires orbit adjust at nominal TIG

\*\*Night landing

MAJOR EVENTS

<u>LAUNCH (KSC)</u>	January 30, 1984
<u>MET (DD/HH:MM:SS)</u>	0/00:00:00
Day of year	30
<u>CST/GMT</u>	07:00/13:00

<u>MECO</u>	
<u>MET (DD/HH:MM:SS)</u>	0/00:08:27
<u>ORBIT ha/hp (nm)</u>	83 x -3

<u>OMS-1</u>	
<u>MET (DD/HH:MM:SS)</u>	0/00:10:21
<u>ΔV (fps)</u>	250.9
<u>ΔT (MM:SS)</u>	2:39
<u>ORBIT ha/hp (nm)</u>	165 x 51

<u>OMS-2</u>	
<u>MET (DD/HH:MM:SS)</u>	0/00:45:04
<u>ΔV (fps)</u>	202.7
<u>ΔT (MM:SS)</u>	2:10
<u>ORBIT ha/hp (nm)</u>	165 x 165

<u>WESTAR SEPARATION (OMS)</u>	
<u>MET (DD/HH:MM:SS)</u>	0/08:14:23
<u>ΔV (fps)</u>	11
<u>ΔT (MM:SS)</u>	0:09.0
<u>ORBIT ha/hp (nm)</u>	170 x 165

<u>PALAPA SEPARATION (OMS)</u>	
MET (DD/HH:MM:SS)	1/03:52:11
$\Delta V$ (fps)	11.0
$\Delta T$ (MM:SS)	0:09.0
ORBIT ha/hp (nm)	176 x 165
<u>DTO 403 (OMS TO RCS #1)</u>	
MET (DD/HH:MM:SS)	2/01:50:12
$\Delta V$ (fps)	1.3
$\Delta T$ (MM:SS)	0:05.0
ORBIT ha/hp (nm)	176 x 165
<u>DTO 403 (OMS TO RCS #2)</u>	
MET (DD/HH:MM:SS)	2/01:50:41
$\Delta V$ (fps)	34.0
$\Delta T$ (MM:SS)	0:33
ORBIT ha/hp (nm)	176 x 155
<u>ORBIT ADJUST BURN (OMS)</u>	
MET (DD/HH:MM:SS)	2/02:36:59
$\Delta V$ (fps)	36.6
$\Delta T$ (MM:SS)	0:42.0
ORBIT ha/hp (nm)	155 x 155
<u>RENDEZVOUS DTOs (SEP)</u>	
MET (DD/HH:MM:SS)	2/03:44:23
$\Delta V$ (fps)	0.8
<u>RENDEZVOUS DTOs (S2)</u>	
MET (DD/HH:MM:SS)	2/04:16:55
$\Delta V$ (fps)	2.8
<u>RENDEZVOUS DTOs (F1)</u>	
MET (DD/HH:MM:SS)	2/05:14:30
$\Delta V$ (fps)	7.8
<u>RENDEZVOUS DTOs (NC)</u>	
MET (DD/HH:MM:SS)	2/20:16:28
$\Delta V$ (fps)	27.4
<u>RENDEZVOUS DTOs (NH)</u>	
MET (DD/HH:MM:SS)	2/21:01:34
$\Delta V$ (fps)	4.2
<u>RENDEZVOUS DTOs (NCC)</u>	
MET (DD/HH:MM:SS)	2/22:20:23
$\Delta V$ (fps)	0.4
<u>RENDEZVOUS DTOs (TI)</u>	
MET (DD/HH:MM:SS)	2/23:15:52
$\Delta V$ (fps)	21.0
<u>RENDEZVOUS DTOs (TF)</u>	
MET (DD/HH:MM:SS)	3/00:36:20
$\Delta V$ (fps)	5.6

RENDEZVOUS DTOs (SEP)

<u>MET (DD/HH:MM:SS)</u>	3/02:20:01
$\Delta V$ (fps)	4.0
$\Delta T$ (MM:SS)	0:07.8
ORBIT ha/hp (nm)	152 x 152

DEORBIT BURN

<u>MET (DD/HH:MM:SS)</u>	7/22:22:39
$\Delta V$ (fps)	278.4

ENTRY INTERFACE

<u>MET (DD/HH:MM:SS)</u>	7/22:49:48
--------------------------	------------

LANDING (KSC)

<u>MET (DD/HH:MM:SS)</u>	7/23:19:04
Day of year	38
CST/GMT	06:19/12:19

8. CREW

1. The crewmen responsible for performing an EVA, are: EV1 - MS3 and EV2 - MS2.
2. There will be five crewmen flying this mission, with each crewmen assigned to the following tasks:

CDR	LEFT	Mission Success, Vehicle and Crew Safety, DPS, GNC, ECLS, Rendezvous and IV-1 crewman
PLT	RIGHT	PDRS, SPAS Systems, HP-41 Programs, EVA COMM, IFM and all Shuttle Systems except DPS, ECLS and C&W
MS1	ASC 4th/MIDDECK	PAM-D/WESTAR, PDRS, all experiments (including SPAS experiments) CCTV/VTR and all movies (including CINEMA 360), IRT DSO
MS2	CENTER	PAM-D/PALAPA, EV-2 and center seat crewman (ascent/entry), RME
MS3	MIDDECK/ENTRY 4th	COMM, C&W, EV-1 Rendezvous, Still Photography, Grid, Visual Observations, HP-41 loading and laser DSO

## C. ORBITER SYSTEMS

### 1. Communications and Instrumentation

- a. The Operational Instrumentation (OI) system will nominally be managed from the ground through uplink RTC commands coordinated with the crew.
- b. The Modular Auxiliary Data System (MADS) will nominally be managed through uplink RTC commands and crew switch actions.
- c. There are 12 GSTDN sites available for on-orbit coverage: ORR, GDS (GD<sub>X</sub>), MIL (ML<sub>X</sub>), BDA, HAW, GWM, AGO, ACN, MAD (MA<sub>X</sub>), YAR, BOT, and DKR.
- d. There are 3 GSTDN sites available for real-time TV: GDS (GD<sub>X</sub>), MIL (ML<sub>X</sub>), and HAW.
- e. There are 2 GSTDN sites available for UHF voice only: YAR and BOT.
- f. There is 1 SGLS site available for contingency on-orbit coverage: IOS.
- g. TDRS is assumed to be in position (41<sup>0</sup>W) for this edition of the crew activity plan.

### 2. Guidance and Navigation

- a. The Orbiter state vector must be uplinked whenever downtrack error in the on-board vector becomes greater than 20 nm, but is usually uplinked when errors are much greater than 5 nm. These are real-time calls. In addition, state vectors must be uplinked for specified targets when utilizing an Orbiting Vehicle as a TGT ID with Universal Pointing.
- b. IMU alignments are scheduled approximately every 12 hours in morning and evening activities and prior to major events requiring low navigation uncertainty.

- c. The on-orbit avionics configuration is listed below. This is considered the group A powerdown configuration. Group B powerdown may be used to further reduce electrical loads.

#### POWERDOWN GROUP A

GPC 1	- GNC OPS 2
GPC 2	- GNC OPS 2
GPC 3	- FD OPS 3 (OFF)
GPC 4	- SM OPS 4
GPC 5	- BFS (OFF)
IMUs (3)	- OPERATE
STAR TRACKERS (2)	- ON
MASS MEMORY UNITS (2)	- ON
FLIGHT-CRITICAL MDMs (8)	- ON

#### POWERDOWN GROUP B

GPC 1	- GNC OPS 2
GPC 2	- GNC OPS 2
GPC 3	- FD OPS 3 (OFF)
GPC 4	- SM OPS 4
GPC 5	- BFS (OFF)
IMUs (2)	- OPERATE
STAR TRACKERS (2)	- ON
MASS MEMORY UNITS (1)	- ON
FLIGHT-CRITICAL MDMs (4)	- ON

3. Environmental Control and Life Support Subsystem (ECLSS)
- The CO<sub>2</sub> absorbers are installed for launch and entry and are alternately replaced as needed.
  - The four supply water tanks and one waste water tank are loaded for launch with volumes sufficient to meet an orbit 4 launch day deorbit opportunity with PLBDs failed closed (TK A = 2%, TK B = 98%, TK C = 75%, TK D = 75%, Waste TK = 2%). If waste water production exceeds storage capacity, a real-time call will be made to perform a dump. Normally two supply water dumps will occur per flight day. A real-time call will be made prior to each to inform the crew whether a dump is required, and to what level. Tanks A and B will be dumped to a level that will allow the tanks to be full prior to the next daily group of deorbit opportunities.

#### D. TEXT UPLINK SYSTEM

- The teleprinter (TPR) will provide an on-orbit capability to receive and reproduce text-only data (such as procedures, weather data, and CAP updates or changes) from MCC during routine and off-nominal situations. The TPR uses S-Band and is not dependent on TDRS Ku-Band. TPR uplink requires 1 to 2.5 minutes per message, depending upon the number of lines (up to 66). Activation includes powering up the unit during Post Insertion. The TPR will remain on continuously until deactivation prior to seat ingress on entry day.



2. The Text and Graphics System (TAGs) is basically a hard copy machine that operates via telemetry. The system provides the capability to transmit text material, maps, schematics, and photographs to the Orbiter through a two-way Ku-Bank link using the TDRS. Transmission time for an 8- x 11-in. page can vary from just over 1 minute to just over 16 minutes, depending on the hard-copy resolution desired.

#### E. TELEVISION/PHOTOGRAPHY

1. The CCTV systems provide two color wide-angle cameras for in-cabin coverage. There will also be four PLB TV cameras, and two RMS TV cameras configured as follows:

<u>Camera</u>	<u>Lens</u>
A(Port Fwd)	CLA(Color Lens Assembly)
B(Port Aft)*	MLA(Monochrome Lens Assembly)
C(Starboard Aft)*	CLA
D(Starboard Fwd))	WLA(Wide Angle Lens Assembly)
EE(RMS End Effector)	MLA
Elbow(RMS)	WLA

\*Camera equipped with laser range finder

2. The video tape recorder (VTR) is available with 30-min cassettes.
3. 16mm, 35mm, and 70mm camera systems are available.
4. Two Cinema 360 cameras, one in the crew compartment and one in the bay, will also be flown.

#### F. REMOTE MANIPULATOR SYSTEM

The RMS will be used and evaluated in the accomplishment of the following DTOs:

1. DTO 0316, Upper Stage Plume Damage Model Verification (Witness Plate)
2. DTO 0607, MMU Capability Demonstration
3. DTO 0614, Manipulator Foot Restraint Evaluation

#### G. PAYLOADS

1. ACES (Acoustic Containerless Experiment System)

The ACES is a three-axis acoustic containment furnace experiment which when activated performs a preprogrammed sequence of operations on a material sample for a period of 2 hr (approx MET 0/22:45 to 01/00:45) and automatically shuts off. The experiment hardware is contained in two airtight canisters and operates off of two 28 Vdc utility power outlets in the Orbiter middeck.

## 2. CINEMA-360

The Cinema 360 is part of a joint endeavor agreement between NASA and Cinema-360, Inc., a group of 3 planetariums, to produce a color motion picture film of Shuttle Flight Operations from launch to landing. Two 35mm 'Arriflex' motion picture cameras -- one stowed in middeck with two extra film magazines, and a second camera in the P/L bay, starboard side, mounted in a heated, pressurized 'GAS' can, viewing through an optical dome, using a 'Fisheye' lens -- will be flown.

## 3. GAS (Get Away Special)

The GAS payload is a self-contained equipment package. Five GAS payloads have been defined for STS-11 (G051, G004, G309, G008 and G349). All GAS payloads on this flight require crew activation and deactivation of the experiments. GAS experiment activation and operation times are listed in Table 9-7. Payload G051 requires the crew to initiate 3 data takes during operation.

The GAS G051 payload is from GTE laboratories and will study modified optical and electrical properties of arc discharge lamps when convective effects are eliminated. The experiment desires three periods of VRCS attitude control lasting less than one hour each.

The GAS G004 payload is by Utah State University. It is composed of two experiments to study: thermocapillary flow in liquid columns and capillary waves on water surfaces. Three additional experiments: spore growth, three-dimensional brownian motion, and dimensional stability are provided by Aberdeen University of Aberdeen, Scotland.

The GAS G309 payload is by the U.S. Air Force. The experiment will investigate the probability and incidence of cosmic ray induced errors in memory-type integrated circuits when flown in a shuttle orbit. G309 is a reflight of a similar experiment flown on STS-8.

The GAS G008 payload is by Utah State University. The first experiment studies the separation of flux from solder while soldering in a microgravity. This is a reflight of a similar experiment flown on STS-4. An experiment contributed by the University of Utah will study crystallization of a protein sample. Brighton High School of Salt Lake City has contributed an experiment to study seed germination in a microgravity environment.

The GAS G349 payload is by NASA Goddard Space Flight Center. The purpose of the payload is to monitor the effects of atomic oxygen erosion. This is a reflight of a similar experiment flown on STS-8.

#### 4. IEF (Isoelectric Focusing)

Isoelectric focusing is obtained by applying a d.c. potential on an electrolyte system in which the pH steadily increases from the anode to the cathode. The objective of the Isoelectric Focusing Experiment is to evaluate the effect of electro-osmosis on isoelectric focusing in the absence of gravity for a period of 1 hour and 30 minutes (approx MET 0/22:55 to 01/00:25). The IEF is a completely self-contained assembly which contains an array of eight columns of electrolyte solutions, a battery power supply, supporting hardware, electronics, camera, mirror, and strobe lights. The IEF will be installed in the Orbiter middeck and will occupy the space of a single middeck locker. It will mount to a single adapter plate. There is no electrical power or data interface with the Orbiter. A single switch is provided for crew activation of the experiment along with an indicator for operations status.

#### 5. MLR (Monodisperse Latex Reactor)

The MLR is designed to conduct experiments associated with the manufacture of monodisperse latex particles in the near weightlessness of space. The MLR package occupies the space of three middeck lockers. It is activated via a single switch at MET 001/05:15 and runs continuously for 20 hours. Experiment events are listed in Table 9-9.

#### 6. MMU

The Manned Maneuvering Unit (MMU) is a modular, self-contained, propulsive backpack designed to attach to the EMU. The MMU will be used during the EVA to accomplish DTO 0607 (MMU CAPABILITY DEMONSTRATION), which will provide an end-to-end verification of STS MMU/EVA capability. Two MMUs will be carried, one on the starboard side and the other on the port side of the forward cargo bay.

#### 7. PALAPA-B2

The Palapa-B2 payload is a deployable upper stage spacecraft powered by a Payload Assist Module (PAM) solid rocket motor. The deployment opportunities are determined by constraints imposed on the right ascension of the ascending node of the parking orbit. Normally, a deployment at the descending node of orbit 19 is planned, followed 45 minutes later by a PAM Perigee Kick Motor (PKM) burn on the ascending node of orbit 20. If the deployment has to be delayed, a second attempt will be scheduled on FD 3 with an orbit 32D deployment and an orbit 33A PKM burn. PALAPA deployment events and times are presented in Table 9-4.

8. RME (Radiation Monitoring Equipment)

The RME experiment is designed to measure radiation levels in the Orbiter middeck at various times throughout the flight. Experiment equipment includes the Handheld Radiation Monitor (HRM-III), a gamma and electron dosimeter, and the Pocket REM Meter (PRM), a neutron and proton dosimeter. The HRM-III will operate four times during the mission, while the PRM will operate twice. RME activation and operation times are listed in Table 9-8.

9. SPAS-01A (Shuttle Pallet Satellite)

The SPAS-01A mission will consist of attached operations during which the following experiments are to be performed: Friction Pressure Loss, Modular Opto-Electronic Multispectral Scanner, Bonn Neutral Mass Spectrometer, Heat Pipes, Yaw Earth Sensor Package, Solar Cell Calibration Equipment, and Material Wissenschaftliche Autonome Experimente Unter Schwerelosigkeit. SPAS-01A experiment activation times are listed in Table 9-5.

10. WESTAR-VI

The WESTAR payload is also a deployable upper stage spacecraft powered by a PAM solid rocket motor. Again, the deployment opportunities are determined by constraints imposed on the right ascension of the ascending node of the orbit. Normally, a deployment at the descending node of orbit 6 is planned, followed 45 minutes later by a PAM PKM burn on the ascending node of orbit 7. In case of a delay, deployment will be rescheduled to orbit 32D on FD3 with an orbit 33A PKM. WESTAR deployment events and times are presented in Table 9-3.

ON-ORBIT CREW ACTIVITY  
DETAILED TEST OBJECTIVES (DTOs),  
DETAILED SUPPLEMENTARY OBJECTIVES (DSOs)

INTRODUCTION..... 8-2  
TABLE 8-1 STS-11 DTOs/DSOs..... 8-3

DTOs/DSOs

## INTRODUCTION

The following Table describes the scheduling data and rationale for on-orbit crew activity related DTOs/DSOs for STS-11. The current FDRD (Ref. 1) was used for compiling this table.

DTOs/DSOs

TABLE 8-1 STS-11 ON-ORBIT CREW ACTIVITY RELATED DTOs/DSOs

DTO/DSO NUMBER	TITLE	SCHEDULED (DD/HH:MM) (MET)	SCHEDULING REMARKS
DTO 0316	Upper Stage Plume Damage Model Verification	1/04:23	Concurrent with second PAM-D PKM
DTO 0321	Crew Compartment Structure Deflection Investigation	1/21:30 2/01:20	
DTO 0403	OMS to RCS Interconnect	2/01:50	
DTO 0602	Cabin Atmosphere Verification	2/22:10 4/22:00 6/04:05	Late as possible prior to 10.2 depress Approximate midpoint of the 10.2 period Near as possible to the end of the 10.2 period
DTO 0607	MMU Capability Demonstration	3/23:15	During first EVA on FD5
DTO 0614	Manipulator Foot Restraint Evaluation	3/23:15	During first EVA on FD5
DTO 0777	CCTV Laser Ranging Test	FD4	During DTO 0812 and the second EVA on FD7

STS-11/FIN

TABLE 8-1 STS-11 ON-ORBIT CREW ACTIVITY RELATED DTOs/DSOs

DTO/DSO NUMBER	TITLE	SCHEDULED (DD/HH:MM) (MET)	SCHEDULING REMARKS
DTO 0808	EVA Fluid Transfer Connector Valve Demonstration	5/22:00	During second EVA on FD7
DTO 0811	Rendezvous Systems and Sensors Performance - Short Range	FD3	SEE FIGURE 8-1
DTO 0812	Rendezvous Systems and Sensors Performance - Long Range	FD4	SEE FIGURE 8-2
DSO 0201	Atmospheric Drag/Density Studies	3/01:00	
DSO 0401	Validation of Predictive Tests and Countermeasures for Motion Sickness	Presleep Activity	
DSO 0402	Cardiovascular De-conditioning Assessment	FD9	Fluid loading starts 90 minutes prior to EI



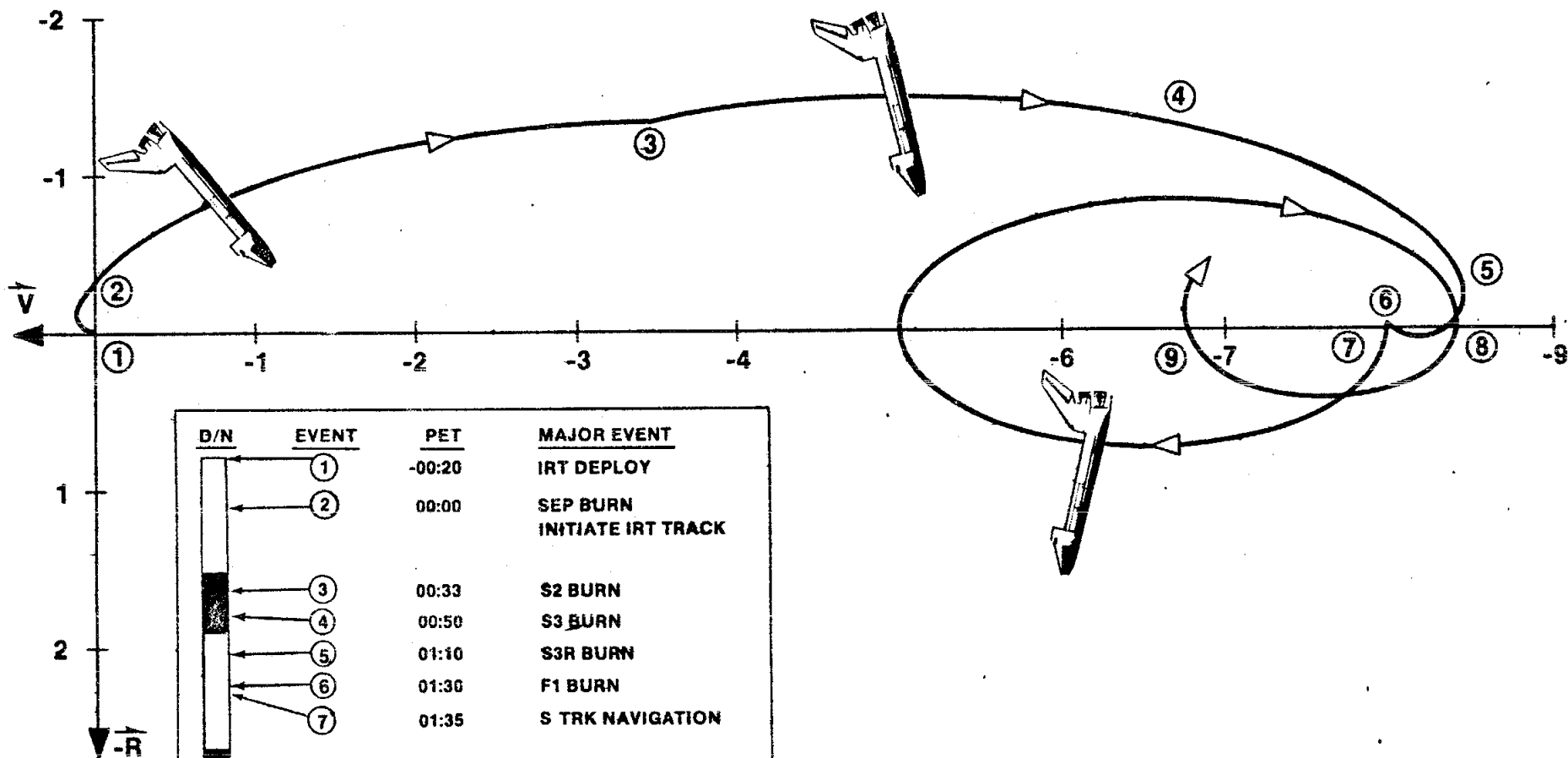
TABLE 8-1 (Cont)

DTO/DSO NUMBER	TITLE	SCHEDULED (DD/HH:MM) (MET)	SCHEDULING REMARKS
DSO 0901	Documentary Television	FD 1 FD 2 FD 3 FD 4 FD 5 FD 6 FD 7 FD 8	02 - PAM Deploy 02 - PAM Deploy 04 - IRT Deploy 05 - IRT Rendezvous 07 - EVA 1 08 - Student Experiment 09 - EVA 2 14 - Crew Conference (20 min duration; between 11:00 and 13:00 GMT)
DSO 0902	Documentary Motion Picture Photography	FD 1 FD 2 FD 3 FD 5 FD 6 FD 7 FD 9	16mm/01 - PAM Deploy 70mm/01 - PAM Deploy 16mm/01 - PAM Deploy 70mm/01 - PAM Deploy 16mm/03 - IRT Dply/Rndz 70mm/02 - IRT Dply/Rndz 16mm/04 - EVA A/L IN/EG 16mm/05 - EVA Ops 70mm/03 - EVA Ops 16mm/07 - Student Experiment 16mm/06 - RMS/SPAS 70mm/04 - RMS/SPAS 16mm/05 - EVA 70mm/03 - EVA Ops 16mm/10 - EI
DSO 0903	Documentary Still Photography	FD 5 FD 7 FD 9	35mm/01 - EVA/MMU Ops 35mm/01 - EVA/MMU Ops 35mm/02 - Entry Interface

STS-11/FIN

# RENDEZVOUS PROFILE - PHASE 1

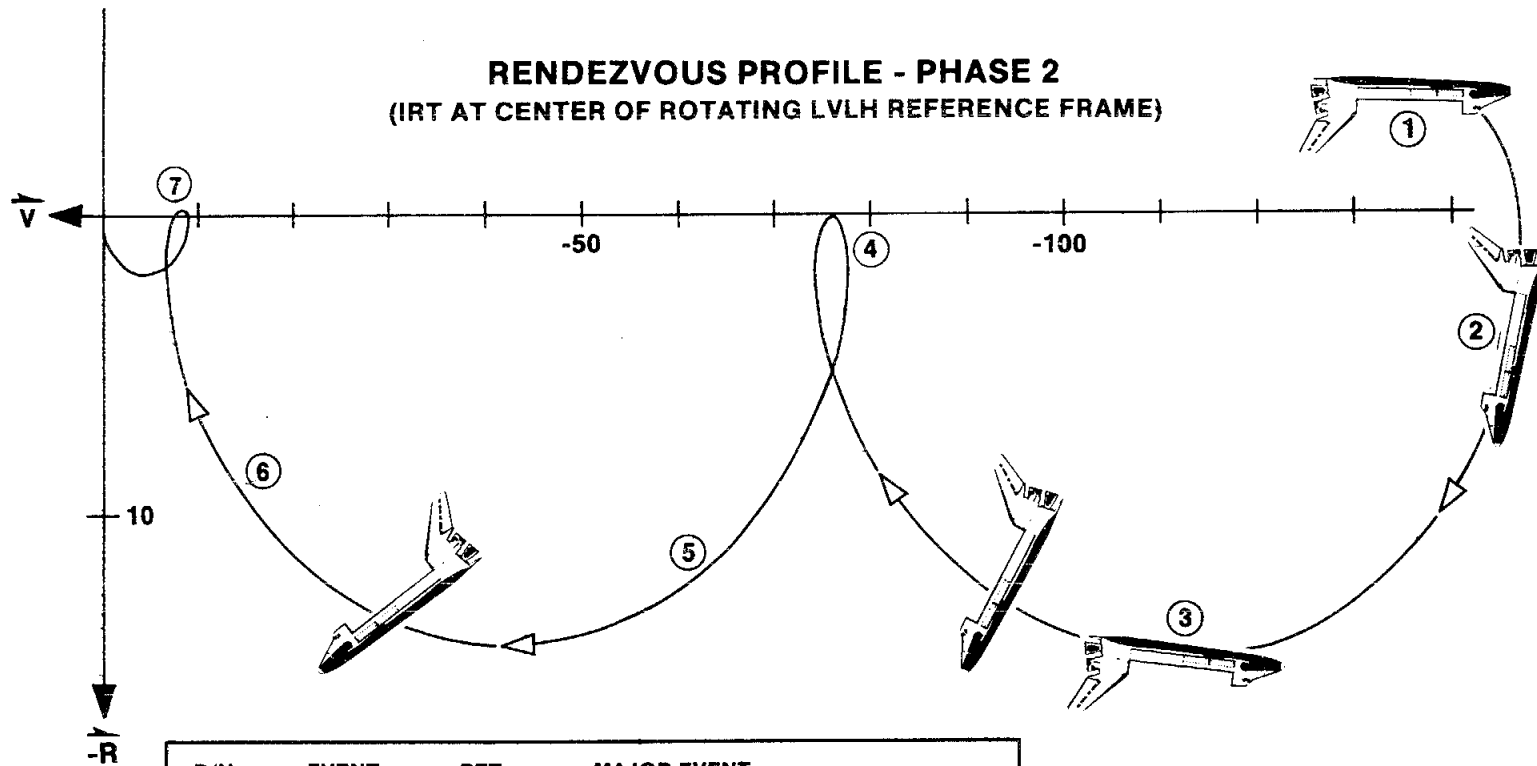
(IRT AT CENTER OF ROTATING LVLH REFERENCE FRAME)



<u>D/N</u>	<u>EVENT</u>	<u>PET</u>	<u>MAJOR EVENT</u>
	①	-00:20	IRT DEPLOY
	②	00:00	SEP BURN INITIATE IRT TRACK
	③	00:33	S2 BURN
	④	00:50	S3 BURN
	⑤	01:10	S3R BURN
	⑥	01:30	F1 BURN
	⑦	01:35	S TRK NAVIGATION
	⑧	03:15	COAS NAVIGATION
	⑨	03:30	BEGIN DRIFTING SEP TO ~140 NM

SCALE IN NM

**RENDEZVOUS PROFILE - PHASE 2**  
 (IRT AT CENTER OF ROTATING LVLH REFERENCE FRAME)



<u>D/N</u>	<u>EVENT</u>	<u>PET</u>	<u>MAJOR EVENT</u>
1	①	00:00	NC BURN
	②	00:08	S TRK NAVIGATION
3	③	00:45	NH BURN
	④	01:35	S TRK NAVIGATION
5	⑤	02:03	NCC BURN
	⑥	02:30	RADAR NAVIGATION
7	⑦	03:00	TRANSITION INITIATION (TI) BURN

**SCALE IN NM  
 DISTANCES ARE APPROXIMATE**

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TABLES

TABLE 9-1 - ACES EXPERIMENT ACTIVATION AND OPERATION TIMES..... 9-2

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TABLES

TABLE 9-1  
ACES EXPERIMENT ACTIVATION AND OPERATION TIMES

EVENT	APPROX MET (D/HH:MM)	DURATION (HH/MM)
ACES ACTIVATION	00/22:45	02:00
ACES DEACTIVATION	Automatic	--

TABLE 9-2  
IEF EXPERIMENT ACTIVATION AND OPERATION TIMES

EVENT	APPROX MET (D/HH:MM)	DURATION (HH/MM)
IEF ACTIVATION	0/22:55	01:30
IEF DEACTIVATION	Automatic	--

TABLE 9-3  
WESTAR DEPLOYMENT EVENTS AND TIMES  
(ORBIT 7A PKM BURN)

EVENT	MET (D/HH:MM)	DEPLOY MINUS (HH:MM)
PREDEPLOY CHECKOUT	0/06:59	01:00
MNVR TO DEPLOY ATT	0/07:19	00:40
MECHANICAL SEQUENCE START	0/07:44	00:15
TERMINAL SEQUENCE	0/07:56	00:03
DEPLOY	0/07:59:23	00:00
OMS SEP MNVR	0/08:14	(+)00:15
WINDOW PROTECT MNVR	0/08:28	(+)00:29
PKM IGNITION	0/08:44	(+)00:45

TABLES

TABLE 9-4  
 PALAPA DEPLOYMENT EVENTS AND TIMES  
 (ORBIT 20A PKM BURN)

EVENT	MET (D/HH:MM)	DEPLOY MINUS (HH:MM)
PREDEPLOY CHECKOUT	1/02:37	01:00
MNVR TO DEPLOY ATT	1/02:57	00:40
MECHANICAL SEQUENCE START	1/03:22	00:15
TERMINAL SEQUENCE	1/03:34	00:03
DEPLOY	1/03:37:11	00:00
OMS SEP MNVR	1/03:52	(+ )00:15
WINDOW PROTECT MNVR	1/04:06	(+ )00:29
PKM IGNITION	1/04:22	(+ )00:45

TABLE 9-5  
SPAS EXPERIMENT ACTIVATION AND OPERATION TIMES

EVENT	APPROX MET (D/HH:MM)	DURATION (HH:MM)
ACTIVATION (ATTACHED)	1/05:20 3/02:25	19:10 65:10
SYSTEM CHECKOUT	1/05:30	1:15
BNMS		
CAL	3/02:35	3:05
GLOW I	4/20:30	0:35
GLOW II	4/23:45	0:40
BACKGROUND	5/05:50	0:40
BACKGROUND	5/16:20	0:40
FPL	5/00:20	1:10
HP	3/05:50	38:10
MAUS-1	3/07:45	12:50
MAUS-2	3/07:50	12:55
MOMS	1/06:15 3/04:10	19:10 63:25
SCCE	4/21:30 5/03:30	0:30 0:30
YESP		
NIGHT	4/21:05 5/01:35	0:20 0:20
DAY	5/01:55	0:35
DEACTIVATION (ATTACHED)	5/19:35	0:10
ACTIVATION (DETACHED)	5/19:45	8:30
BNMS		
PERIODIC	5/20:00	1:50
BACKGROUND	5/21:50	3:10



TABLE 9-6  
 STUDENT EXPERIMENT OPERATION TIMES  
 AEM (ANIMAL ENCLOSURE MODULE)

EVENT	APPROX MET (D/HH:MM)
LIGHTS OFF	0/07:00
LIGHTS ON	0/20:30
DATA & LIGHTS OFF	1/06:30
LIGHTS ON	1/19:00
VTR/DATA & LIGHTS OFF	2/06:00
LIGHTS ON	2/18:00
DATA & LIGHTS OFF	3/05:00
LIGHTS ON	3/17:30
DATA & LIGHTS OFF	4/04:30
LIGHTS ON	4/17:30
VTR/DATA & LIGHTS OFF	5/04:30
LIGHTS ON	5/17:30
DATA & LIGHTS OFF	6/04:30
LIGHTS ON	6/17:30
VTR/DATA & LIGHTS OFF	7/04:30
LIGHTS ON	7/17:30

TABLE 9-7  
GAS EXPERIMENT ACTIVATION AND OPERATION TIMES

GROUP	EVENT	APPROX MET (D/HH:MM)	DURATION (HH:MM)
	GAS ENCDR UNSTOW/SETUP	0/01:55	00:15
A	GAS G051 ACTIVATION	2/04:55	23:20
	GAS G309 ACTIVATION		119:35
	GAS G349 ACTIVATION		119:35
B	GAS G004 ACTIVATION	3/04:15	96:15
	GAS G008 ACTIVATION		96:15
	GAS G051 EXP 1 STOP		--
	GAS G051 EXP 2		40:30
C	GAS G051 EXP 2 STOP	4/20:45	--
D	DELETED		
E	GAS G051 EXP 3	5/19:25	23:35
F	GAS G051 DEACTIVATION	6/19:00	--
G	GAS G004 DEACTIVATION	7/04:30	--
	GAS G309 DEACTIVATION		--
	GAS G008 DEACTIVATION		--
	GAS G349 DEACTIVATION		--
	GAS ENCDR STOW	7/18:30	00:15

TABLE 9-8  
RADIATION MONITORING EQUIPMENT (RME)  
ACTIVATION AND OPERATION TIMES

EVENT		APPROX MET (D/HH:MM)	DURATION (HH:MM)
HRM	ACT	0/23:00	1:35
	DATA RCD	1/00:35	
	ACT	3/00:20	1:40
	DATA RCD	3/02:00	
ACT	5/00:25	2:45	
DATA RCD	5/03:10		
PRM	ACT	6/18:55	2:35
	DATA RCD	6/21:30	
	ACT	1/07:30	15:00
	DATA RCD	1/22:30	
	ACT	5/03:25	15:55
	DATA RCD	5/19:20	

TABLE 9-9  
MLR EXPERIMENT ACTIVITY AND OPERATION TIMES

EVENT	APPROX MET (D/HH:MM)	DURATION (HH:MM)
MLR OFF-POST INSERTION	0/03:50	20:15
MLR ACTIVATION	1/05:10	
MLR STATUS	1/07:00	
MLR DEACTIVATION	2/01:25	
MLR POST DEACTIVATION	2/03:40	
MLR DEORBIT	7/18:45	

TABLE 9-10  
CINEMA-360

CAMERA	SCHEDULED	SCENE
CABIN	FD2	01 - PAM DPLY
	FD5	03 - RMS Activities
	FD6	02 - Middeck Activities
	FD7	04 - EVA Prep
	FD8	05 - FWD Flt Deck Activities
PLB	FD5	01 - MMU OPS
		02 - MFR OPS
	FD7	03 - RMS Uncradle
		04 - SPAS Grapple
		05 - SPAS Unberth
		06 - SPAS Docking

TABLE 9-11  
DAP A CONFIGURATIONS

	A1*	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
<u>TRANSLATION</u>											
PULSE ft/sec	0.10	0.10	0.10	0.10	0.10	0.10	0.25	0.25	0.10	0.05	0.05
<u>ROTATION</u>											
DSC RT NORM °/sec	0.200	0.400	0.200	0.200	0.400	0.200	0.800	0.200	0.200	0.200	0.150
VERN °/sec	0.200	0.400	0.200	0.008	0.200	0.200	0.250	0.200	0.200	0.200	0.200
PULSE NORM °/sec	0.10	0.10	0.30	0.10	0.40	0.10	0.10	0.05	0.10	0.10	0.05
VERN °/sec	0.010	0.010	0.010	0.010	0.200	0.010	0.010	0.010	0.010	0.010	0.010
COMP NORM °/sec	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
VERN °/sec	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
<u>DEADBAND</u>											
ATT NORM (deg)	5.000	1.00	5.00	1.00	5.00	5.00	0.20	1.00	2.00	2.00	2.00
VERN (deg)	1.000	1.000	0.070	1.000	1.000	1.000	1.00	1.000	1.000	0.500	0.300
RATE NORM °/sec	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
VERN °/sec	.020	.020	.020	.010	.020	.020	.010	.010	.020	.020	0.300
<u>JET OPT</u>											
P	1	1	3	1	1	3	1	1	1	1	1
Y	1	1	3	3	1	3	1	1	1	1	1
CNTL ACCEL	0	0	0	0	0	0	0	0	0	0	0

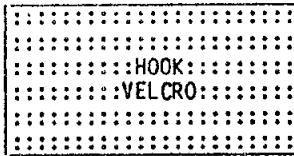
\*I-loaded OPS-2 DAP Configuration

TABLE 9-11 (Cont)  
DAP B CONFIGURATIONS

	B1*	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
<u>TRANSLATION</u>											
PULSE ft/sec	0.02	0.02	0.02	0.02	0.02	0.05	0.01	0.01	0.05	0.05	0.01
<u>ROTATION</u>											
DSC RT NORM °/sec	0.500	0.200	0.200	0.200	0.200	0.500	0.500	0.200	0.150	0.150	0.150
VERN °/sec	0.200	0.200	0.200	0.008	0.016	0.200	0.200	0.050	0.150	0.150	0.050
PULSE NORM °/sec	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.10	0.05	0.05	0.05
VERN °/sec	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.010	0.010	0.010	0.010
COMP NORM °/sec	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
VERN °/sec	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
<u>DEADBAND</u>											
ATT NORM (deg)	3.00	3.00	3.00	0.30	3.00	2.00	2.00	5.00	3.00	3.00	2.00
VERN (deg)	1.000	1.000	1.000	0.100	0.033	1.000	0.500	0.250	5.000	5.000	0.040
RATE NORM °/sec	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
VERN °/sec	.020	.020	.020	.010	.020	.020	.020	.010	.200	.200	0.010
<u>JET OPT</u>											
P	1	3	1	1	3	1	1	1	3	3	1
Y	1	3	1	3	3	1	1	1	3	3	1
CNTL ACCEL	0	0	0	0	0	0	0	0	0	3	0

\*I-loaded OPS-2 DAP Configuration

# DAP BOOK



STS-11/O/BAS

UNIV PTG	
TGT ID = 1	Orbiting Vehicle
= 2	Earth ctr
= 3	Earth tgt
	Input LAT ( $\pm 90$ )
	LON ( $\pm 180$ , + = East)
	ALT ( $\pm 99.99$ nm)
= 4	Sun ctr
= 5	Celestial tgt
	Input RA (0-359.99)
	DEC ( $\pm 90$ )
= 11-60	Nav Stars
BODY VECT = 1	+X*
= 2	-X*
= 3	-Z*
= 4	PTC ( $\sim 20^\circ$ below +X)*
= 5	Optional
	Input P (0-359.99)
	Y (270-359.99, 0-90)
* input OM +	OM (0-359.99)
MON AXIS = 1	+X
2	-X

STS-11/O/BAS

G20 DAP CONFIG			
CNTL ACCEL = 0	Orbiter alone	JET OPT = 1	Normal
= 1	P/L on RMS above stbd overhead window	= 2	Nose only
= 2	P/L on RMS above plbd	= 3	Tail only
= 3	In between position of 1 and 2		

TOP

<u>DAP</u>	<u>PURPOSE</u>
A1	- NOMINAL
	-ZLV
	IMJ ALIGN
	TAIL ONLY CONTROL
	BACKOUT
	PRE/POST PAM DEPLOY
	OMS BURN
	TAIL-TO-SUN
	LOSS OF VERN
A2	- PTC
A3	- RCS HOT FIRE
A4	- GG
A5	- IMJ ROLL
A6	- LOSS OF VERN
	(TAIL ONLY)
A7	- IUS STAR SCAN
A8	- IUS DEPLOY
A9	- RENDEZVOUS
A10	+ PROX OPS
A11	- SPAS GYRO DRIFT
A12	- (Blank)

STS-11/0/BAS

A1

TOP

A1

<u>DAP A1</u>			
PURPOSE:	<u>0.1 0</u>	1	TRANSLATION PULSE
-ZLV			ROTATION
IMJ ALIGN	<u>0.2 0 0</u>	2	DSC RT NORM
TAIL ONLY CONTROL BACKOUT	<u>0.2 0 0</u>	3	VERN
PRE/POST PAM DEPLOY	<u>0.1 0</u>	4	PULSE NORM
OMS BURN	<u>0.0 1 0</u>	5	VERN
TAIL-TO-SUN	<u>.0 0</u>	6	COMP NORM
LOSS OF VERN	<u>.0 0 0</u>	7	VERN
(NOSE & TAIL)			DEADBAND
	<u>5.0 0</u>	8	ATT NORM
	<u>1.0 0 0</u>	9	VERN
	<u>0.2 0</u>	10	RATE NORM
	<u>.0 2 0</u>	11	VERN
	<u>1</u>	12	JET OPT P
	<u>1</u>	13	Y
	<u>0</u>	14	CNTL ACCEL

STS-11/0/BAS

STS-11/0/BAS

A2

TOP

(reduced copy)

STS-11/FIN



				TOP	
	A1				
	DAP A2			A2	
PURPOSE:		0.1 0	1	TRANSLATION	
PTC				PULSE	
		0.4 0 0	2	ROTATION	
		0.4 0 0	3	DSC RT	NORM
		0.1 0 0	4	VERN	VERN
		0.0 1 0	5	PULSE	NORM
		0.0 0 0	6	VERN	VERN
		.0 0 0	7	COMP	NORM
				VERN	VERN
		1.0 0	8	DEADBAND	
		1.0 0 0	9	ATT	NORM
				VERN	VERN
		0.2 0	10	RATE	NORM
		0.2 0	11	VERN	VERN
		1	12	JET OPT	P
		1	13		Y
		0	14	CNTL ACCEL	

STS-11/O/BAS

STS-11/O/BAS

				A3	
	TOP				
	A2			TOP	
	DAP A3			A3	
PURPOSE:		0.1 0	1	TRANSLATION	
RCS HOT FIRE				PULSE	
		0.2 0 0	2	ROTATION	
		0.2 0 0	3	DSC RT	NORM
		0.3 0 0	4	VERN	VERN
		0.0 1 0	5	PULSE	NORM
		0.0 0 0	6	VERN	VERN
		.0 0 0	7	COMP	NORM
				VERN	VERN
		5.0 0	8	DEADBAND	
		1.0 0 0	9	ATT	NORM
				VERN	VERN
		0.2 0	10	RATE	NORM
		0.2 0	11	VERN	VERN
		3	12	JET OPT	P
		3	13		Y
		0	14	CNTL ACCEL	

STS-11/O/BAS

STS-11/O/BAS

				A4	
	TOP				

(reduced copy)

+	+	+	+	TOP	+
-	-	-	-	A4	-
A3	DAP A4				
PURPOSE:		0.1 0	1	TRANSLATION	
GG				PULSE	
		0.2 0 0	2	ROTATION	
		0.0 0 8	3	DSC RT	NORM
		0.1 0	4	PULSE	NORM
		0.0 1 0	5		VERN
		.0 0	6	COMP	NORM
		.0 0 0	7		VERN
				DEADBAND	
		1.0 0	8	ATT	NORM
		0.0 7 0	9		VERN
		0.2 0	10	RATE	NORM
		0.1 0	11		VERN
			1	JET OPT	P
			3		Y
			0	CNTL ACCEL	

-	-	-	-	STS-11/O/BAS	-
+	+	+	+	A5	+
-	-	-	-	TOP	-
+	+	+	+	TOP	+
-	-	-	-	A4	-

-	-	-	-	A5	-
+	DAP A5				
PURPOSE:		0.1 0	1	TRANSLATION	
IMJ ROLL				PULSE	
		0.4 0 0	2	ROTATION	
		0.2 0 0	3	DSC RT	NORM
		0.4 0	4	PULSE	NORM
		0.2 0 0	5		VERN
		.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
		0.0 2 0	11		VERN
			1	JET OPT	P
			1		Y
			0	CNTL ACCEL	

-	-	-	-	STS-11/O/BAS	-
+	+	+	+	A6	+
-	-	-	-	TOP	-

				TOP	
	A5				
					A6
	DAP A6				
PURPOSE:		0.1 0	1	TRANSLATION PULSE	
LOSS OF VERN (TAIL ONLY)		0.2 0 0	2	ROTATION DSC RT NORM	
		0.2 0 0	3	VERN	
		0.1 0	4	PULSE NORM	
		0.0 1 0	5	VERN	
		0.0 0	6	COMP NORM	
		0.0 0	7	VERN	
		5.0 0	8	DEADBAND 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	

	STS-11/0/BAS			STS-11/0/BAS	
					A7
	TOP			TOP	
	A6				A7
	DAP A7				
PURPOSE:		0.2 5	1	TRANSLATION PULSE	
IUS STAR SCAN		0.8 0 0	2	ROTATION DSC RT NORM	
		0.2 5 0	3	VERN	
		0.1 0	4	PULSE NORM	
		0.0 1 0	5	VERN	
		0.0 0	6	COMP NORM	
		0.0 0	7	VERN	
		0.2 0	8	DEADBAND ATT NORM	
		0.1 0 0	9	VERN	
		0.2 0	10	RATE NORM	
		0.1 0	11	VERN	
		1	12	JET OPT P	
		1	13	Y	
		0	14	CNTL ACCEL	

	STS-11/0/BAS			STS-11/0/BAS	
					A8
	TOP			TOP	

(reduced copy)

TOP

A7

DAP A8

PURPOSE:

IUS DEPLOY

0.2 5 1

TRANSLATION  
PULSE

0.2 0 0 2

ROTATION  
DSC RT NORM

0.2 0 0 3

VERN

0.0 5 4

PULSE NORM

0.0 1 0 5

VERN

.0 0 6

COMP NORM

.0 0 0 7

VERN

1.0 0 8

DEADBAND  
ATT NORM

1.0 0 0 9

VERN

0.2 0 10

RATE NORM

.0 1 0 11

VERN

1 12

JET OPT P

I 13

Y

0 14

CNTL ACCEL

STS-11/O/BAS

STS-11/O/BAS

A9

TOP

TOP

A8

A9

DAP A9

PURPOSE:

RENDEZVOUS  
(DTO 0811 & 0812)

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 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

I 13

Y

0 14

CNTL ACCEL

STS-11/O/BAS

STS-11/O/BAS

A10

TOP

(reduced copy)

TOP

A9

A10

**DAP A10**

PURPOSE: PROX OPS (DTO 0811 & 0812)

0.0 5	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 0	7	VERN
2.0 0	8	DEADBAND ATT NORM
0.5 0 0	9	VERN
0.2 0	10	RATE NORM
.0 2 0	11	VERN
1	12	JET OPT P
I	13	Y
0	14	CNTL ACCEL

STS-11/0/BAS

TOP

A10

A11

TOP

**DAP A11**

PURPOSE: SPAS GYRO DRIFT

0.1 0	1	TRANSLATION PULSE
0.2 0 0	2	ROTATION DSC RT NORM
0.0 1 6	3	VERN
0.1 0	4	PULSE NORM
0.0 1 0	5	VERN
.0 0	6	COMP NORM
.0 0 0	7	VERN
5.0 0	8	DEADBAND ATT NORM
0.3 0 0	9	VERN
0.2 0	10	RATE NORM
0.0 2 0	11	VERN
1	12	JET OPT P
I	13	Y
3	14	CNTL ACCEL

STS-11/0/BAS

TOP

A12

(reduced copy)

TOP

+ + + +

A11

- - - -

A12

**DAPA12**

PURPOSE: (Blank)

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

STS-11/O/BAS

STB-11/O/BAS

TOP

+ + + +

TOP

+ + + +

- | <u>DAP</u> | <u>PURPOSE</u>   |
|------------|--|
| B1         | - NOMINAL<br>PRCS IMJ ALIGN<br>TOP-TO-SUN<br>TAIL ONLY CON-<br>TROL BACKOUT<br>OMS & BCS BURNS |
| B2         | - LOSS OF VERN<br>(TAIL ONLY)  |
| B3         | - LOSS OF VERN<br>GG MNVR  |
| B4         | - PAM DEPLOY   |
| B5         | - COAS CAL   |
| B6         | - RENDEZVOUS   |
| B7         | - PROX OPS   |
| B8         | - YAW MNVR   |
| B9         | - MFR OPS  |
| B10        | - SPAS/RMS OPS   |
| B11        | - SPAS GYRO DRIFT  |
| B12        | - (Blank)  |

STS-11/O/BAS

STS-11/O/BAS

TOP

+ + + +

TOP

+ + + +

(reduced copy)

		TOP	
			B1
PURPOSE:	TRANSLATION		
	PULSE	15	0.0 2
PRCS IMJ ALIGN	ROTATION		
TOP-TO-SUN	DSC RT NORM	16	0.5 0 0
TAIL ONLY CONTROL BACKOUT	VERN	17	0.2 0 0
OMS & RCS BURNS	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
STS-11/O/BAS	STS-11/O/BAS		

		TOP	
			B2
PURPOSE:	TRANSLATION		
	PULSE	15	0.0 2
LOSS OF VERN	ROTATION		
(TAIL ONLY)	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	3
	Y	27	3
	CNTL ACCEL	28	0
STS-11/O/BAS	STS-11/O/BAS		

		TOP	
			B3

(reduced copy)

TOP

+ + +

B2

- - -

**DAP B3**

PURPOSE:  
LOSS OF VERN  
(NOSE & TAIL)  
GG MNVR

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
	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

STS-11/O/BAS

STS-11/O/BAS

TOP

+ + +

B3

- - -

**DAP B4**

PURPOSE:  
PAM DEPLOY

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
	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	0.0 1 0
JET OPT			
	P	26	1
	Y	27	1
CNTL ACCEL		28	0

STS-11/O/BAS

STS-11/O/FIN

TOP

+ + +

B5

- - -

(reduced copy)



		TOP	
+	+	+	+
B4		B5	
DAP B5			
PURPOSE:		TRANSLATION	
COAS CAL		PULSE	15 <u>0.0 2</u>
		ROTATION	
		DSC RT NORM	16     0.2 0 0
		VERN	17 <u>0.0 1 6</u>
		PULSE NORM	18 <u>0.0 4</u>
		VERN	19 <u>0.0 0 2</u>
		COMP NORM	20 <u>.0 0</u>
		VERN	21 <u>.0 0 0</u>
		DEADBAND	
		ATT NORM	22     3.0 0
		VERN	23 <u>0.0 3 3</u>
		RATE NORM	24     0.2 0
		VERN	25 <u>0.0 2 0</u>
		JET OPT P	26     3
		Y	27 <u>3</u>
		CNTL ACCEL	28     0
STS-11/O/BAS		STS-11/O/BAS	
TOP		TOP	
+	+	+	+
B5		B6	
DAP B6			
PURPOSE:		TRANSLATION	
RENDEZVOUS (DTO 0811 & 0812)		PULSE	15 <u>0.0 5</u>
		ROTATION	
		DSC RT NORM	16     0.5 0 0
		VERN	17 <u>0.2 0 0</u>
		PULSE NORM	18 <u>0.0 4</u>
		VERN	19 <u>0.0 0 2</u>
		COMP NORM	20 <u>.0 0</u>
		VERN	21 <u>.0 0 0</u>
		DEADBAND	
		ATT NORM	22     2.0 0
		VERN	23 <u>1.0 0 0</u>
		RATE NORM	24     0.2 0
		VERN	25 <u>0.0 2 0</u>
		JET OPT P	26     1
		Y	27 <u>1</u>
		CNTL ACCEL	28     0
STS-11/O/BAS		STS-11/O/BAS	
TOP		TOP	
+	+	+	+
B7			

(reduced copy)

+	+	+	TOP	+
-	-	-	B7	-
	B6			
	DAP B7			
PURPOSE:			TRANSLATION	
PROX OPS			PULSE	15 0.0 1
(DTO 0811 & 0812)			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
			VERN	21 .0 0 0
			DEADBAND	
			ATT NORM	22 2.0 0
			VERN	23 0.5 0 0
			RATE NORM	24 0.2 0
			VERN	25 0.0 2 0
			JET OPT P	26 1
			Y	27 1
			CNTL ACCEL	28 0
	STS-11/O/BAS		STS-11/O/BAS	

+	+	+	B8	+
-	-	-	B8	-
	TOP			TOP
	B7			B8
	DAP B8			
PURPOSE:			TRANSLATION	
YAW MNVR			PULSE	15 0.0 1
			ROTATION	
			DSC RT NORM	16 0.2 0 0
			VERN	17 0.0 5 0
			PULSE NORM	18 0.1 0
			VERN	19 0.0 1 0
			COMP NORM	20 .0 0
			VERN	21 .0 0 0
			DEADBAND	
			ATT NORM	22 5.0 0
			VERN	23 0.2 5 0
			RATE NORM	24 0.2 0
			VERN	25 0.0 1 0
			JET OPT P	26 1
			Y	27 1
			CNTL ACCEL	28 0
	STS-11/O/BAS		STS-11/O/BAS	

+	+	+	B9	+
-	-	-	B9	-
	TOP			TOP

(reduced copy)

+ + + + +  
 - B8 - - B9 -

**DAP B9**

PURPOSE:  
 MFR OPS  
 (OTO 0614)

TRANSLATION PULSE		15	<u>0.0</u> <u>5</u>
ROTATION			
DSC RT	NORM	16	0.1 5 0
	VERN	17	<u>0.1</u> <u>5</u> <u>0</u>
PULSE	NORM	18	<u>0.0</u> <u>5</u>
	VERN	19	<u>0.0</u> <u>1</u> <u>0</u>
COMP	NORM	20	<u>.0</u> <u>0</u>
	VERN	21	<u>.0</u> <u>0</u> <u>0</u>
DEADBAND			
ATT	NORM	22	3.0 0
	VERN	23	<u>5.0</u> <u>0</u> <u>0</u>
RATE			
	NORM	24	0.2 0
	VERN	25	<u>0.2</u> <u>0</u> <u>0</u>
JET OPT			
	P	26	<u>3</u>
	Y	27	<u>3</u>
CNTL ACCEL		28	<u>0</u>

STS-11/O/BAS

STS-11/O/BAS

+ + + + +  
 - B9 - - B10 -

TOP

TOP

B9

B10

**DAP B10**

PURPOSE:  
 SPAS/RMS OPS

TRANSLATION PULSE		15	<u>0.0</u> <u>5</u>
ROTATION			
DSC RT	NORM	16	0.1 5 0
	VERN	17	<u>0.1</u> <u>5</u> <u>0</u>
PULSE	NORM	18	<u>0.0</u> <u>5</u>
	VERN	19	<u>0.0</u> <u>1</u> <u>0</u>
COMP	NORM	20	<u>.0</u> <u>0</u>
	VERN	21	<u>.0</u> <u>0</u> <u>0</u>
DEADBAND			
ATT	NORM	22	3.0 0
	VERN	23	<u>5.0</u> <u>0</u> <u>0</u>
RATE			
	NORM	24	0.2 0
	VERN	25	<u>0.2</u> <u>0</u> <u>0</u>
JET OPT			
	P	26	<u>3</u>
	Y	27	<u>3</u>
CNTL ACCEL		28	<u>3</u>

STS-11/O/BAS

STS-11/O/BAS

+ + + + +  
 - B10 - - B11 -

TOP

B11

(reduced copy)

+ + + TOP +

- - - B11 -

**DAP B11**

PURPOSE:  
SPAS GYRO DRIFT

TRANSLATION			
PULSE	15		<u>0.0 5</u>
ROTATION			
DSC RT	NORM 16		<u>0.1 5 0</u>
	VERN 17		<u>0.0 5 0</u>
PULSE	NORM 18		<u>0.0 5</u>
	VERN 19		<u>0.0 1 0</u>
COMP	NORM 20		<u>.0 0 0</u>
	VERN 21		<u>.0 0 0</u>
DEADBAND			
ATT	NORM 22		<u>3.0 0</u>
	VERN 23		<u>0.0 5 0</u>
RATE			
	NORM 24		<u>0.2 0</u>
	VERN 25		<u>.0 2 0</u>
JET OPT	P 26		<u>1</u>
	Y 27		<u>I</u>
CNTL ACCEL	28		<u>3</u>

- - - STS-11/O/BAS -

+ + + TOP +

- - - B12 -

**DAP B12**

PURPOSE: (Blank)

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		-

- - - STS-11/O/BAS -

+ + + TOP +

+

+

-

-

STS-11/O/BAS

-

-

+

+

TOP

TOP

BACK COVER 'DAP BOOK'

+

+



STS-11/O/BAS

+

+

(reduced copy)

9-25

STS-11/FIN

TABLE 9-12 ATTITUDE TIMELINE

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
0/00:08:40	MNVR R+331.60 P+348.50 Y+352.50	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30	SUN T 37 P 228	MAIN ENGINE CUTOFF	MECO
0/00:09:30 10:10	MNVR R+336.00 P+ 7.00 Y+344.00	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30	SUN T 52 P 214		OMS 1 ATT
0/00:10:19	OMS IGNITION	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30		DV =249 fps DT = 167 s	OMS 1
0/00:20:00 24:45	MNVR R+ 29.00 P+153.00 Y+359.00	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30	SUN T 152 P 287		OMS 2 ATT
0/00:45:02	OMS IGNITION	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30		DV =203 fps DT = 133 s	OMS 2
0/01:10:00 17:06	TRK TGT=2 BV=5( 90.00,333.60) OM=180.00	A1 AUTO NORM	DSC 0.200 DB AT 5.00 DB RT 0.20	EARTH T 90 P 334	LVLH R+206 P+ 0 Y+ 0	BIASED -ZLV PLBD OPENING
0/02:30:00 41:36	MNVR R+268.40 P+195.00 Y+ 24.50	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 122 P 85	-Z ST: 17 -Y ST: 21 2:15-2:58	IMU ALIGN PAIR A2
0/02:50:00 03:00:46	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
0/07:18:54 30:19	MNVR R+ 10.26 P+161.41 Y+290.01	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 90 P 287		DEPLOY ATT
0/07:58:54	DEPLOY	B4 AUTO VERN	DSC 0.008 DB AT 0.10 DB RT 0.01			WESTAR DEPLOY
0/08:01:54 08:48	MNVR R+ 24.00 P+119.00 Y+356.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 154 P 215		OMS SEP ATT
0/08:14:23	OMS IGNITION	A1 AUTO NORM	DSC 0.200 DB AT 5.00 DB RT 0.20		DV = 11 fps DT = 9.4 s	WESTAR SEP BURN

TABLE 9-12 ATTITUDE TIMELINE

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
0/08:16:54 18:11	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	WESTAR MONITOR ATT
0/08:27:54 39:56	TRK TGT=2 BV=5(254.00, 42.00) OM= 32.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 102 P 137	LVLH R+ 32 P+ 16 Y+ 42	WINDOW PROTECT ATT
0/08:43:54	STOP	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 92 P 111	INRTL R+222 P+227 Y+346	ATTITUDE HOLD FOR PKM
0/08:55:00 09:06:06	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
0/09:45:00 58:43	MNVR R+234.60 P+187.50 Y+355.80	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 122 P 102	-Z ST: 12 -Y ST: 31 9:50-10:25	IMU ALIGN AND COAS CAL
0/10:10:00 22:08	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
0/20:20:00 27:26	MNVR R+ 10.80 P+ 31.00 Y+324.30	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 70 P 177	-Z ST: 21 -Y ST: 17 20:22-21:06	IMU ALIGN PAIR A1
0/20:40:00 53:50	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
1/02:56:42 03:07:12	MNVR R+ 46.68 P+189.44 Y+299.36	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 90 P 276		DEPLOY ATT
1/03:36:42	DEPLOY	B4 AUTO VERN	DSC 0.008 DB AT 0.10 DB RT 0.01			PALAPA DEPLOY
1/03:39:42 46:42	MNVR R+ 24.00 P+113.00 Y+356.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 151 P 203		OMS SEP ATT
1/03:51:42	OMS IGNITION	A1 AUTO NORM	DSC 0.200 DB AT 5.00 DB RT 0.20		DV = 11 fps DT = 9.2 s	PALAPA SEP BURN

TABLE 9-12 ATTITUDE TIMELINE

NET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1/03:54:42 55:59	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	PALAPA MONITOR ATT
1/04:05:42 19:29	TRK TGT=2 BV=5(241.00, 18.00) OM= 11.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 117 P 160	LVLH R+ 10 P+ 29 Y+ 18	WINDOW PROTECT ATT
1/04:21:42	STOP	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 117 P 133	INRTL R+206 P+205 Y+ 6	ATTITUDE HOLD FOR PKM
1/04:32:00 45:25	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
1/08:37:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
1/09:02:00 07:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
1/09:10:00 25:00	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 T 90 P 0	LVLH R+ 0 P+180 Y+ 0	-ZLV TAIL FWD
1/19:13:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
1/19:38:00 43:00	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 T 90 P 0	LVLH R+ 0 P+180 Y+ 0	-ZLV TAIL FWD
2/01:20:00 25:17	MNVR R+112.60 P+ 27.40 Y+335.00	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 68 P 77		RCS BURN ATT
2/01:50:41	RCS IGNITION	B1 MAN NORM	DSC 0.500 DB AT 3.00 DB RT 0.20		DV = 34 fps DT = 33 s	RCS HI-Z BURN ORBIT ADJUST DT0 403
2/02:15:00 24:13	MNVR R+154.80 P+292.60 Y+ 13.80	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 38 P 151		OMS BURN ATT



TABLE 9-12 ATTITUDE TIMELINE

NET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
2/02:36:59	OMS IGNITION	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20		DV = 37 fps DT = 24 s	OMS RECIRC
2/03:06:00 17:36	TRK TGT=2 BV=2(180.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 180 P 0	LVLH R+ 0 P+ 90 Y+ 0	IRT DEPLOY ATT
2/03:24:21	DEPLOY	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			DEPLOY IRT
2/03:34:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IRT TRACK
2/03:44:21	RCS IGNITION	A9 LVLH NORM	DSC 0.200 DB AT 2.00 DB RT 0.20		DV = .8 fps DT = 3.3 s	SEPARATION BURN
2/03:45:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IRT TRACK
2/04:16:59	RCS IGNITION	A9 LVLH NORM	DSC 0.200 DB AT 2.00 DB RT 0.20		DV = 3 fps DT = 11 s	XFER 1 BURN
2/04:18:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IRT TRACK
2/05:14:45	RCS IGNITION	A9 LVLH NORM	DSC 0.200 DB AT 2.00 DB RT 0.20		DV = 8 fps DT = 31 s	F1 BURN
2/05:15:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0		IRT TRACK
2/07:15:00 29:45	MNVR R+ 10.80 P+ 31.00 Y+324.30	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 69 P 176	-Z ST: 21 -Y ST: 17 7:08-7:53	IMU ALIGN PAIR A1
2/07:35:00 48:20	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 T 90 P 0	LVLH R+ 0 P+180 Y+ 0	-ZLV TAIL FWD

TABLE 9-12 ATTITUDE TIMELINE

MET	MNVR OPTION	DAF	E/S	REMARKS	EVENT	
2/17:49:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02		IMU ALIGN LVLH ROTATION	
2/18:14:00 19:00	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 T 90 P 0	LVLH R+ 0 P+180 Y+ 0	-ZLV TAIL FWD
2/20:00:00 04:11	MNVR R+194.00 P+194.00 Y+ 25.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 125 P 162		OMS NC ATT
2/20:16:24	OMS IGNITION	A9 AUTO NORM	DSC 0.200 DB AT 2.00 DB RT 0.20		DV = 33 fps DT = 20 s	NC BURN
2/20:19:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0		IRT TRACK
2/20:40:00 45:22	MNVR R+166.50 P+ 14.50 Y+334.50	B6 AUTO NORM	DSC 0.500 DB AT 2.00 DB RT 0.20	SUN T 55 P 17		NH BURN ATT
2/21:01:31	RCS IGNITION	A9 AUTO NORM	DSC 0.200 DB AT 2.00 DB RT 0.20		DV = 5 fps DT = 3 s	NH BURN
2/21:03:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0		IRT TRACK
2/22:19:42	RCS IGNITION	A9 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02		DV = .4 fps DT = 2 s	NCC BURN
2/22:24:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IRT TRACK
2/22:50:00 50:57	MNVR R+153.00 P+350.00 Y+350.00	B6 AUTO NORM	DSC 0.500 DB AT 2.00 DB RT 0.20	SUN T 34 P 42		TI BURN ATT
2/23:16:12	OMS IGNITION	A9 AUTO NORM	DSC 0.200 DB AT 2.00 DB RT 0.20		DV = 26 fps DT = 27 s	TI BURN

TABLE 9-12 ATTITUDE TIMELINE

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
2/23:18:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0		IRT TRACK
3/01:36:24	RCS IGNITION	A9 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02		IV= 2.5 fps	FRCS SEP BURN
3/02:35:00 50:00	TRK TGT=2 BV=2(180.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 180 P 0	LVLH R+180 P+ 90 Y+ 0	MASS SPEC CAL ATT
3/04:15:00 22:30	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
3/07:19:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
3/07:44:00 49:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
3/17:50:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
3/18:15:00 20:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
3/20:10:00	TRK TGT=1 BV=3( 90.00, 0.00) OM= 0.00	A9 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0		IRT TRACK
3/22:40:00 55:00	TRK TGT=2 BV=5(180.00, 320.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 140 P 270	LVLH R+ 0 P+ 90 Y+320	BIASED +ZVV EVA ATT
4/07:20:00 33:49	MNVR R+268.40 P+195.00 Y+ 24.50	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 125 P 88	-Z ST: 17 -Y ST: 21 7:11 - 7:57	IMU ALIGN PAIR A2
4/07:40:00 48:46	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD

TABLE 9-12 ATTITUDE TIMELINE

NET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
4/17:52:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
4/18:17:00 22:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
4/20:30:00 35:00	TRK TGT=2 BV=5(280.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 30 P 0	LVLH R+180 P+300 Y+ 0	GLOW I TEST TARGETED FOR 180,190,0
4/20:35:00 46:00	TRK TGT=2 BV=5(220.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 102 P 180	LVLH R+180 P+168 Y+ 0	GLOW I TEST TARGETED FOR 180,130,0
4/20:46:00 21:00:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	GLOW I TEST -ZLV NOSE FWD END OF TEST
4/21:05:00 08:20	TRK TGT=2 BV=3( 90.00, 0.00) OM=190.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 10	YAW SENSOR TEST ; STEP 2
4/21:13:20 16:40	TRK TGT=2 BV=3( 90.00, 0.00) OM=200.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 20	YAW SENSOR TEST ; STEP 2 CONTINUED
4/21:17:40 19:20	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD YAW SENSOR TEST ;STEP 3
4/21:38:00 47:23	TRK TGT=4 BV=3( 90.00, 0.00) OM=171.40	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 90 P 359	INRTL R+341 P+239 Y+ 34	-ZSI SCCE
4/22:00:00 13:19	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
4/23:45:00 50:00	TRK TGT=2 BV=5(280.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 30 P 0	LVLH R+180 P+300 Y+ 0	GLOW II TEST TARGETED FOR 180,190,0
4/23:50:00 5/00:02:30	TRK TGT=2 BV=5(240.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 120 P 180	LVLH R+180 P+150 Y+ 0	GLOW II TEST

TABLE 9-12 ATTITUDE TIMELINE

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
5/00:17:30 30:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	GLOW II TEST -ZLV NOSE FWD END OF TEST
5/01:35:00 38:20	TRK TGT=2 BV=3( 90.00, 0.00) OM=170.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+350	YAW SENSOR TEST ; STEP 4
5/01:43:20 46:40	TRK TGT=2 BV=3( 90.00, 0.00) OM=160.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+340	YAW SENSOR TEST ; STEP 4 CONTINUED
5/01:47:40 49:20	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD YAW SENSOR TEST ; STEP 5
5/01:55:00 58:20	TRK TGT=2 BV=3( 90.00, 0.00) OM=190.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 10	YAW SENSOR TEST ; STEP 2
5/02:03:20 06:40	TRK TGT=2 BV=3( 90.00, 0.00) OM=200.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 20	YAW SENSOR TEST ; STEP 2 CONTINUED
5/02:07:40 09:20	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD YAW SENSOR TEST ; STEP 3
5/02:11:20 14:40	TRK TGT=2 BV=3( 90.00, 0.00) OM=170.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+350	YAW SENSOR TEST ; STEP 4
5/02:19:40 23:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=160.00	B8 AUTO VERN	DSC 0.050 DB AT 0.25 DB RT 0.01	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+340	YAW SENSOR TEST ; STEP 4 CONTINUED
5/02:24:00 25:40	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD YAW SENSOR TEST ; STEP 5
5/03:38:00 47:19	TRK TGT=4 BV=3( 90.00, 0.00) OM=173.12	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 91 P 1	INRTL R+341 P+237 Y+ 32	-ZSI SCCE
5/04:00:00 13:23	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD

TABLE 9-12 ATTITUDE TIMELINE

NET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
5/05:35:00 50:00	TRK TGT=2 BV=1( 0.00, 0.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0	LVLH R+ 0 P+270 Y+ 0	+XLV BAY FWD
5/05:53:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
5/06:18:00 23:00	TRK TGT=2 BV=1( 0.00, 0.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0	LVLH R+ 0 P+270 Y+ 0	+XLV BAY FWD
5/16:23:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
5/16:48:00 53:00	TRK TGT=2 BV=1( 0.00, 0.00) OM= 0.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 0 P 0	LVLH R+ 0 P+270 Y+ 0	+XLV BAY FWD
5/16:55:00 17:10:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
5/19:00:00	TRK TGT=1 BV=5(348.00, 49.00) OM= 2.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 95 P 163		EVA ATT TDRS TRACK
6/01:45:00	STOP	A1 MAN VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 119 P 281	INRTL R+138 P+297 Y+ 72	EVA 2
6/02:30:00	TRK TGT=1 BV=5(348.00, 49.00) OM= 2.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 92 P 293		RETURN TO EVA ATT TDRS TRACK
6/05:45:00 59:40	MNVR R+ 10.00 P+ 31.00 Y+324.30	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 67 P 173	-Z ST: 21 -Y ST: 17 5:44 - 6:30	IMU ALIGN PAIR A1
6/06:05:00 19:38	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 T 90 P 0	LVLH R+ 0 P+180 Y+ 0	-ZLV TAIL FWD
6/16:25:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION

TABLE 9-12 ATTITUDE TIMELINE

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
6/16:50:00 55:00	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 T 90 P 0	LVLH R+ 0 P+180 Y+ 0	-ZLV TAIL FWD
6/21:45:00 22:00:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
7/05:56:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.200	A5 LVLH VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			IMU ALIGN LVLH ROTATION
7/06:21:00 26:00	TRK TGT=2 BV=3( 90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH T 90 P 0	LVLH R+180 P+ 0 Y+ 0	-ZLV NOSE FWD
7/16:25:00 35:38	MNVR R+ 10.80 P+ 31.00 Y+324.30	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 66 P 171	-Z ST: 21 -Y ST: 17 16:27-17:02	IMU ALIGN PAIR A1
7/16:45:00 55:21	TRK TGT=4 BV=5(184.00, 0.00) OM= 90.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN T 177 P 167	INRTL R+110 P+141 Y+ 12	TAIL SUN
7/19:35:00 38:43	MNVR R+175.20 P+206.00 Y+ 39.50	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN T 118 P 188	-Z ST: 21 -Y ST: 38 19:27-20:03	IMU ALIGN
7/19:50:00 53:11	MNVR R+193.70 P+287.40 Y+ 4.10	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN T 38 P 134	-Z ST: 19 -Y ST: 49 19:34-20:20	IMU VERIF
7/20:05:00 06:56	MNVR R+161.00 P+324.00 Y+338.00	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN T 7 P 318		DEORBIT BURN ATT
7/22:24:19	OMS IGNITION	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30		DV =279 fps DT = 169 s	DEORBIT BURN
7/22:30:00 34:21	MNVR R+175.00 P+199.00 Y+ 29.00	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30	SUN T 125 P 186		EI-5 ATT
7/22:45:52	LVLH	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30	EARTH T 83 P 179	LVLH R+ 1 P+ 39 Y+359	EI-5

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## ABBREVIATIONS /ACRONYMS

More complete compilations of abbreviations and acronyms are available in the STS glossary (Ref. 13).

ABBREVIATIONS/  
ACRONYMS

## ABBREVIATIONS/ACRONYMS

ABS	ABSORBER
ACES	ACOUSTIC CONTAINERLESS EXPERIMENT SYSTEM
ACIP	AERODYNAMIC COEFFICIENTS IDENTIFICATION PACKAGE
ACN	ASCENSION ISLAND (STDN SITE)
ACT	ACTIVATE/ACTIVATION
ADI	ATTITUDE DIRECTION INDICATOR
AEM	ANIMAL ENCLOSURE MODULE
AFT	AFT FLIGHT DECK
AGO	SANTIAGO, CHILE (STDN SITE)
ALN	ALIGNMENT
ANT	ANTENNA
AOA	ABORT ONCE AROUND
AOS	ACQUISITION OF SIGNAL
APU	AUXILIARY POWER UNIT
ASE	AIRBORNE SUPPORT EQUIPMENT
ATCS	ACTIVE THERMAL CONTROL SYSTEM
ATO	ABORT TO ORBIT
ATT	ATTITUDE
BDA	BERMUDA ISLAND, BWI (STDN SITE)
BHD	BULKHEAD
BLKT	BLANKET
BNMS	BONN NEUTRAL MASS SPECTROMETER
BOT	BOTSWANA (STDN SITE)
BUC	BUCKHORN, CALIFORNIA (STDN SITE)
BYP	BYPASS
CAL	CALIBRATION
CAMR	CAMERA

ABBREVIATIONS/  
ACRONYMS

CBSA	CARGO BAY STORAGE ASSEMBLY
CCTV	CLOSED-CIRCUIT TV
CDR	COMMANDER
CHG	CHANGE
CL	CLOSE/CLOSED
C/L	CHECKLIST
CLN	CLEAN
C/O	CHECKOUT
COAS	CREWMAN OPTICAL ALIGNMENT SIGHT
COMM	COMMUNICATIONS
CONFIG/CNFG	CONFIGURATION
CST	CENTRAL STANDARD TIME
CTLS	CONTROLS
C&W	CAUTION AND WARNING
DAP	DIGITAL AUTO PILOT
DB	DEADBAND
DEACT	DEACTIVATE
DED	DEDICATED
DEORB	DEORBIT
DEU	DISPLAY ELECTRONICS UNIT
DISP	DISPLAY
DKR	DAKAR, SENEGAL (STDN SITE)
DMP	DUMP
DPLY/DPY	DEPLOY
DSO	DETAILED SUPPLEMENTARY OBJECTIVE
DTO	DETAILED TEST OBJECTIVE
ECLS	ENVIRONMENTAL CONTROL LIFE SUPPORT SYSTEM
EDW	EDWARDS AFB, CALIFORNIA

EI	ENTRY INTERFACE
EMU	EXTRAVEHICULAR MOBILITY UNIT
ENA	ENABLE
ENT	ENTRY
EVA	EXTRAVEHICULAR ACTIVITY
EXDV	EXTERNAL DELTA VELOCITY
EX/EXER	EXERCISE
EXP	EXPERIMENT
FC	FUEL CELL
FCS	FLIGHT CONTROL SYSTEM
FD	FREEZE DRIED; FLIGHT DAY; FLIGHT DECK
FDF	FLIGHT DATA FILE
FDRD	FLIGHT DEFINITION AND REQUIREMENTS DIRECTIVE
FES	FLASH EVAPORATOR SYSTEM
FM	FREQUENCY MODULATION
FOV	FIELD OF VIEW
FPL	FRICTION PRESSURE LOSS
FWD	FORWARD
GAS	GET AWAY SPECIAL
GDS	GOLDSTONE, CALIFORNIA (STDN SITE, 1ST ANTENNA)
GDX	GOLDSTONE, CALIFORNIA (STDN SITE, 2ND ANTENNA)
GMT	GREENWICH MEAN TIME
GNC	GUIDANCE NAVIGATION AND CONTROL
GPC	GENERAL PURPOSE COMPUTER
GRP	GROUP
GSE	GROUND SUPPORT EQUIPMENT
GSTDN	GROUND SPACE TRACKING & DATA NETWORK
GWM	GUAM ISLAND, U.S. (STDN SITE)

HAW	HAWAII (KAUAI, STDN SITE)
HK	HOUSEKEEPING
HL	HI LOAD FLASH EVAPORATOR
HP	HEAT PIPES
HTR	HEATER
HYD	HYDRAULIC
ICONNECT/ I' CNECT	INTERCONNECT
IEF	ISOELECTRIC FOCUSING EXPERIMENT
IMU	INERTIAL MEASUREMENT UNIT
INH	INHIBIT
INRTL	INERTIAL
IOS	INDIAN OCEAN STATION (SGLS SITE)
IRT	INTEGRATED RENDEZVOUS TARGET
KSC	KENNEDY SPACE CENTER
LOS	LOSS-OF-SIGNAL
LVLH	LOCAL VERTICAL LOCAL HORIZONTAL
MAD	MADRID, SPAIN (STDN SITE, 1ST ANTENNA)
MADS	MODULAR AUXILIARY DATA SYSTEM
MAUS	MATERIALWISSENSCHAFTLICHE AUTONOME EXPERIMENTE UNTER SCHWERELOSIGKEIT
MAX	MADRID, SPAIN (STDN SITE, 2ND ANTENNA)
MCC	MISSION CONTROL CENTER
MD	MIDDECK
MDM	MULTIPLEXER/DEMULTIPLEXER
MECH	MECHANISM; MECHANICAL
MECO	MAIN ENGINE CUTOFF
MET	MISSION ELAPSED TIME

MFDS	MID FLIGHT DECK SYSTEM
MFR	MANIPULATOR FOOT RESTRAINT
MIL	MERRITT ISLAND, FLORIDA (STDN SITE)
MILA	MERRITT ISLAND LAUNCH AREA
MLR	MONODISPERSE LATEX REACTOR
MLX	MERRITT ISLAND, FLORIDA (STDN SITE, 2ND ANTENNA)
MMU	MANNED MANEUVERING UNIT
MNVR	MANEUVER
MOMS	MODULAR OPTOELECTRONIC MULTISPECTRAL SCANNER
MPS	MAIN PROPULSION SYSTEM
MSG	MESSAGE
NAV	NAVIGATION
NC	NORMAL CORRECTIVE
NCC	NORMAL CORRECTIVE COMBINATION
NH	NORMAL HEIGHT
NSR	NORMAL SLOW RATE
OI	OPERATIONAL INSTRUMENTATION
OMS	ORBITAL MANEUVERING SYSTEM
O/O	ON ORBIT
OPS	OPERATIONS; OPERATIONAL SEQUENCE
ORB	ORBITER
ORR	ORRORAL VALLEY, AUSTRALIA (STDN SITE)
PAM-D	PAYLOAD ASSIST MODULE - DELTA CLASS
PCM	PULSE-CODE MODULATION
PCS	PRESSURE CONTROL SYSTEM
PERF	PERFORM; PERFORMANCE
PKM	PERIGEE KICK MOTOR
PLBD	PAYLOAD BAY DOORS

PL/PLD	PAYLOAD
PLT	PILOT
PM	PHASE MODULATION
PRCS	PRIMARY REACTION CONTROL SYSTEM
PREP	PREPARATION
PRO	PROCEED
PRSD	POWER REACTANT SUPPLY AND DISTRIBUTION
PSA	PRE/POST SLEEP ACTIVITY
PTC	PASSIVE THERMAL CONTROL
PWRDN	POWERDOWN
RAD	RADIATOR
RCS	REACTION CONTROL SYSTEM
REF	REFERENCE
REFSMAT	REFERENCE STABLE MEMBER MATRIX
RELMAT	RELATIVE MATRIX
RF	RADIO FREQUENCY
RME	RADIATION MONITORING EQUIPMENT
RMS	REMOTE MANIPULATOR SYSTEM
ROT	ROTATION; ROTA FIELD
RSET	RESET
RTC	REAL-TIME COMMAND
SAA	SOUTH ATLANTIC ANOMALY
S-BD	S-BAND
SCCE	SOLAR CELL CALIBRATION EXPERIMENT
SEL	SELECT
SEP	SEPARATION
SEQ	SEQUENCE

SESA	SPECIAL EQUIPMENT STOWAGE ASSEMBLY
SGLS	SPACE GROUND LINK SYSTEM/STATION (DOD)
SMMO	SPACELAB MISSION MANAGEMENT OFFICE
SPLY	SUPPLY
SSP	STANDARD SWITCH PANEL
SSUS	SPINNING SOLID UPPER STAGE
STBD	STARBOARD
STDN	SPACE TRACKING & DATA NETWORK
STS	SPACE TRANSPORTATION SYSTEM
ST/S TRKR	STAR TRACKER
STW	STOW
SW	SWITCH
SYS	SYSTEM
TAGS	TEXT AND GRAPHICS SYSTEM
TB	TALKBACK
TDRS	TRACKING AND DATA RELAY SATELLITE SYSTEM
TERM	TERMINATE; TERMINAL
TIG	TIME OF IGNITION
TPR	TELEPRINTER
UHF	ULTRA HIGH FREQUENCY
VAC	VACUUM
VAL	VALIDATION
VER	VERIFICATION
VRCS	VERNIER REACTION CONTROL SYSTEM
VTR	VIDEO TAPE RECORDER
WCS	WASTE COLLECTION SYSTEM
XFER	TRANSFER



X-POP X BODY AXIS PERPENDICULAR TO ORBIT PLANE  
+X VV +X BODY AXIS COINCIDENT WITH VELOCITY VECTOR  
YAR YARRAGADEE (STDN SITE)  
YESP YAW EARTH SENSOR PACKAGE  
Y-POP Y BODY AXIS PERPENDICULAR TO ORBIT PLANE  
-ZLV -Z LOCAL VERTICAL (-Z BODY AXIS TOWARDS EARTH)

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REFERENCES

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1. STS Flight Definition and Requirements Directive, JSC-07700, Volume III, Rev B, Change 38, November 1, 1983.
2. STS-11 Flight Requirements Document, JSC-17462-11, REV C, Basic, September 21, 1983.
3. STS-11 Operational Flight Profile (OFP) Supertape Cycle 2, Revision A, January 29, 1984, 13:00 GMT, Launch Date.
4. Acoustic Containerless Experiment System Located in the Middeck (ACES) Payload Integration Plan, JSC-14088, with change 1, April 6, 1983.
5. Acoustic Containerless Experiment System/Mid Flight Deck System Flight Planning Annex, JSC-14088, Annex 2, REV A, August 2, 1983.
6. Cinema 360 Camera Payload Integration Plan, JSC-18421, Draft, September 27, 1983.
7. Cinema 360 Camera Flight Planning Annex, JSC-18421, Annex 2, Draft.
8. Get Away Special (GAS) PIP, JSC-14021, Rev C, with change 1-8, August 30, 1983.
9. Get Away Special (GAS) Flight Planning Annex, JSC-14021, Annex 2, Rev A, February 17, 1983.
10. Get Away Special (GAS) Flight Planning Annex Appendix, JSC-14021, Rev B, December 1983.
11. Isoelectric Focusing Experiment Payload Integration Plan, JSC-18397, March 8, 1983.
12. Integrated Rendezvous Target (IRT) PIP, JSC-18407, Basic, August 16, 1983.
13. Integrated Rendezvous Target (MLR) PIP, JSC-14051, Basic with change 1-9, March 11, 1983.
14. Integrated Rendezvous Target (MLR) Flight Planning Annex, JSC-14051, Annex 2, Final with changes 1-3, March 14, 1983.
15. PERUMTEL (PALAPA-B Payload) Payload Integration Plan, JSC-14030, Rev A with change 1, June 3, 1983.
16. PERUMTEL (PALAPA-B) Flight Planning Annex, JSC-14030, Annex 2, Basic, February 15, 1983.
17. Radiation Monitoring Equipment Payload Integration Plan, JSC-18403, Rev A, June 2, 1983.

18. Space Transportation System and Associated Payloads:  
Glossary, Acronyms, and Abbreviations, NASA 1059,  
January 1981.
19. SPAS-01 Payload Integration Plan, JSC-14024, Rev B with  
change 1-10, January 31, 1983.
20. SPAS-01 Flight Planning Annex, JSC-14024, Annex 2, Final,  
March 3, 1983 (with letter update from SPAS Project Office  
RX 34, dated October 7, 1983).
21. WESTAR VI Payload Integration Plan, JSC-18409, Basic,  
September 29, 1983.
22. WESTAR VI Flight Planning Annex, JSC-18409, Annex 2, Basic,  
October 27, 1983.

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