

APOLLO 8

FLIGHT PLAN VOL. I

PART NO.

S / N

SKB 32100030-201

1006

FLIGHT PLAN

TIME	EVENT	REMARKS
-00:45	LMP: FLT RCDR - RECORD	
-00:09	LCC: IGNITION COMMAND	
-00:01	L/V ENGINE LTS (5) - OUT	
00:00	LCC:CDR: <u>REPORT</u> LIFT-OFF P11 AUTO	LIFT-OFF LT - ON, MET STARTS COUNT
00:02	CDR: <u>REPORT</u> YAW MNVR	
00:11	CDR: <u>REPORT</u> ROLL AND PITCH PROGRAM INITIATE	
00:28	CDR <u>REPORT</u> ROLL COMPLETE	
00:42	MCC-H:CDR: <u>REPORT</u> MARK MODE 1B	
00:50	LMP: <u>REPORT</u> CABIN PRESS DECREASE	
01:17	CDR: <u>REPORT</u> MAX Q	
01:50	MCC-H:CDR: <u>REPORT</u> MARK MODE 1C	
02:00	MCC-H:CDR: <u>REPORT</u> GO/NO GO FOR STAGING	
02:05	CDR: <u>REPORT</u> INBOARD ENGINE CUTOFF	
02:31	CDR: <u>REPORT</u> OUTBOARD ENGINE CUTOFF	LTS 1, 2, 3, & 4 - ON
02:32	CDR: <u>REPORT</u> S-IC/S-II STAGING	LTS OFF

TIME	EVENT	REMARKS
03:00	CDR: <u>REPORT</u> 2ND PLANE SEP	>65% THRUST-S-II SEP LIGHT OUT
03:07	CDR: <u>REPORT</u> TWR JETT & MODE II	
03:25	CDR: <u>REPORT</u> GUIDANCE INITIATE	
03:53	MCC-H: <u>REPORT</u> TRAJECTORY AND GUID. GO/NO GO	
04:00	CMP: <u>REPORT</u> S/C GO/NO GO	
05:00	LMP: <u>REPORT</u> S/C GO/NO GO	
05:53	MCC-H:CDR: <u>REPORT</u> S-IVB TO ORBIT CAPABILITY	
06:00	CDR: <u>REPORT</u> S/C GO/NO GO	
06:15	LMP: OMNI ANT-D	IF LAUNCH AZIMUTH -90°
07:00	CDR: <u>REPORT</u> S/C GO/NO GO	
08:00		
08:20	MCC-H:CDR: <u>REPORT</u> GO/NO GO FOR STAGING	
08:40	CDR: <u>REPORT</u> S-II CUTOFF, S-II STAGING	

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MSC FORM 2114C (JUL 67)

FLIGHT PLAN

TIME	EVENT	REMARKS
08:45	CDR: <u>REPORT</u> S-IVB IGNITION	
09:00	CDR: <u>REPORT</u> S/C GO/NO GO MCC-H: <u>REPORT</u> TRAJECTORY AND GUID. GO/NO GO	
09:50	MCC-H:CDR: <u>REPORT</u> MARK MODE IV	
10:00	MCC-H:CDR: <u>REPORT</u> GO/NO GO FOR ORBIT MCC-H: <u>REPORT</u> PREDICTED TIME OF SECO	
11:21	CDR: <u>REPORT</u> SECO AND HP	
11:31	MCC-H:CDR: <u>REPORT</u> ORBITAL GO/NO GO	
12:00	LMP: FLT RCDR - OFF	

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EDITION FINAL

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00:00
00:15
00:30
00:45
01:00

US
T
C
Y
L
I
T
T
A
N
T
C
R
O
N

POST INSERTION CONFIG
REMOVE HELMET & GLOVES
ECS POST INSERTION CONFIG
GDC ALIGN TO IMU
MOUNT & INITIALIZE ORDEAL
INSTALL COAS
COAS HORIZON CK

POST INSERTION CONFIG
SM RCS CK
CM RCS CK
C&W CK
REMOVE HELMET & GLOVES
INGRESS LEB
O₂ MAIN REG CK
JETTISON OPTICS COVER
RECORD ΔAZ CORRECTION
OPTICS CK
IMU REALIGN P52
OPTION 3 - REFSMMAT
STAR ID _____ (cont'd)

POST INSERTION CONFIG
REMOVE HELMET & GLOVES
ECS POST INSERTION CONFIG
EPS PERIODIC MONITOR
ECS MONITOR CK
SPS PERIODIC MONITOR
~~PUGS TEST~~
ECS REDUNDANT COMP CK
FC PURGE CK
BIOMFD Sw - CENTER

VOICE UPDATE:
ΔAZ CORRECTION

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	00:00 - 01:00	1/LPO	2-1

FLIGHT PLANNING BRANCH

MSC Form 1910 (OT) (Oct 68)

FLIGHT PLAN

01:00
01:15
01:30
01:45
02:00

H
S
K
U
S
C
Y
L

SCS ATT REFERENCE COMPARISON CK

STAR ANGLE DIFF
TORQUE ANGLES:
X _____
Y _____
Z _____

REPORT: GYRO TORQUE ANGLES
RECORD ABORT BLOCK PAD (TLI +90 MIN AND TLI +4 HOUR)
RECORD TLI PAD

BACKUP COMM CK

BIOMED Sw - RIGHT

GIVE GO FOR COMM CK

VOICE UPDATE:
BLOCK DATA

VOICE UPDATE:
TLI PAD

P27 UPDATE:
STATE VECTORS

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
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BURN STATUS REPORT

X	X		:		ΔTIG
X	X		:		BT
			:		V _{gx}
TRIM					
X	X	X			R
X	X	X			P
X	X	X			Y
					V _i
					h
					h
					ΔV _c

2-2a

TLI
BURN CHART

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
TLI	10°/SEC SHUTDOWN	+45° SHUTDOWN	B/T+6 SEC & V _i =PAD VALUE	NO TRIM
TLI PREMATURE SHUTDOWN				
ha > 60,000 nm	LUNAR ORBIT OR FLYBY (DEPENDING ON ΔV READ)			
ha > 22,000 nm	TWO PHASING MANEUVERS TO SEMI-SYNCHRONOUS ORBIT. DIRECT ENTRY			
ha > 4,000 nm	HIGH ALTITUDE ORBITS FOLLOWED BY DEBOOST TO 400 nm APOGEE			
ha 100 - 4,000 nm	EITHER HI ALTITUDE (4,000 ha) OR LOW ALT. DEPENDING ON LANDMARKS			

REMARKS:

FLIGHT PLAN

TIME	CDR	CMP	LMP	MCC-H
02:00		UNSTOW PHOTO EQUIP B3 16mm DAC 18mm LENS RT ANG MIRROR 16mm C-EX MAG PWR CABLE 70mm CAM 80mm LENS 70mm C-MAG		
02:15	TLI PREP EMS ΔV TEST	TLI PREP TRANS TO COUCH	TLI PREP S-BAND XPONDER - SEC	
02:30	GO/NO-GO FOR PYRO ARM GO/NO-GO FOR TLI GDC ALIGN AND DRIFT CK		BIONED Sw - LEFT	GO/NO-GO
02:45	TB-6 P47 BURN ATT CK TLI	GETI = 2:50:31	FLT RCDR - RECORD	
03:00	SECO S-IVB INERTIAL SECO +20 SEC S-IVB TO LH, ORB RATE, HEADS DOWN		FLT RCDR - OFF INITIATE BATT B CHARGING (FOLLOWED BY BATT A)	

TIME	CDR	CMP	LMP	MCC-N
03:00	TLI BURN STATUS REPORT	RECORD GET SEP MNVR INIT		VOICE UPDATE: GET OF SEP MNVR INIT
	S-IVB MNVR TO SEP ATT	TRANS CSM STATE VECTOR TO LM SLOT		
03:15	GO/NO-GO FOR 90-MIN ABORT			GO/NO-GO
	TRANSPOSITION FROM S-IVB +X FOR 1 fps, COAST FOR 1 MIN, -X FOR 0.5 fps, PITCH UP 4°/SEC	R13 SPOTMETER	FLT RCDR - RECORD	
03:30	FLY FORMATION	DOFF & STOW PGA	FLT RCDR - OFF NONESS BUS - OFF PHOTOGRAPH S-IVB 16/18/C-EX, 1/250, f11, 6 fps (1 MAG) 2/80/C, 1/250, SPOT (10 EXP)	
	MNVR TO LOCAL VERTICAL -X RADIALLY UPWARD. 1.5 fps	REINITIALIZE W MATRIX R ₁ + 00094 R ₂ + 00057 R ₃ + 00003	TERMINATE WATER BOILER EVAP	
03:45		TRANS CSM STATE VECTOR TO LM SLOT		
04:00				

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	03:00 - 04:00	1/TLC	2-4

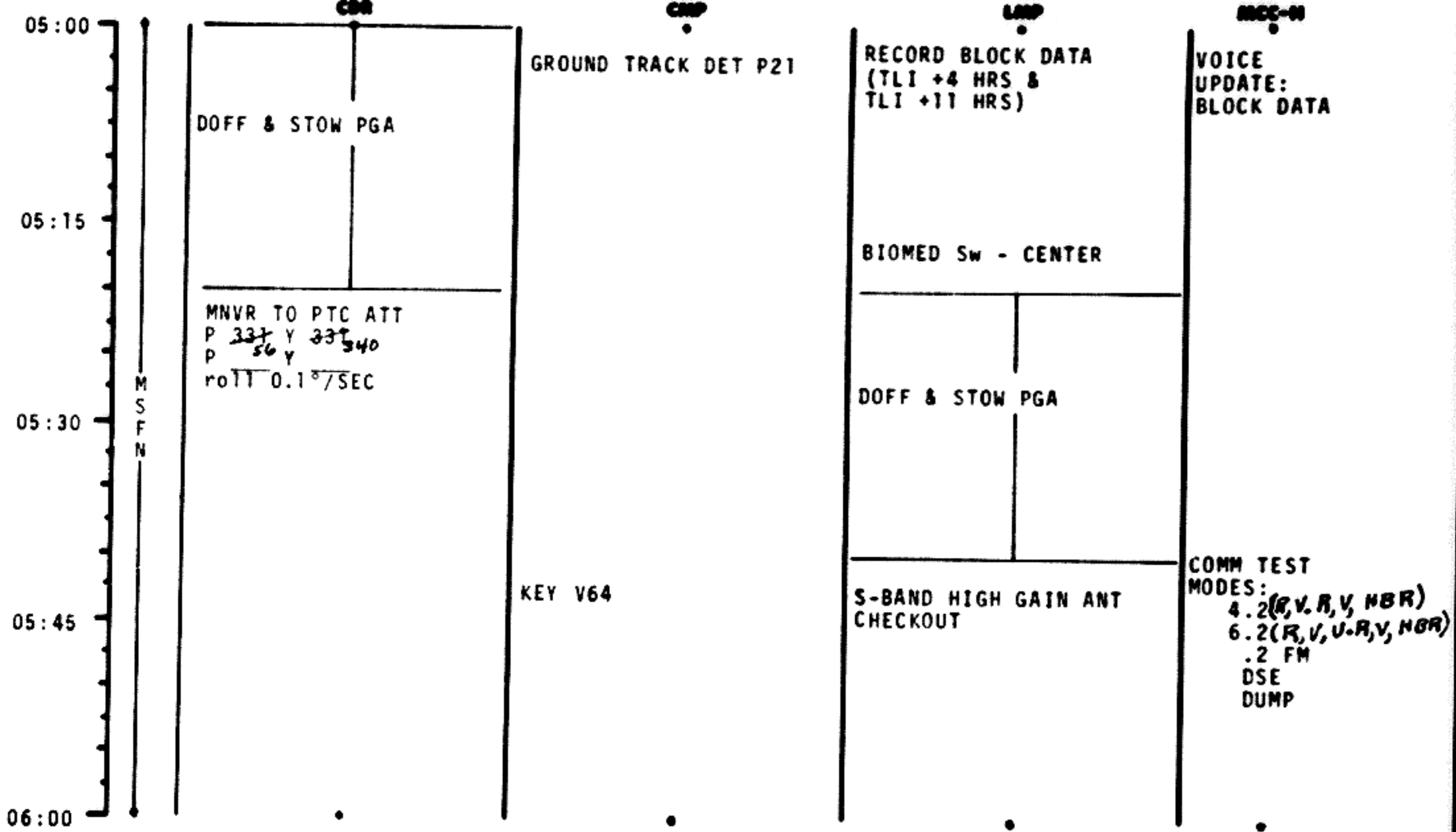
MSC Form 1010 (OT) (Oct 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

TIME	CDR	CMP	LMP	MCC-N
04:00		IMU REALIGN P52 OPTION 3 - REFSMMAT STAR ID STAR ANGLE DIFF	REPORT PERSONAL RADIATION DOSIMETER READINGS	
		TORQUE ANGLES: X Y Z		
04:15	GDC ALIGN TO IMU	CISLUNAR NAVIGATION P23		
		TRN BIAS 1. STAR 14 ENH 00110 STAR E H 1 SET - 3 MARKS EACH	Record Trunion Bias, ΔR, ΔV, & TA for all sightings.	
04:30		2. STAR 15 EFH 00120 STAR E H 2 SETS - 3 MARKS EACH		
04:45		3. STAR 16 EFH 00120 STAR E H 2 SETS - 3 MARKS EACH		
05:00				

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

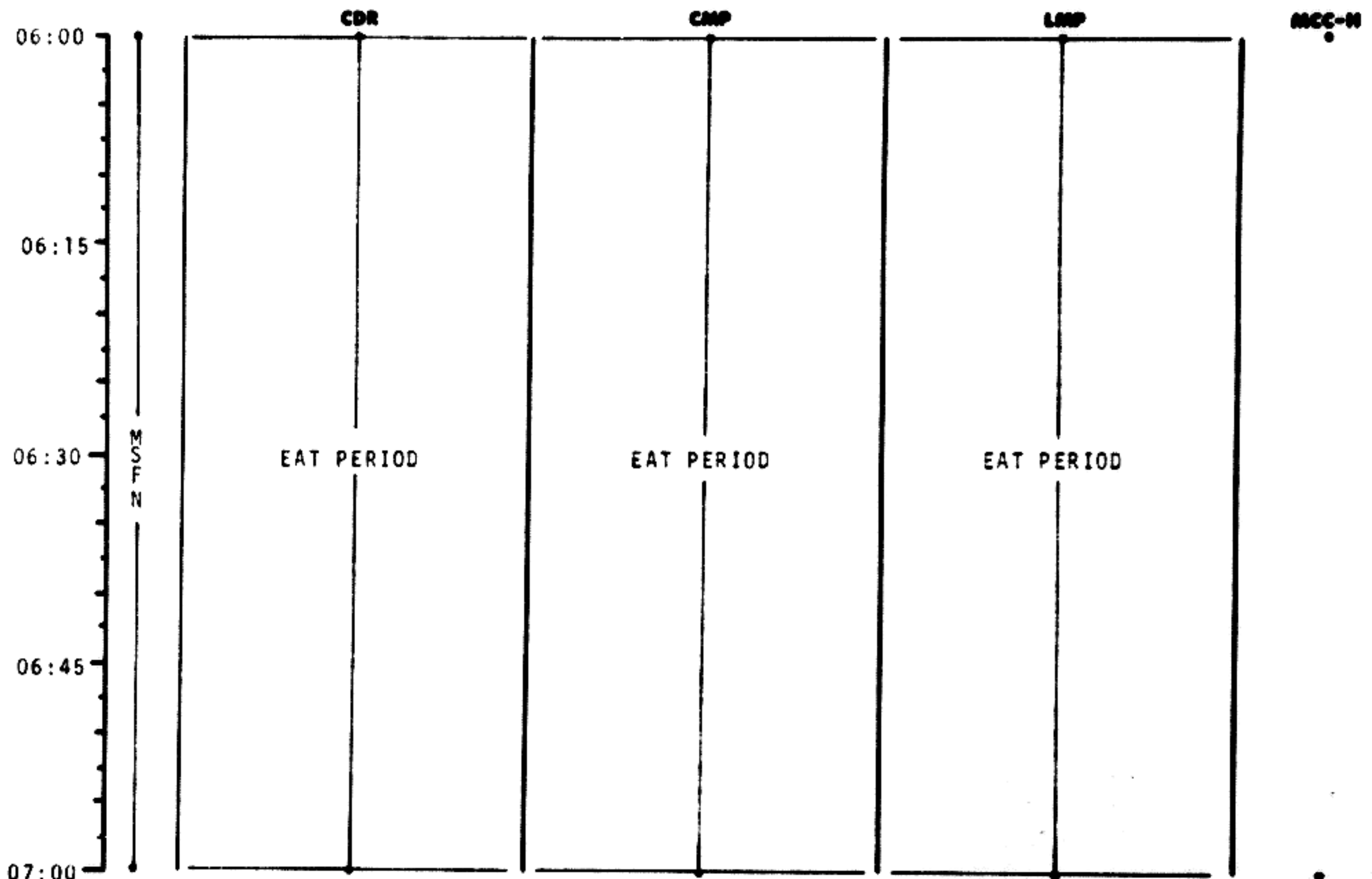


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	05:00 - 06:00	1/TLC	2-6

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	06:00 - 07:00	1/TLC	2-7

07:00
07:15
07:30
07:45
08:00

M
S
F
N

LiOH CANISTER CHANGE
(CARTRIDGE NO. 3 FROM
A3 INTO CANISTER A)
85

OPEN COOLANT CONTROL
ATTENUATION PANEL
EVAP WATER CONT SEC
VLV - OFF

CLOSE COOLANT CONTROL
ATTENUATION PANEL

WASTE STOWAGE VENT -
CLOSED
BAT VENT VLV - OPEN
(UNTIL SERVICE
METER = 0)
BAT VENT VLV - CLOSED

(R, V, R, V, LBR)
(R, V, U, R, V, LBR)
(R, U, R, V, HBR)
(UVB, R, V, HBR)

PERFORM
COMM TESTS
MODES: 4.3
6.3
5.2
8.2

P27 UPDATE:
STATE
VECTOR
TGT LOAD

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	07:00 - 08:00	1/TLC	2-8

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

BURN STATUS REPORT

X X : ΔTIG
 X X : BT
 : V_{gx}

TRIM

X X X R
 X X X P
 X X X Y
 V_{gx}
 V_{gy}
 V_{gz}
 ΔV_c

X X X FUEL
 X X X OX
 X X X UNBALANCE

REMARKS:

MCC'S

BURN CHART

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TO 0.2 fns

2-8a

08:00	MNVR TO P52 ATT	IMU REALIGN P52 OPTION 3 - REFSMMAT AND DRIFT CK STAR ID STAR ANGLE DIFF	RECORD MNVR PAD → TLC → 11 HR PAD	MCC-N VOICE UPDATE: MNVR PAD → TLC → 11 HR PAD
08:15		TORQUE ANGLES X Y Z		
08:30	V47 TRANS LM STATE VECTOR TO CSM SLOT EXT ΔV P30 SPS/RCS THRUST P40/P41 MNVR TO BURN ATT	SXT STAR CK TRANS TO COUCH	BIOMED Sw - RIGHT	PIPA BIAS CK
08:45	EMS ΔV TEST			
09:00	GDC ALIGN TO IMU MCC ₁ ΔV=NOMINALLY ZERO	SM RCS MON CK		

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	08:00 - 09:00	1/TLC	2-9

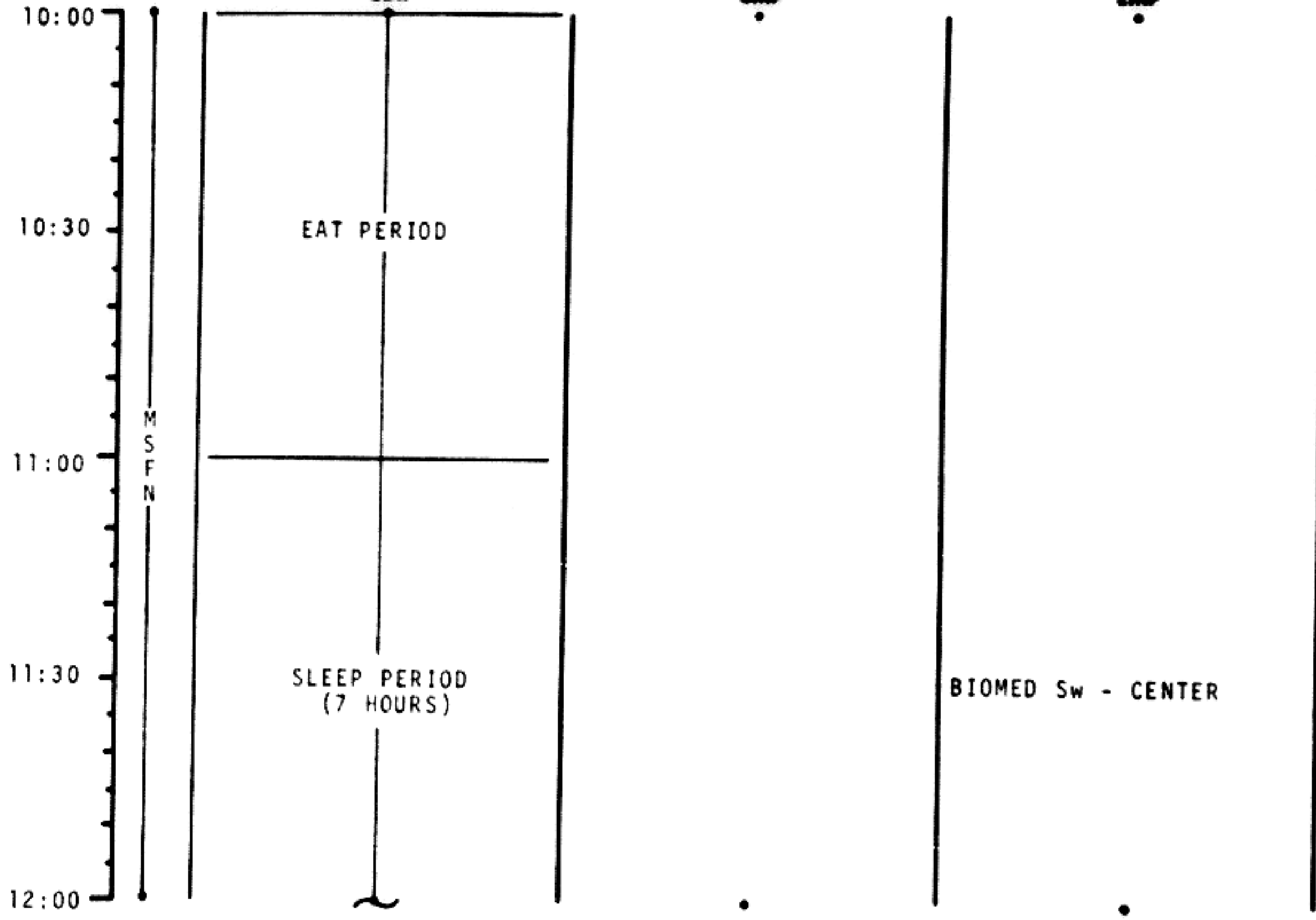
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FLIGHT PLANNING BRANCH

FLIGHT PLAN

09:00	V66 TRANS CSM STATE VECTOR TO LM SLOT MCC ₁ BURN STATUS REPORT MNVR TO SIGHTING ATT	SM RCS ^{MON} CK TRN BIAS	SPS MONITOR CK INITIATE BAT CHARGE	MCC-N
09:30		CISLUNAR NAVIGATION P23 1. STAR 15 ELDNK 10 LAT 28.876°N LONG/2 56.292°W ALT 000.01 STAR ELDNK LAT LONG/2 ALT 2 SETS 2. STAR 16 ELDNK 10 LAT 28.876°N LONG/2 56.292°W ALT 000.01 STAR ELDNK LAT LONG/2 ALT		
10:00	MNVR TO PTC ATT P 337 ⁵⁶ Y 337 ³⁴⁰ P Y ROLL 0.1°/SEC	GROUND TRACK DET P21		

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
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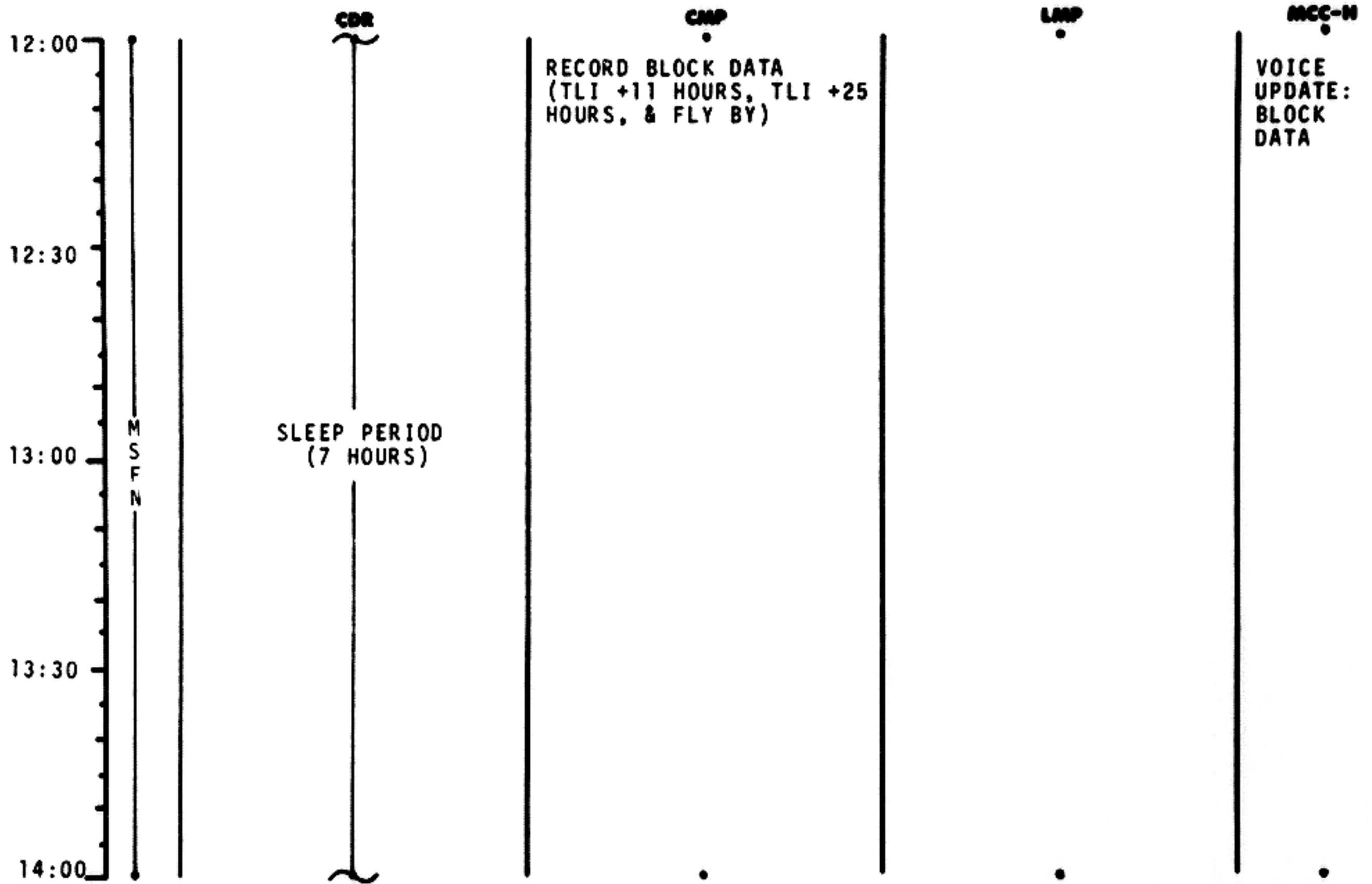


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	10:00 - 12:00	1/TLC	2-11

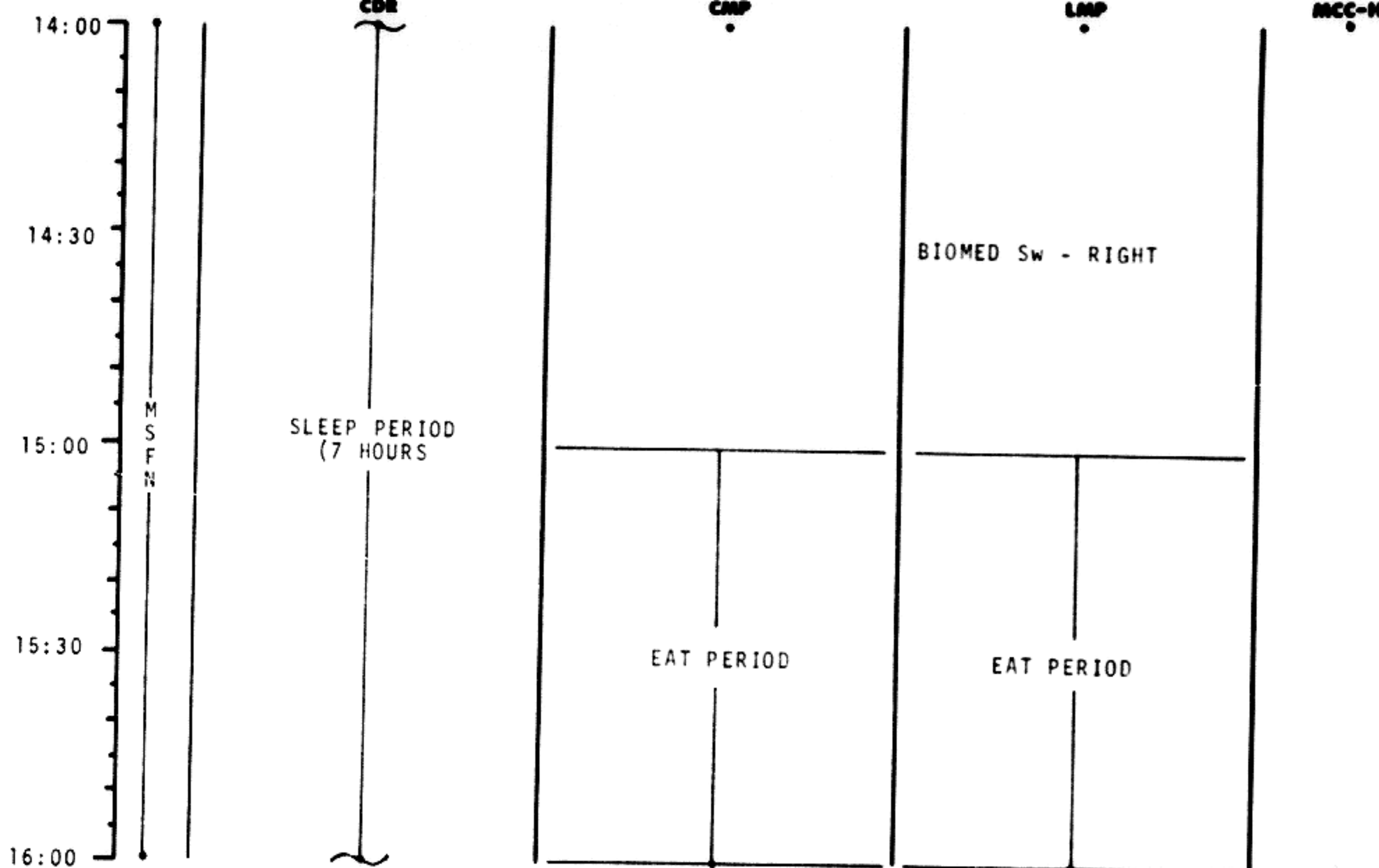
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FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	12:00 - 14:00	1/TLC	2-11

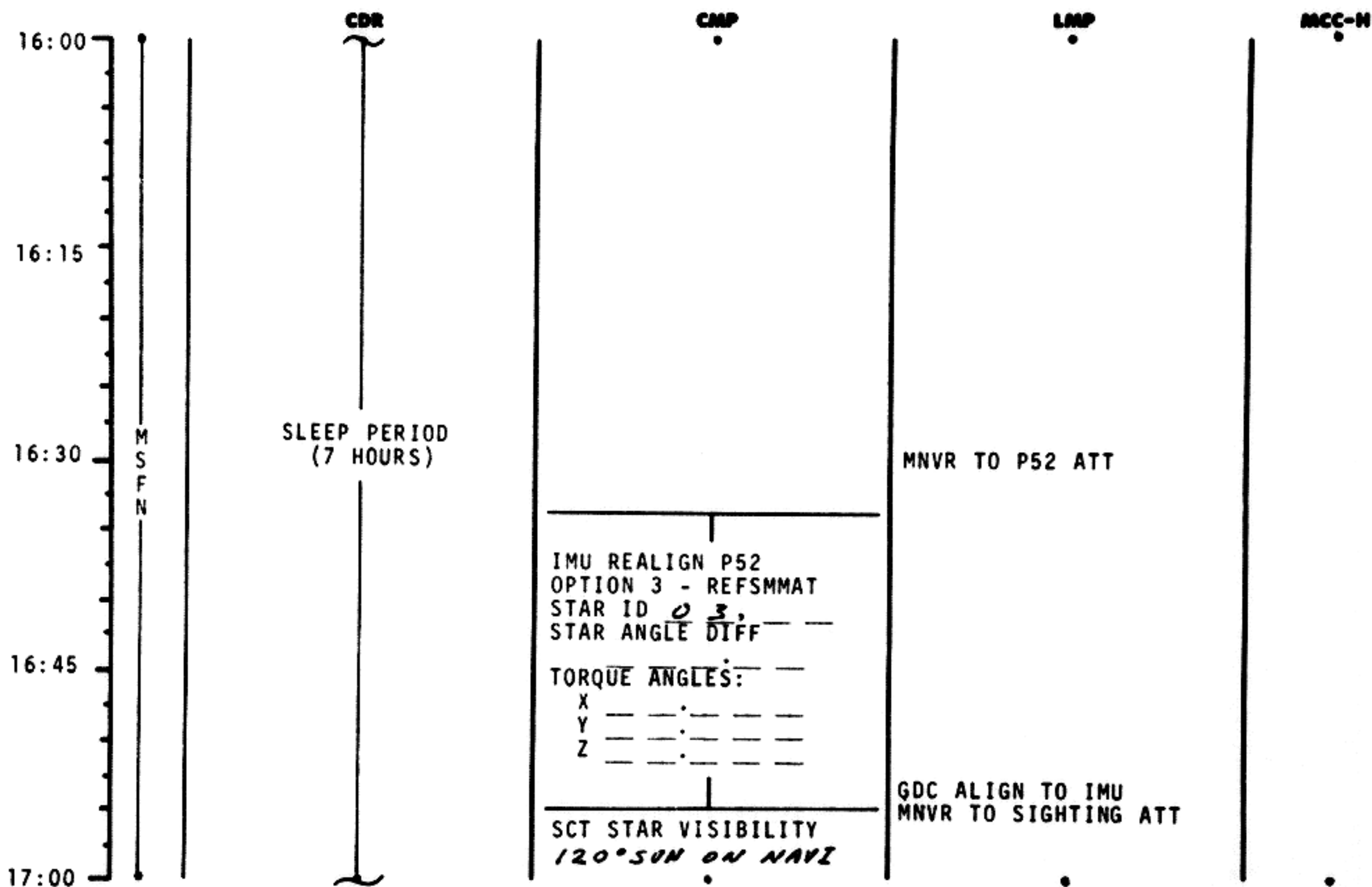


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	14:00 - 16:00	1/TLC	2-13

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FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	14:00 - 16:00	1/TLC	2-13

17:00
17:15
17:30
17:45
18:00

M S F N

SLEEP PERIOD
(7 HOURS)

TRN BIAS

CISLUNAR NAVIGATION P23

1. STAR 22¹⁶ EFH 00120
STAR ___ E ___ H
3 SETS

2. STAR 16²² EFH 00120
STAR ___ E ___ H
2 SETS

GROUND TRACK DET P21

BIOMED Sw - LEFT

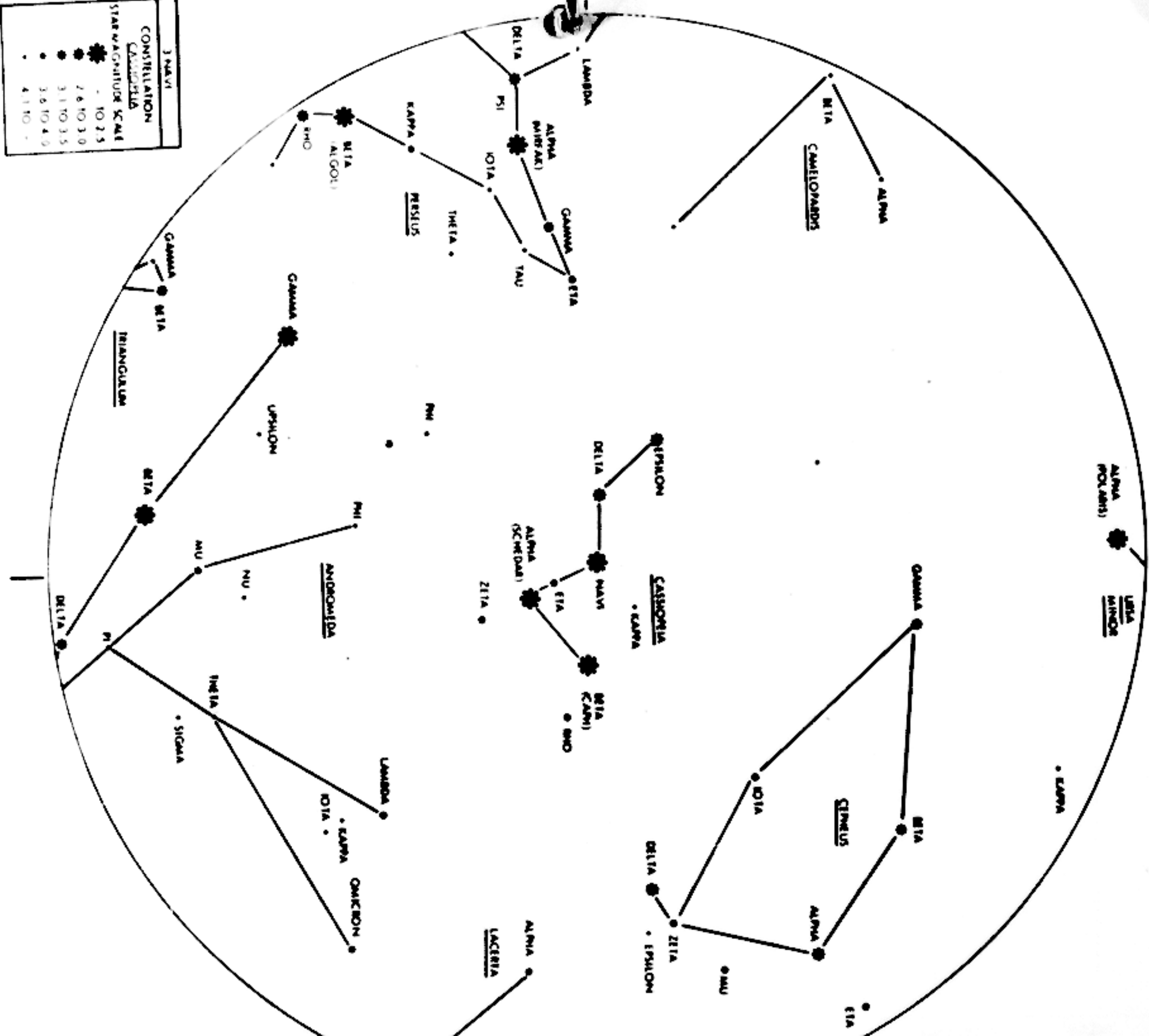
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	17:00 - 18:00	1/TLC	2-15

MSC Form 1910 (Nov 68)

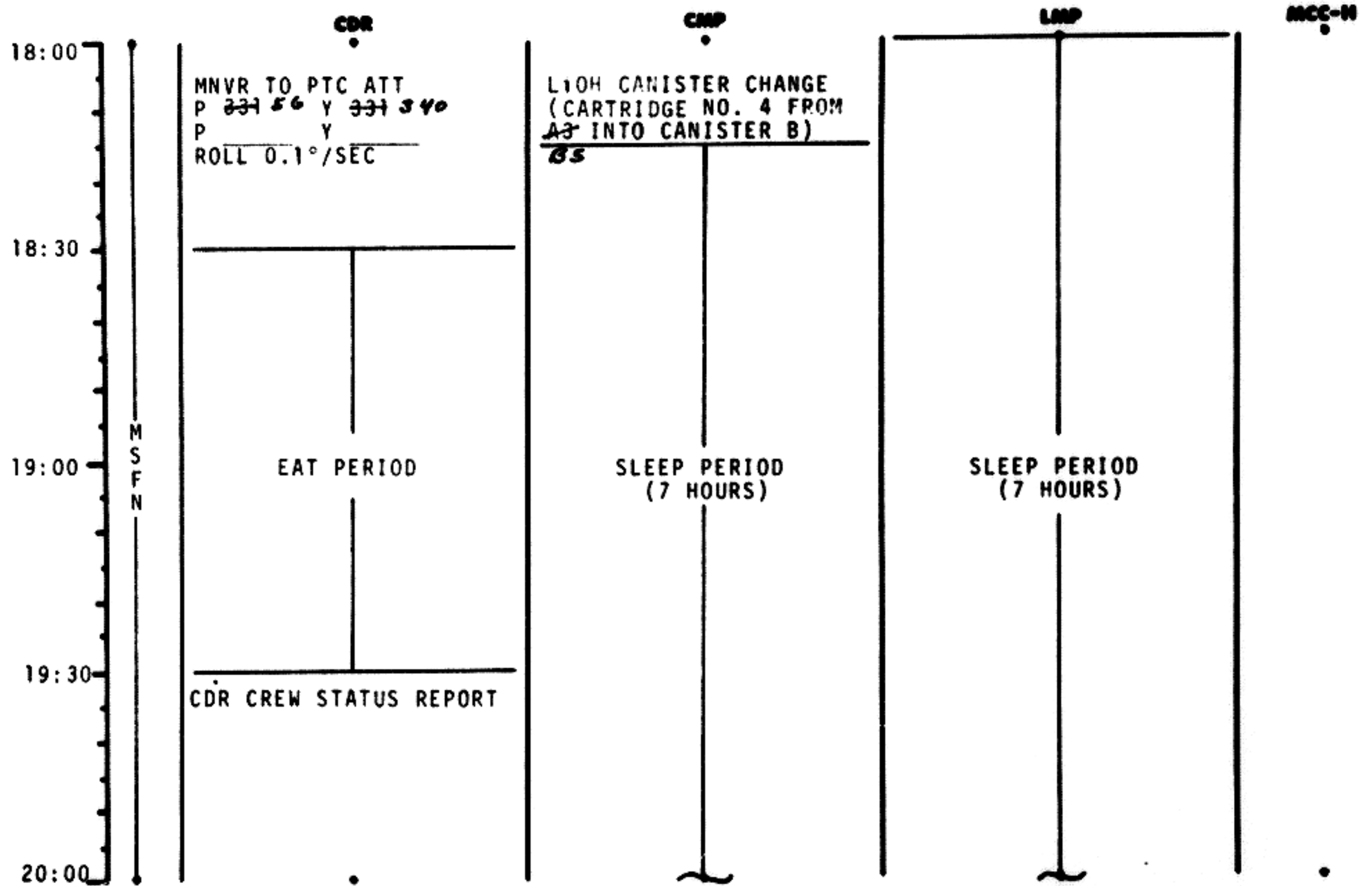
FLIGHT PLANNING BRANCH

3 NAVI
CONSTELLATION
CASSIOPIA
STAR MAGNITUDE SCALE

•	1 TO 2.5
•	2.6 TO 3.0
•	3.1 TO 3.5
•	3.6 TO 4.0
•	4.1 TO 5.0



FLIGHT PLAN



20:00
20:30
21:00
21:30
22:00

M
S
F
N

CDR

CDR

LEP

MCC-N

SLEEP PERIOD
(7 HOURS)

SLEEP PERIOD
(7 HOURS)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	20:00 - 22:00	1/TLC	2-17

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FLIGHT PLANNING BRANCH

FLIGHT PLAN

22:00
22:30
23:00
23:30
24:00

M
S
F
N

CDR

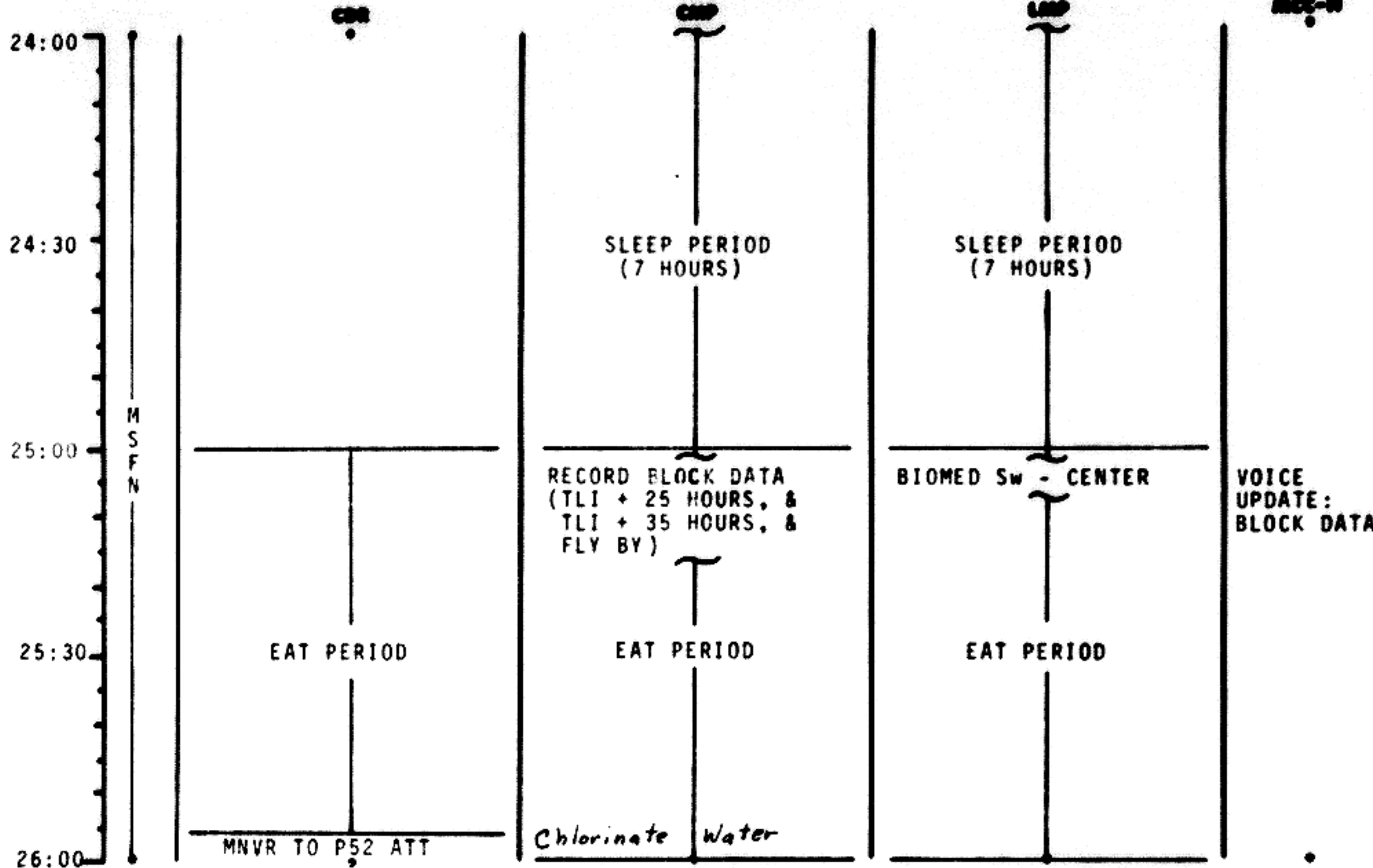
CDR

LEP

MCC-N

SLEEP PERIOD
(7 HOURS)

SLEEP PERIOD
(7 HOURS)

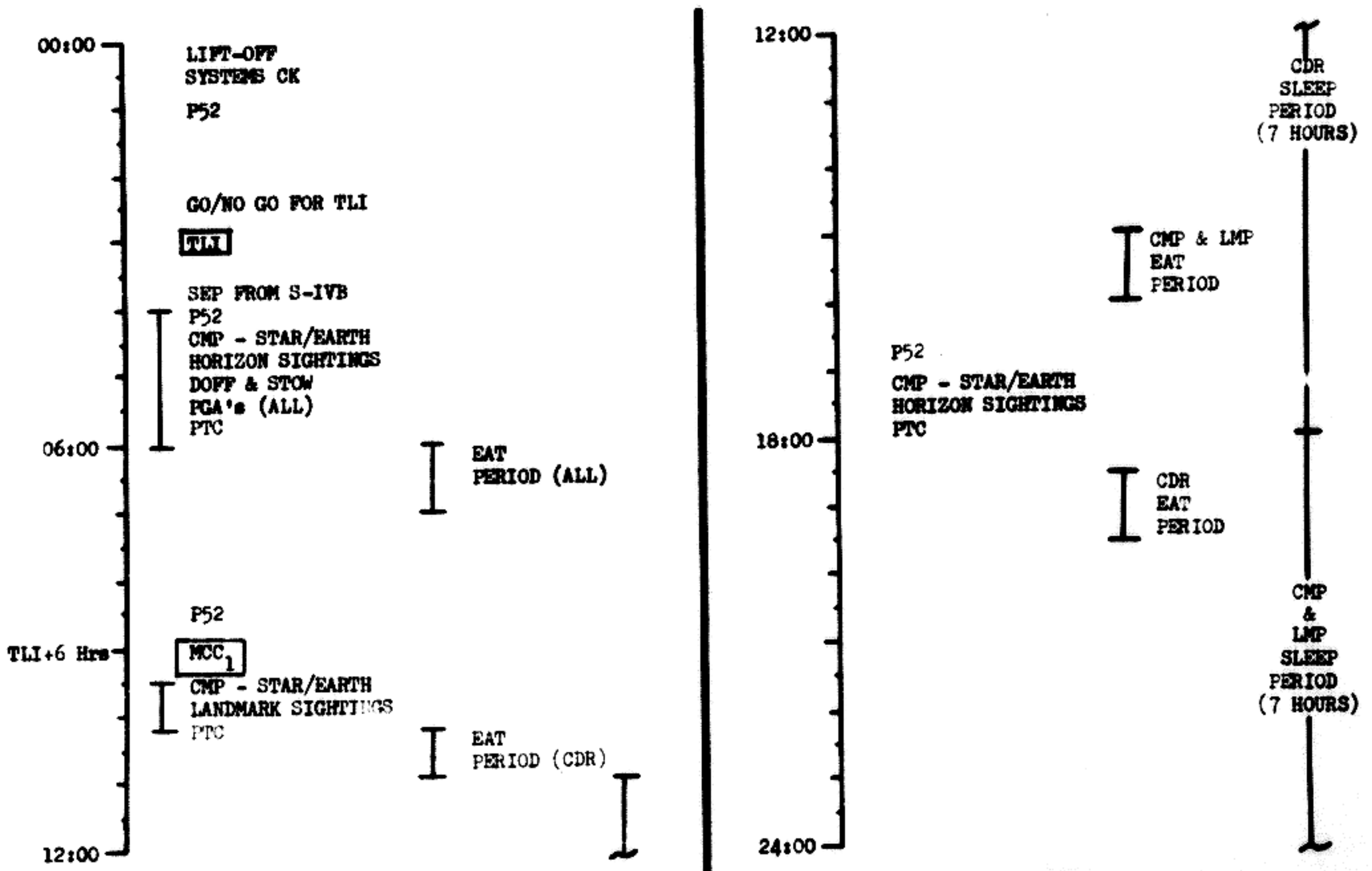


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	24:00 - 26:00	2/TLC	2-19

MSC Form 1010 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
		November 22, 1968	00:00 - 24:00	1	5-1

FLIGHT PLAN

26:00
26:15
26:30
26:45
27:00

M
S
F
N

GDC ALIGN TO IMU
MNR TO SIGHTING
ATTITUDE

COR

CMP

IMU REALIGN P52 OPTION 3 - REFSMMAT STAR ID STAR ANGLE DIFF	
TORQUE ANGLES:	
X	---
Y	---
Z	---
TRN BIAS	
CISLUNAR NAVIGATION P23	
1.	STAR 16 EFH 00120 STAR ___ E ___ H 1 SET
2.	STAR 22 EFH 00120 STAR ___ E ___ H 1 SET
3.	STAR 26 ENH 00110 STAR ___ E ___ H 1 SET

CMP/LMP CREW STATUS
REPORT

LMP

MCC-N

RECORD MNR PAD

VOICE
UPDATE:
MNR PAD

BURN STATUS REPORT

MCC'S

BURN CHART

X X : ΔTIG
 X X : BT
 : V_{gx}

TRIM

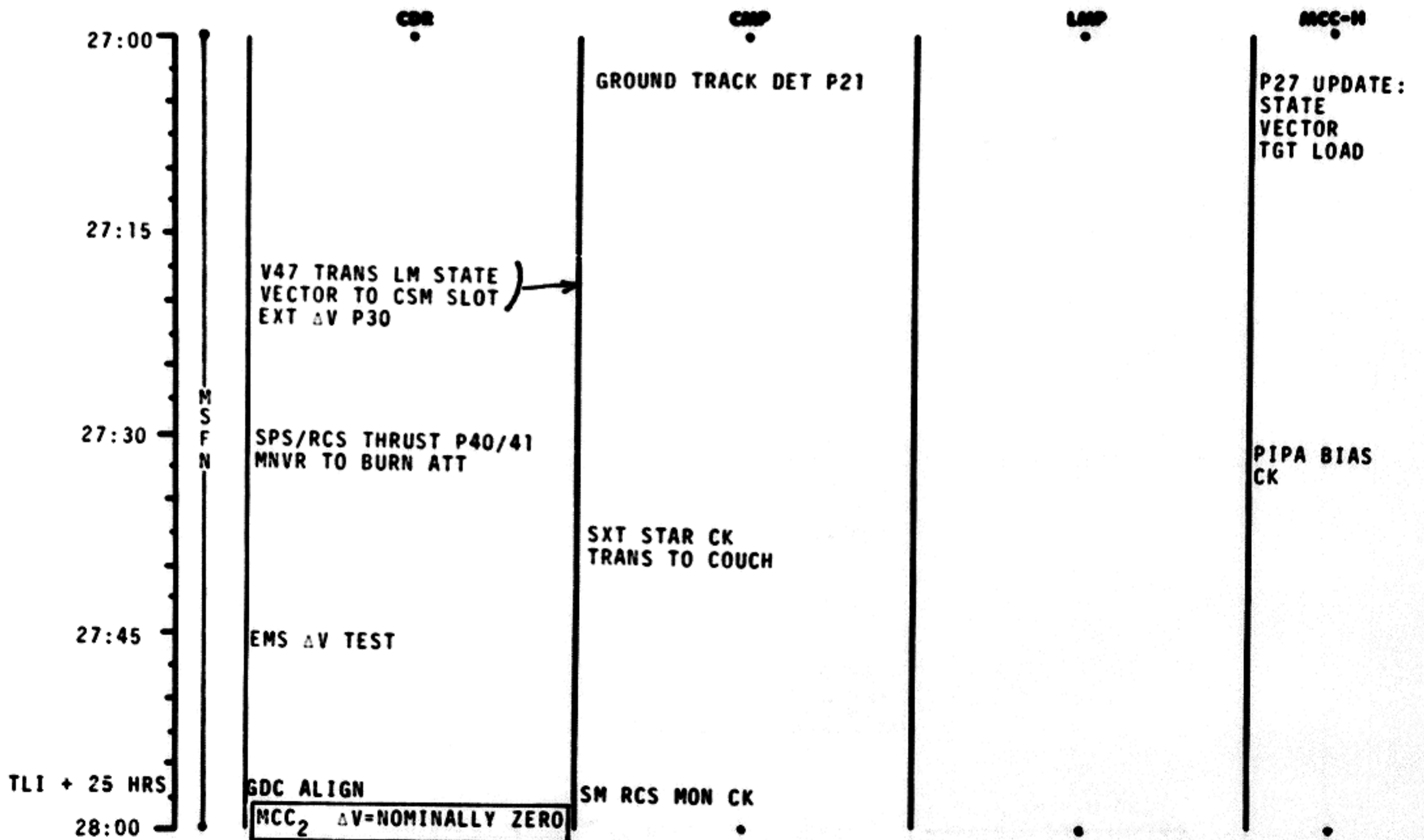
X X X R
 X X X P
 X X X Y
 V_{gx}
 V_{gy}
 V_{gz}
 ΔV_c

X X X FUEL
 X X X OX
 X X X UNBALANCE

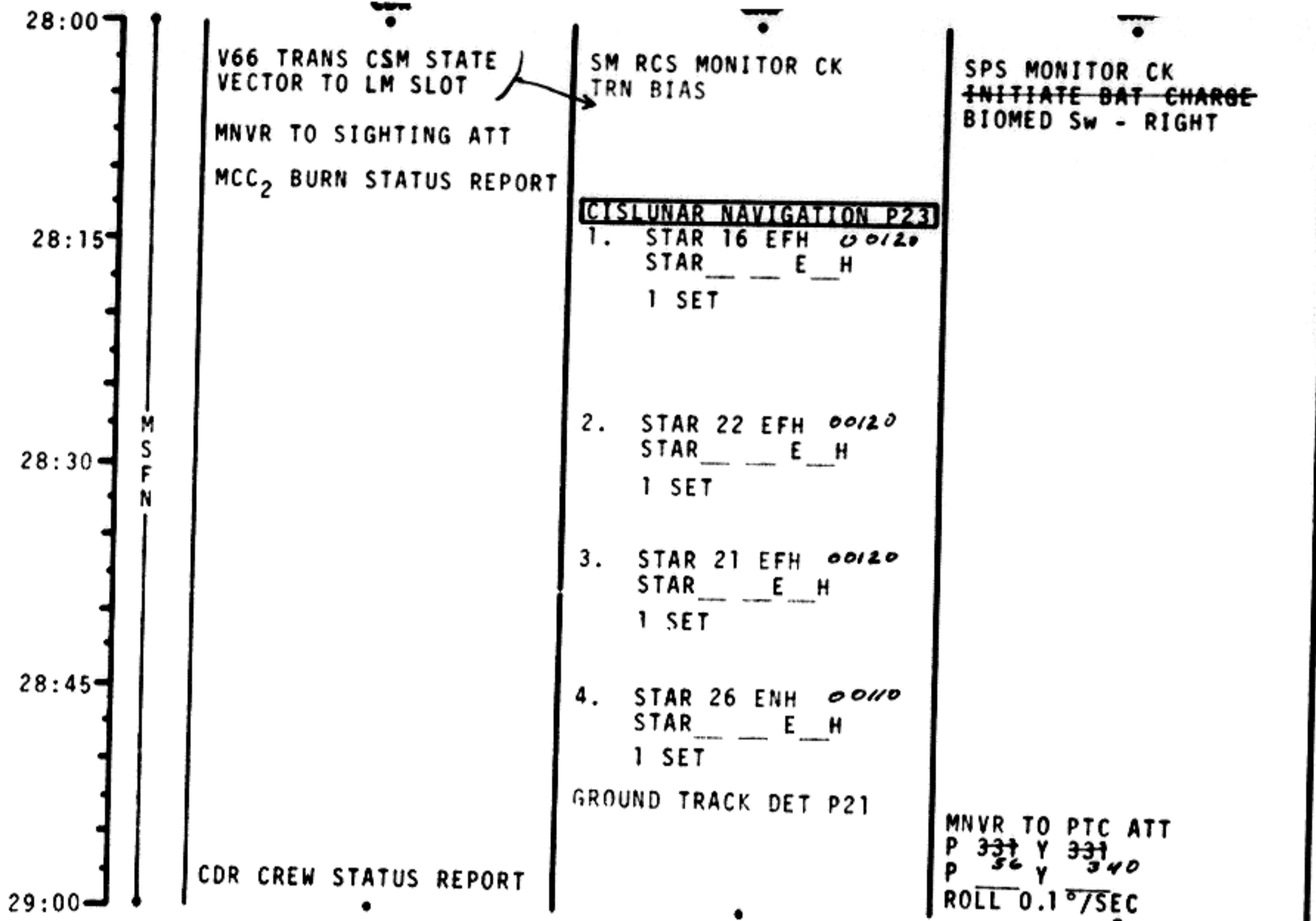
	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TO 0.2 fns

REMARKS:

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
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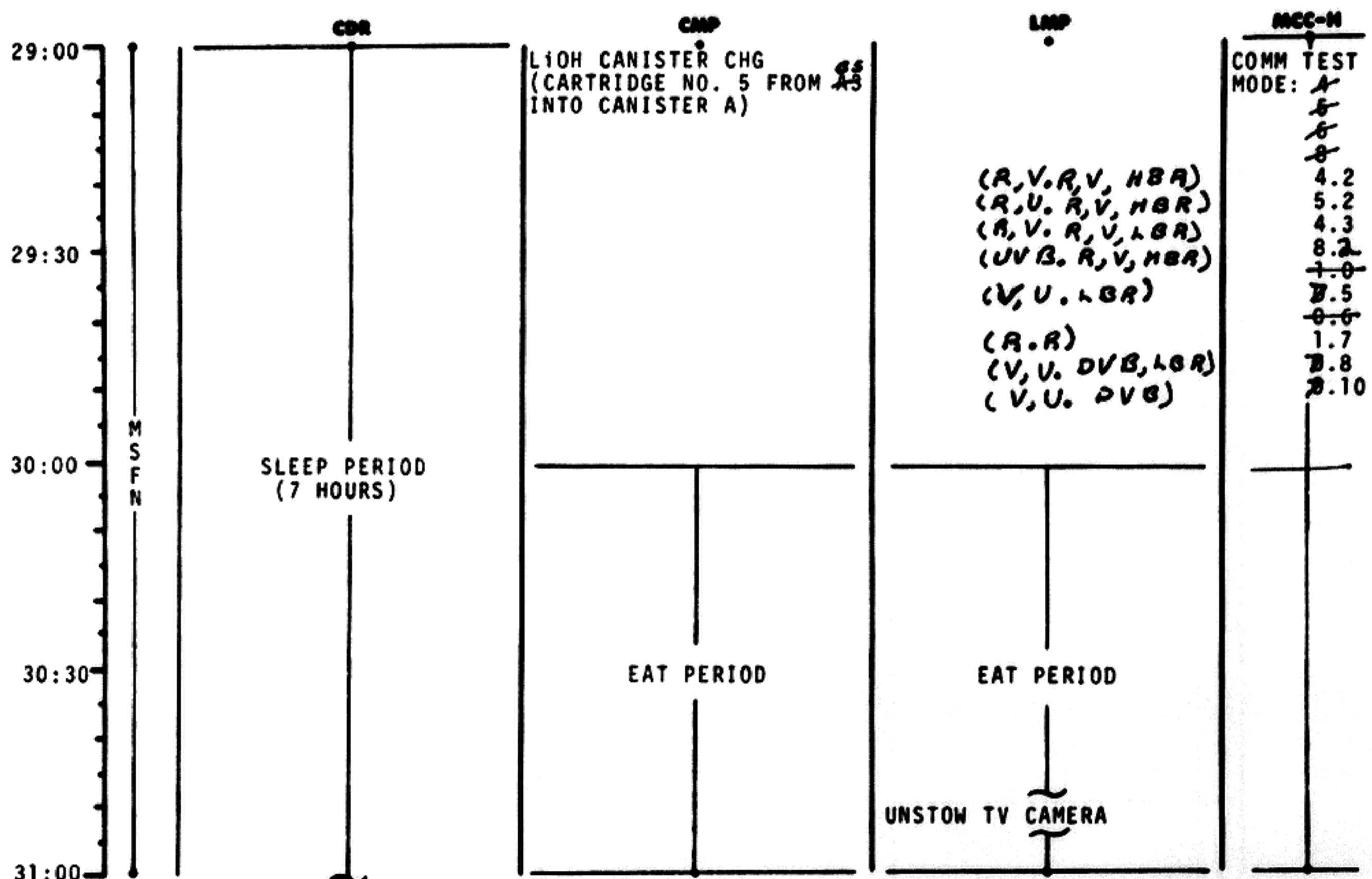


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	28:00 - 29:00	2/TLC	2-22

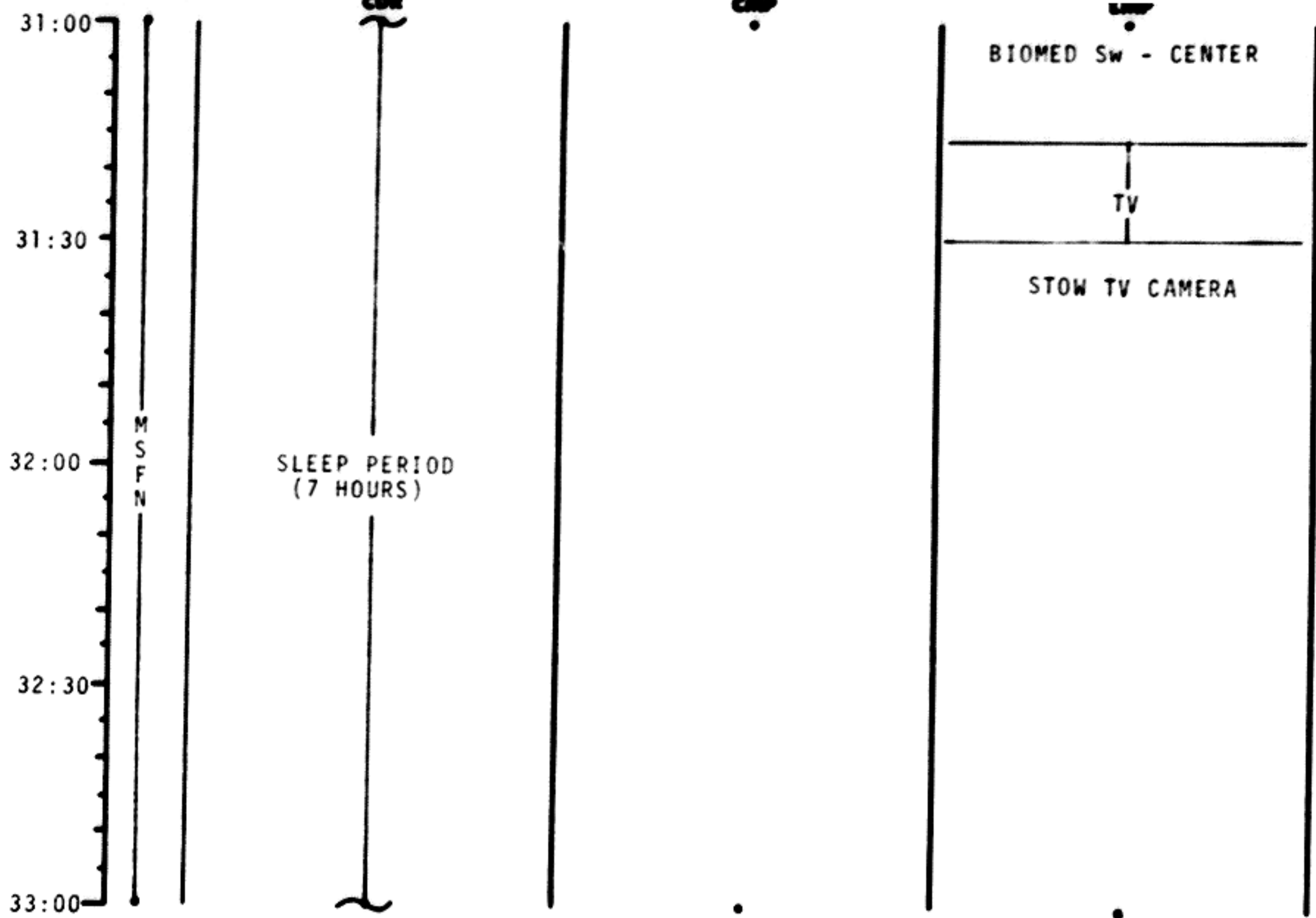
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
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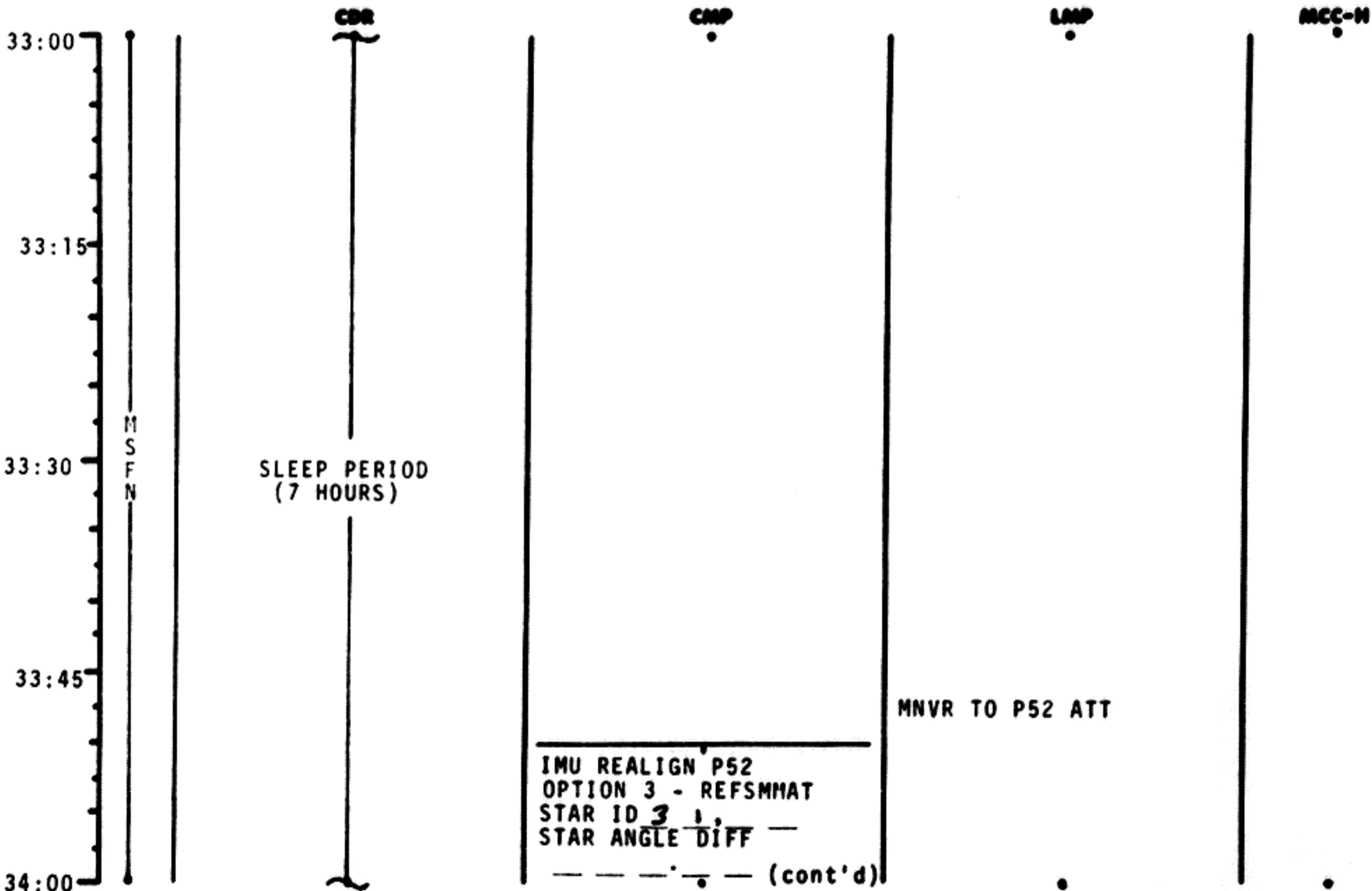


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	31:00 - 33:00	2/TLC	2-24

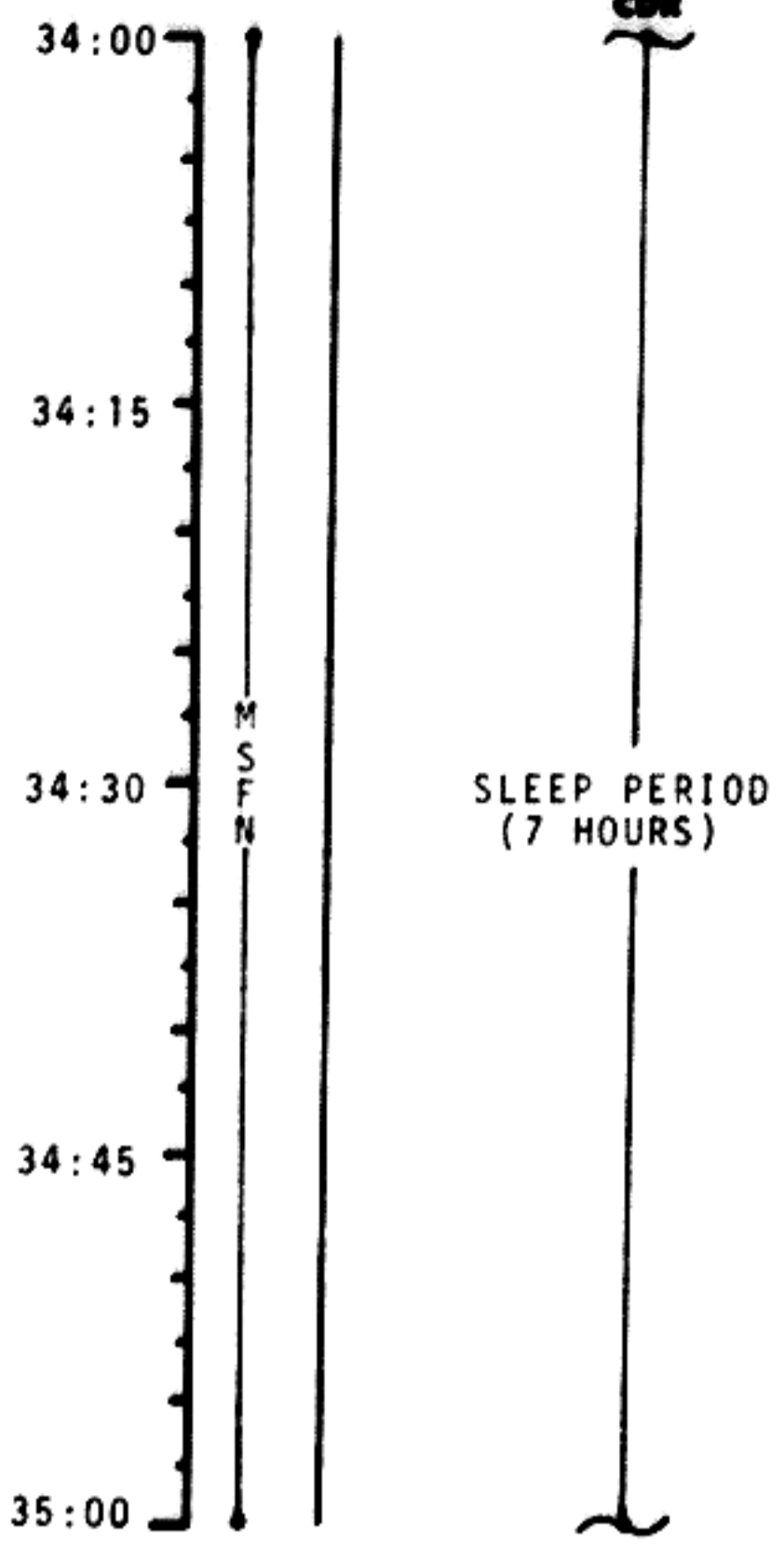
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FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE



TORQUE ANGLES:
 X _____
 Y _____
 Z _____

SCT STAR VISIBILITY
 TRN BIAS (70° SUN ON ACURUS)

BIOMED Sw - RIGHT
 MNVR TO SIGHTING ATT

CISLUNAR NAVIGATION P23

1. STAR 16 EFH 00120
 STAR ___ E ___ H
 1 SET
 2. STAR 22 EFH 00120
 STAR ___ E ___ H
 1 SET
 3. STAR 26 ENH 00110
 STAR ___ E ___ H
 1 SET
- GROUND TRACK DET P21

MNVR TO PTC ATT
 P 337 Y 337
 P 36 Y 340
 ROLL 0.1°/SEC

RECORD BLOCK DATA
 (TLI + 35 HOURS, TLI +
 44 HOURS, AND FLY BY)

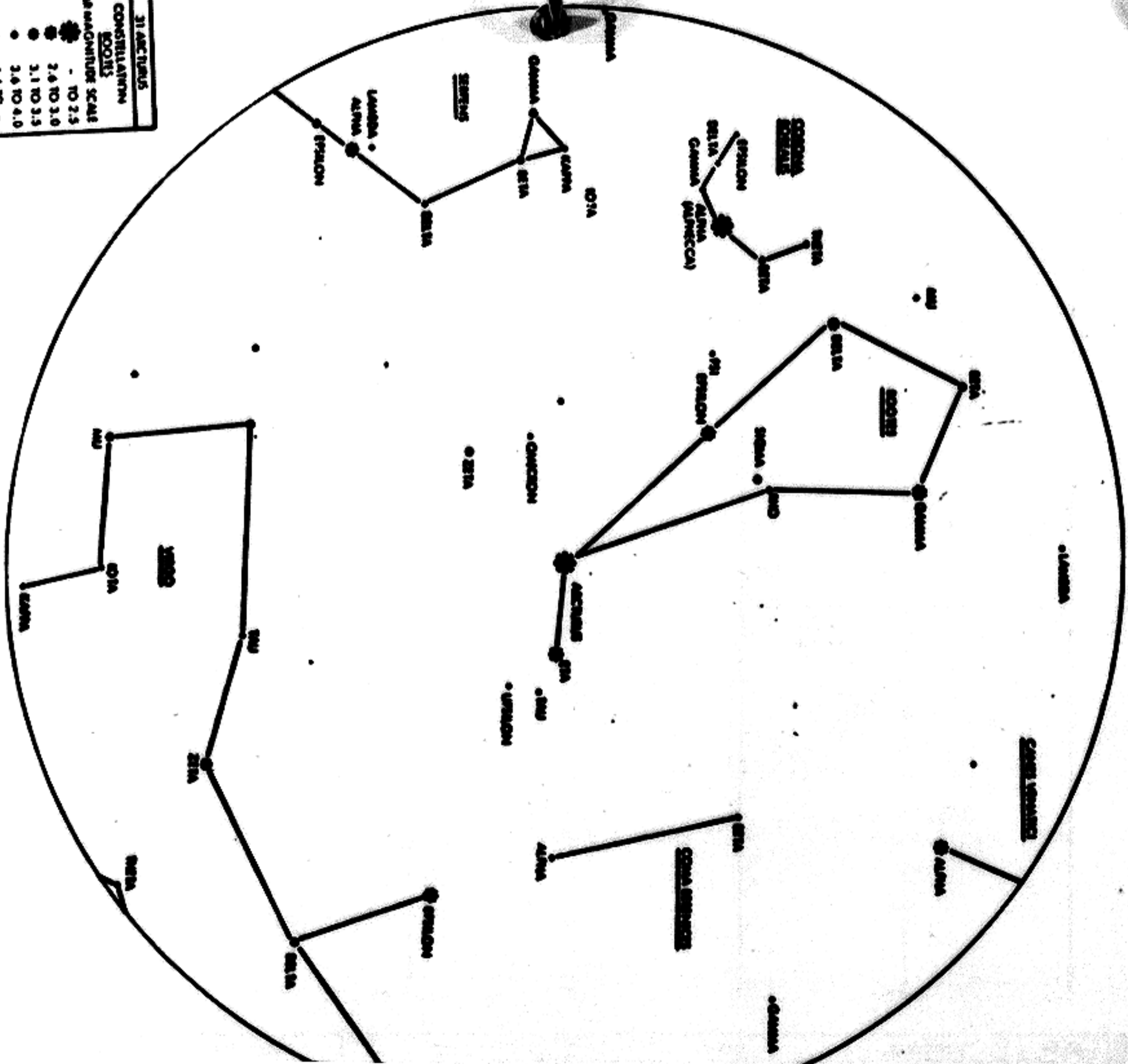
VOICE
 UPDATE:
 BLOCK DATA

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	34:00 - 35:00	2/TLC	2-26

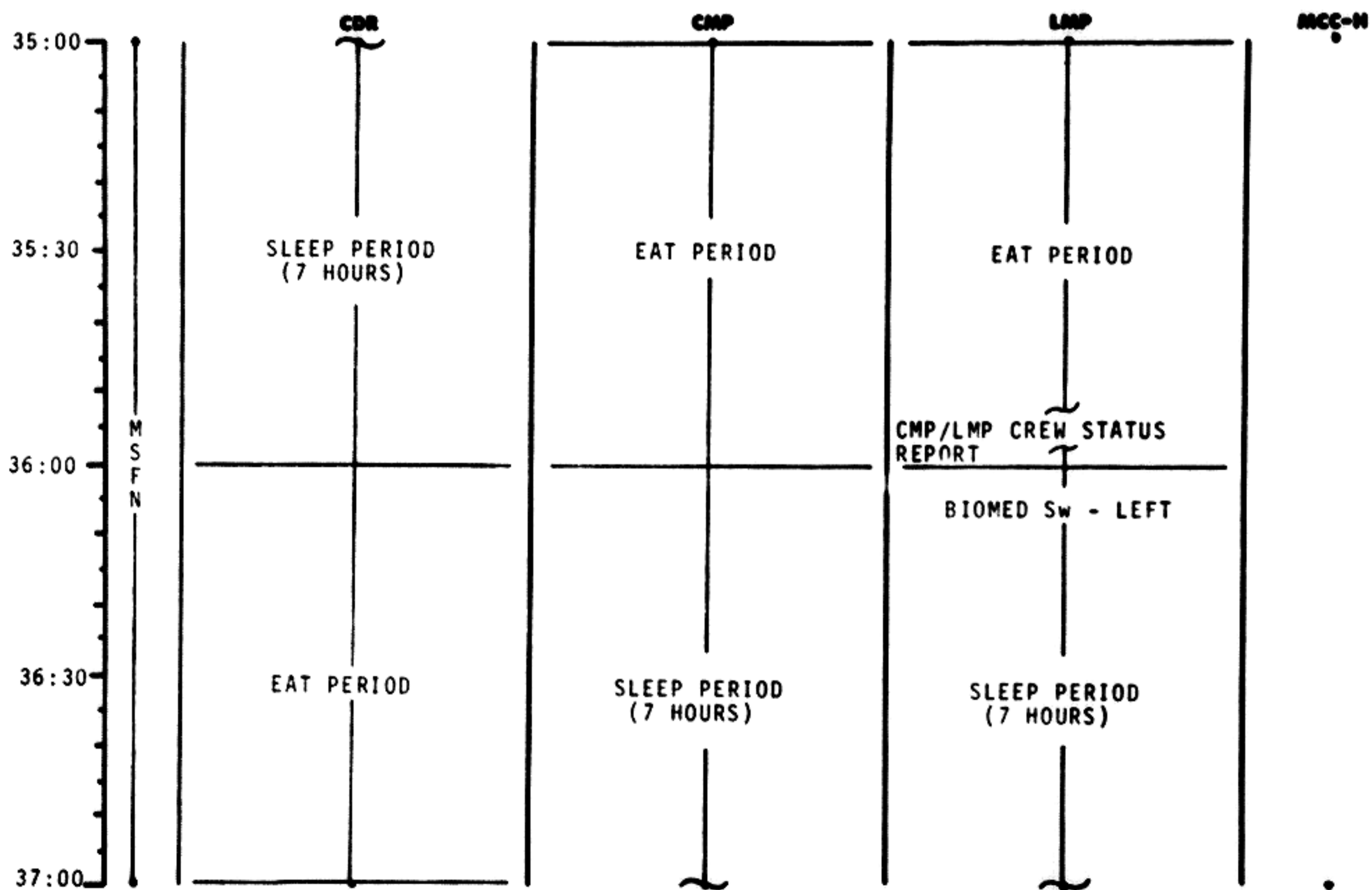
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FLIGHT PLANNING BRANCH

CONSTELLATION	STAR MAGNITUDE SCALES
31 ACURUS	TO 2.5
ROOFS	2.6 TO 3.0
	3.1 TO 3.5
	3.6 TO 4.0
	4.1 TO



FLIGHT PLAN



37:00
37:30
38:00
38:30
39:00

M
S
F
N

CDR
CDR CREW STATUS REPORT

SLEEP PERIOD
(7 HOURS)

SLEEP PERIOD
(7 HOURS)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	37:00 - 39:00	2/TLC	2-28

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FLIGHT PLANNING BRANCH

FLIGHT PLAN

39:00
39:30
40:00
40:30
41:00

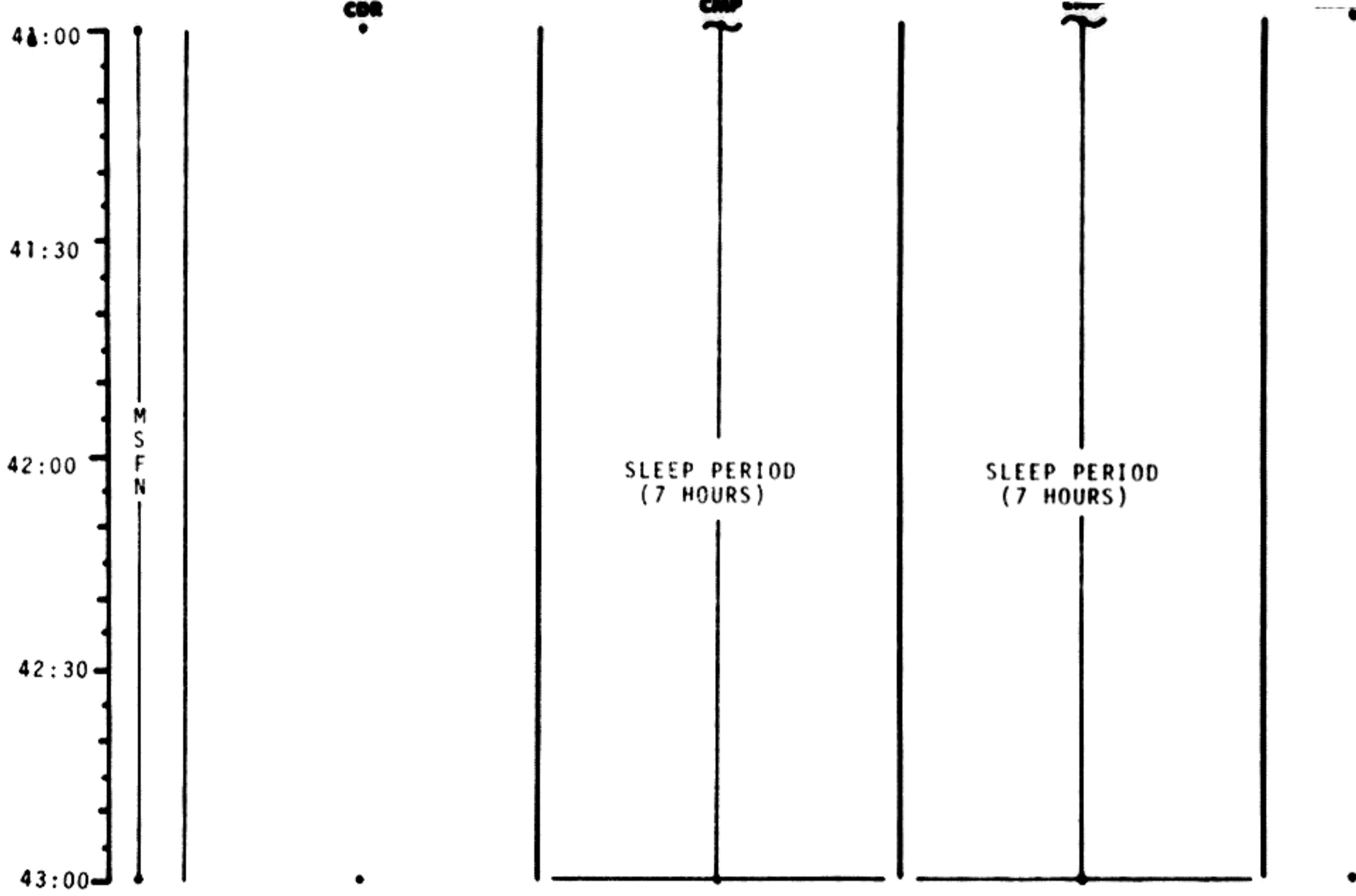
M
S
F
N

L10H CANISTER CHANGE
(CARTRIDGE NO. 6 FROM
A5 INTO CANISTER B)
65

SLEEP PERIOD
(7 HOURS)

SLEEP PERIOD
(7 HOURS)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

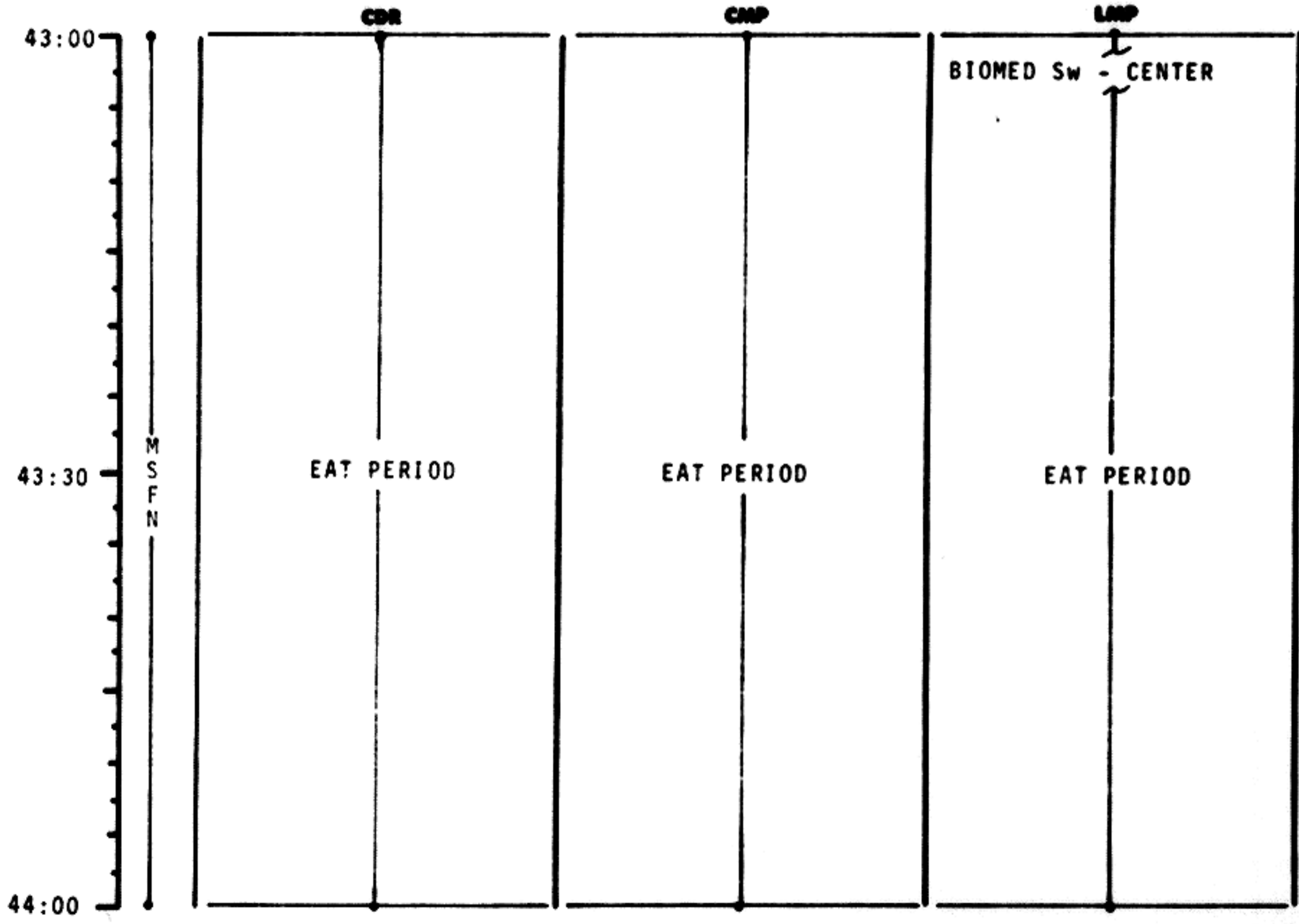


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	41:00 - 43:00	2/TLC	2-30

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FLIGHT PLANNING BRANCH

FLIGHT PLAN



MCC-N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

44:00
44:30
45:00

M
S
F
N

MNVR TO P52 ATT

GDC ALIGN TO IMU

RECORD BLOCK DATA
(TLI + 44 HOURS, FLY BY,
~~PC + 2 (QUICK RETURN),~~
& PC + 2 ASSUMING FLYBY)

CMP/LMP CREW STATUS
REPORT

VOICE
UPDATE:
BLOCK DATA

IMU REALIGN P52
OPTION 3 - REFSMMAT
STAR ID
STAR ANGLE DIFF

TORQUE ANGLES:
X
Y
Z

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	44:00 - 45:00	2/TLC	2-32

MSC Form 1010 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

45:00
45:15
45:30
45:45
46:00

M
S
F
N

MNVR TO SIGHTING ATT

TRN BIAS
CISLUNAR NAVIGATION P23

1. STAR 33 LNH 00210
STAR ___ L ___ H
3 SETS

2. STAR ^{34 LPH} 37 LNH 00220
STAR ___ L ___ H
1 SET

3. STAR ^{40 LNH 00210} 45 LPH 00230
STAR ___ L ___ H
1 SET

~~4. STAR 42 LPH 00200
STAR ___ L ___ H
1 SET~~

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

BURN STATUS REPORT

MCC'S

BURN CHART

X X : ΔTIG
 X X : BT
 : V_{gx}

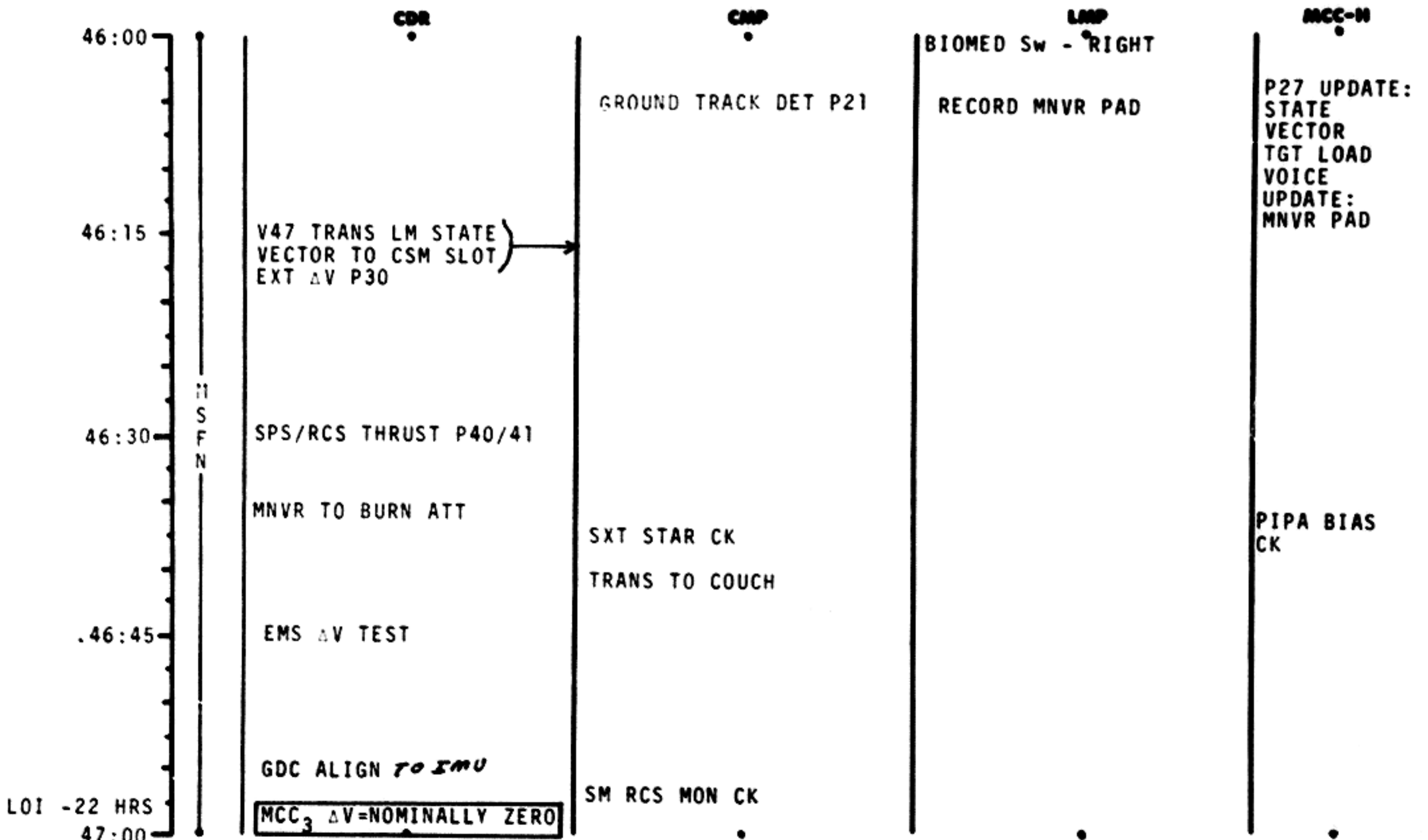
TRIM
 X X X R
 X X X P
 X X X Y
 V_{gx}
 V_{gy}
 V_{gz}
 ΔV_c

X X X FUEL
 X X X OX
 X X X UNBALANCE

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TO 0.2 fns

REMARKS:

FLIGHT PLAN



47:00
47:15
47:30
47:45
48:00

M
S
F
N

MNVR TO SIGHTING ATT

V66 TRANS CSM STATE
VECTOR TO LM SLOT

MCC₃ BURN STATUS REPORT

MNVR TO PTC ATT
P 331 Y 331
P 36 Y 340
ROLL 0.1°/SEC

SM RCS MON CK

TRN BIAS

LUNAR NAVIGATION P23

1. STAR 16 EFH 00120
STAR ___ E ___ H
1 SET
2. STAR 22 EFH 00120
STAR ___ E ___ H
1 SET
3. STAR 26 ENH 00110
STAR ___ E ___ H
1 SET

GROUND TRACK DET P21

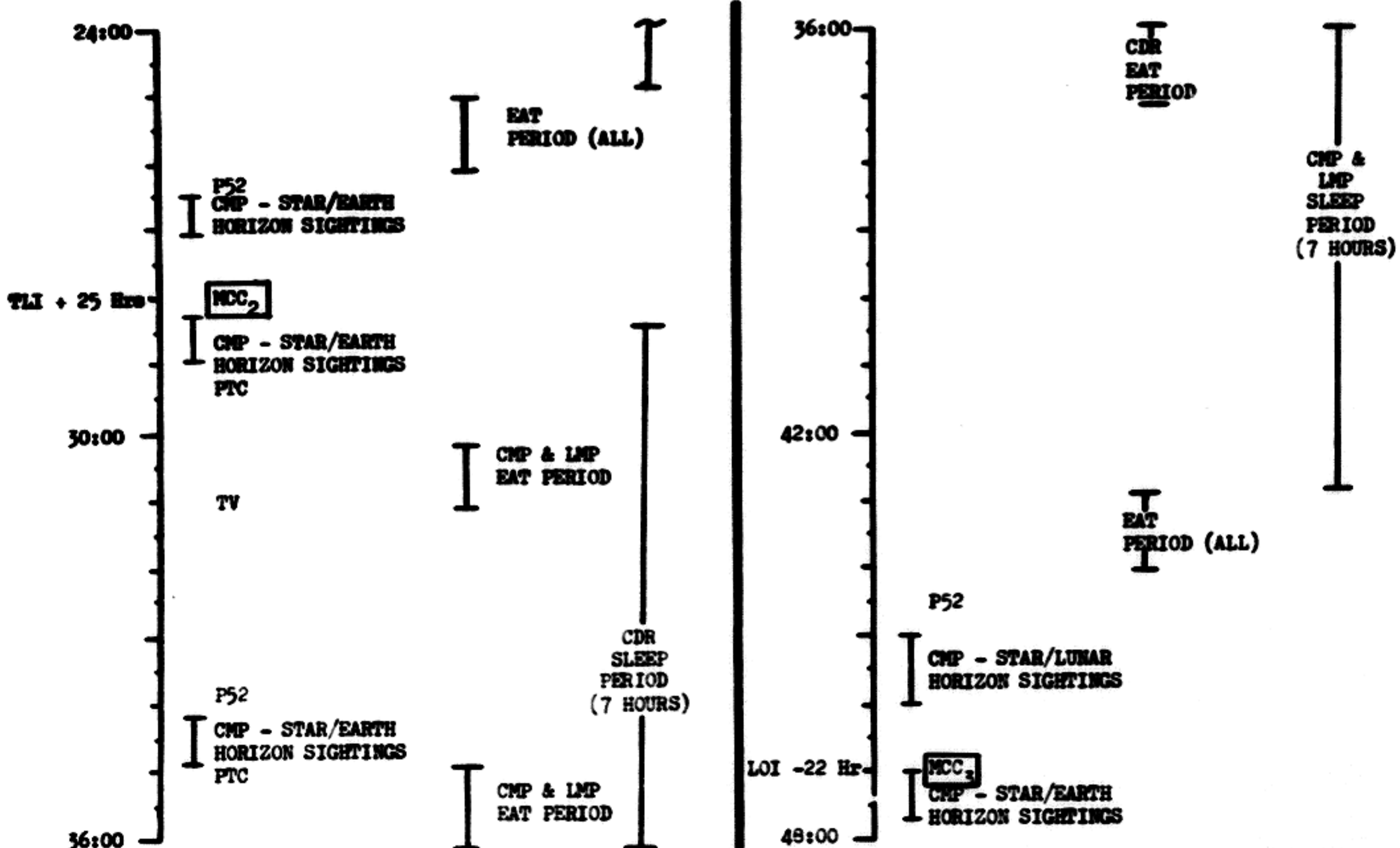
SPS MON CK
INITIATE BAT CHARGE

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	47:00 - 48:00	2/TLC	2-35

MSC Form 1910 (Nov 68)

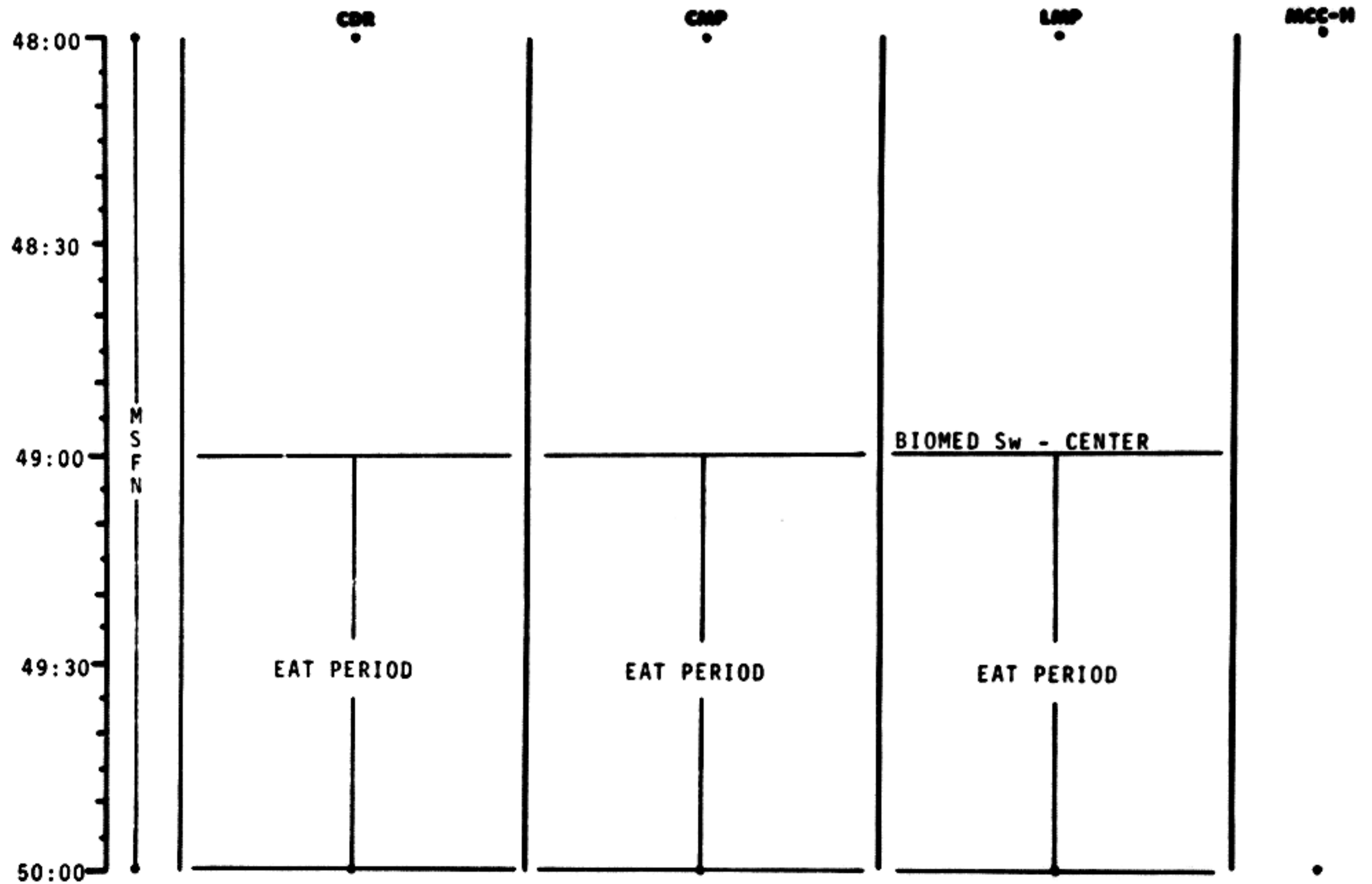
FLIGHT PLANNING BRANCH

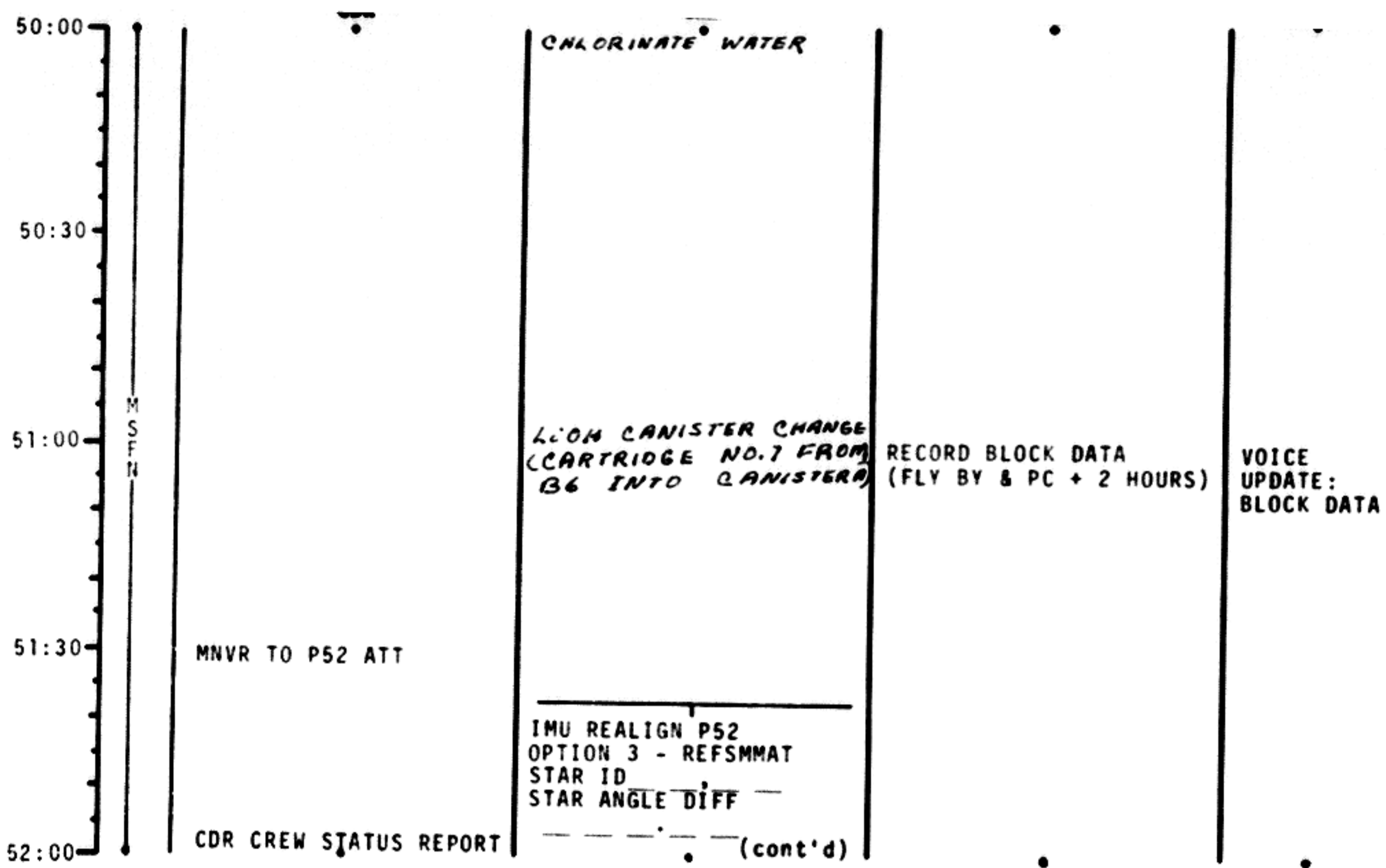
FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	24:00 - 48:00	2	5-2

FLIGHT PLAN



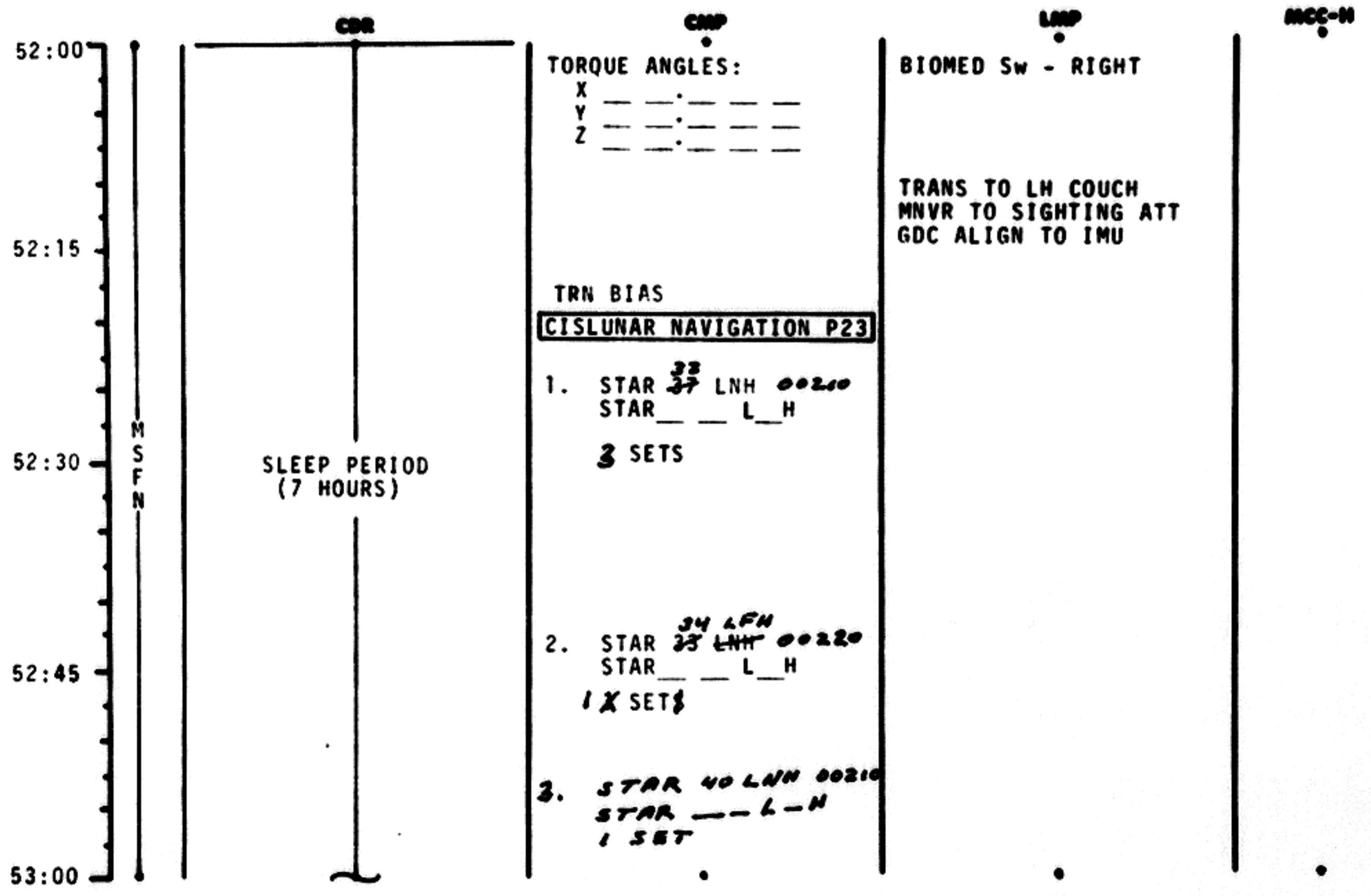


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	50:00 - 52:00	3/TLC	2-37

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

53:00
53:15
53:30
53:45
54:00

M
S
F
N

SLEEP PERIOD
(7 HOURS)

GROUND TRACK DET P21

MNVR TO PTC ATT
P 331 Y 231
P 86 Y 340
ROLL 0.1°/SEC

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	53:00 - 54:00	3/TLC	2-39

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

54:00
54:15
54:30
54:45
55:00

M
S
F
N

SLEEP PERIOD
(7 HOURS)

CDR

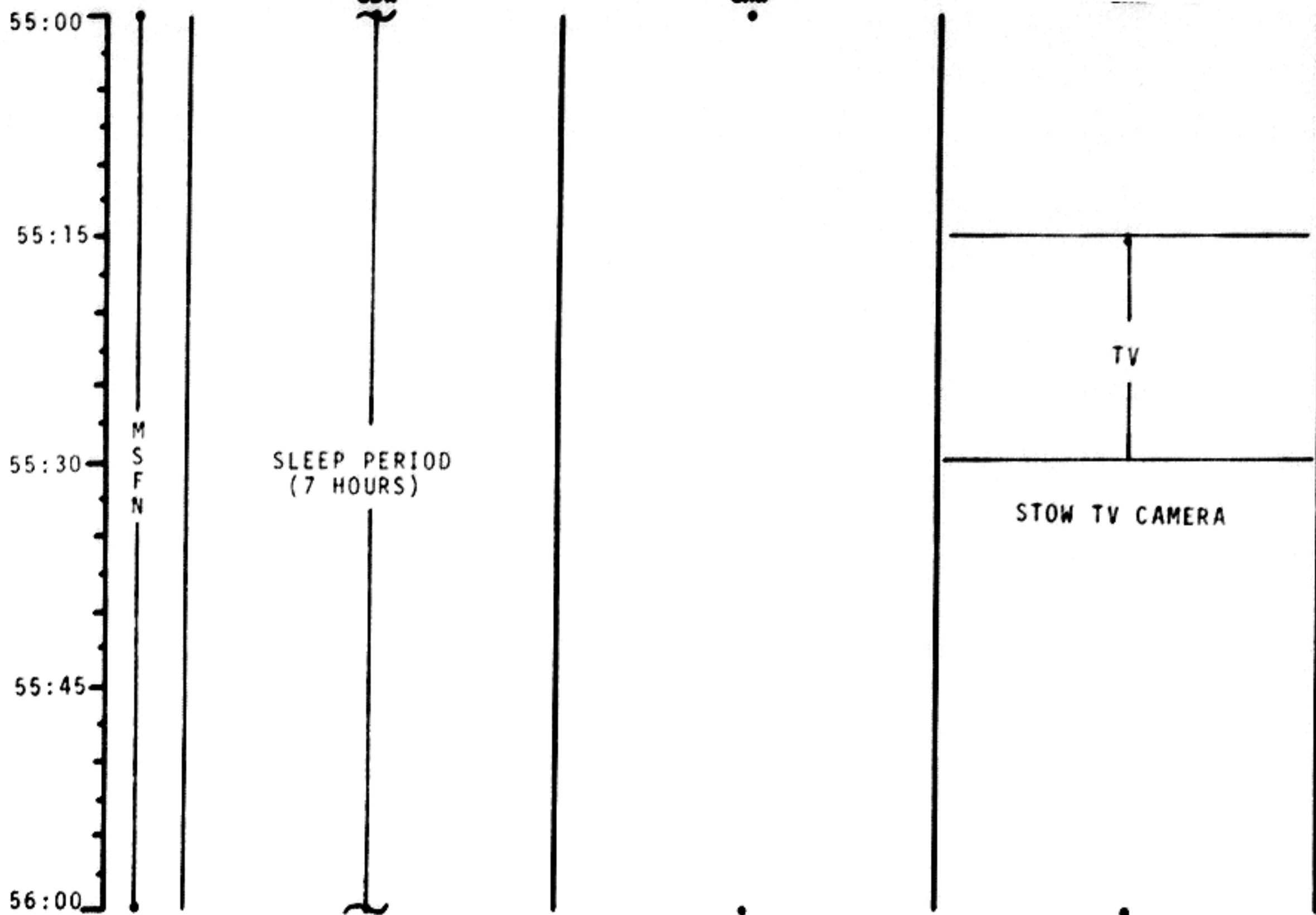
CMP

LMP

MCC-N

BIOMED SW - CENTER
UNSTOW TV CAMERA

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

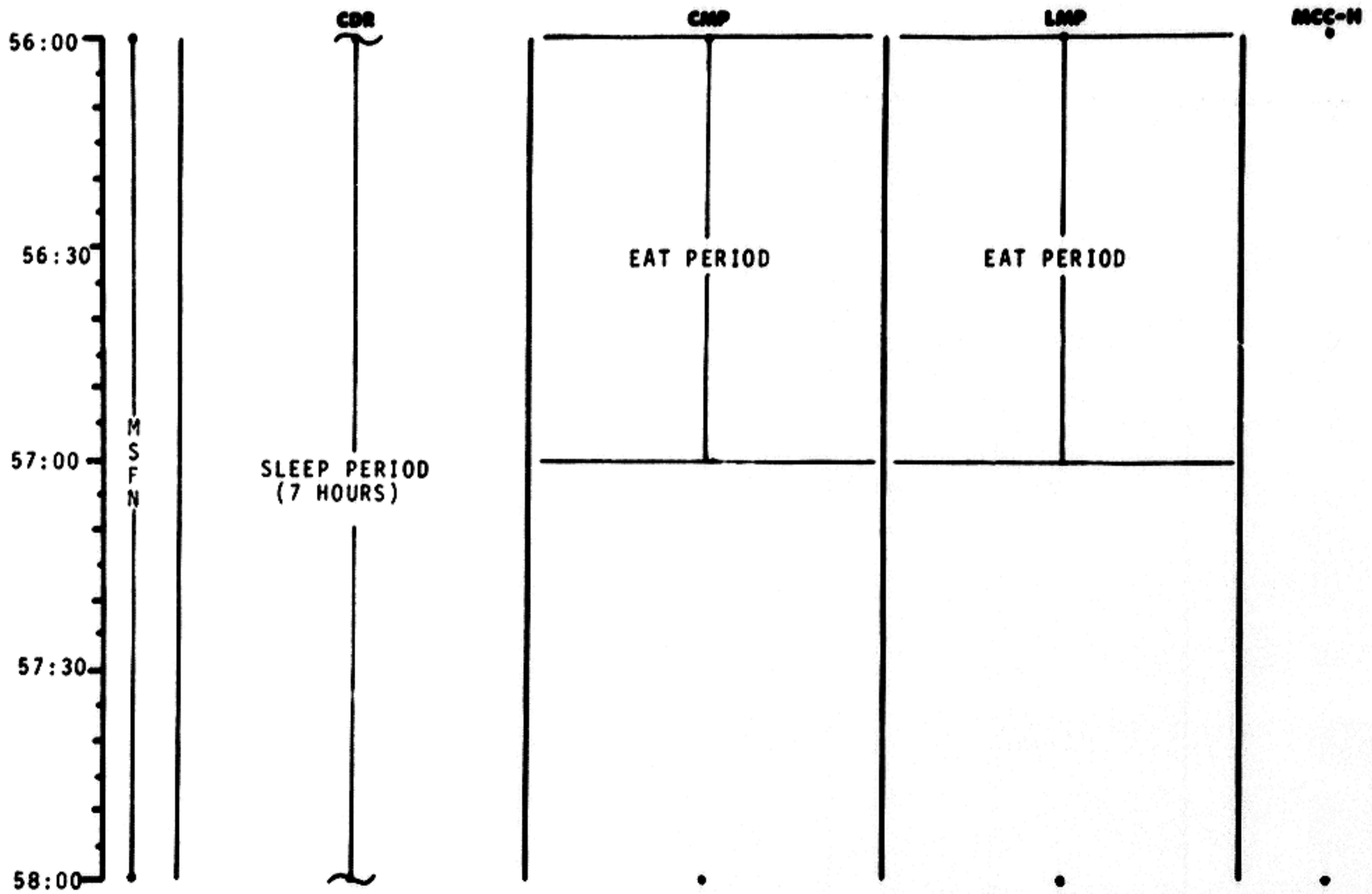


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	55:00 - 56:00	3/TLC	2-41

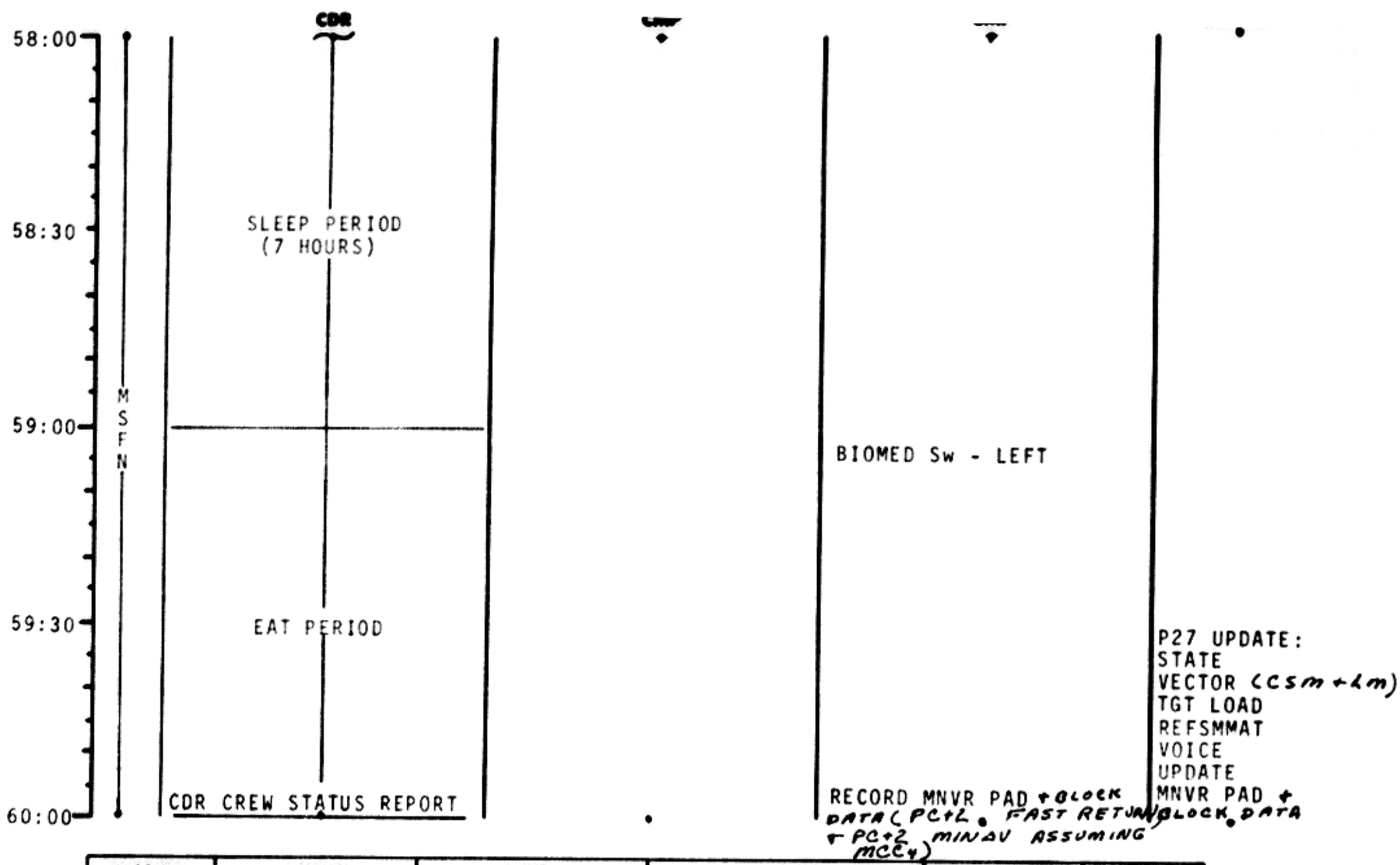
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	56:00 - 58:00	3/TLC	2-42



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	58:00 - 60:00	3/TLC	2-43

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

BURN STATUS REPORT

X X : ΔTIG
 X X : BT
 : Vgx

TRIM

X X X R
 X X X P
 X X X Y
 Vgx
 Vgy
 Vgz
 ΔVc

X X X FUEL
 X X X OX
 X X X UNBALANCE

MCC'S

BURN CHART

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TO 0.2 fns

REMARKS:

2-43a

60:00
60:15
60:30
60:45
61:00

M
S
F
N

MNVR TO P52 ATT

EXT ΔV P30
SPS/RCS THRUST P40/41
MNVR TO BURN ATT

EMS ΔV TEST

GDC ALIGN TO IMU
MCC₄ ΔV = NOMINALLY ZERO

IMU REALIGN P52
OPTION 1 - PREFERRED
STAR ID
STAR ANGLE DIFF

TORQUE ANGLES:
X
Y
Z

SXT STAR CK

TRANS TO COUCH

SM RCS MON CK

PIPA BIAS
CK

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	60:00 - 61:00	3/TLC	2-44

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

61:00
61:15
61:30
61:45
62:00

M
S
F
N

CDR

V66 TRANS CSM STATE
VECTOR TO LM SLOT

MNVR TO PTC ATT
P 122 Y 315
P Y
ROLL 0.1 °/SEC

CMP

SM RCS MON CK

GROUND TRACK DET P21
(STATE VECTOR CK)

L/DH CANISTER CHANGE
(CARTRIDGE NO.8 FROM
B6 INTO CANISTER B)

LMP

SPS MON CK

~~INITIATE BAT CHARGE~~

ECS REDUNDANT COMP CK

CMP/LMP CREW STATUS
REPORT

MCC-W

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

62:00
62:30
63:00
63:30
64:00

M
S
F
N

CDR

SLEEP PERIOD
(6 HOURS)

SLEEP PERIOD
(6 HOURS)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	62:00 - 64:00	3/TLC	2-46

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

64:00
64:30
65:00
65:30
66:00

M
S
F
N

CDR

CNP

LMP

MCC-N

SLEEP PERIOD
(6 HOURS)

SLEEP PERIOD
(6 HOURS)

MNVR TO P52, ATT

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

66:00
66:15
66:30
66:45
67:00

M
S
F
N

COP

IMU REALIGN P52
OPTION 3 - REFSMMAT
STAR ID _____
STAR ANGLE DIFF _____

TORQUE ANGLES:
X _____
Y _____
Z _____

GDC ALIGN TO IMU
~~MNVR TO PTC ATT~~
~~P 122 Y 315~~
~~P _____ Y _____~~
~~ROLL 0.1°/SEC~~

RECORD MNVR PAD FOR LOI

SLEEP PERIOD
(6 HOURS)

SLEEP PERIOD
(6 HOURS)

VOICE
UPDATE:
MNVR PAD

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	66:00 - 67:00	3/TLC	2-48

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

67:00
67:15
67:30
67:45
68:00

M
S
F
N

COP

MNVR TO LOI₁ ATT
SXT STAR CK

MNVR TO PTC ATT
P 122 Y 315
P _____ Y _____
ROLL 0.1°/SEC

RECORD BLOCK DATA
(TEI₁, TEI₂, & PC+2)
& MAP UPDATE

SLEEP PERIOD
(6 HOURS)

SLEEP PERIOD
(6 HOURS)

MCC-H

VOICE
UPDATE:
BLOCK DATA
& MAP
UPDATE 1/2 +
MNVR PAD
P27 UPDATE:
STATE VECTOR
(SM+LM)+
TGT LOAD

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
				3/TLC	2-48

68:00
68:30
68:57
69:00

M
S
T
N

GO/NO GO FOR LOI₁

MNVR TO P52 ATT

EXTERNAL ΔV P30
EMS CK
SPS THRUST P40
MNVR TO BURN ATT

GDC ALIGN TO IMU

GROUND TRACK DET - P21
(LOI ALTITUDE DET)

IMU REALIGN P52
OPTION 3 - REFSMMAT AND
GYRO DRIFT TEST
STAR ID
STAR ANGLE DTFF

TORQUE ANGLES:
X
Y
Z

SXT STAR CK
TRANSFER TO COUCH

CMP/LMP CREW STATUS
REPORT

~~RECORD MANEUVER PAD~~

PRE LOI SYSTEMS CKS:
C&W CK
CM RCS CK
SM RCS CK
SPS PERIODIC MONITOR
EPS PERIODIC MONITOR
ECS PERIODIC MONITOR
~~NON ESS BUS - MVB~~
INITIATE WATER
BOILER

GO/NO GO
~~P27 UPDATE:~~
~~STATE VECTOR~~
~~TARGET LOAD~~
~~VOICE UPDATE:~~
~~MNVR PAD~~

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	68:00 - 69:00	3/TLC	2-50

MSC Form 1916 (OT) (Oct 68)

FLIGHT PLANNING BRANCH

BURN STATUS REPORT

X X : ΔTIG
 X X : BT
 : V_{gx}
 TRIM
 X X X R
 X X X P
 X X X Y
 • V_{gx}
 • V_{gy}
 • V_{gz}
 • ΔV_c
 X X X FUEL
 X X X OX
 X X X UNBALANCE

REMARKS:

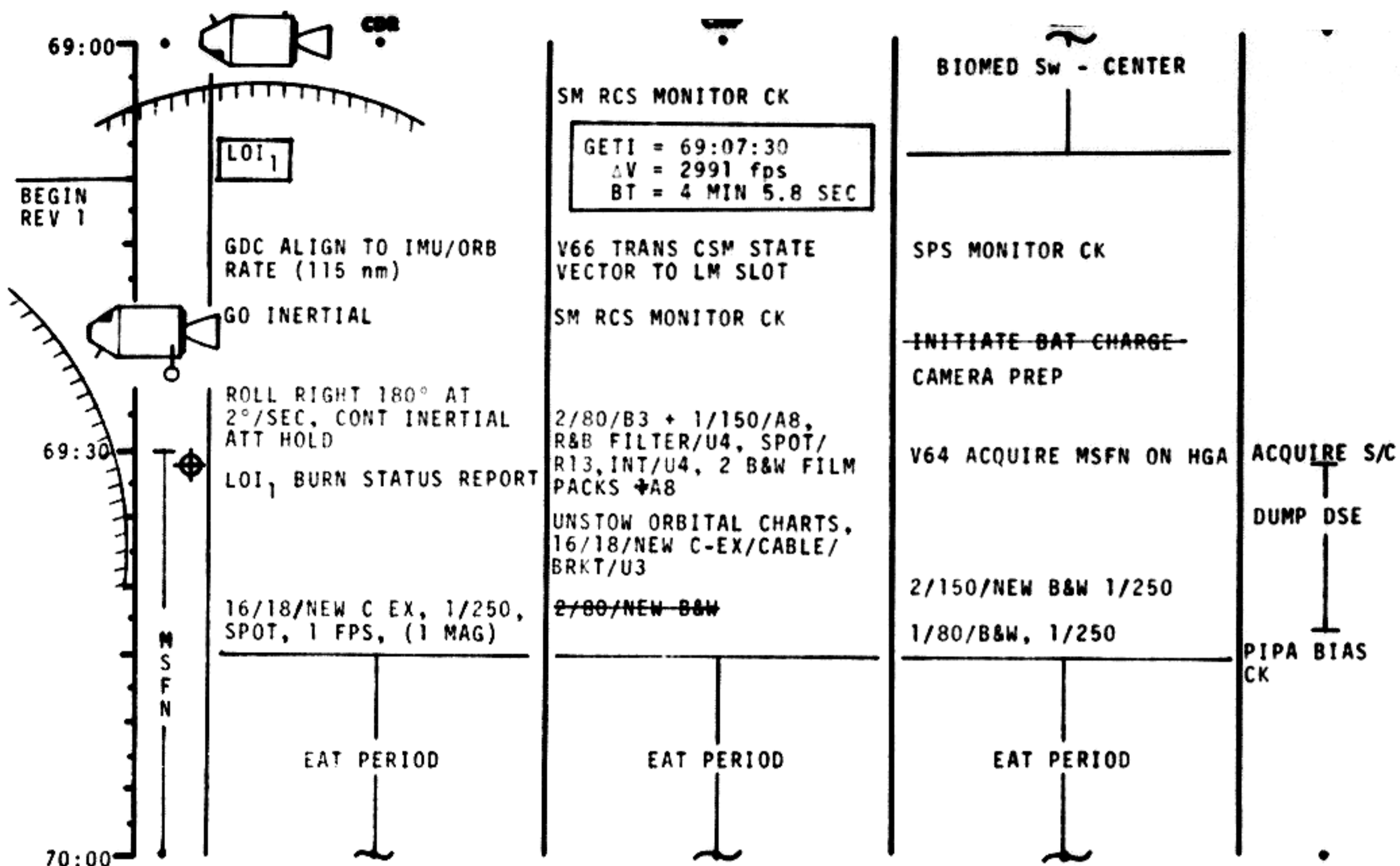
LOI₁
BURN CHART

	P or V RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
LOI ₁	10°/SEC TAKEOVER	10° TAKEOVER	B/T+6 SEC	NO TRIM

LOI₁ ABORT MODES

LOI V _{go}	B/T	TRAJECTORY	ABORT MODE
3050-2100	0 -1:20	HYPERBOLIC	COAST OUT OF SPHERE-P37
2100-1650	1:20-2:00	UNSTABLE	5 HR COAST. MODE I ABORT
1650-0	2:00-4:06	LUNAR ORBIT	MODE III ABORT AFTER 1 REV

2-50a

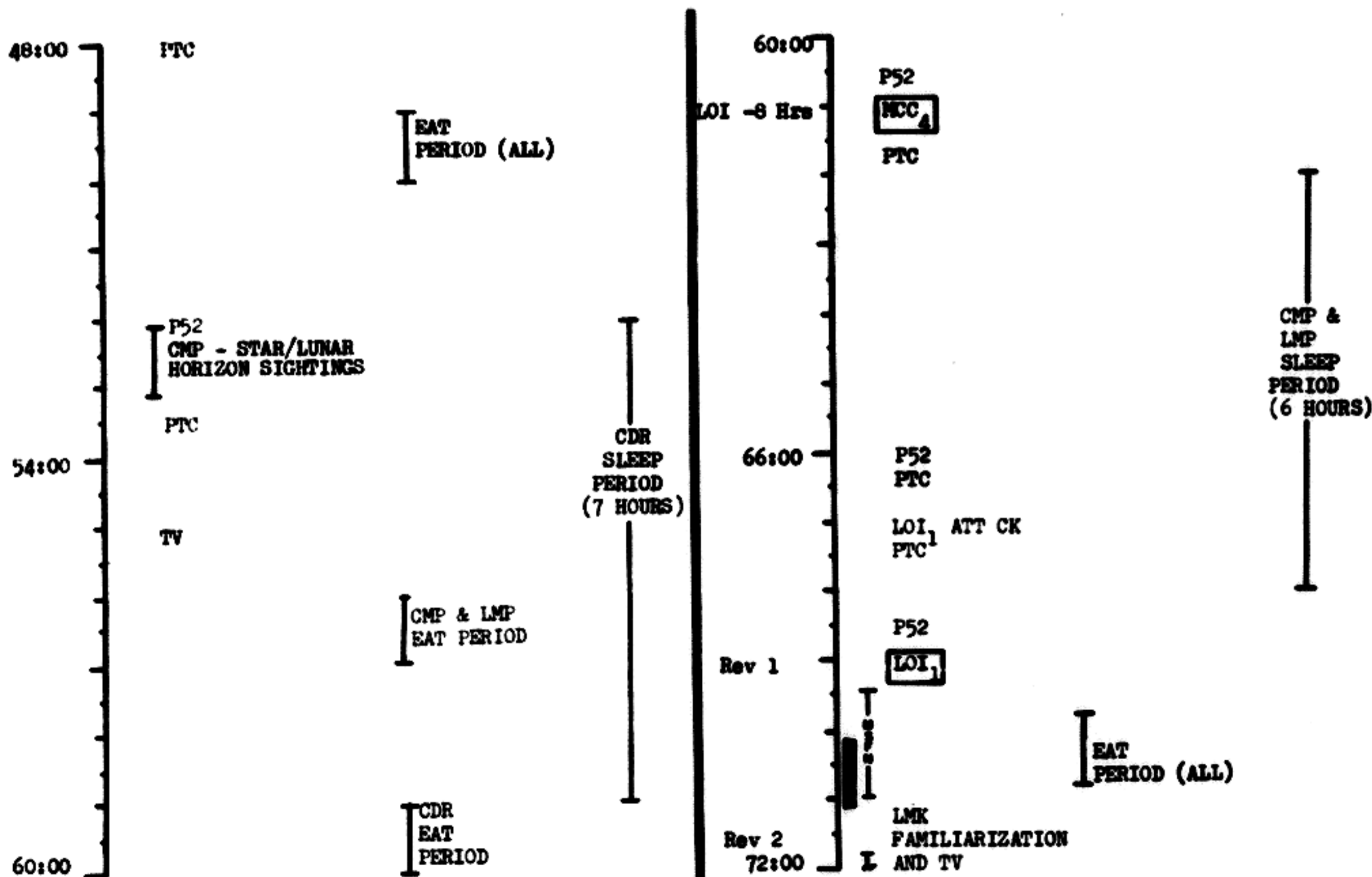


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	69:00 - 70:00	3/LPO	2-51

MSC Form 1910 (Nov 58)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	48:00 - 72:00	3	5-3

BURN STATUS REPORT

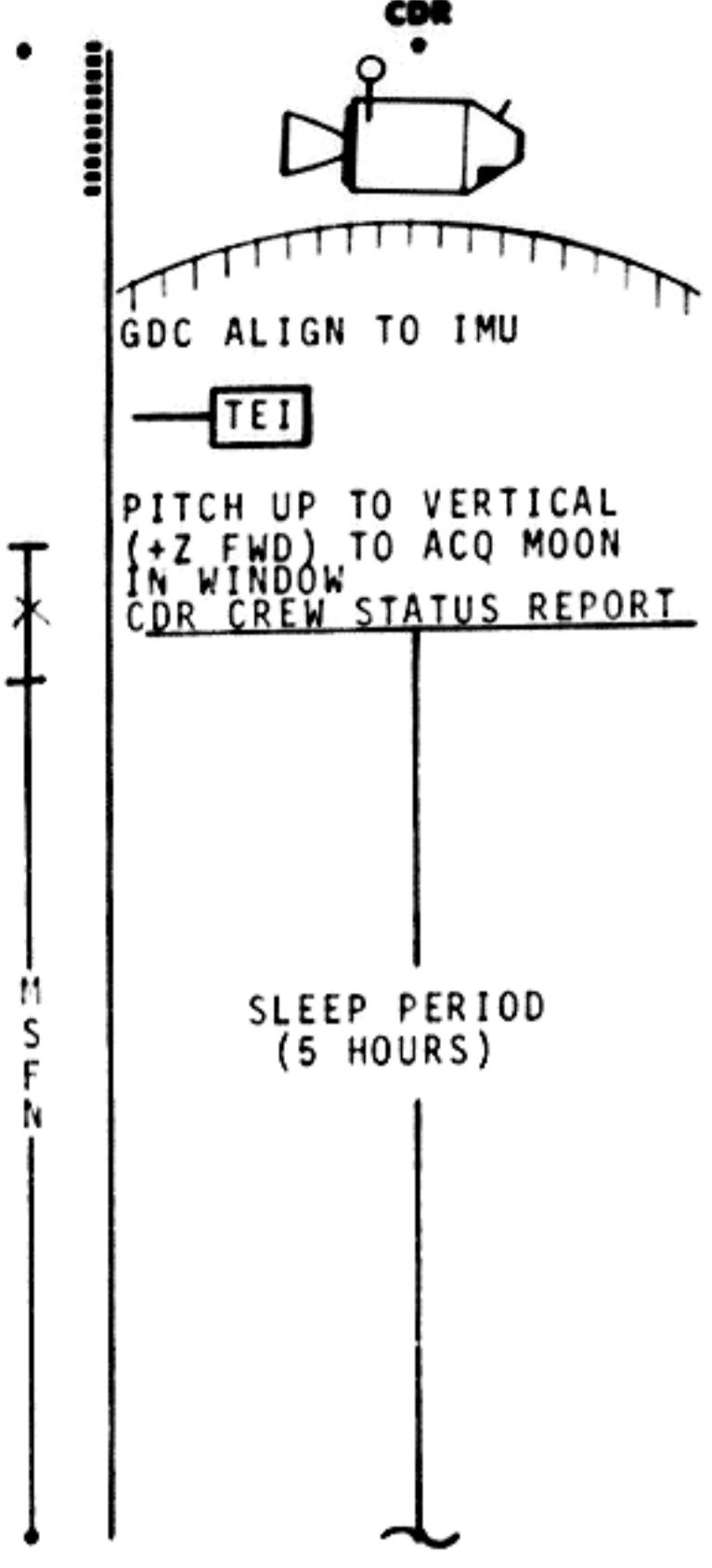
X X	:	ΔTIG
X X	:	BT
	.	V _{gx}
----- TRIM -----		
X X X		R
X X X		P
X X X		Y
<input type="checkbox"/>	.	V _{gx}
<input type="checkbox"/>	.	V _{gy}
<input type="checkbox"/>	.	V _{gz}
<input type="checkbox"/>	.	ΔV _c
X X X		FUEL
X X X		OX
X X X		UNBALANCE

REMARKS:

TEI
BURN CHART

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
TEI	10°/SEC TAKEOVER	10° TAKEOVER	B/T+2 SEC & ΔV _c = -40 fps	TRIM TO 2.0 fps
TEI ABORT MODES-SYSTEMS PROBLEMS: 15-MIN ABORT CHART OTHERWISE				
TEI V _{go}	B/T	TRAJECTORY	ABORT MODE	
2850-950	0 -2:00	LUNAR ORBIT	MODE III AFTER 1 REV	
950-600	2:00-2:20	UNSTABLE	5-HR COAST, MODE I	
600-0	2:20-2:54	HYPERBOLIC	COAST OUT OF SPHERE - P37	

89:00
89:15
89:30
89:45
90:00



SM RCS MON CK
GETI = 89:15:07
ΔV = 3532 fps
BT = 3 MIN 26 SEC

SM RCS MON CK
V66E
TRANS CSM STATE VECTOR TO LM SLOT
REINITIALIZE W MATRIX
R₁ +00094
R₂ +00571 *OK*
R₃ +00003

SPS MON CK
ACQUIRE MSFN WITH HGA
TEI BURN STATUS REPORT
INITIATE BAT CHARGE
BIOMED SW - CENTER
TERMINATE WATER BOILER EVAP
1/80 (OR 250) / B+W,R+B SPOT, 4 STOPS WIDER
SC EXT ATM (POST BURN)
*1/80 / NS FZ.8
B 6 SEC, B 1 SEC, 1/60
90° FROM SUN*

ACQUIRE S/C
DUMP DSE
UPDATE
ENTRY
REFSMAT

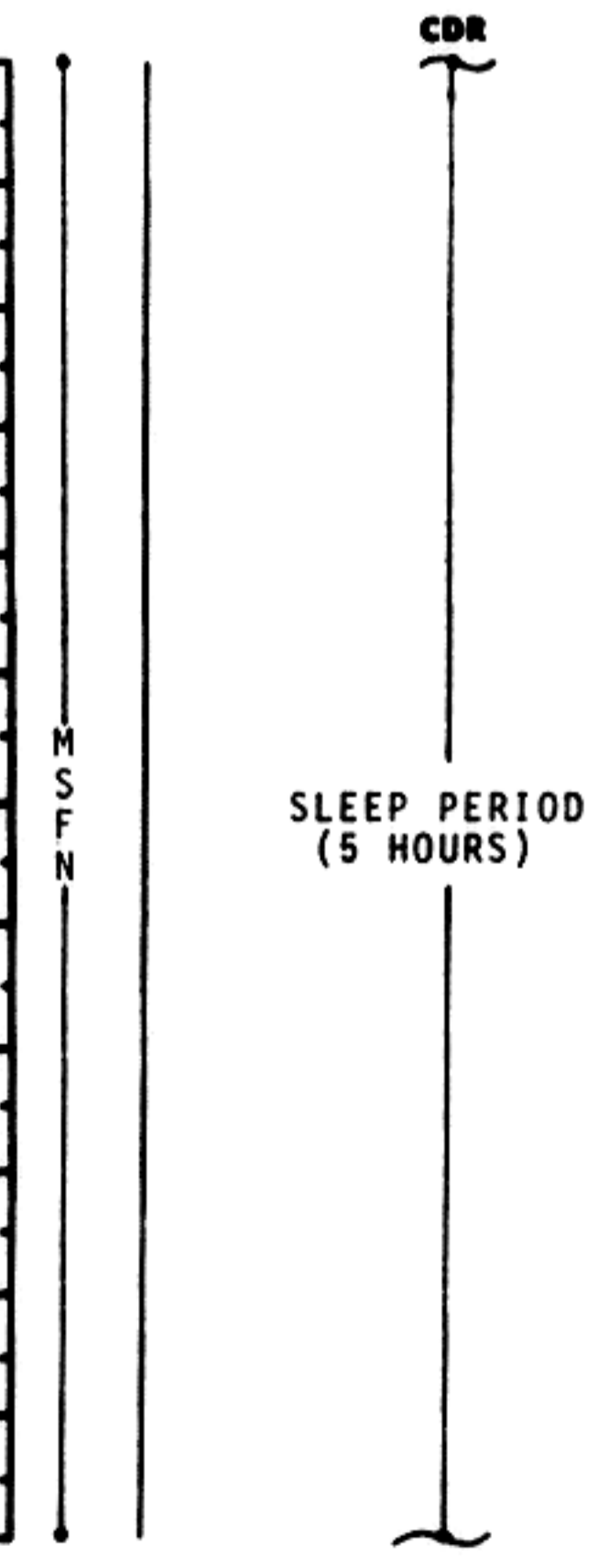
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	89:00 - 90:00	4/TEC	2-71

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

90:00
90:15
90:30
90:45
91:00

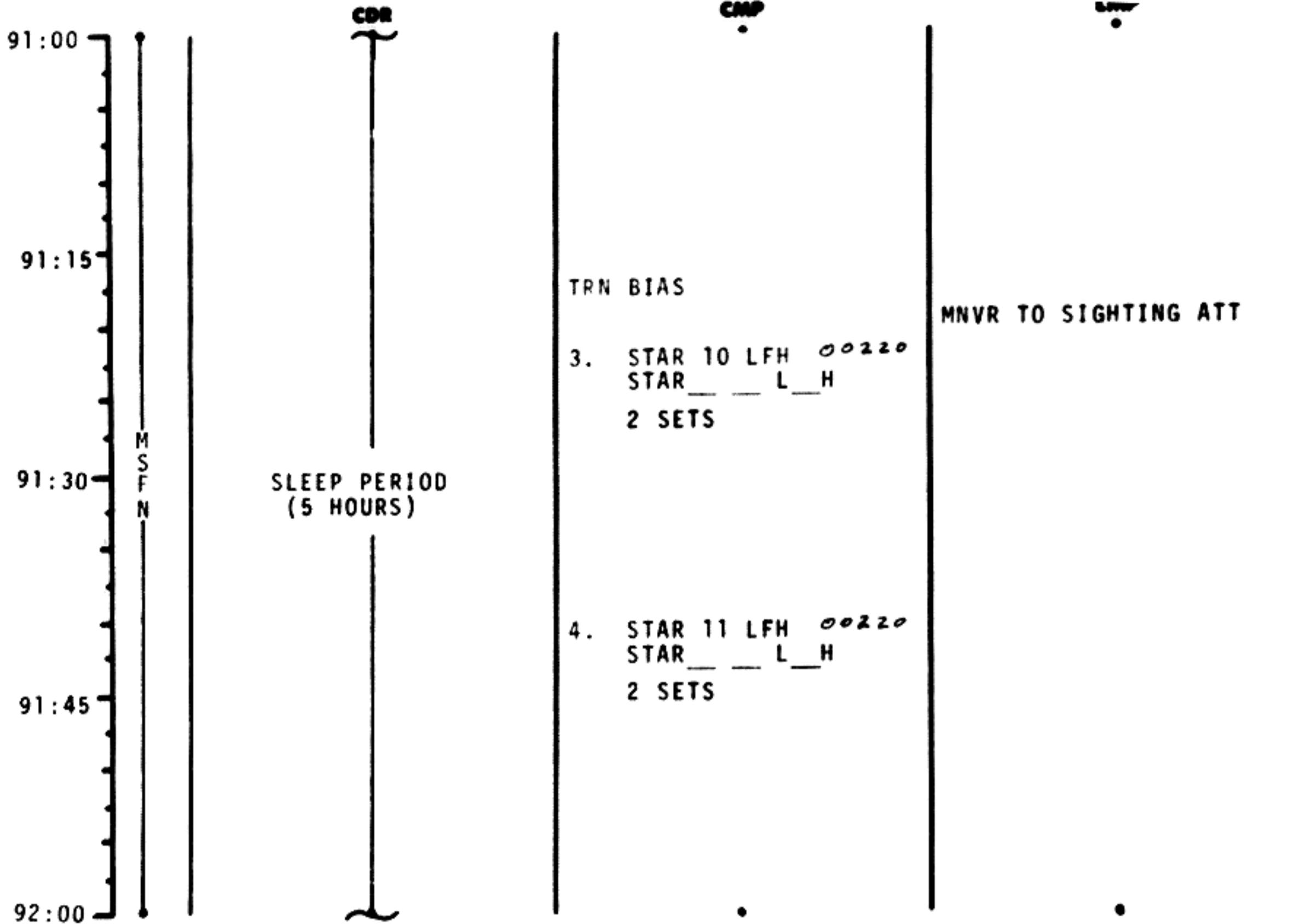


CMP
IMU REALIGN P52
OPTION 1 - PREFERRED
STAR ID _____
STAR ANGLE DIFF _____
TORQUE ANGLES: _____
X _____
Y _____
Z _____
TRN BIAS
CISLUNAR NAVIGATION P23
1. STAR 01 LNH 00210
STAR _____ L _____ H
2 SETS
2. STAR 02 LNH 00210
STAR _____ L _____ H

LMP
MNVN TO P52 ATT
MNVN TO SIGHTING ATT

MCC-H

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	90:00 - 91:00	4/TEC	2-72

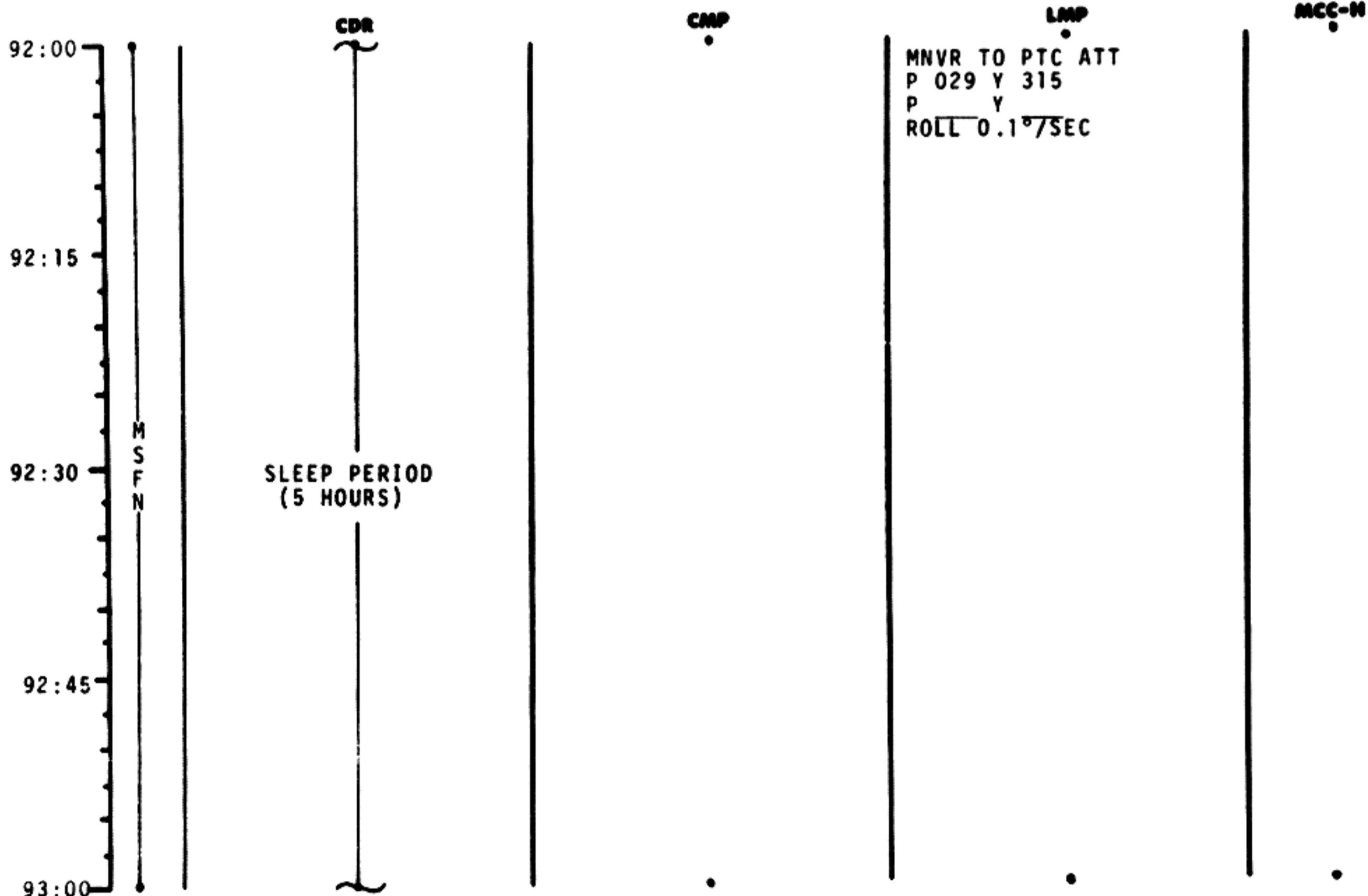


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	91:00 - 92:00	4/TEC	2-73

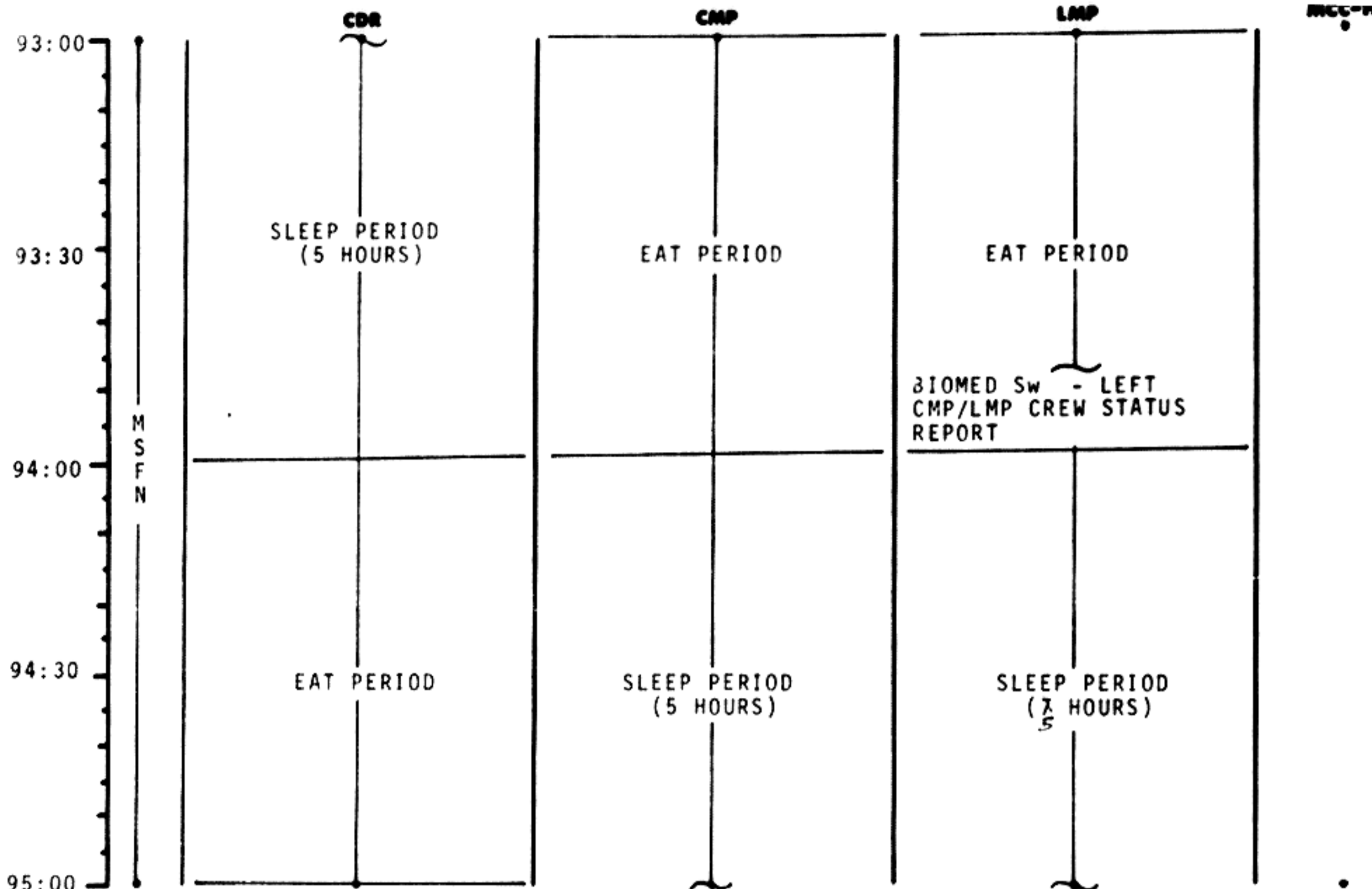
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	92:00 - 93:00	4/TEC	2-74

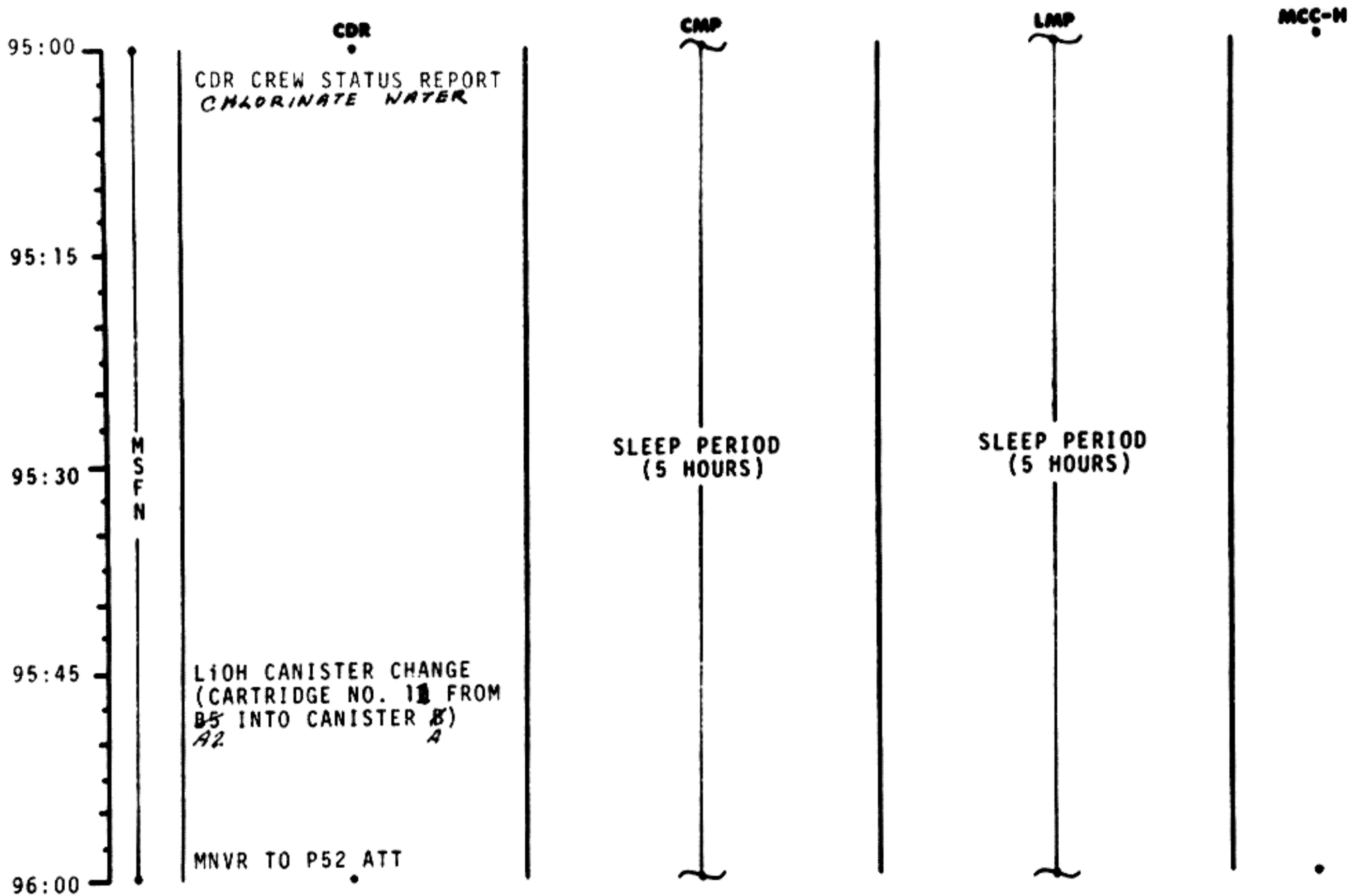


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	93:00 - 95:00	4/TEC	2-75

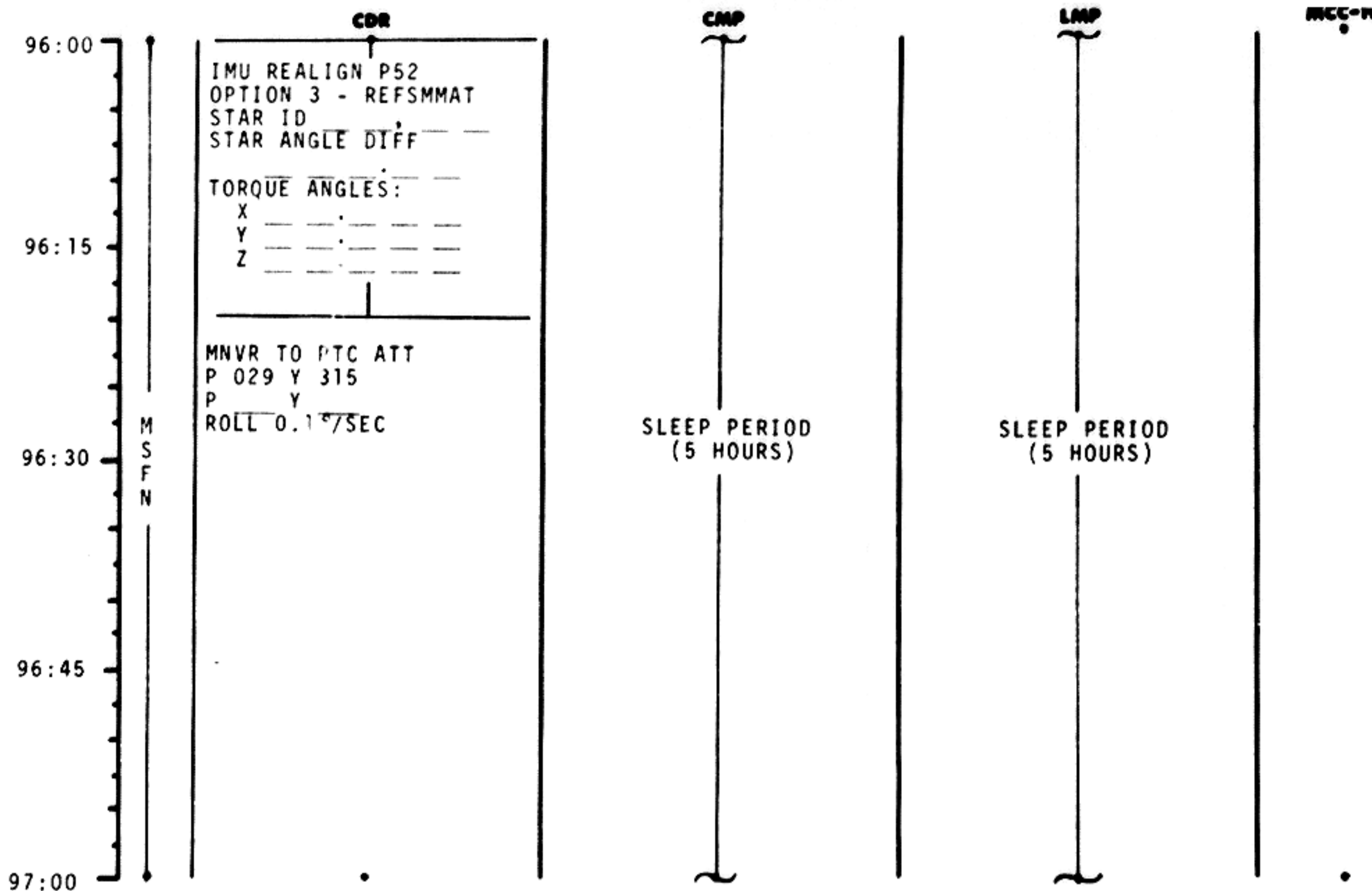
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
					2-76

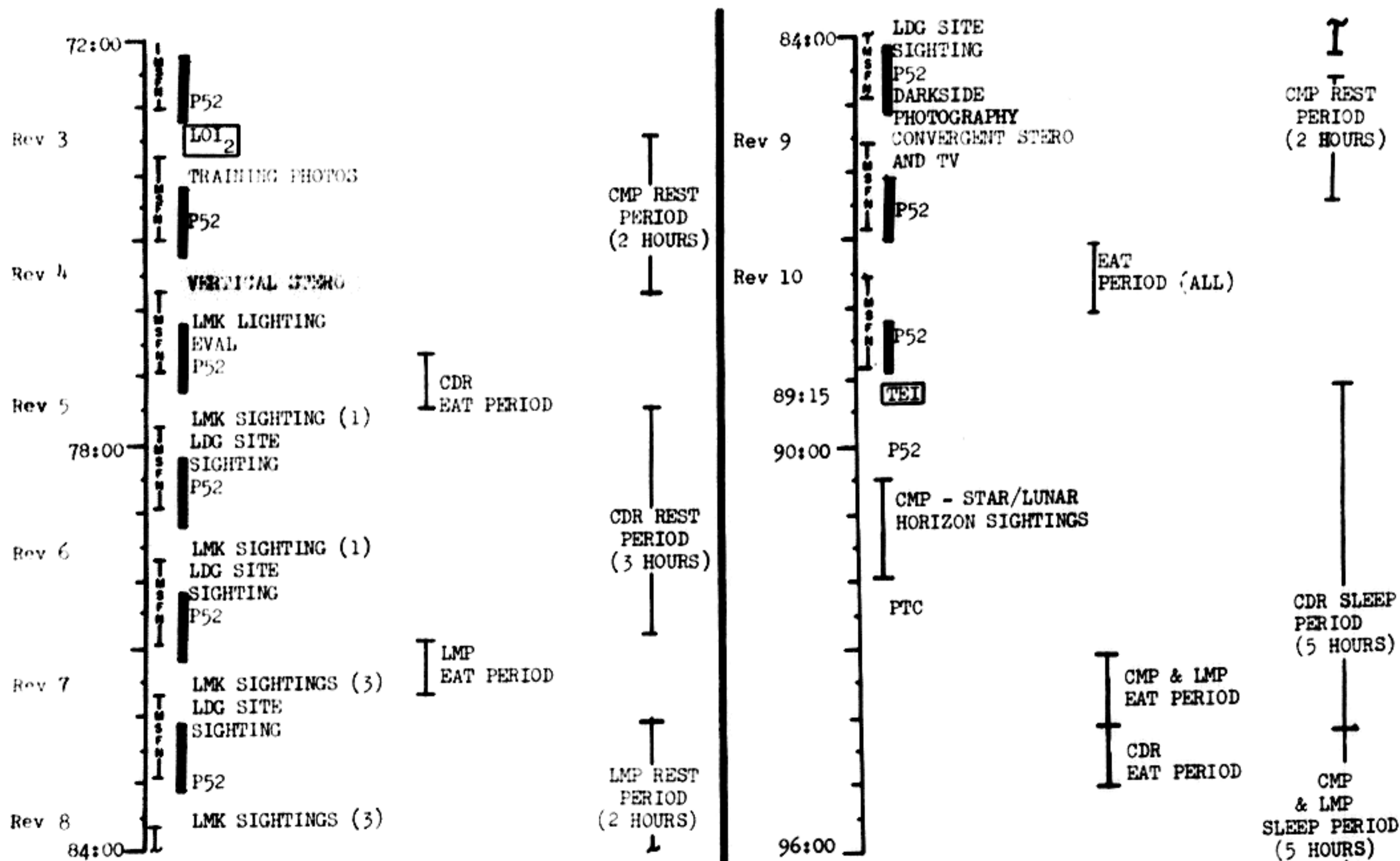


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	96:00 - 97:00	5/TEC	2-77

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

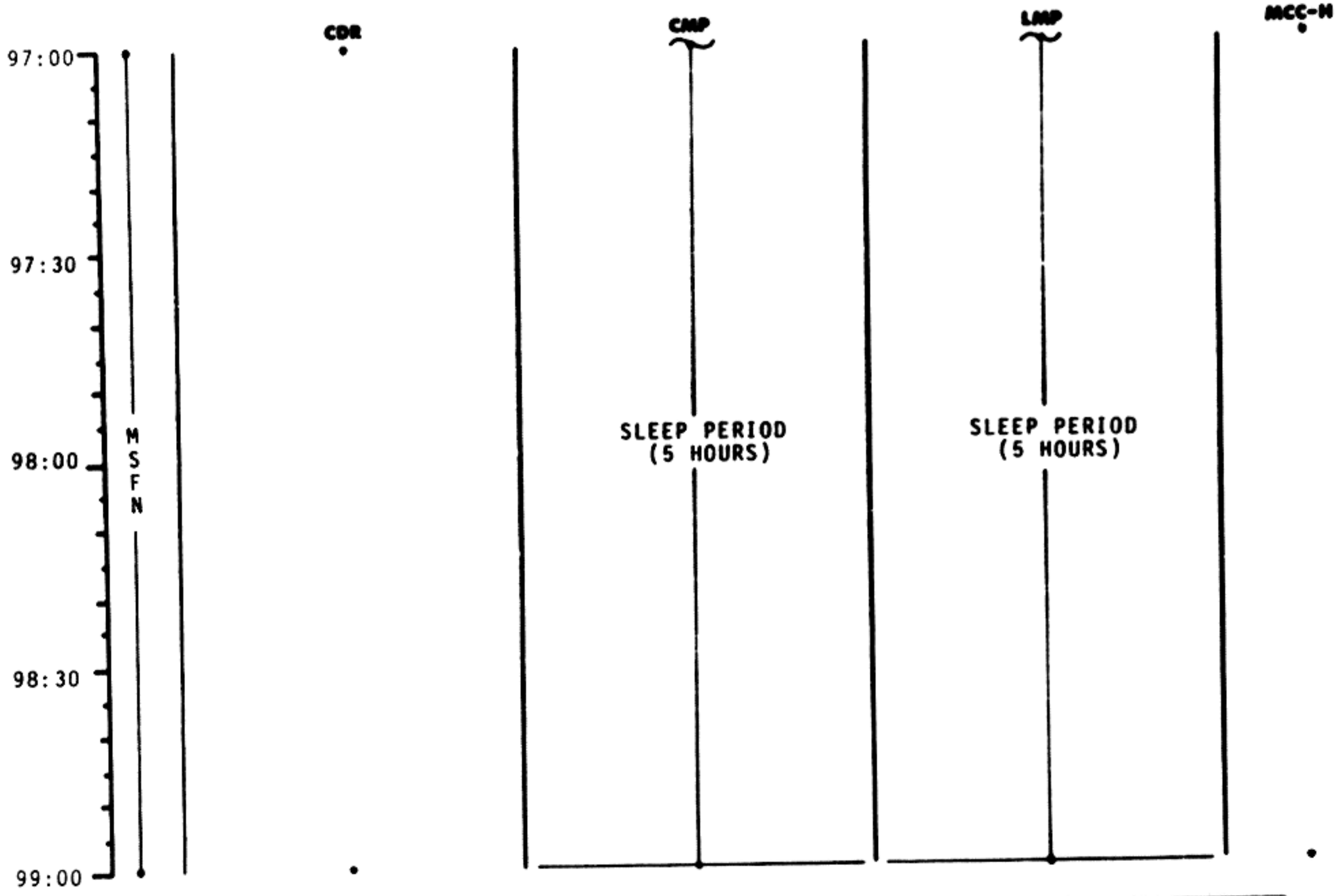
FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	72:00 - 96:00	4	5-4

FLIGHT PLANNING BRANCH

FLIGHT PLAN



99:00	M S F N				BIOMED SW - CENTER
99:15					
99:30		EAT PERIOD	EAT PERIOD	EAT PERIOD	
99:45					
100:00					

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	99:00 - 100:00	5/TEC	2-79

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

100:00	M S F N	CDR MNVR TO P52 ATT	CMP IMU REALIGN P52 OPTION 3 - REFSMMAT STAR ID _____ STAR ANGLE DIFF _____	LMP CMP/LMP CREW STATUS REPORT	MCC-N	
		100:15		TORQUE ANGLES: X _____ Y _____ Z _____		
		100:30	MNVR TO SIGHTING ATT	TRN BIAS		
		100:45		CISLUNAR NAVIGATION P23 1. STAR 02 LNH 00210 STAR _____ L_H 1 SET _____ 2. STAR 11 LFH 00220 STAR _____ L_H 1 SET _____ 3. STAR 01 LNH 00210 STAR _____ L_H 1 SET _____		
101:00		MNVR TO SIGHTING ATT				

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	100:00 - 101:00	5/TEC	2-80

101:00
101:15
101:30
101:45
102:00

M
S
F
N

TRN BIAS

CISLUNAR NAVIGATION P23

1. STAR 22 EFH 00120
STAR__ E__H
2 SETS

2. STAR 26 ENH 00110
STAR__ E__H
2 SETS

BIOMED Sw - RIGHT

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	101:00 - 102:00	5/TEC	2-81

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

CDR

CMP

LMP

MCC-H

102:00
102:15
102:30
102:45
103:00

M
S
F
N

3. STAR 31 ENH 00110
STAR__ E__H
2 SETS

MNVR TO P52 ATT

RECORD MNVR PAD

P27 UPDATE
STATE
VECTOR
TGT LOAD
REFSMAT

VOICE
UPDATE:
MNVR PAD

IMU REALIGN P52
OPTION 3 - RESFMMAT
STAR ID
STAR ANGLE DTFF

TORQUE ANGLES:
X
Y
Z

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	102:00 - 103:00	5/TEC	2-82

MCC'S

BURN CHART

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TO 0.2 fns

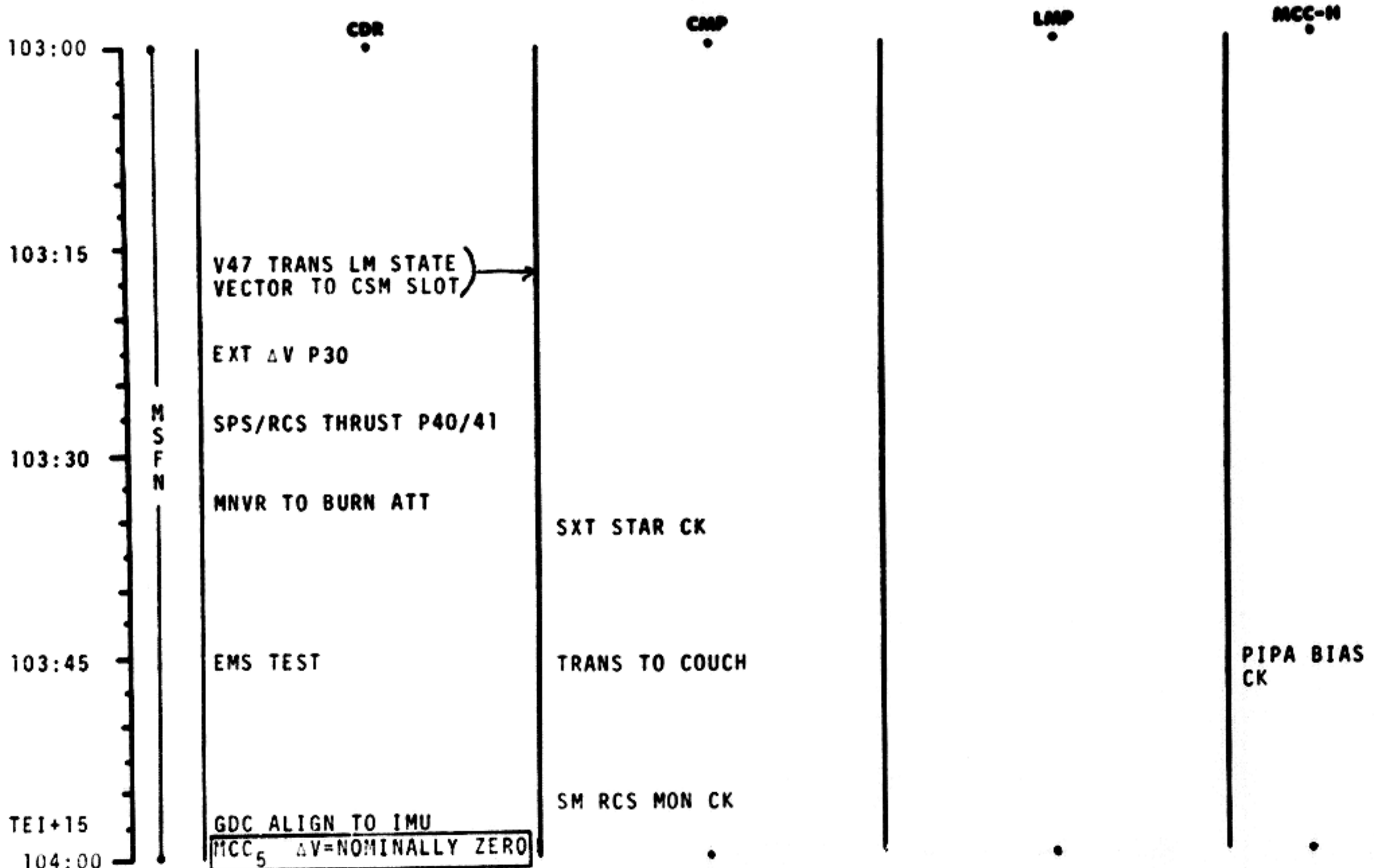
BURN STATUS REPORT

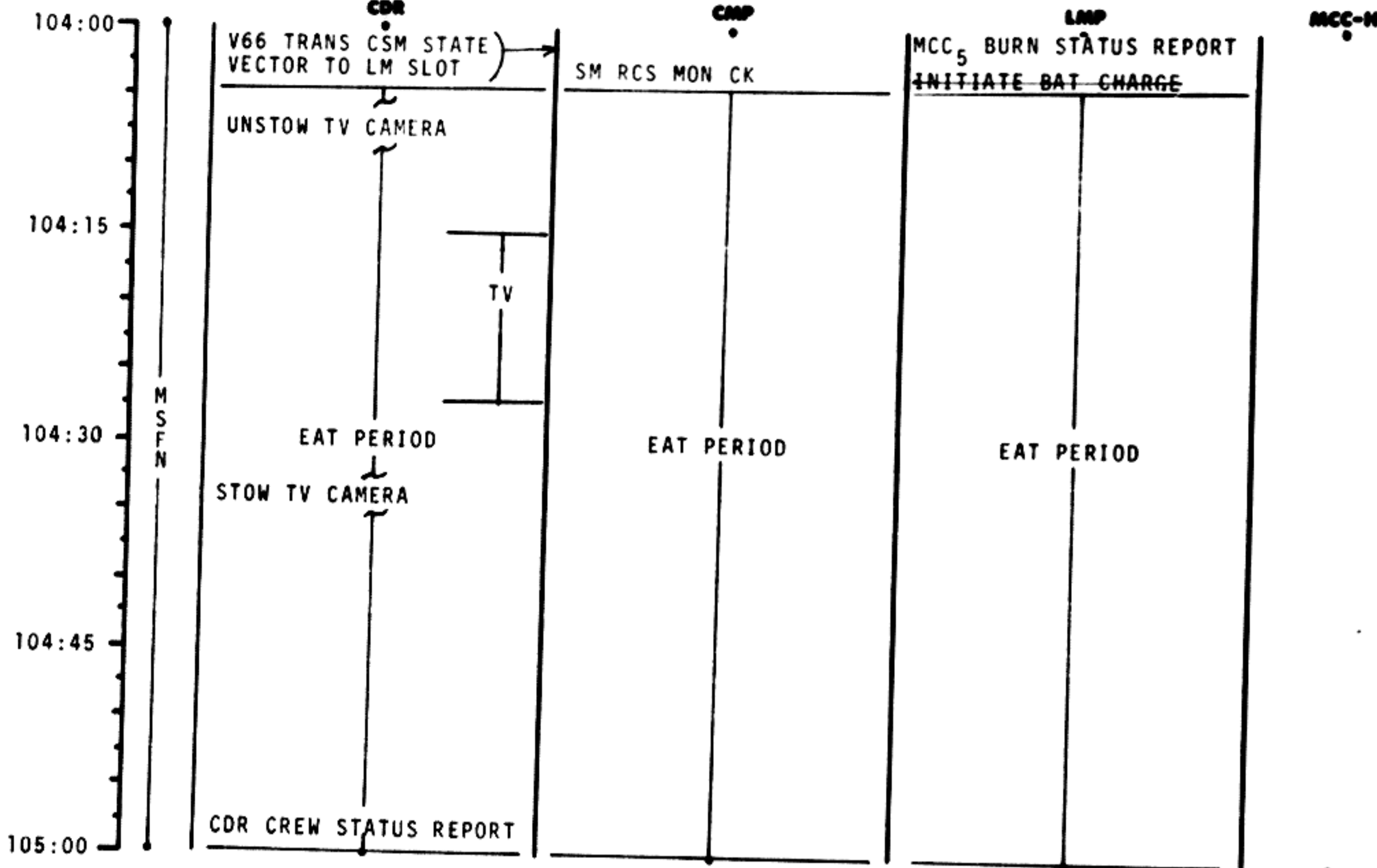
X X : ΔTIG
 X X : BT
 : V_{gx}
 ----- TRIM -----
 X X X R
 X X X P
 X X X Y
 V_{gx}
 V_{gy}
 V_{gz}
 ΔV_c
 X X X FUEL
 X X X OX
 X X X UNBALANCE

2-82a

REMARKS:

FLIGHT PLAN



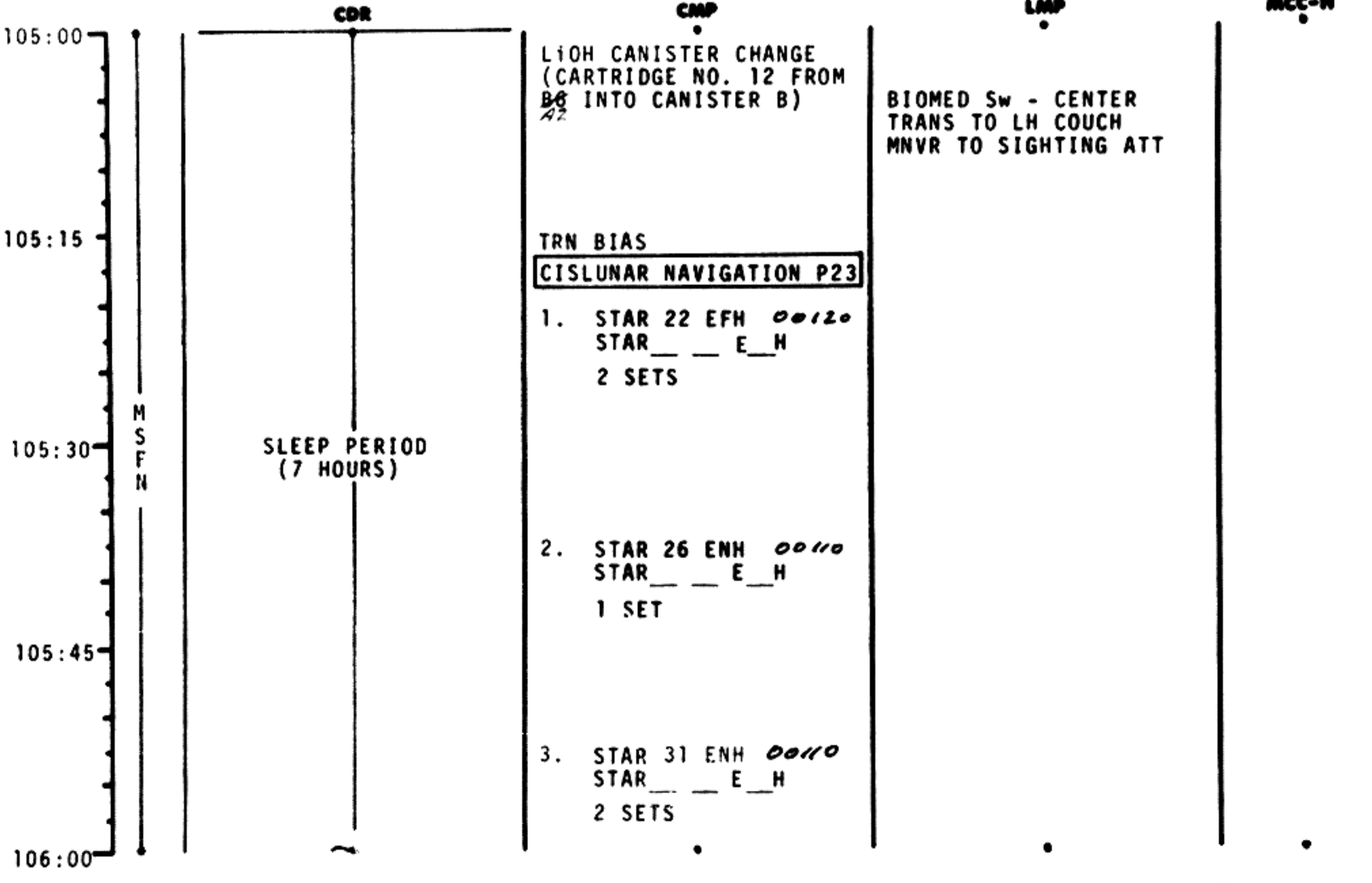


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	104:00 - 105:00	5/TEC	2-84

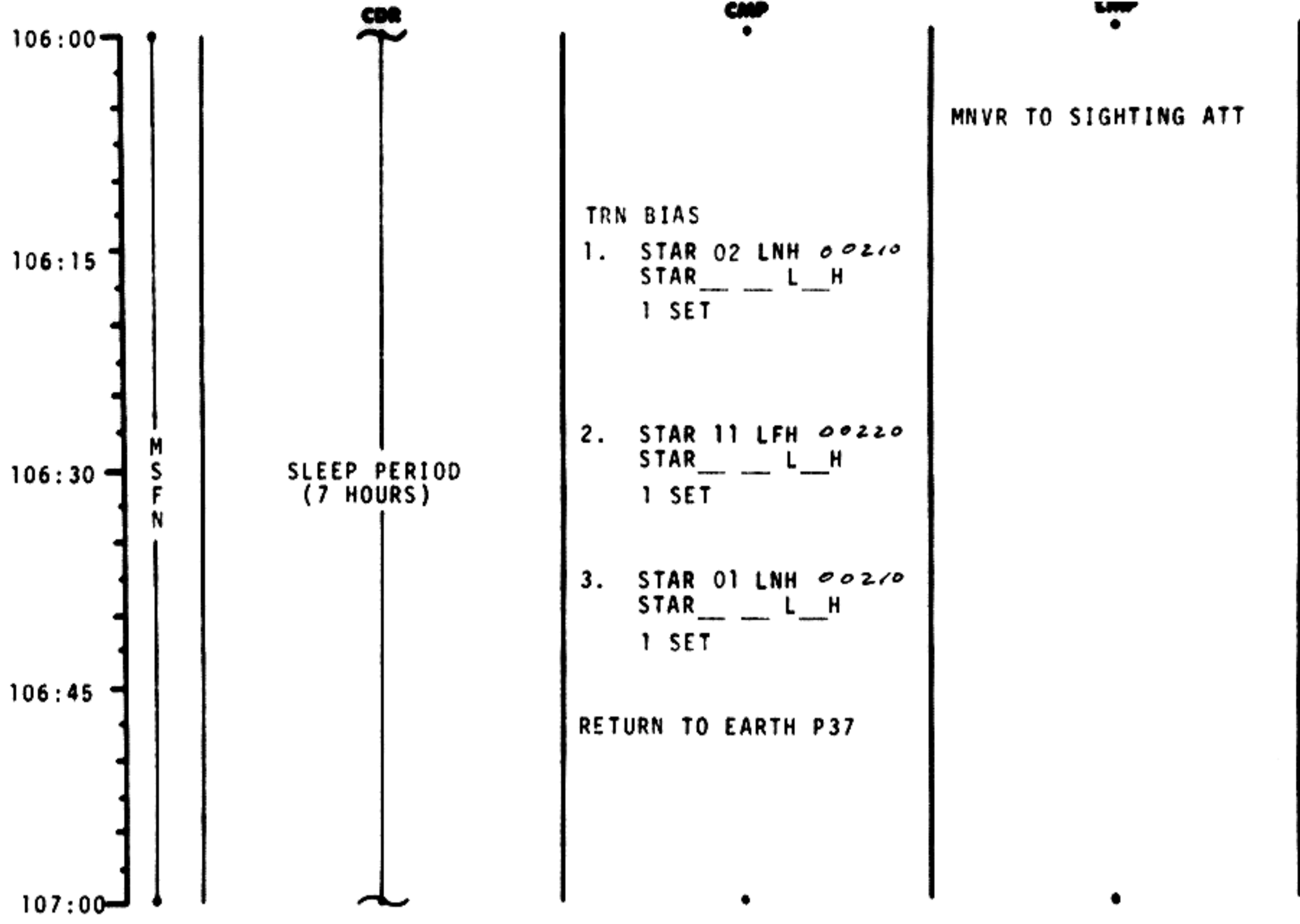
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE

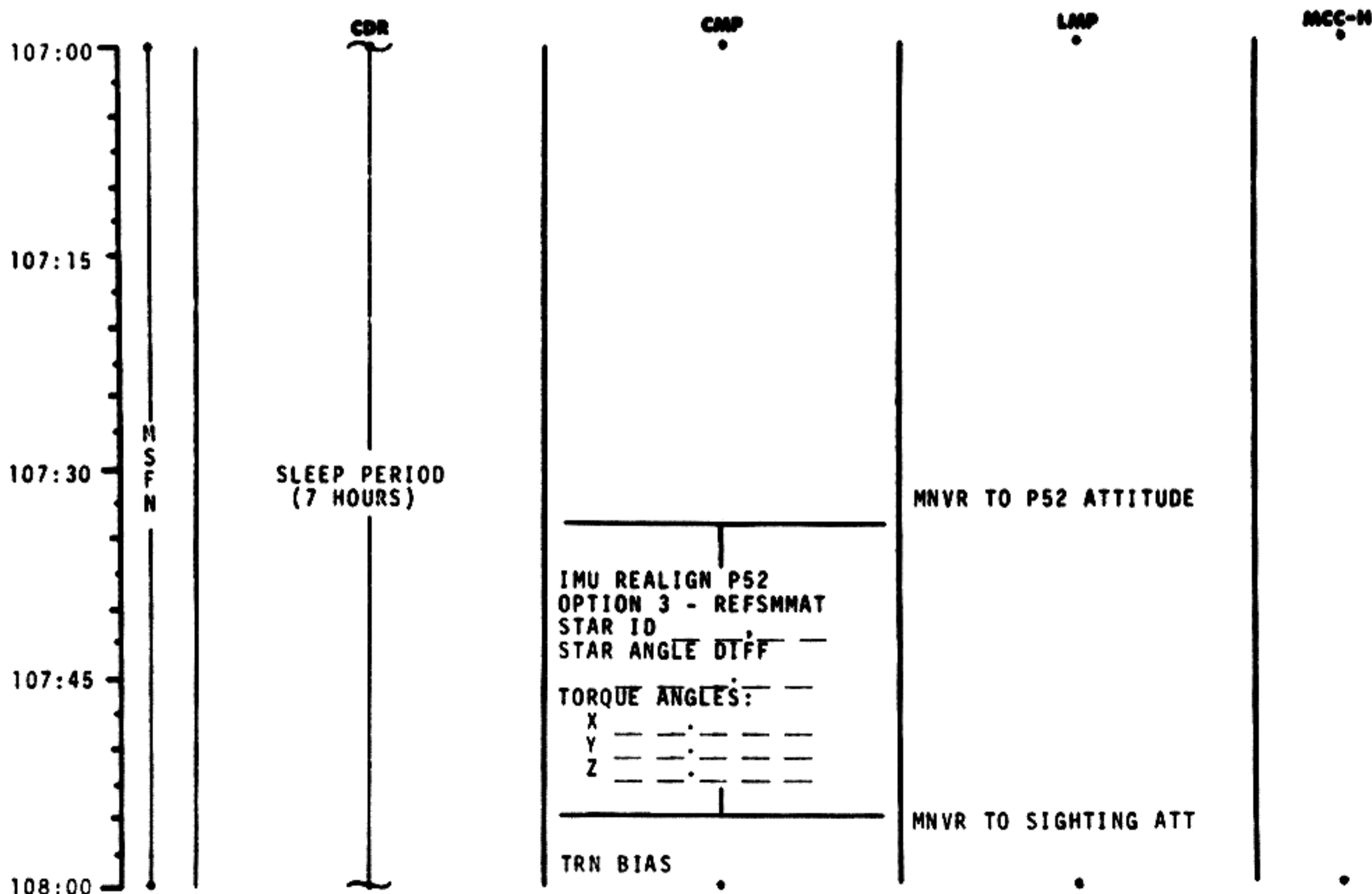


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	106:00 - 107:00	5/TEC	2-86

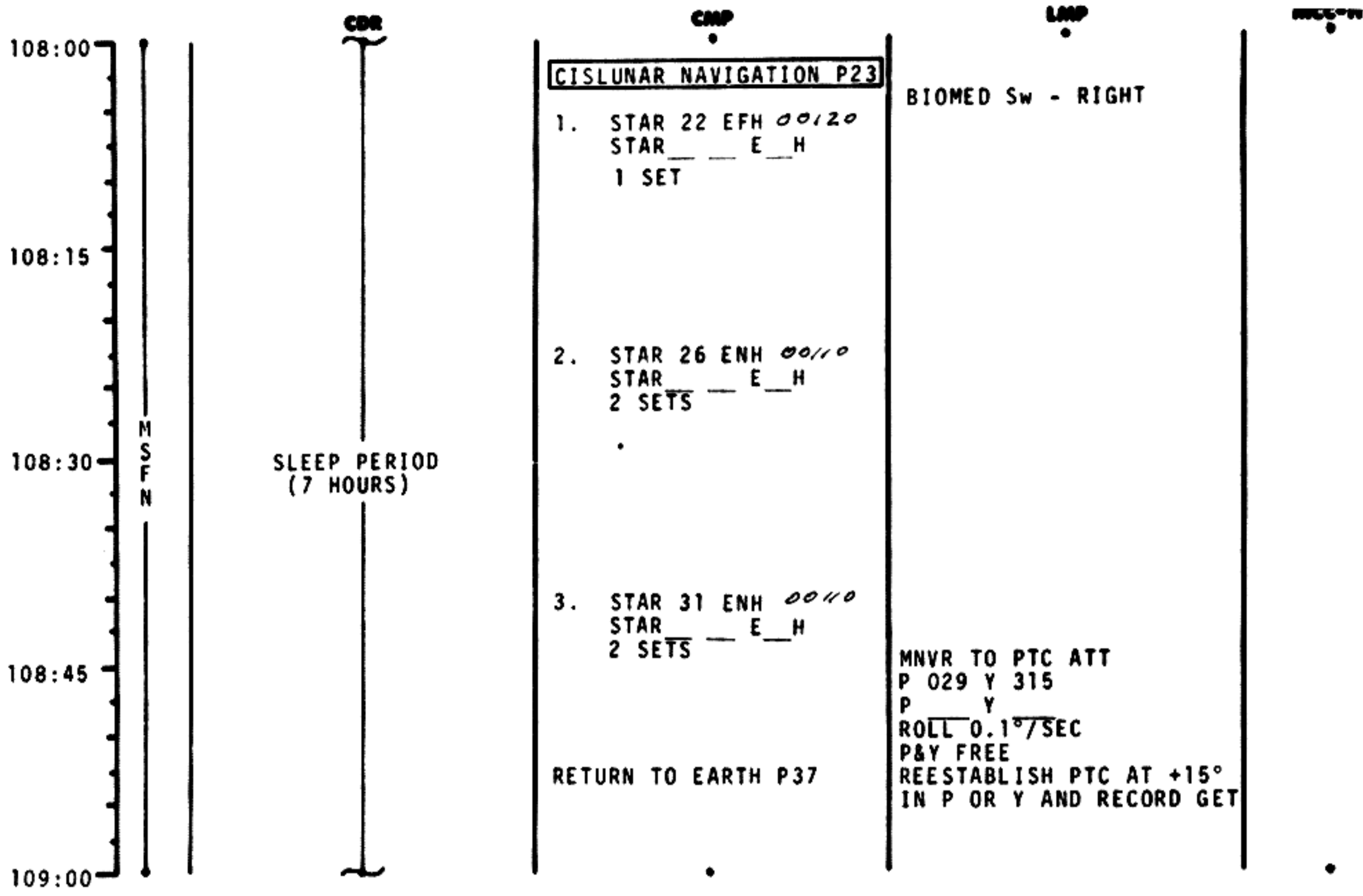
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	107:00 - 108:00	5/TEC	2-87

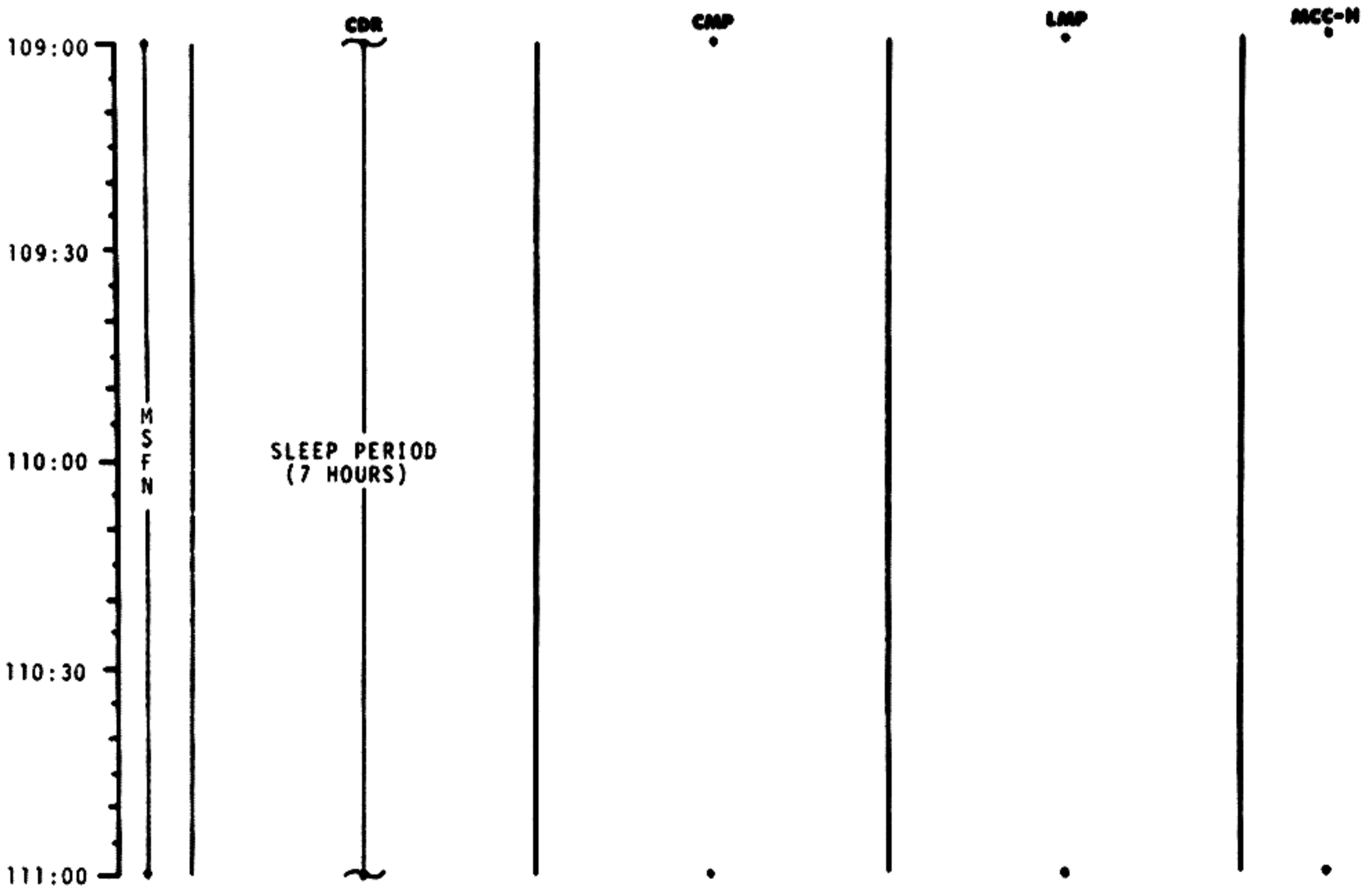


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	108:00 - 109:00	5/TEC	2-88

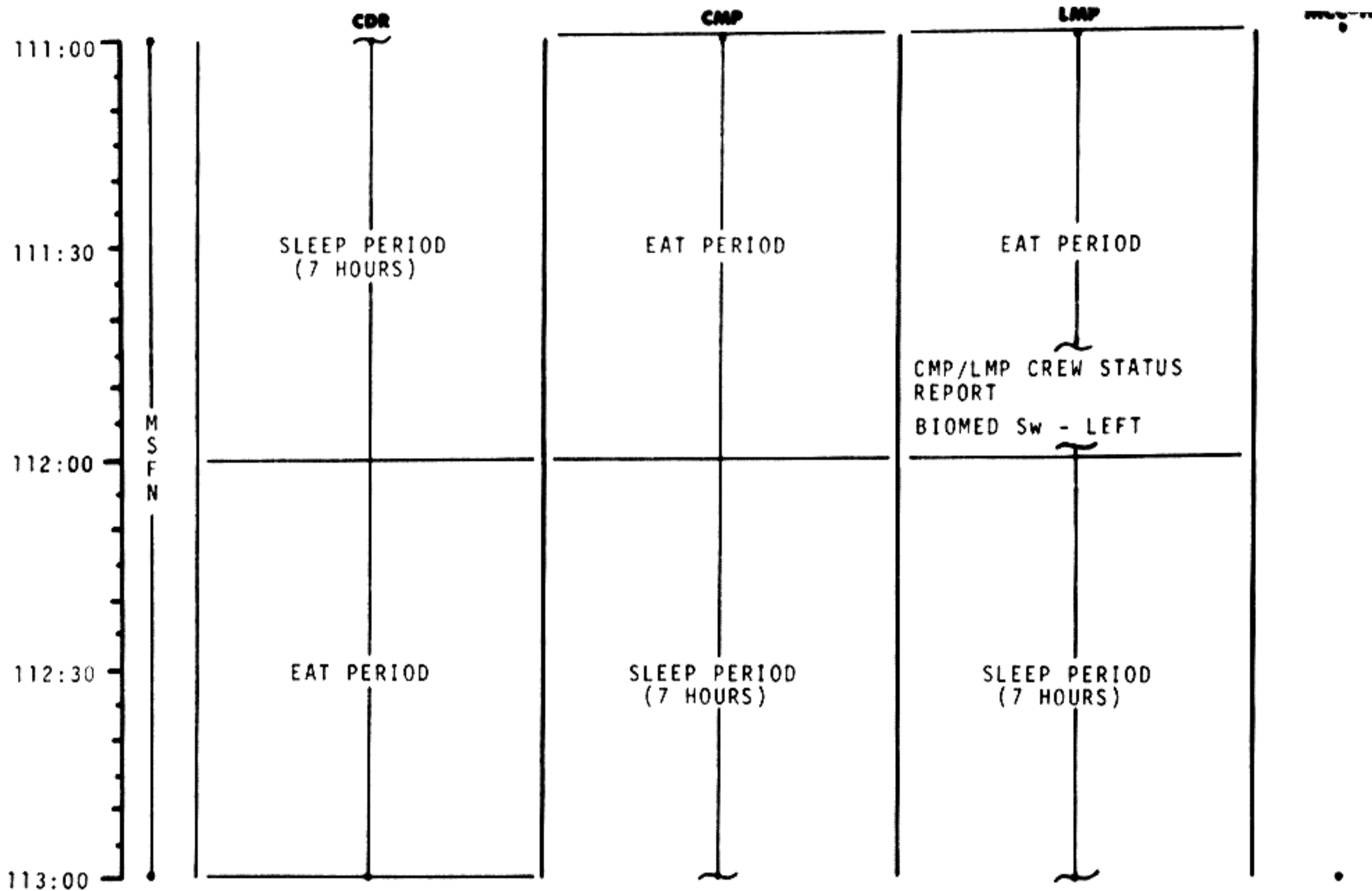
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22 1968	109:00 - 111:00	5/TEC	2-89

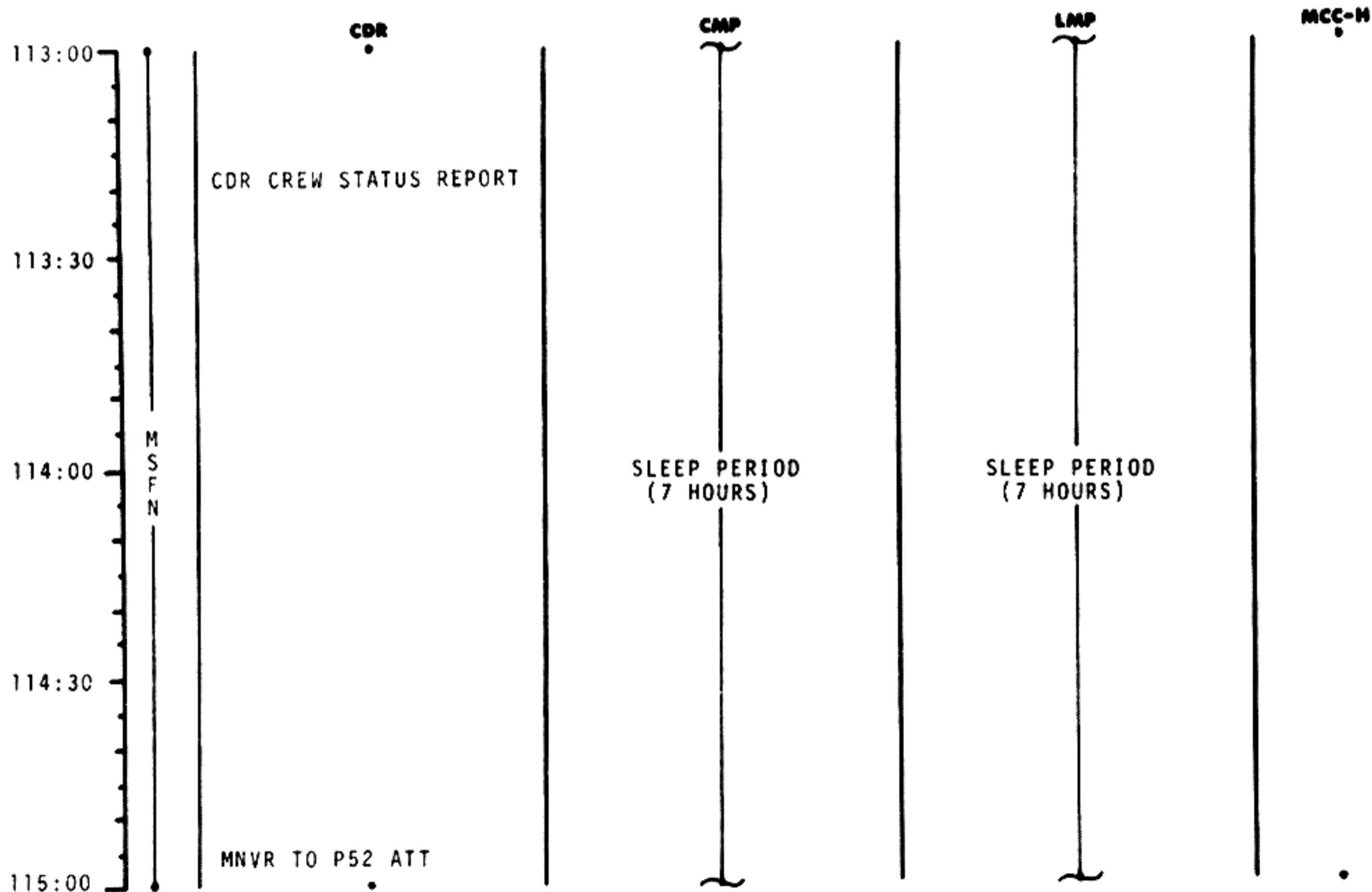


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	111:00 - 113:00	5/TEC	2-90

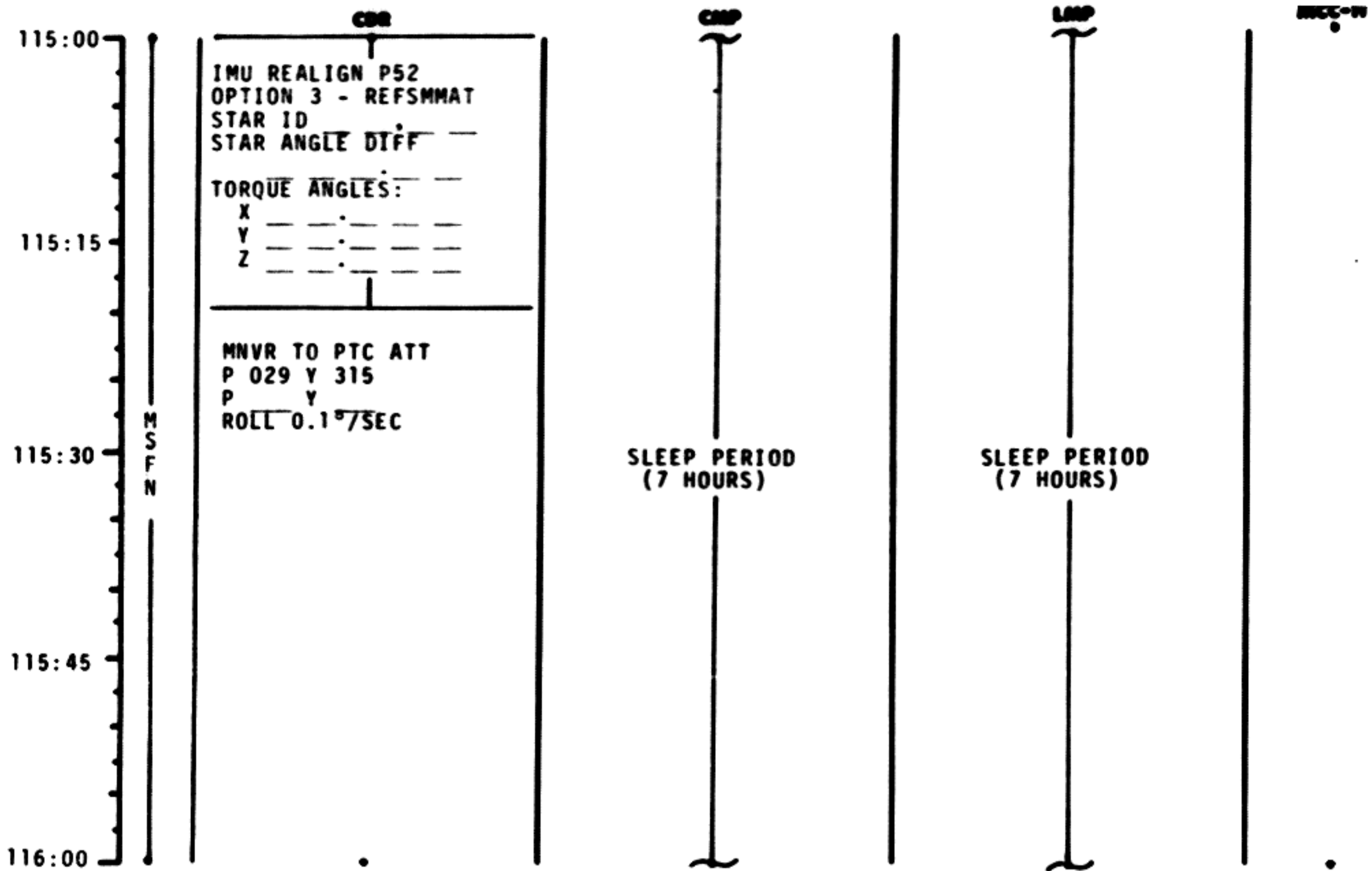
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
			113:00 - 115:00	5/TEC	2-91

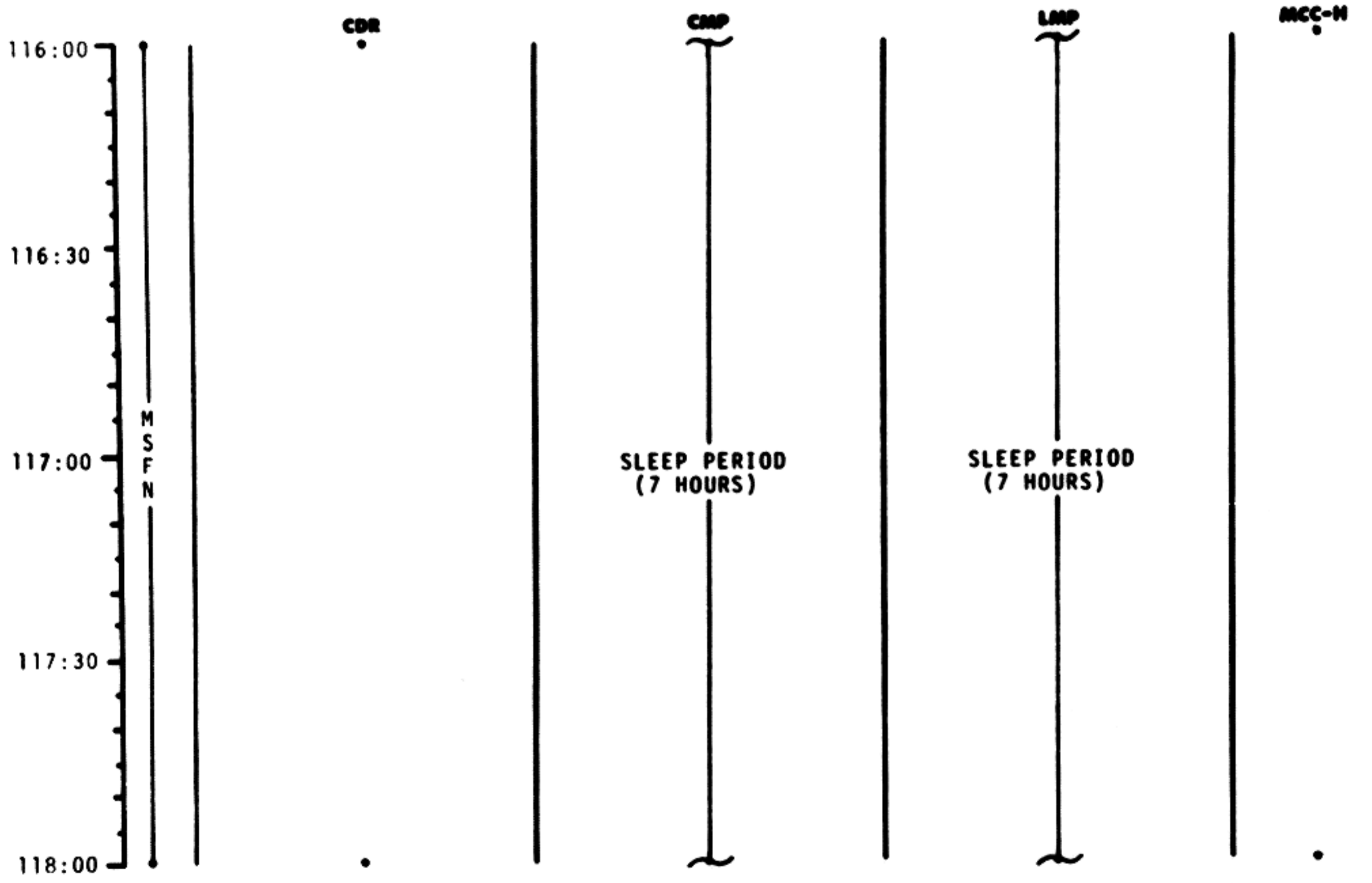


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	115:00 - 116:00	5/TEC	2-92

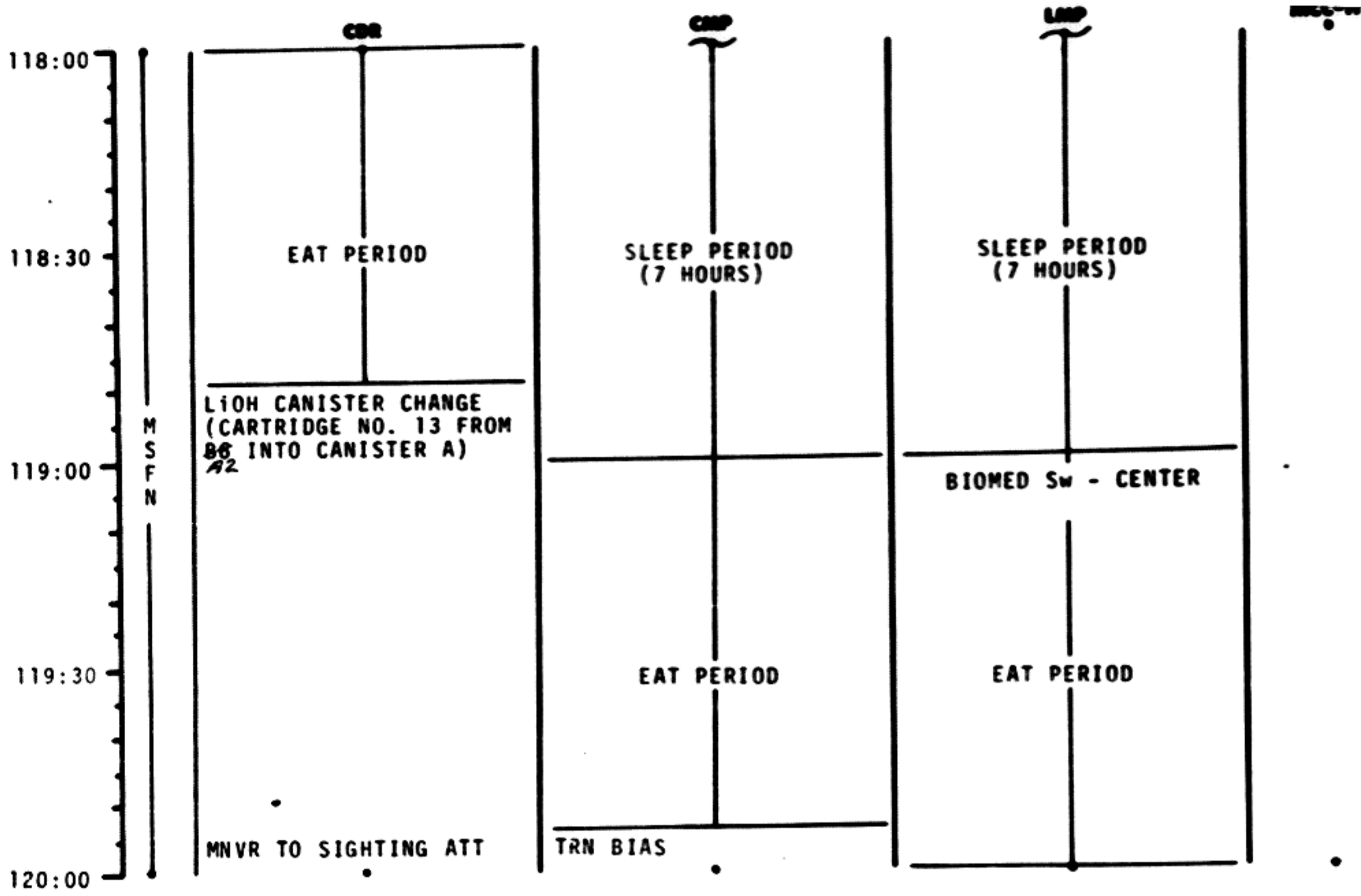
NSC Form 1010 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	116:00 - 118:00	5/TEC	2-93

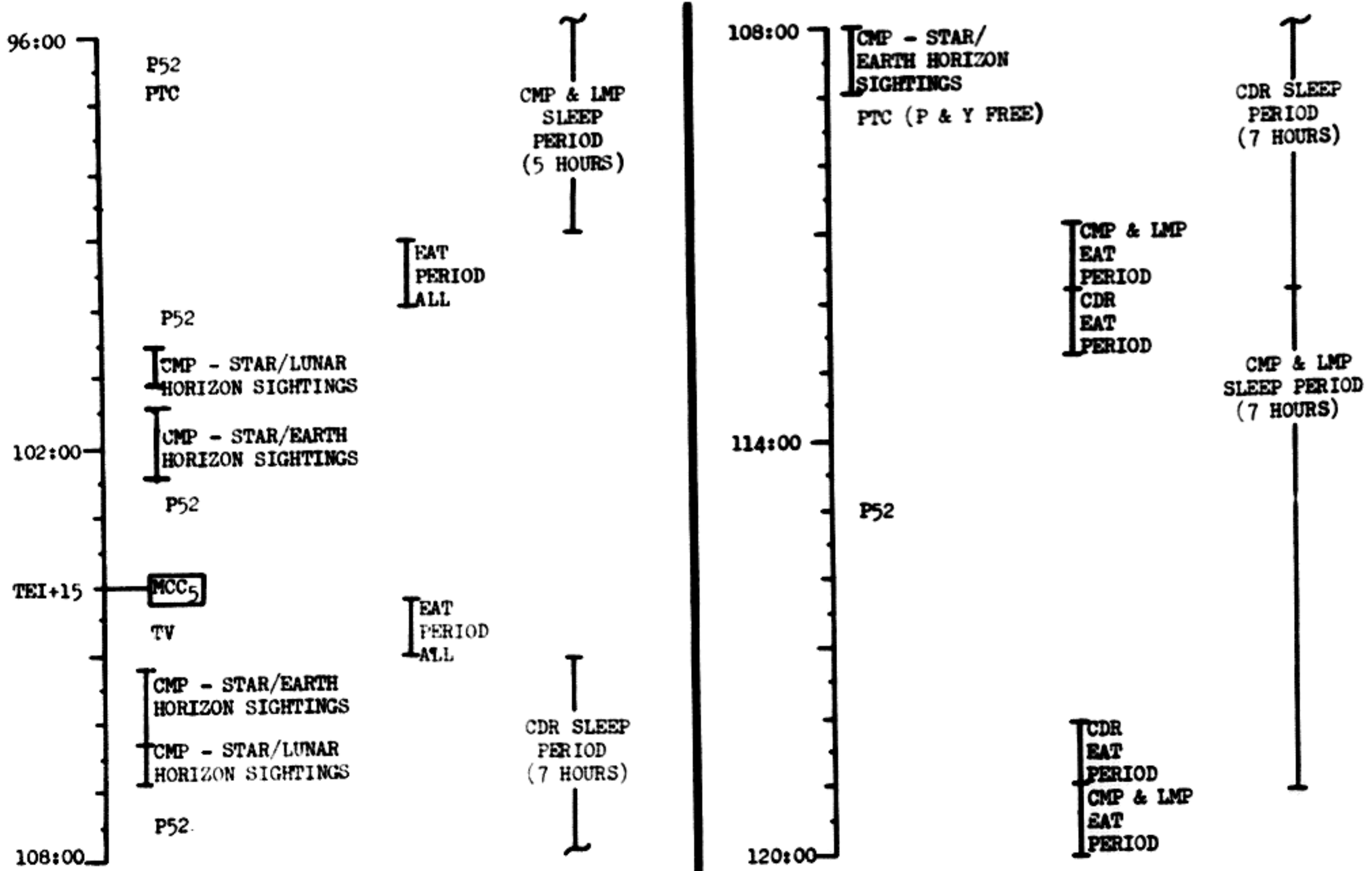


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	118:00 - 120:00	5/TEC	2-94

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
			96:00 - 120:00	5	5-5

FLIGHT PLAN

CDR

CMP

LMP

MCC-H

120:00
120:15
120:30
120:45
121:00

M
S
F
N

CISLUNAR NAVIGATION P23

1. STAR 22 EFH 00120
STAR ___ E ___ H
1 SET

 2. STAR 26 ENH 00110
STAR ___ E ___ H
1 SET

 3. STAR 31 ENH 00110
STAR ___ E ___ H
1 SET
- RETURN TO EARTH
P37
CHLORINATE WATER

CMP/LMP CREW STATUS
REPORT

RECORD MNVR PAD
INITIATE GATB CHARGE
(FOLLOWED BY GAT A)

P27 UPDATE:
STATE
VECTOR
TGT LOAD
VOICE
UPDATE:
MNVR PAD

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
10000102	FINAL	November 22, 1968	120:00 - 121:00	6/TEC	2-95

BURN STATUS REPORT

X X : ΔTIG
 X X : BT
 : V_{gx}

TRIM
 X X X R
 X X X P
 X X X Y
 V_{gx}
 V_{gy}
 V_{gz}
 ΔV_c

X X X FUEL
 X X X OX
 X X X UNBALANCE

REMARKS:

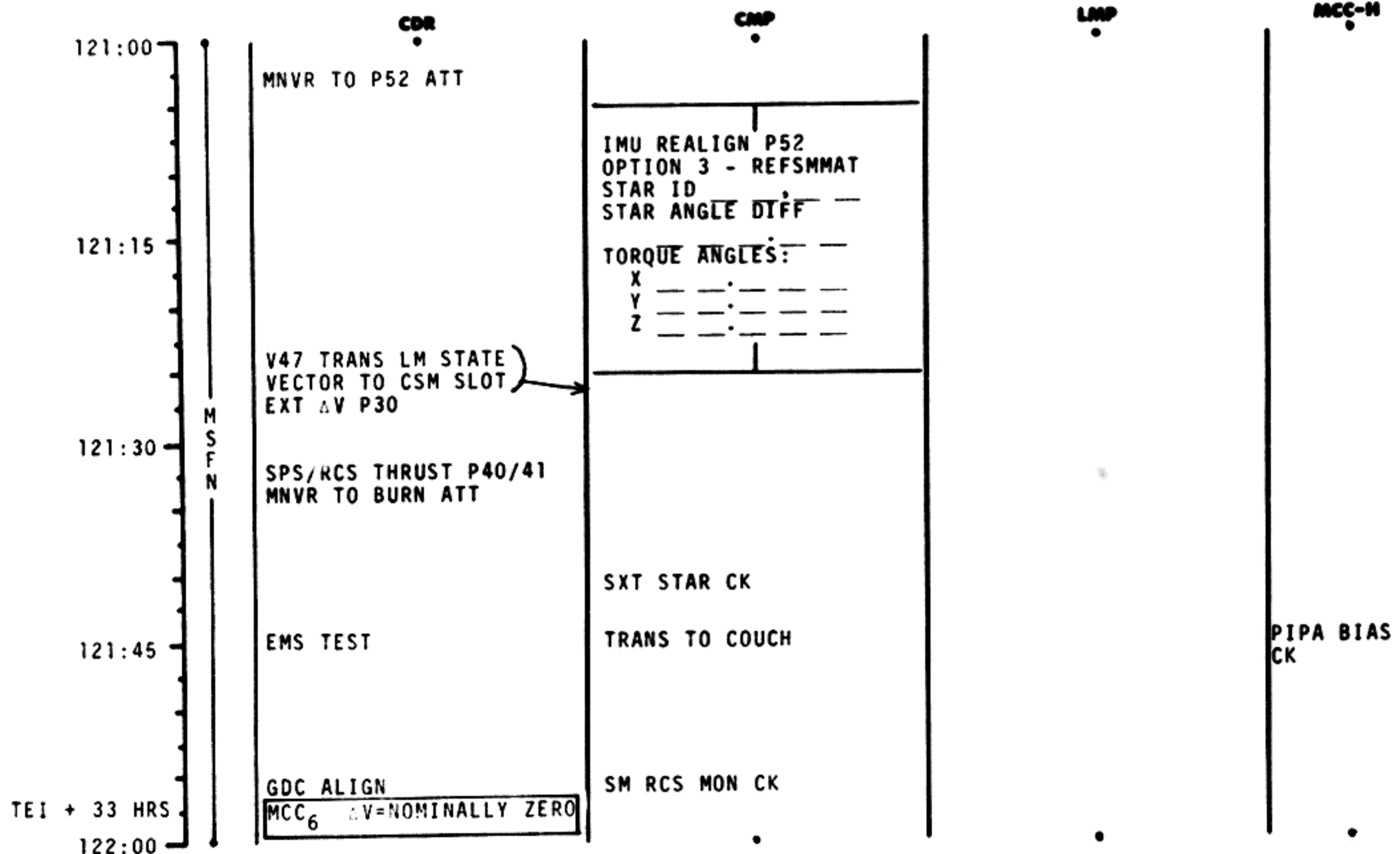
MCC'S

BURN CHART

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TC 0.2 fns

2-96A

FLIGHT PLAN



122:00	CDR V66 TRANS CSM STATE VECTOR TO LM SLOT	CMP SM RCS MON CK	LMP MCC ₆ BURN STATUS REPORT INITIATE BAT CHARGE
122:15			RIOMED Sw - RIGHT
122:30	M S F N MNVR TO SIGHTING ATT	TRN BIAS	
122:45		CISLUNAR NAVIGATION P23	
		1. STAR 02 LNH 00210 STAR ___ L ___ H 2 SETS	
123:00		2. STAR 01 LNH 00210 STAR ___ L ___ H 1 SET	

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	122:00 - 123:00	6/TEC	2-97

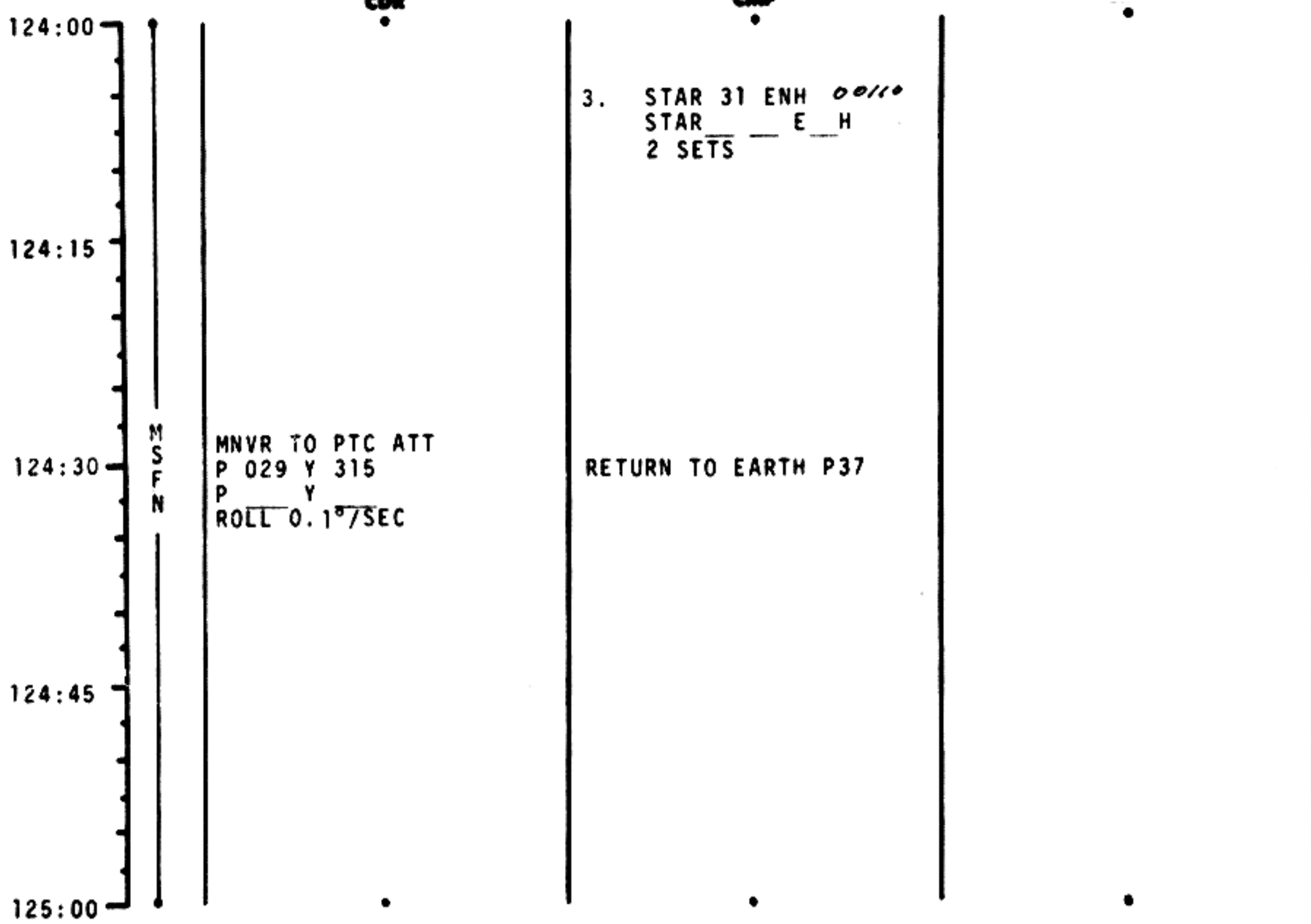
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

123:00	CDR MNVR TO SIGHTING ATT	CMP RETURN TO EARTH P37	LMP	MCC-H
123:30				
123:30	M S F N	TRN BIAS		
123:45		CISLUNAR NAVIGATION P23		
		1. STAR 22 EFH 00120 STAR ___ E ___ H 2 SETS		
124:00		2. STAR 26 ENH 00110 STAR ___ E ___ H 1 SET		

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
				6/TEC	2-98

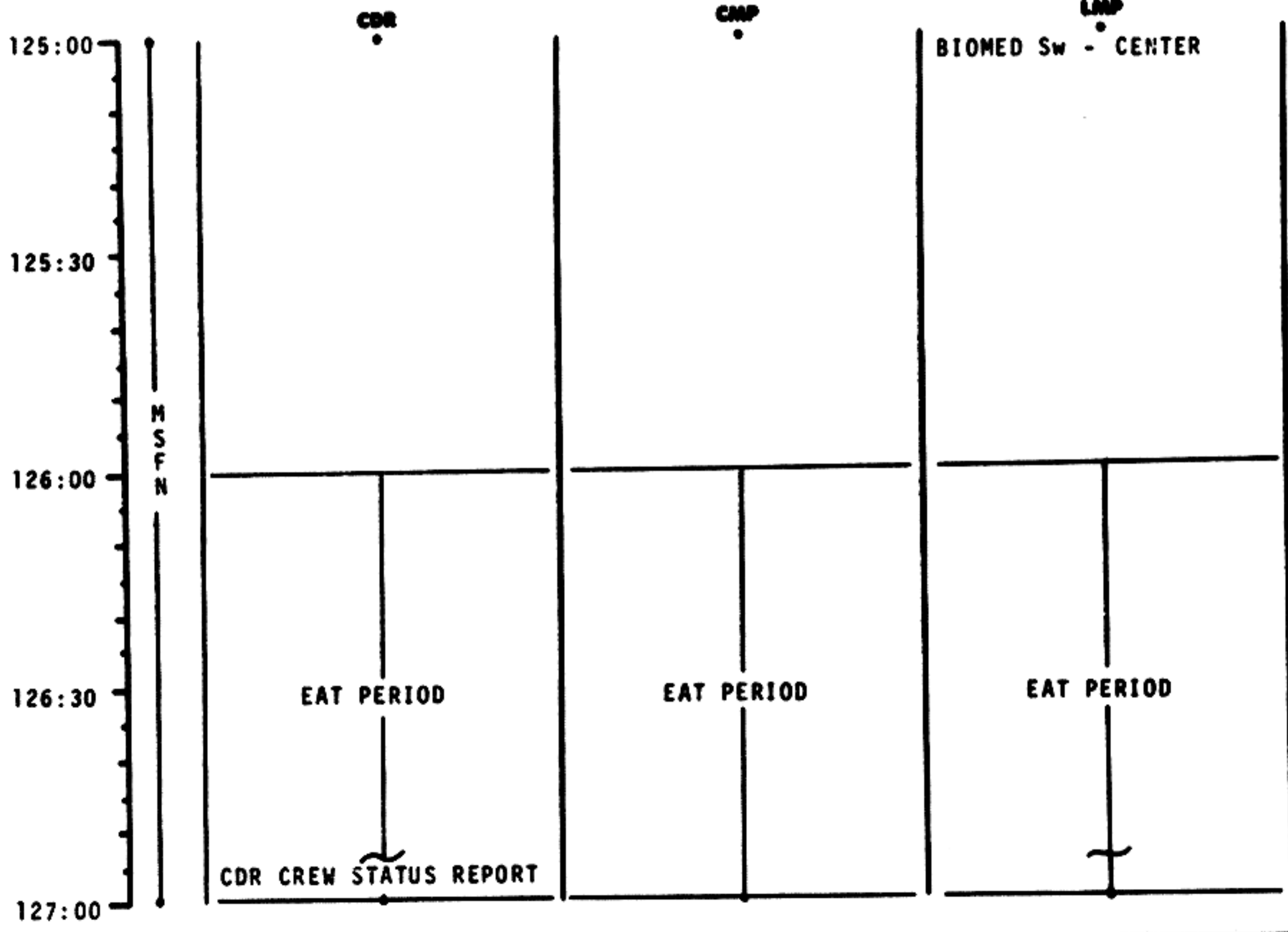


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	124:00 - 125:00	6/TEC	2-99

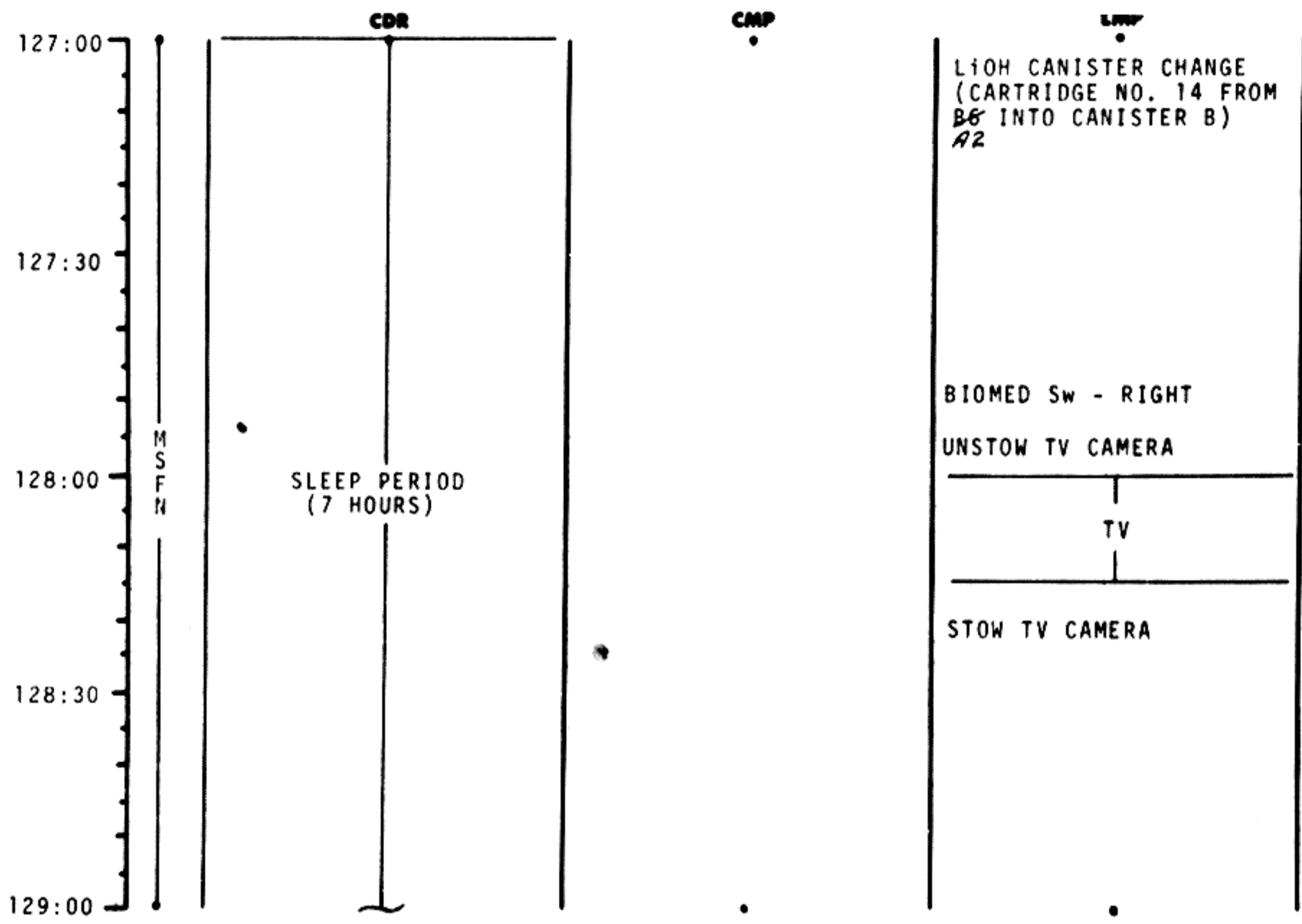
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
		November 22, 1968	125:00 - 127:00	6/TEC	2-100

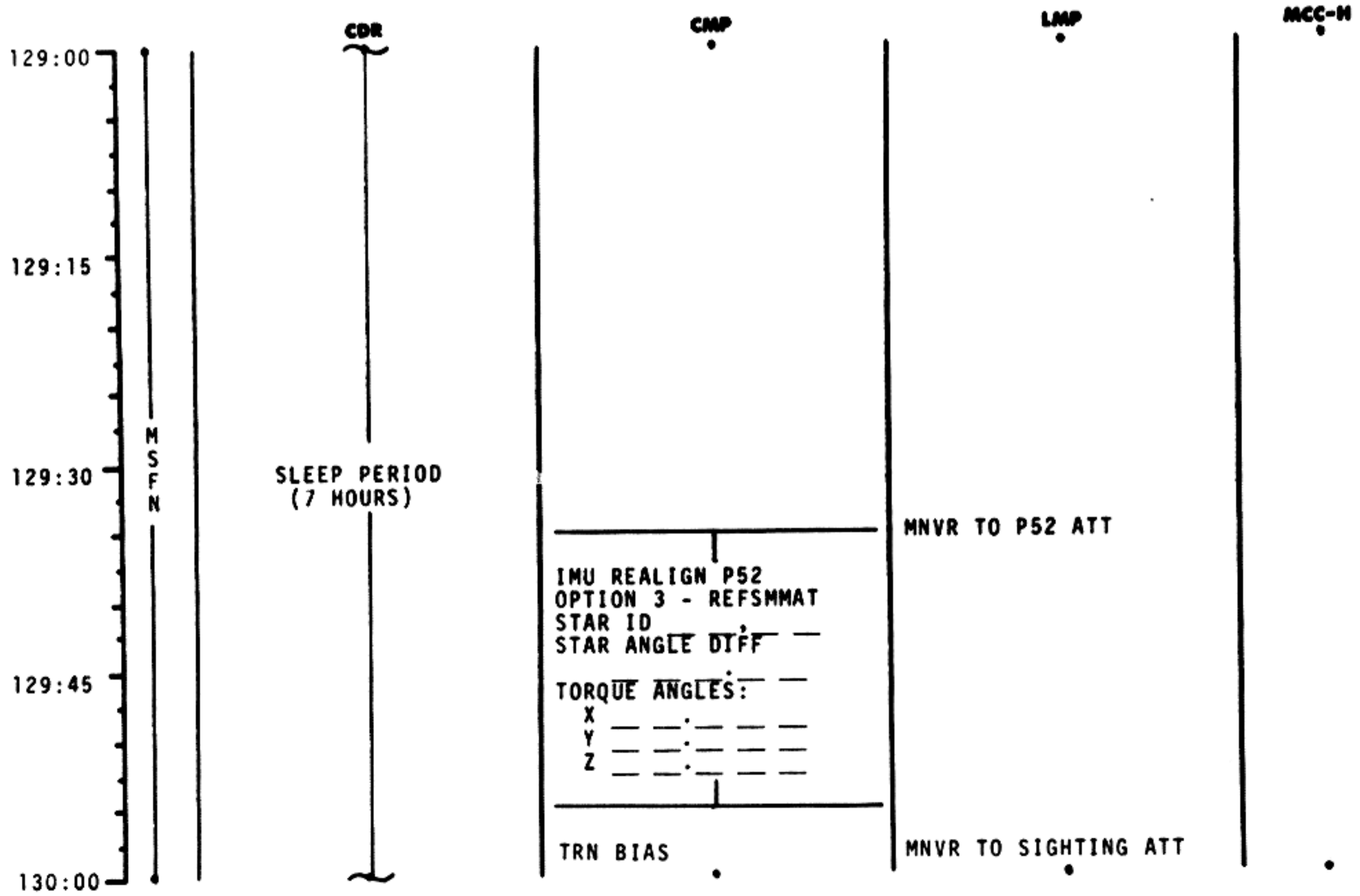


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	127:00 - 129:00	6/TEC	2-101

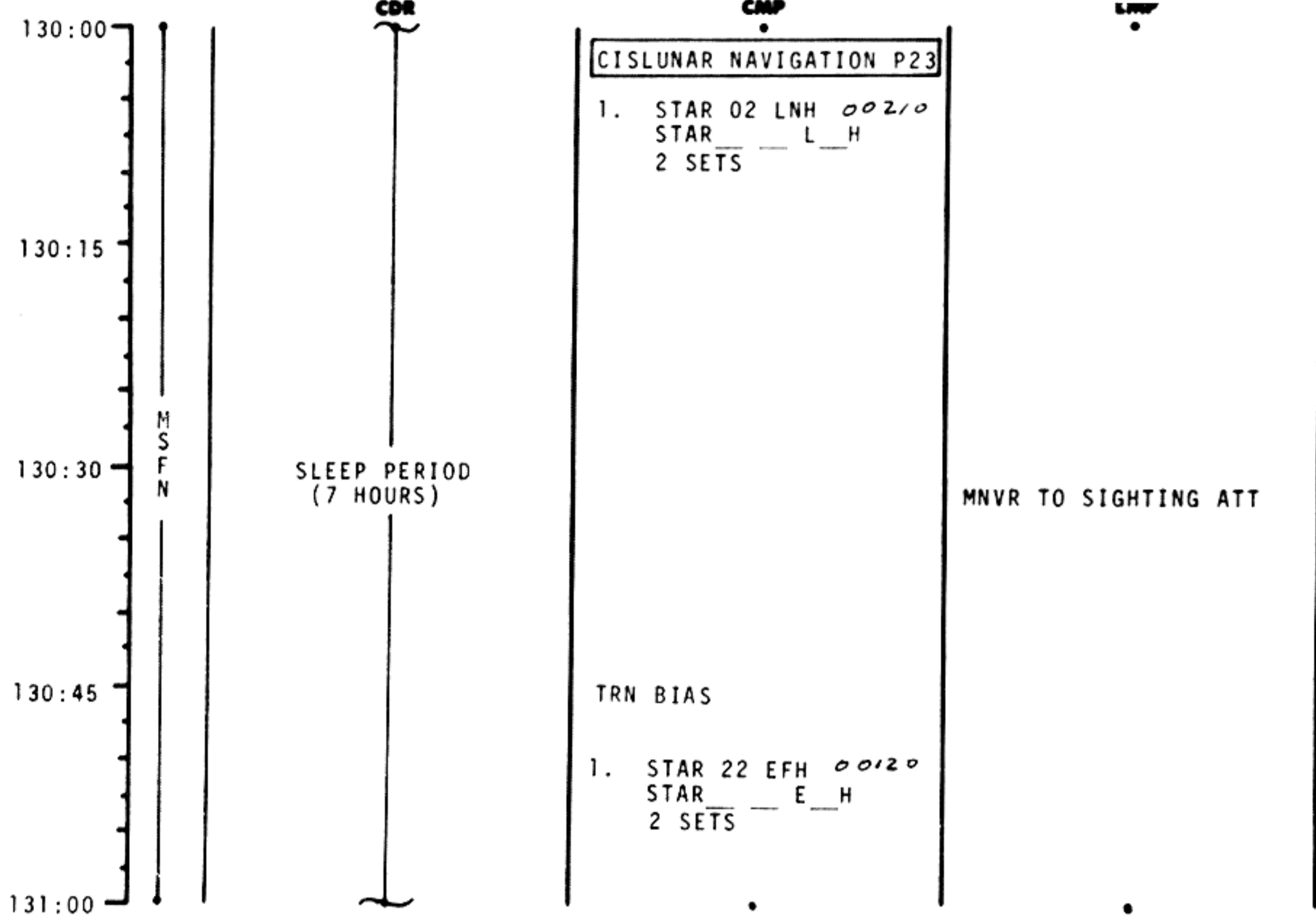
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	129:00 - 130:00	6/TEC	2-102

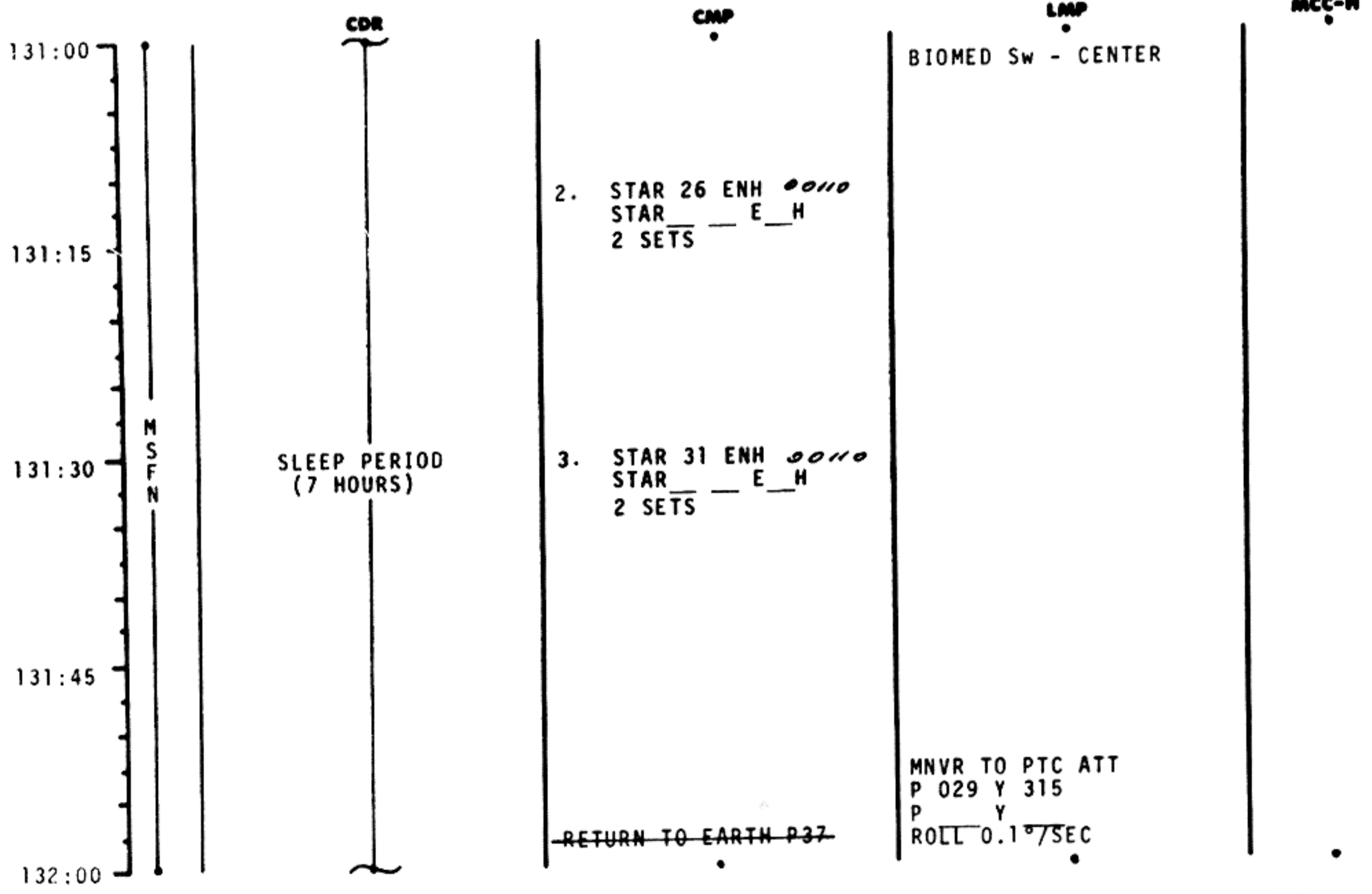


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	130:00 - 131:00	6/TEC	2-103

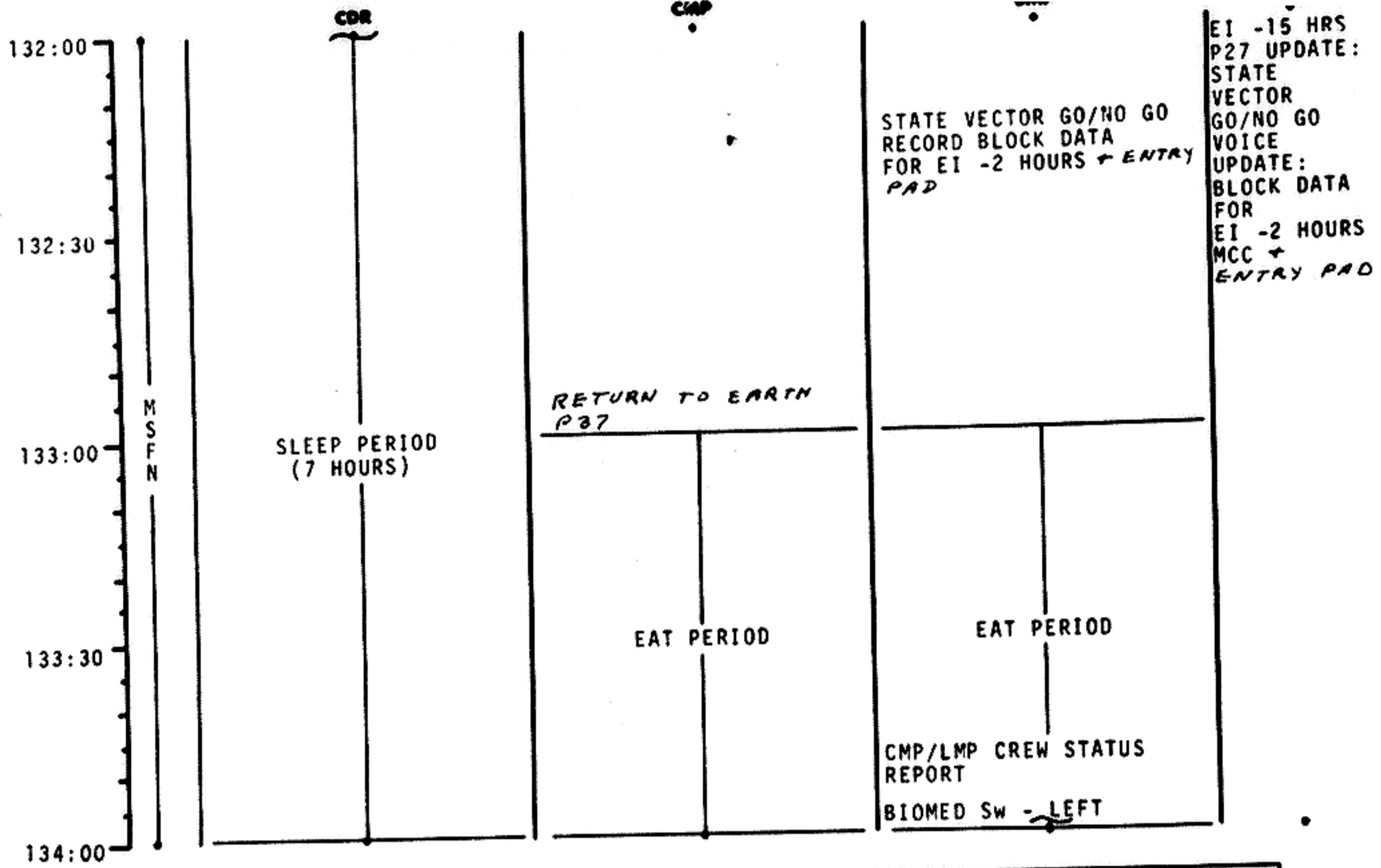
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
			131:00 - 132:00	6/TEC	2-104

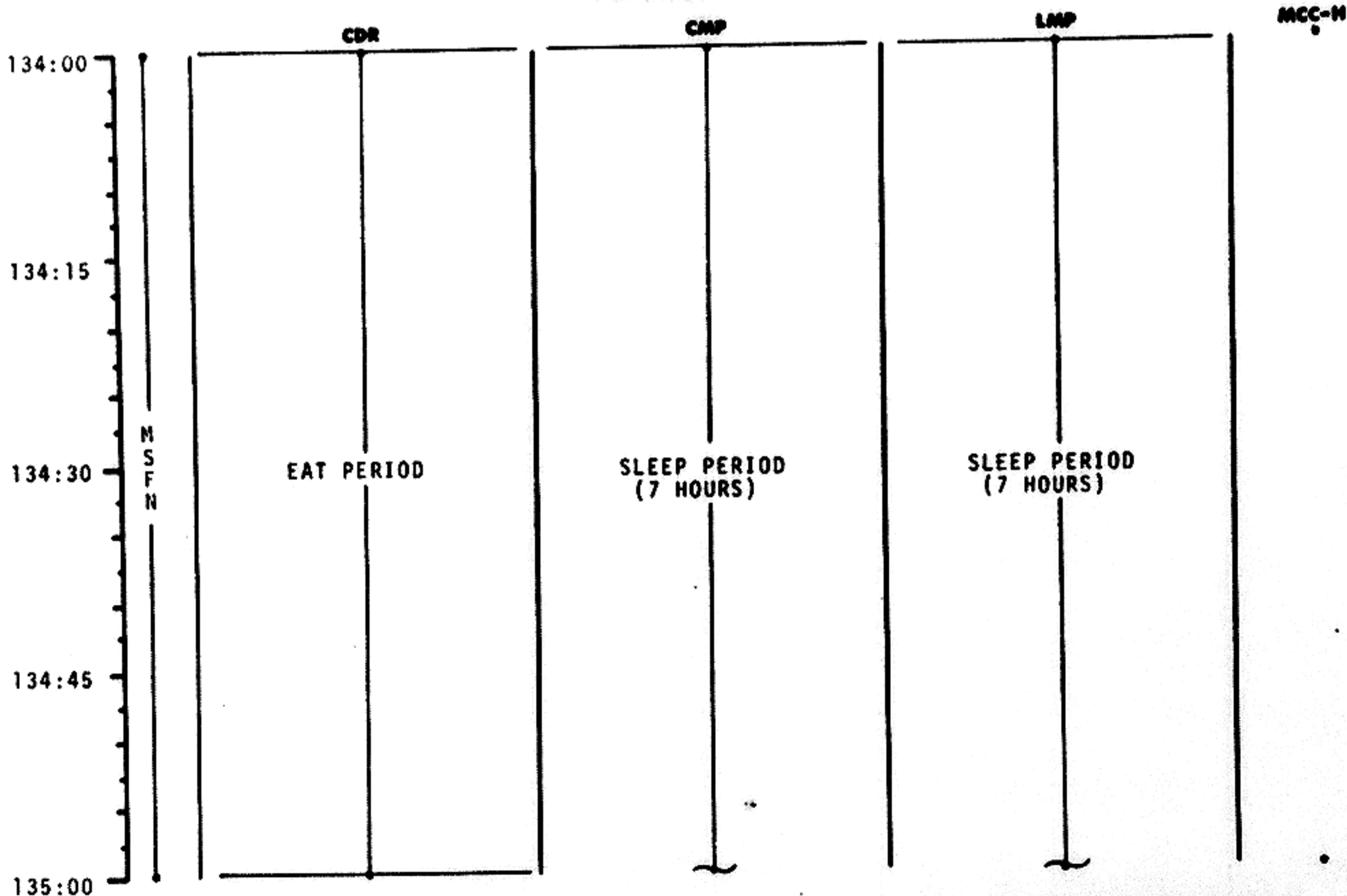


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	132:00 - 134:00	6/TEC	2-105

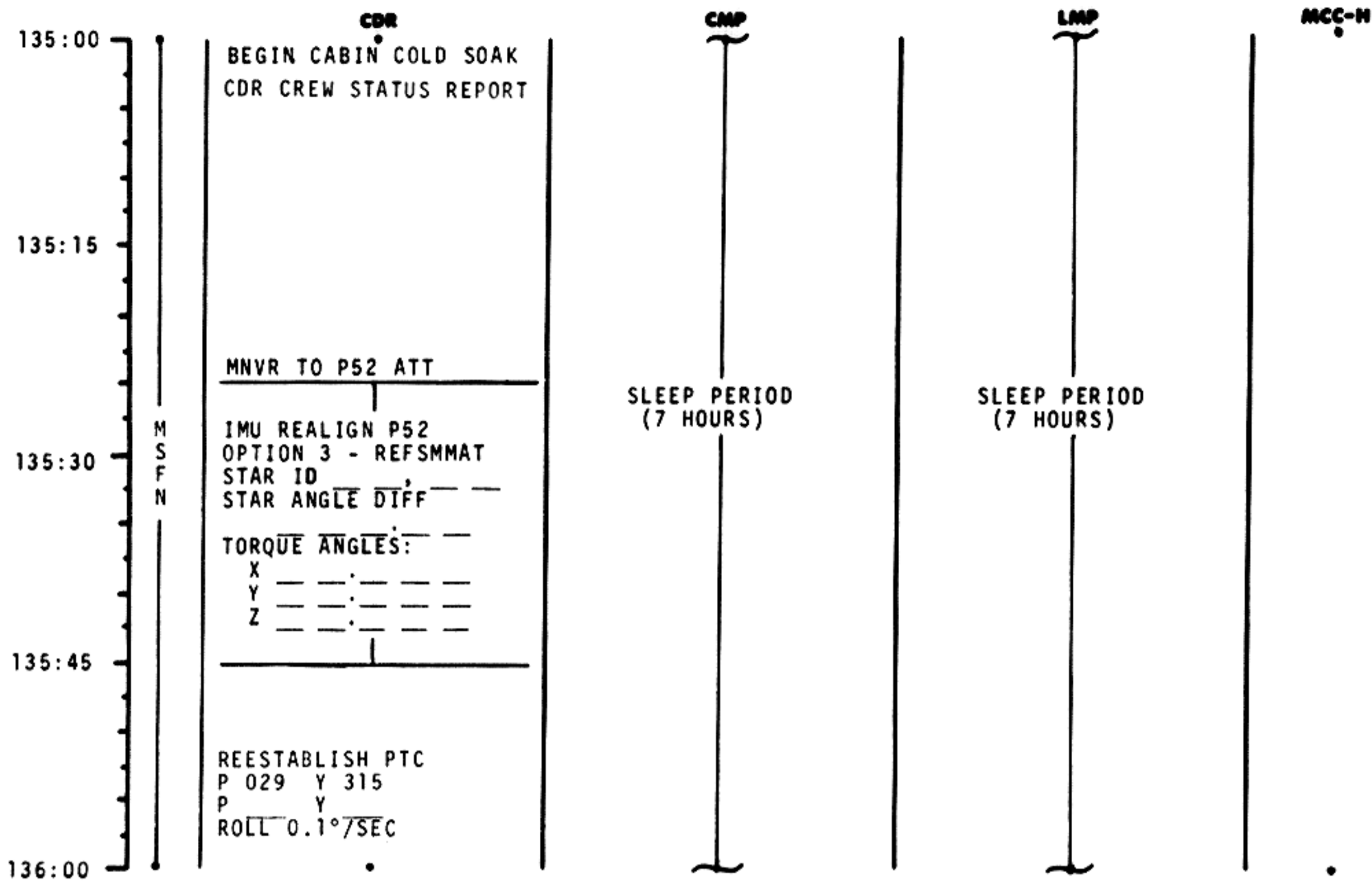
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	134:00 - 135:00	6/TEC	2-106

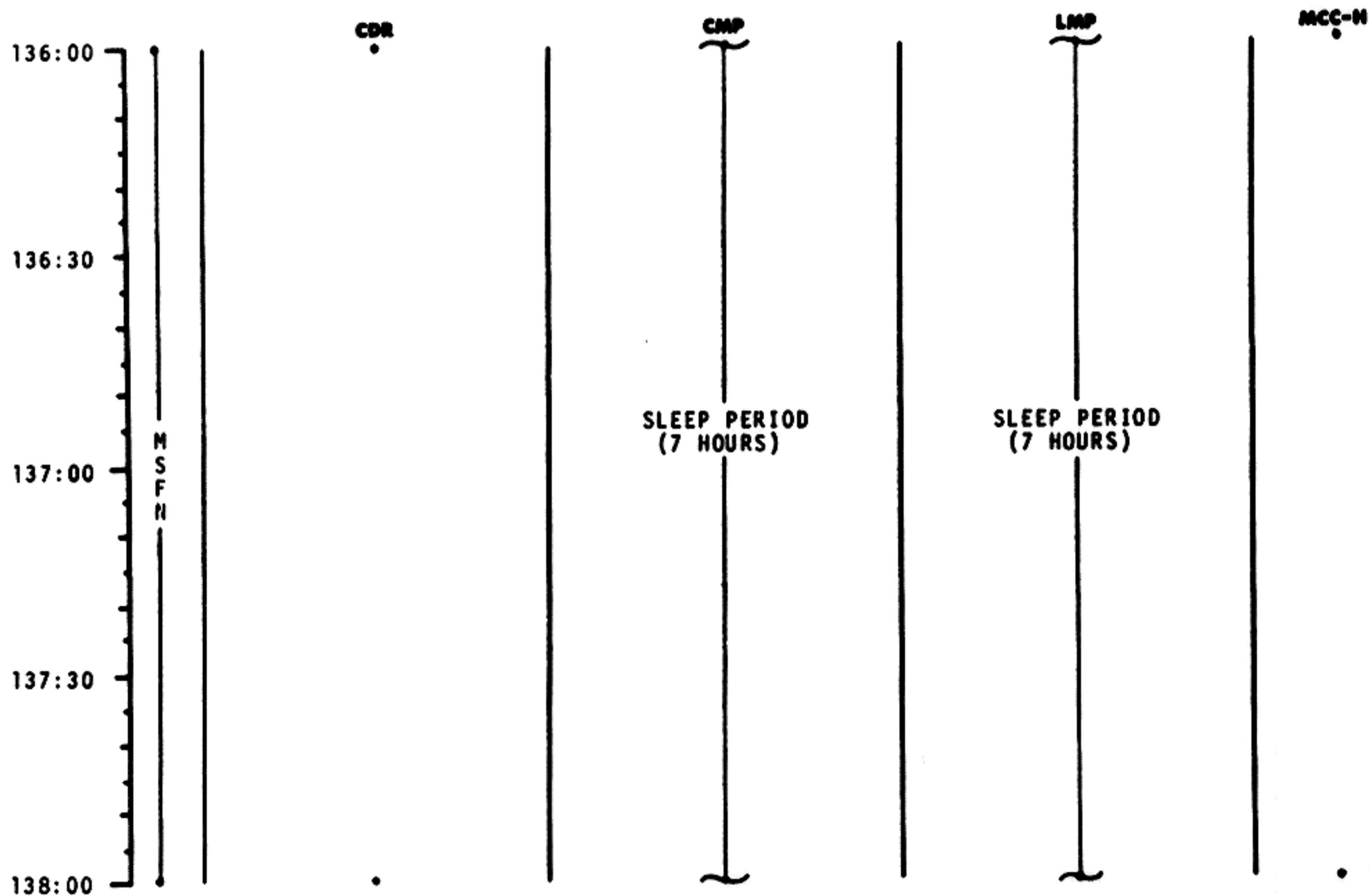


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	135:00 - 136:00	6/TEC	2-107

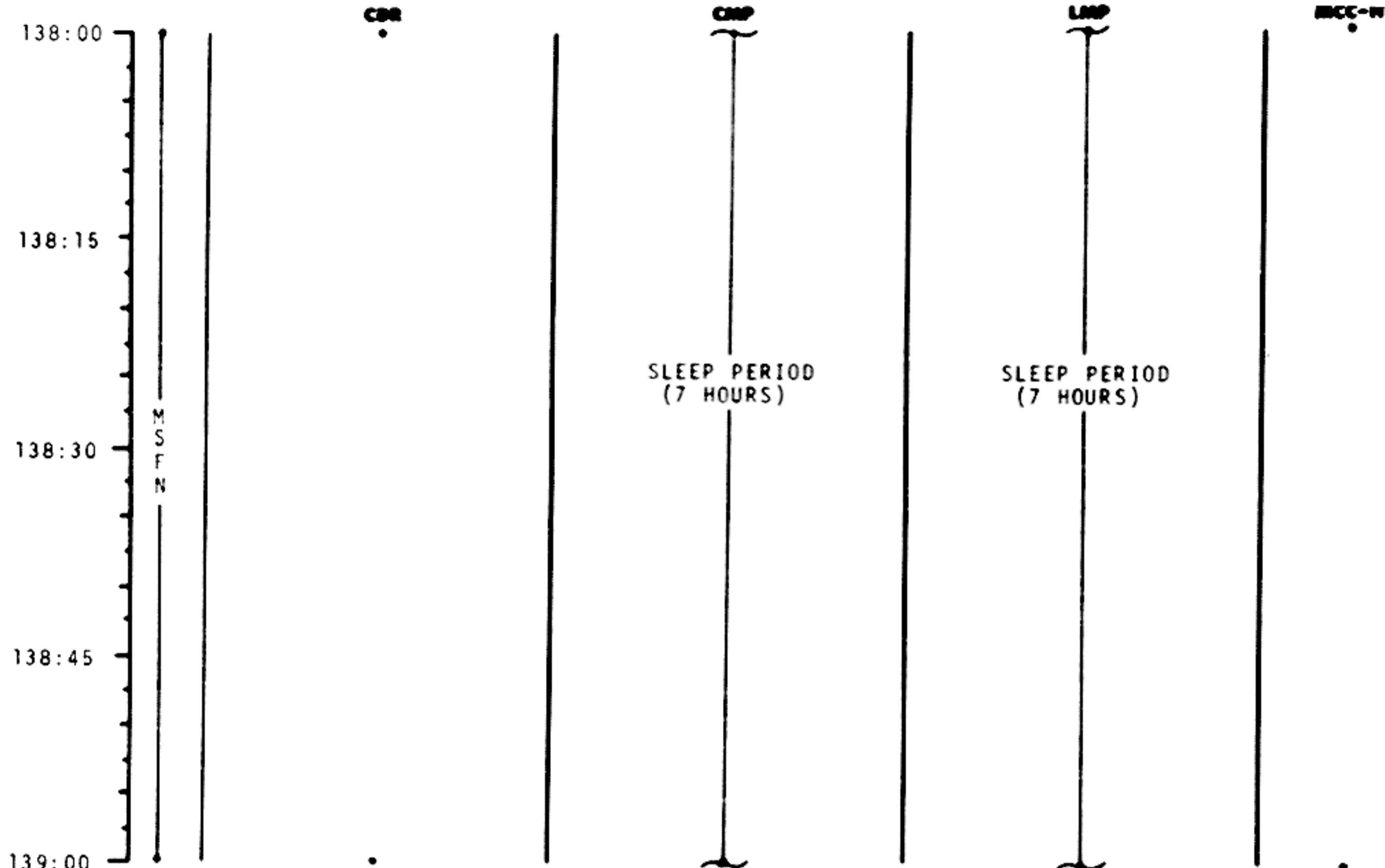
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	136:00 - 138:00	6/TEC	2-108

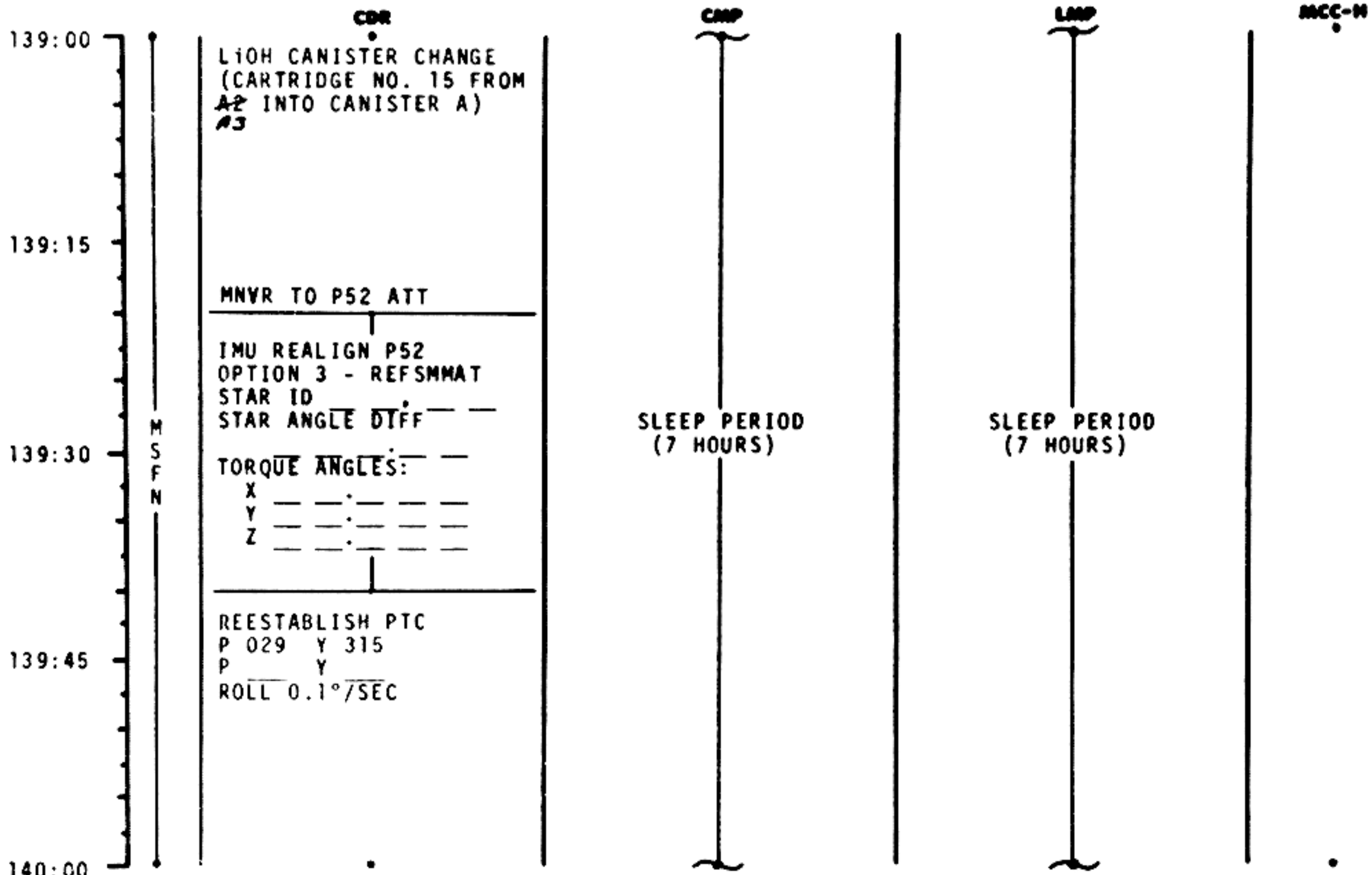


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	138:00 - 139:00	6/TEC	2-109

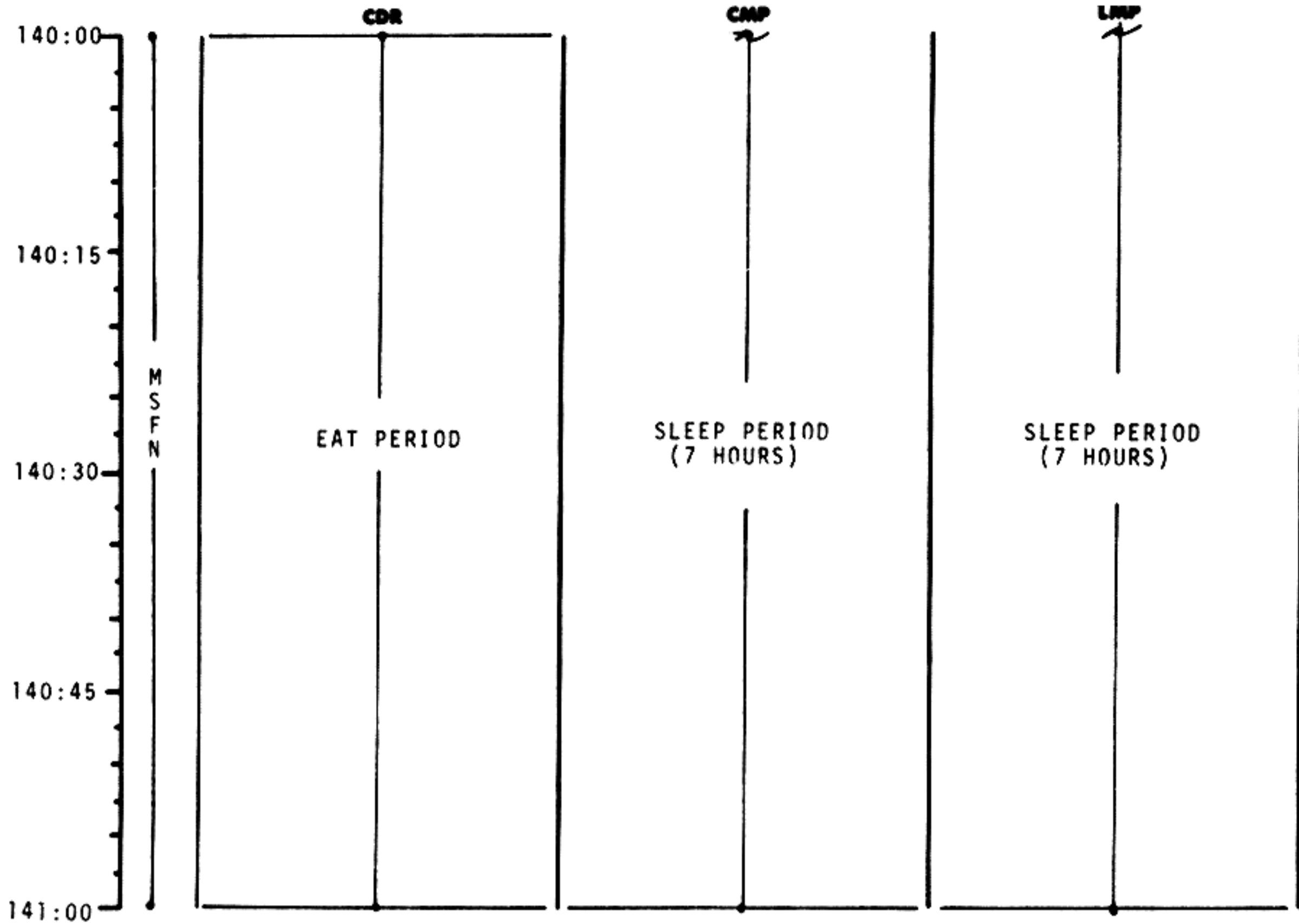
MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
			139:00 - 140:00	6/TEC	2-110

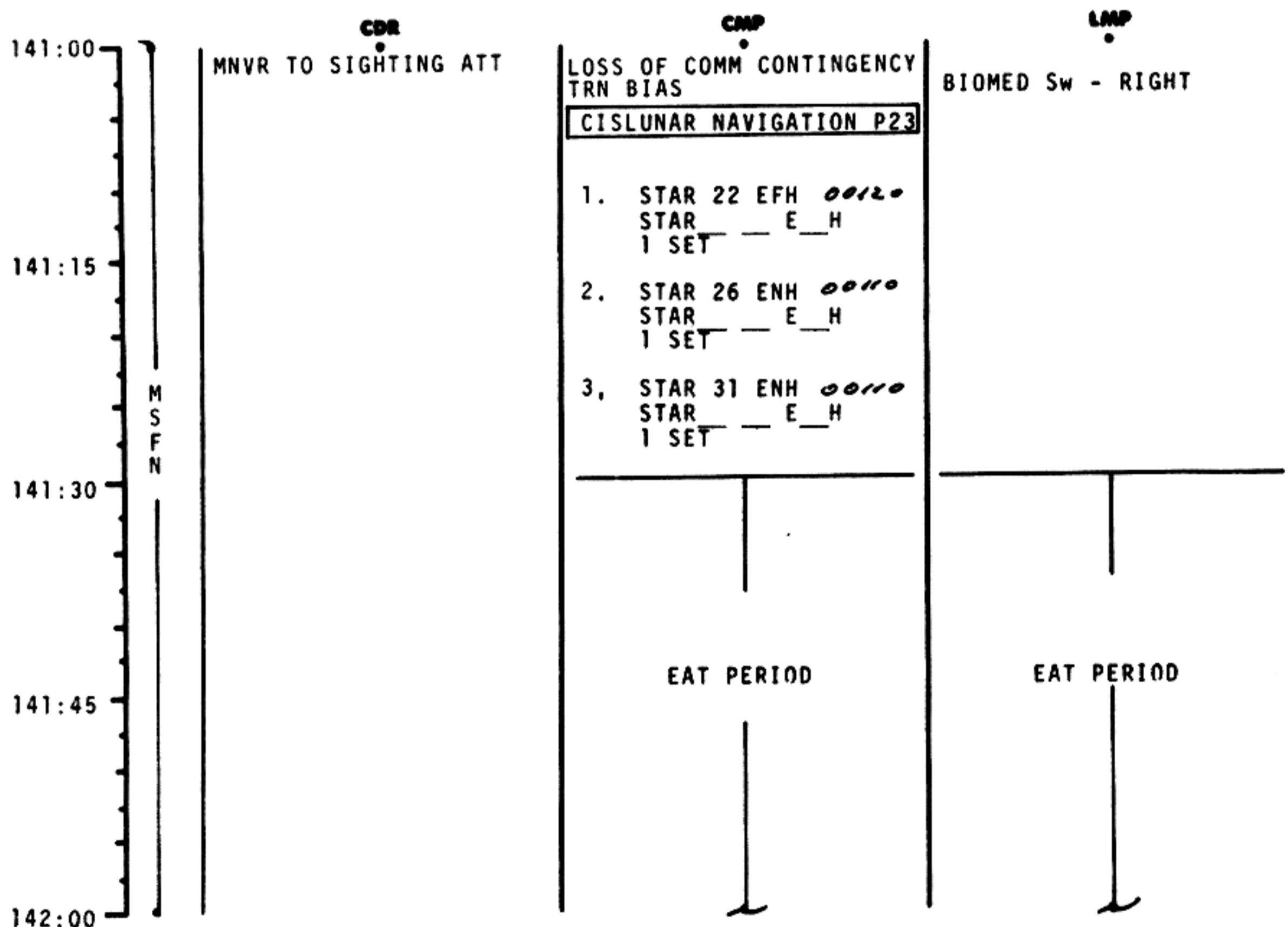


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	140:00 - 141:00		2-111

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
		November 22 1968	141:00 - 142:00		2-112

142:00
142:15
142:30
142:45
143:00

M
S
F
N

EAT PERIOD

EAT PERIOD

LOSS OF COMM CONTINGENCY

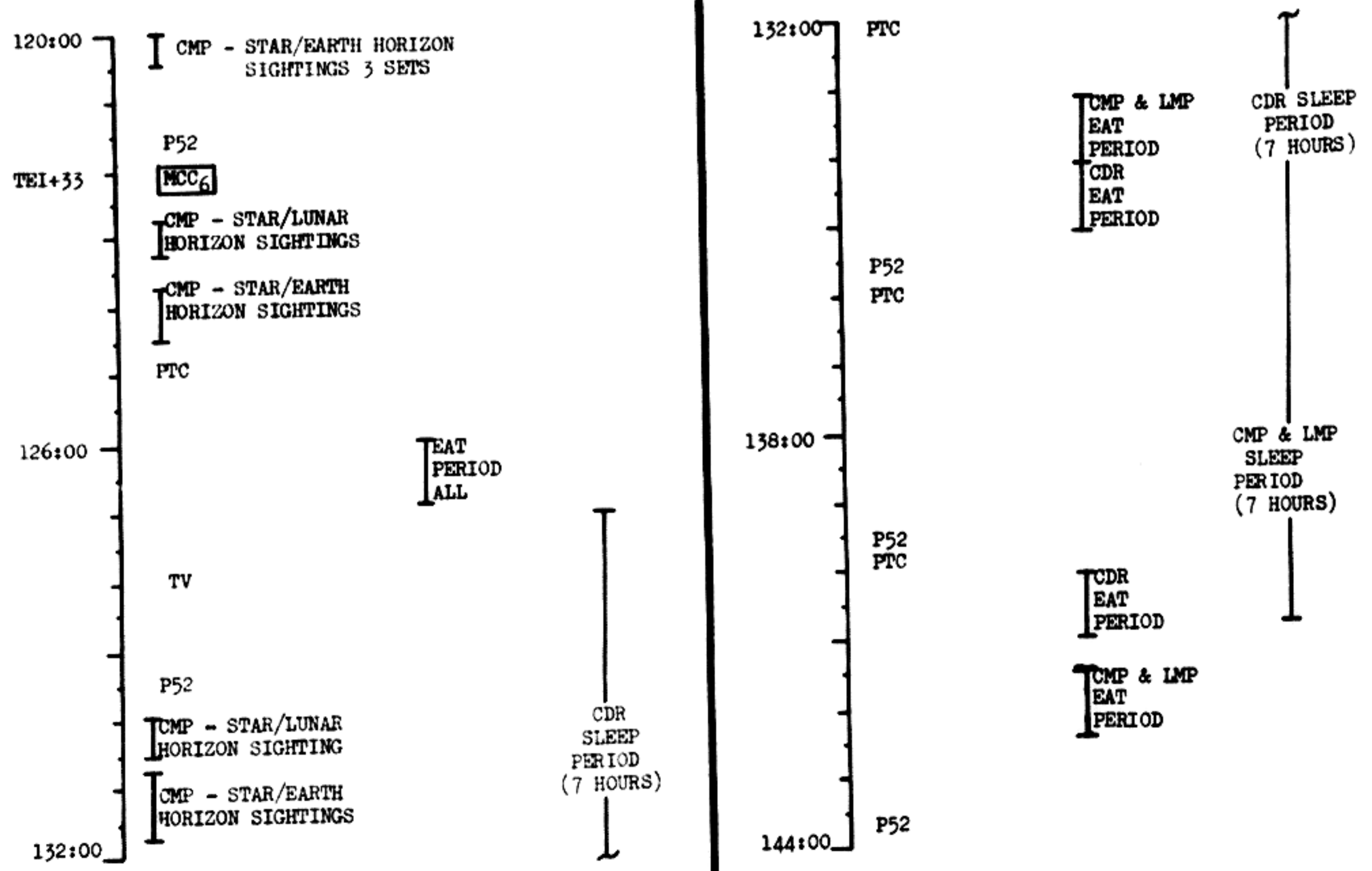
TRN BIAS
CISLUNAR NAVIGATION P23
1. STAR 22 EFH 00120
STAR ___ E ___ H
1 SET
2. STAR 26 ENH 00110
STAR ___ E ___ H
1 SET

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	142:00 - 143:00		2-113

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
		November 22, 1968	120:00 - 144:00	6	5-6

FLIGHT PLAN

	CDR	CMP	LMP	MCC-N
<p>143:00</p> <p>EI-3.5 HRS</p> <p>143:30</p> <p>EI-3 HRS</p> <p>144:00</p>	<p style="text-align: center;">M S P N</p> <p>MNVR TO P52 ATT</p>	<p>IMU REALIGN P52 OPTION 3 - REFSMMAT STAR ID _____ STAR ANGLE DIFF _____</p> <p>TORQUE ANGLES: _____ X _____ Y _____ Z _____</p> <p>CMC SELF CK DSKY COND LT TEST</p>	<p>RECORD MNVR AND ENTRY PAD</p> <p>ECS CK</p> <p>EPS CK SPS CK SM/CM RCS CK C&W CK</p>	<p>P27 UPDATE: STATE VECTOR (LM & CSM SLOTS) REFSMMAT</p> <p>VOICE UPDATE: MNVR PAD ENTRY PAD</p>

BURN CHART

BURN STATUS REPORT

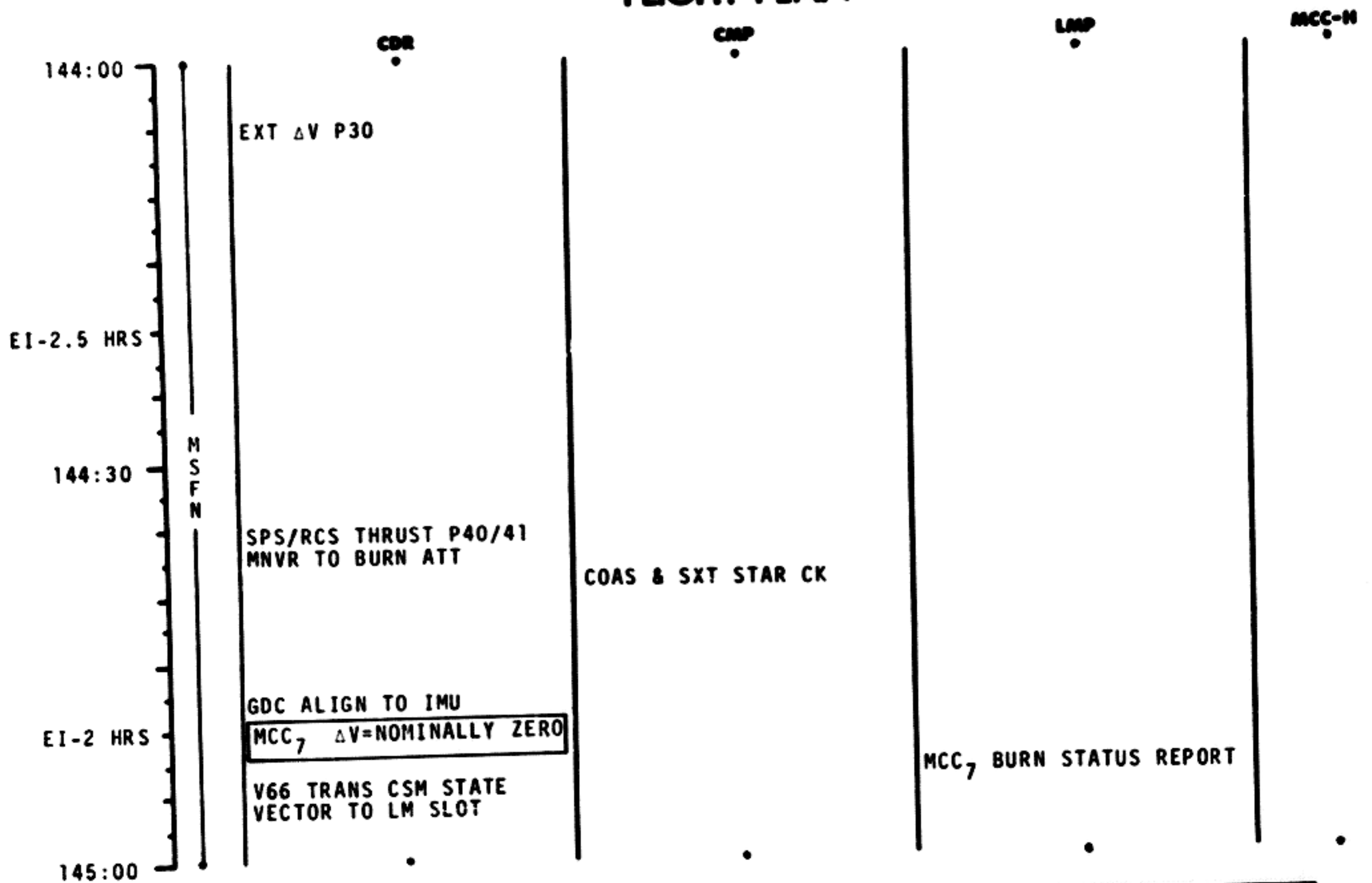
X	X	<input type="checkbox"/>	ΔTIG
X	X	<input type="checkbox"/>	BT
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vgx
TRIM			
X	X	X	R
X	X	X	P
X	X	X	V
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vgx
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vgy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vgz
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ΔVc
X	X	X	FUEL
X	X	X	OX
X	X	X	UNBALANCE

	P or Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
MCC(ALL)	10°/SEC TAKEOVER	10° TAKEOVER	B/T +1 SEC	TRIM TO 0.2 fns

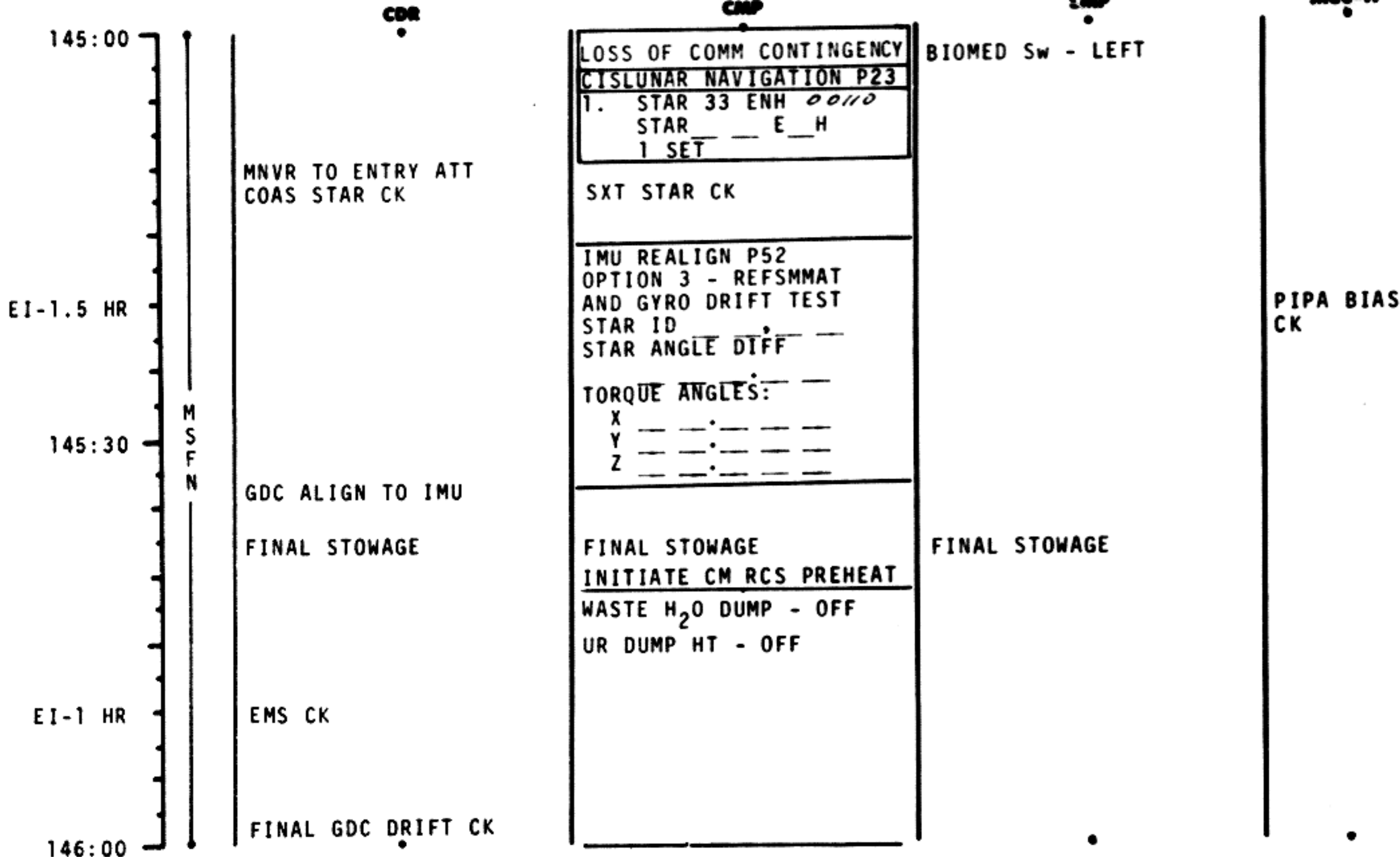
2-114a

REMARKS:

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
		November 22, 1968	144:00 - 145:00	7/TEC	2-115

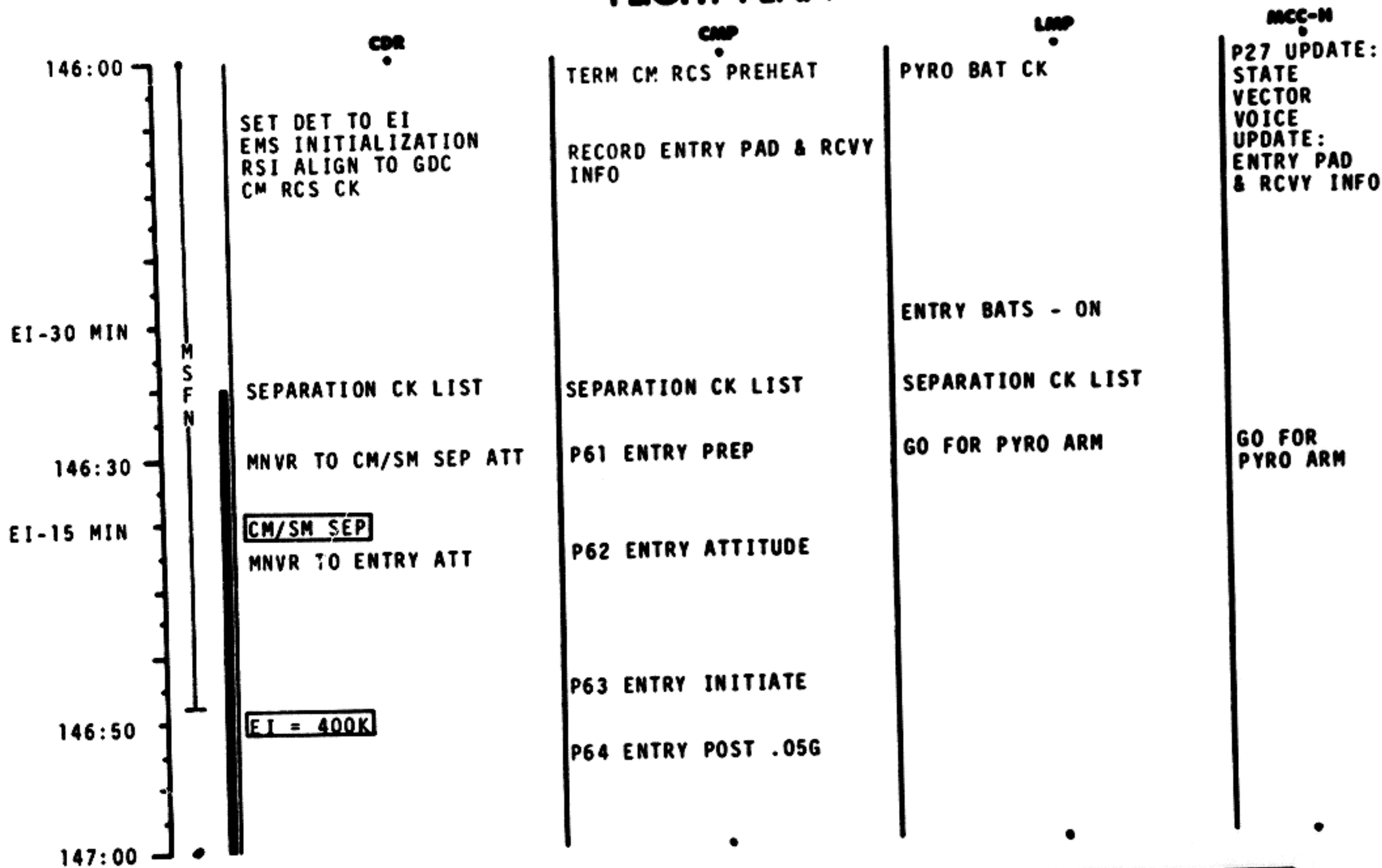


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	145:00 - 146:00	7/TEC	2-116

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
					2-117

147:00

EARTH LANDING PHASE

SPLASHDOWN

147:30

148:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	147:00 - 148:00	7/TEC	2-118

MSC Form 1910 (Nov 68)

FLIGHT PLANNING BRANCH

FLIGHT PLAN

144:00

EI -2 HRS

MCC₇
P52

CM/SM SEP

EI = 400K

147:10

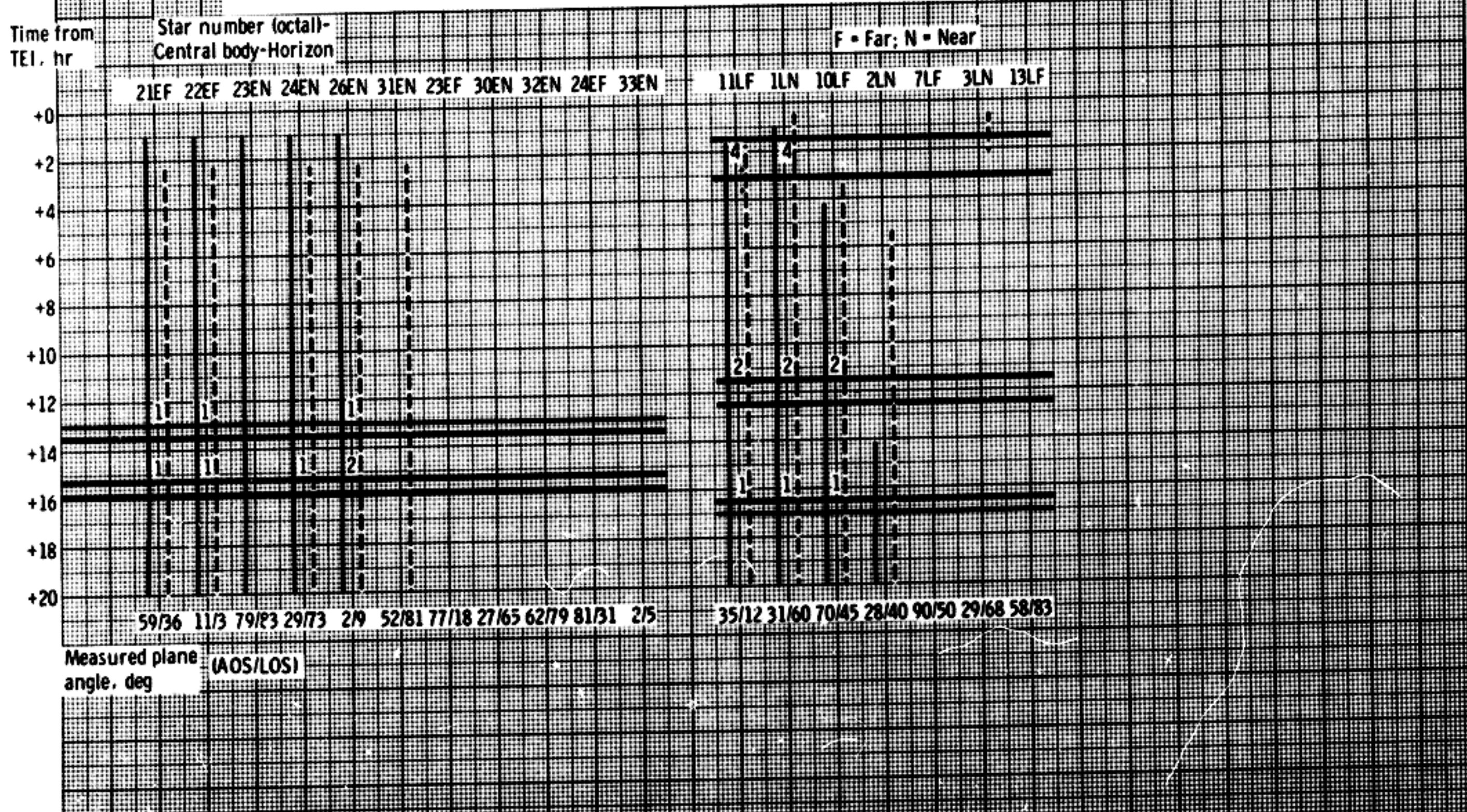
148:00

SPLASHDOWN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL	November 22, 1968	144:00 to 146:50	6	5-7

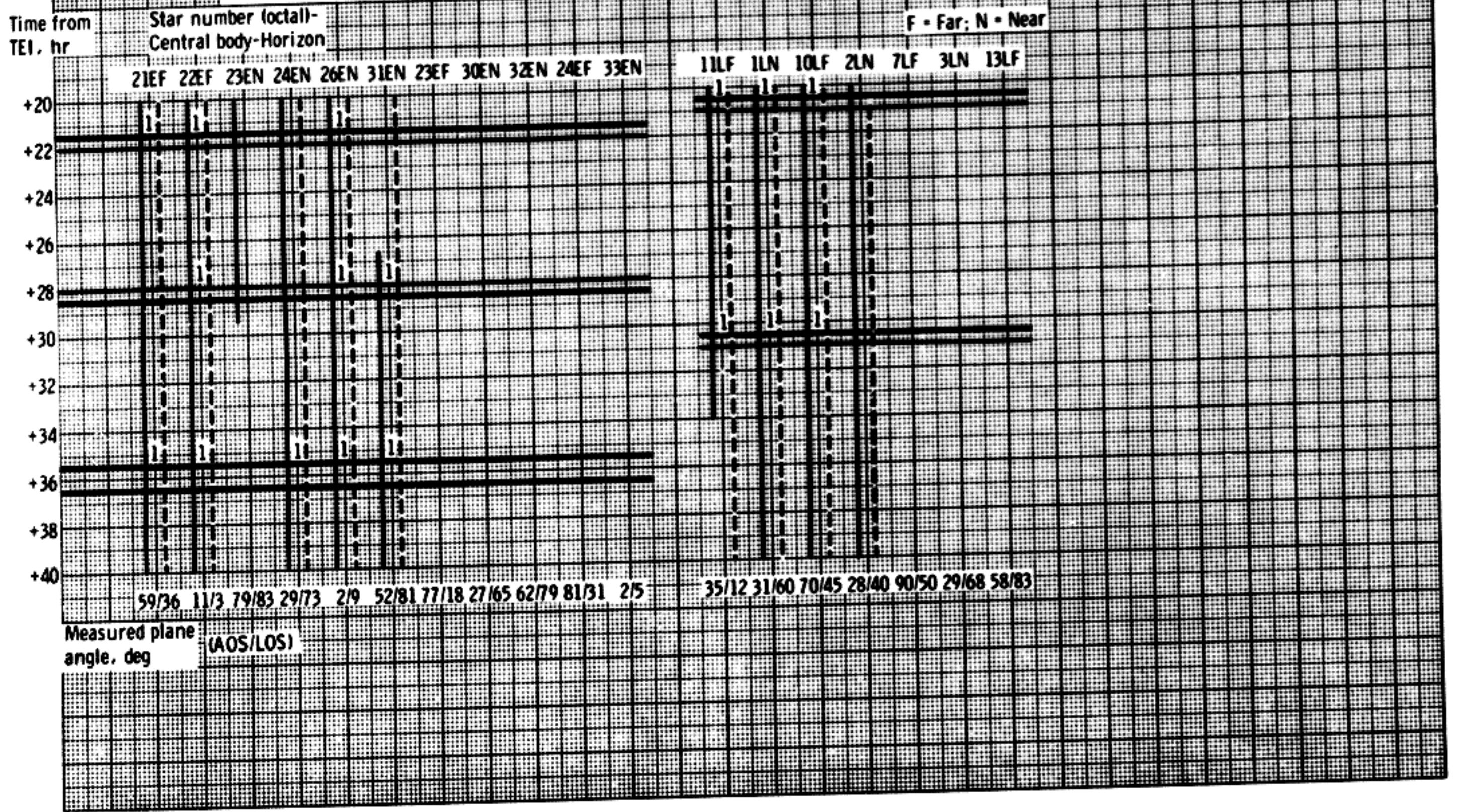
(a) Time from TEI.

Figure 1. - Detailed transearth sighting schedule for aborts from lunar orbit (50- to 81-hour return) for a December 21, 1968, launch.



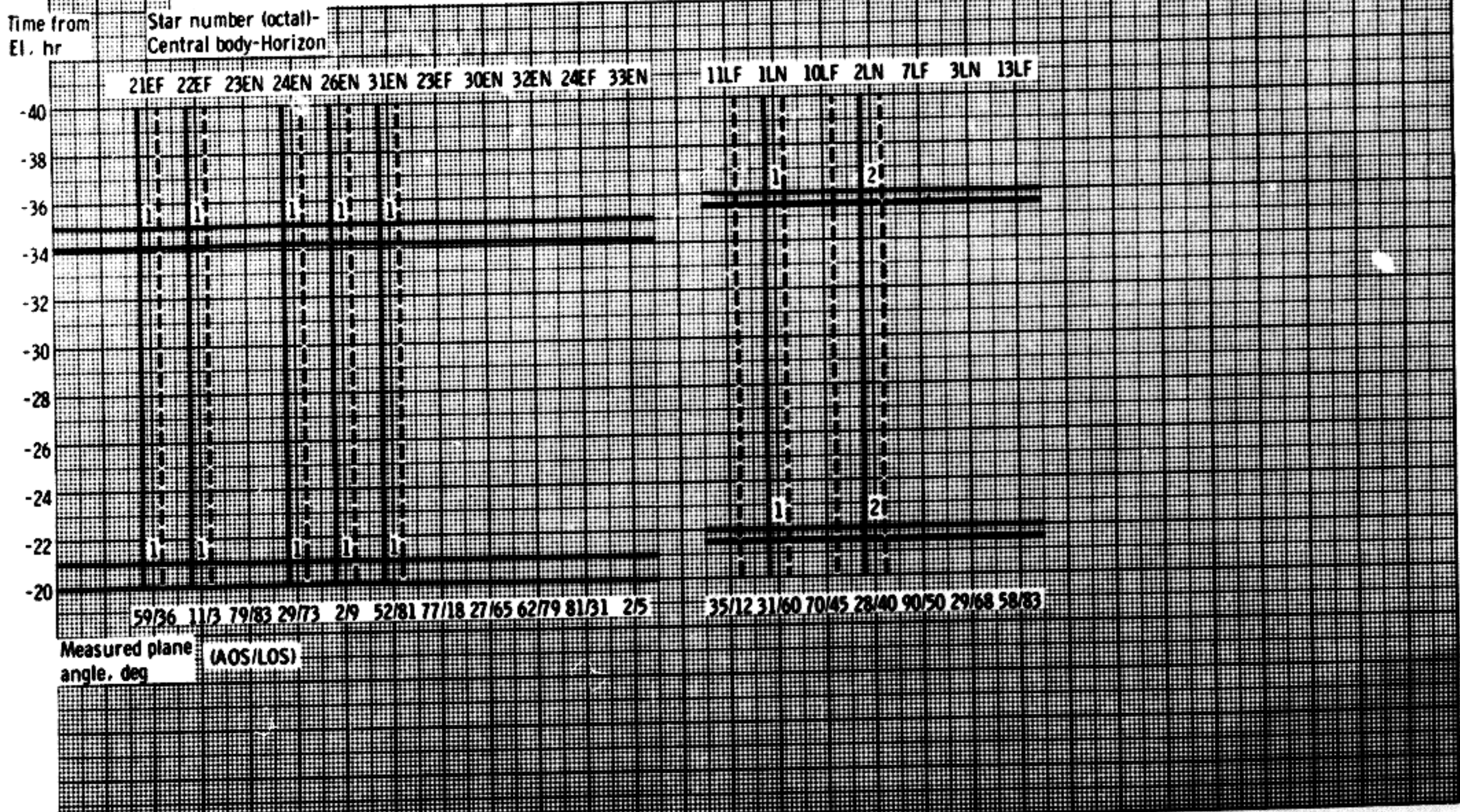
(b) Time from TEI-Concluded.

Figure 1. - Detailed transearth sighting schedule for aborts from lunar orbit (50- to 81-hour return) for a December 21, 1968, launch-Continued.



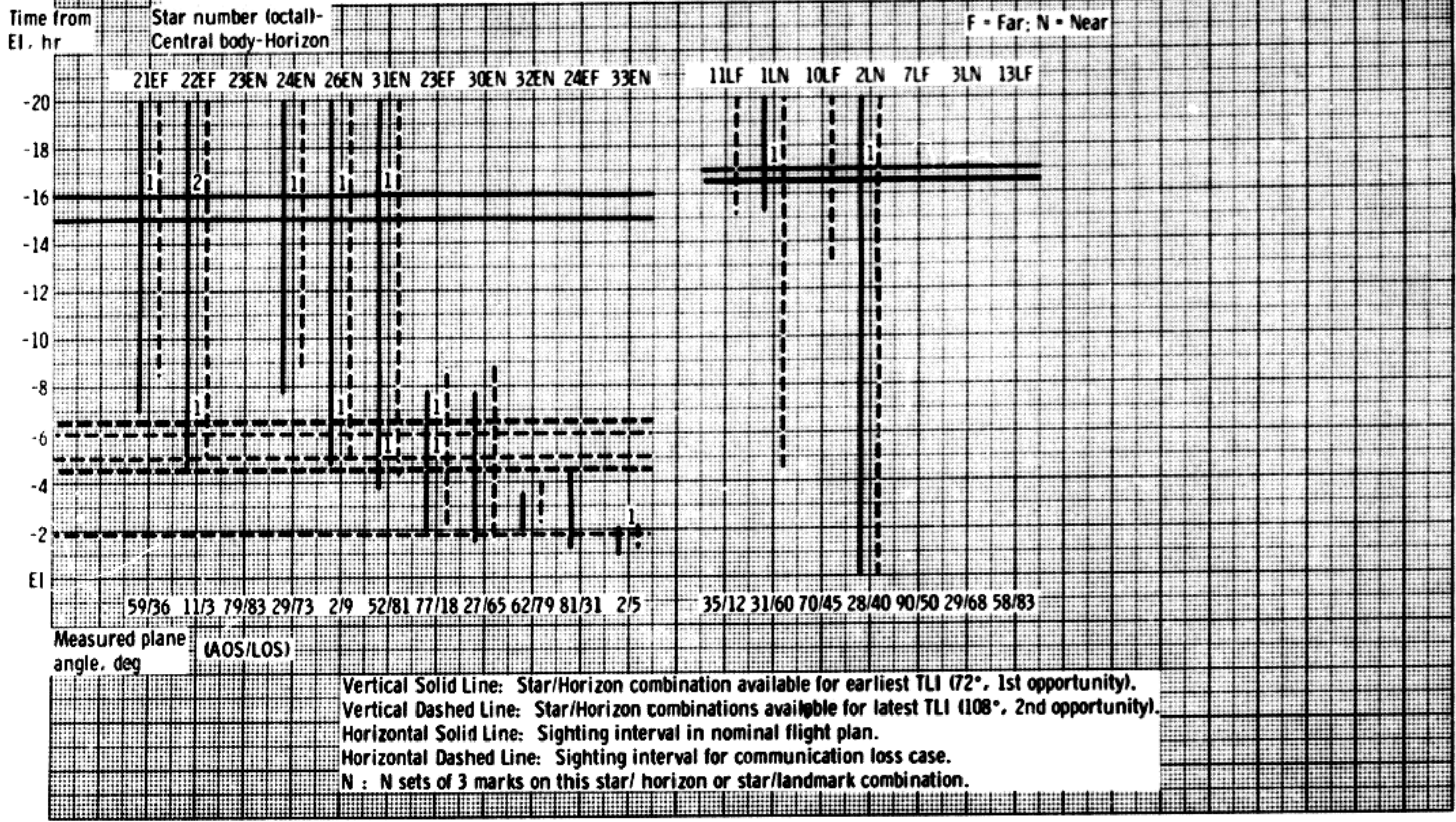
(c) Time from EI.

Figure 1. - Detailed transearth sighting schedule for aborts from lunar orbit (50- to 81-hour return) for a December 21, 1968, launch-Continued.



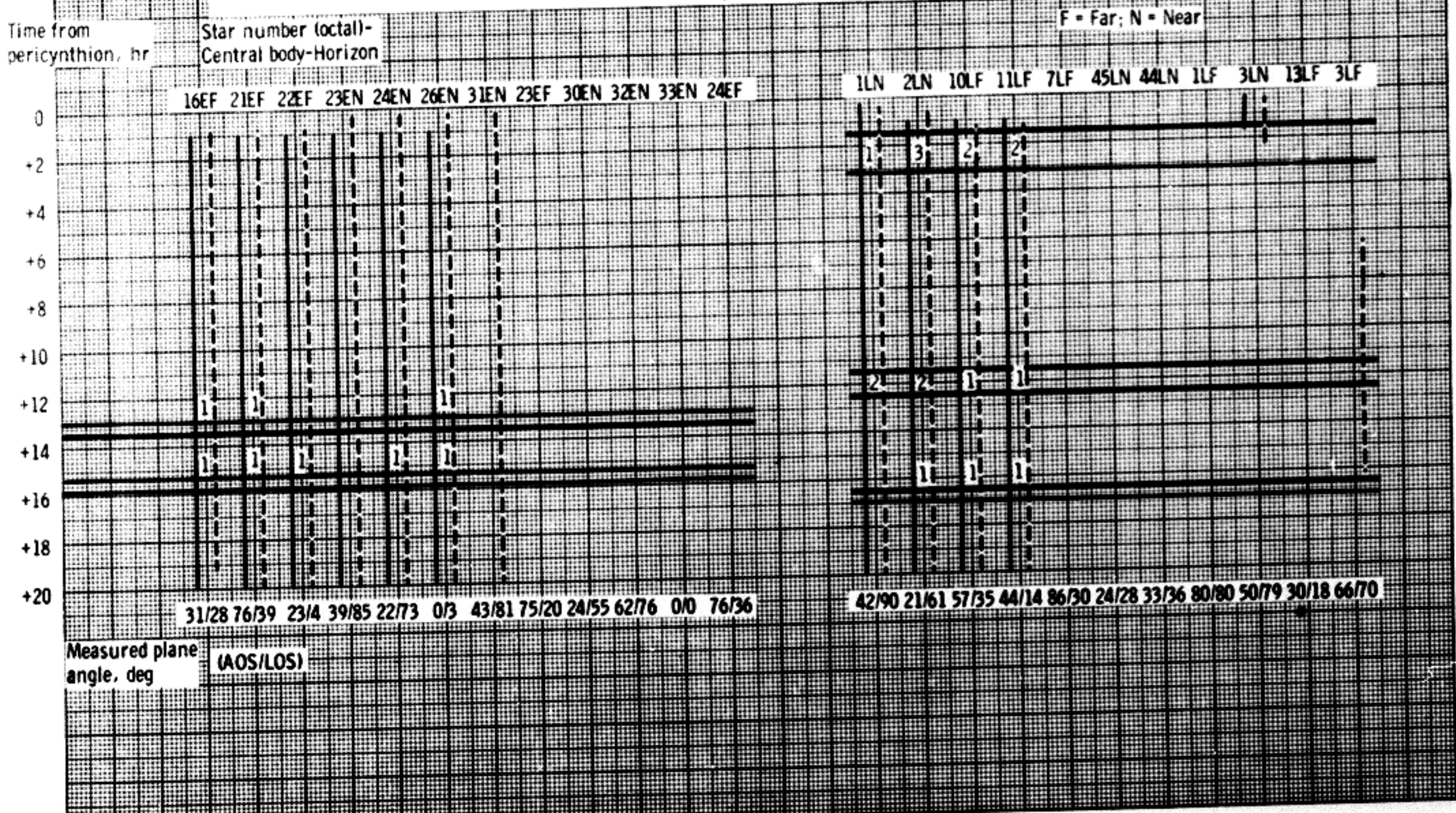
(d) Time from EI-Concluded.

Figure 1. - Detailed transearth sighting schedule for aborts from lunar orbit (50- to 81-hour return) for a December 21, 1968, launch-Concluded.



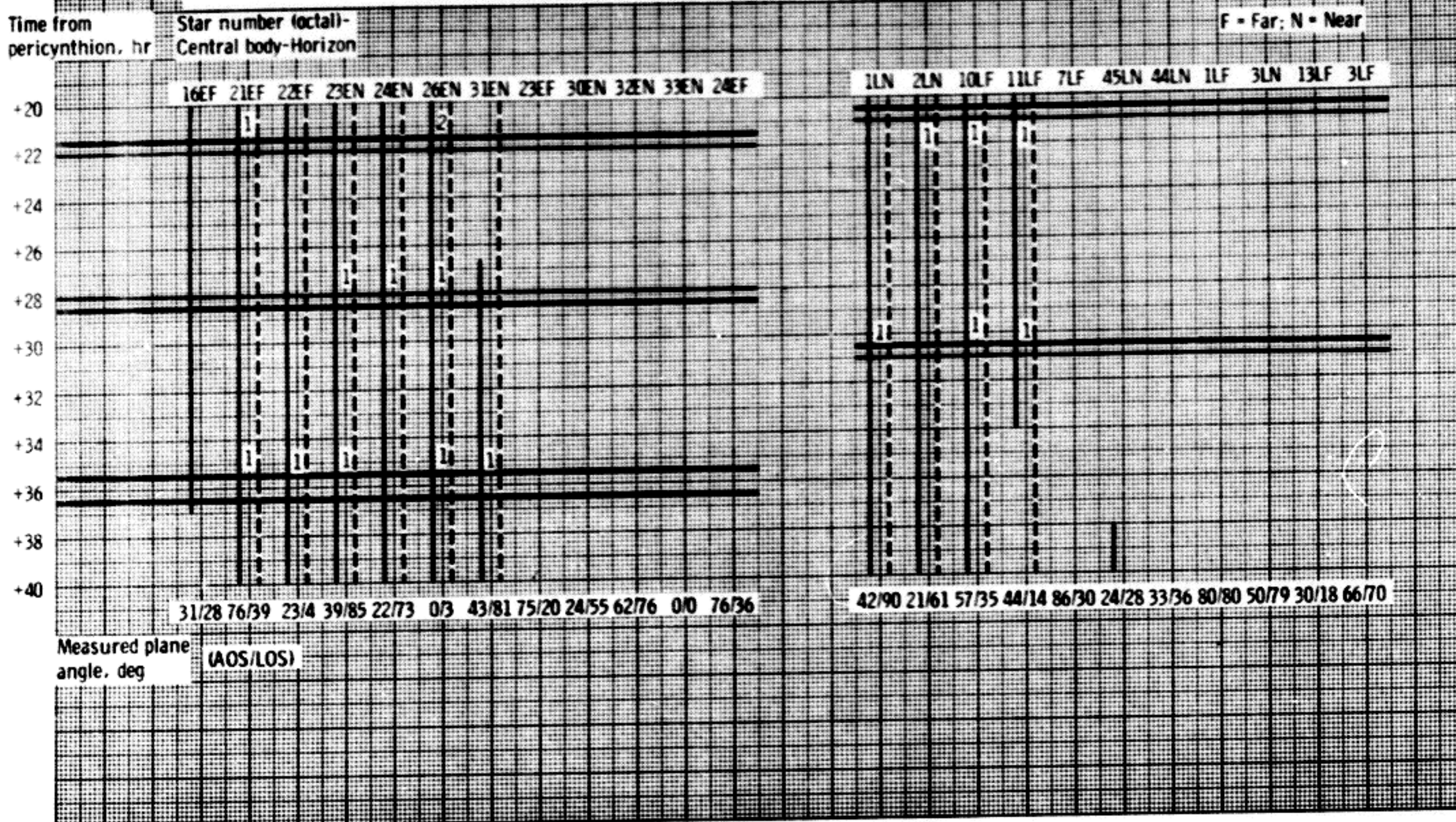
(a) Time from pericyynthion.

Figure 2. - Detailed sighting schedule for December 21, 1968, flyby trajectories with a 60 n. mi. pericyynthion.



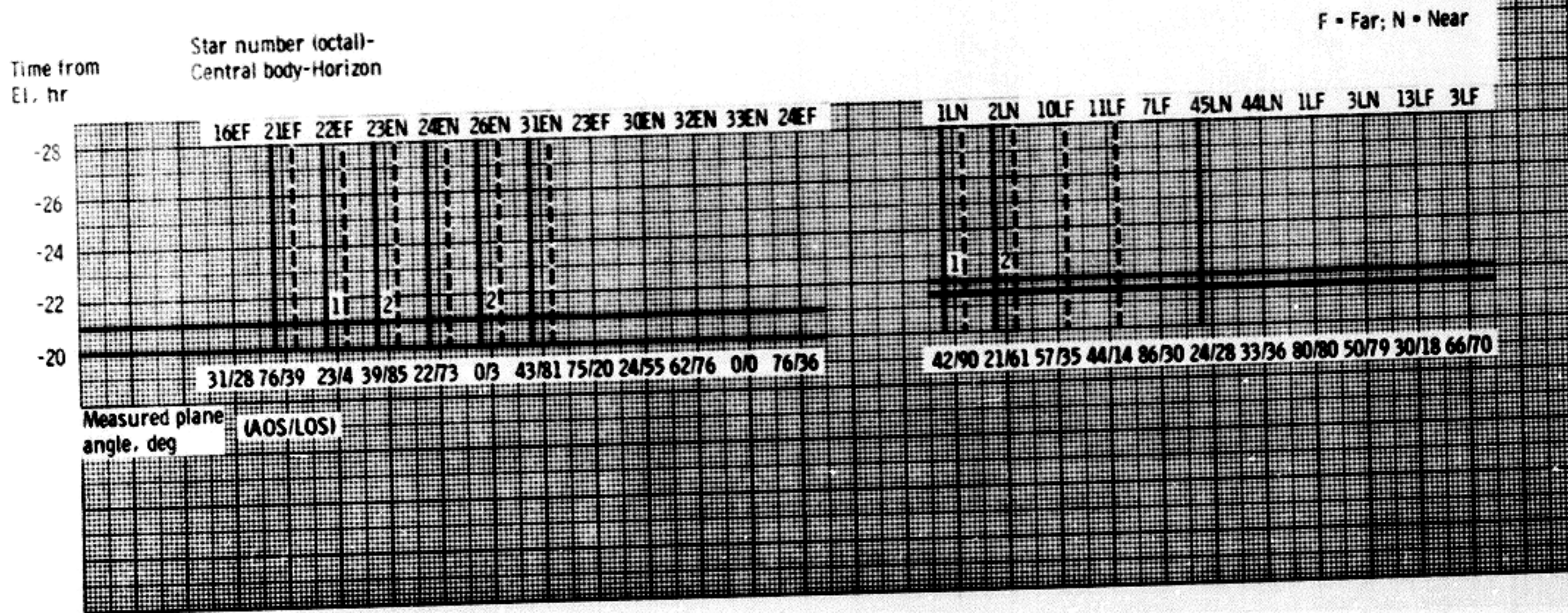
b) Time from pericynthion-Concluded.

Figure 2. - Detailed sighting schedule for December 21, 1968, flyby trajectories with a 60 n. mi. pericynthion-Continued.



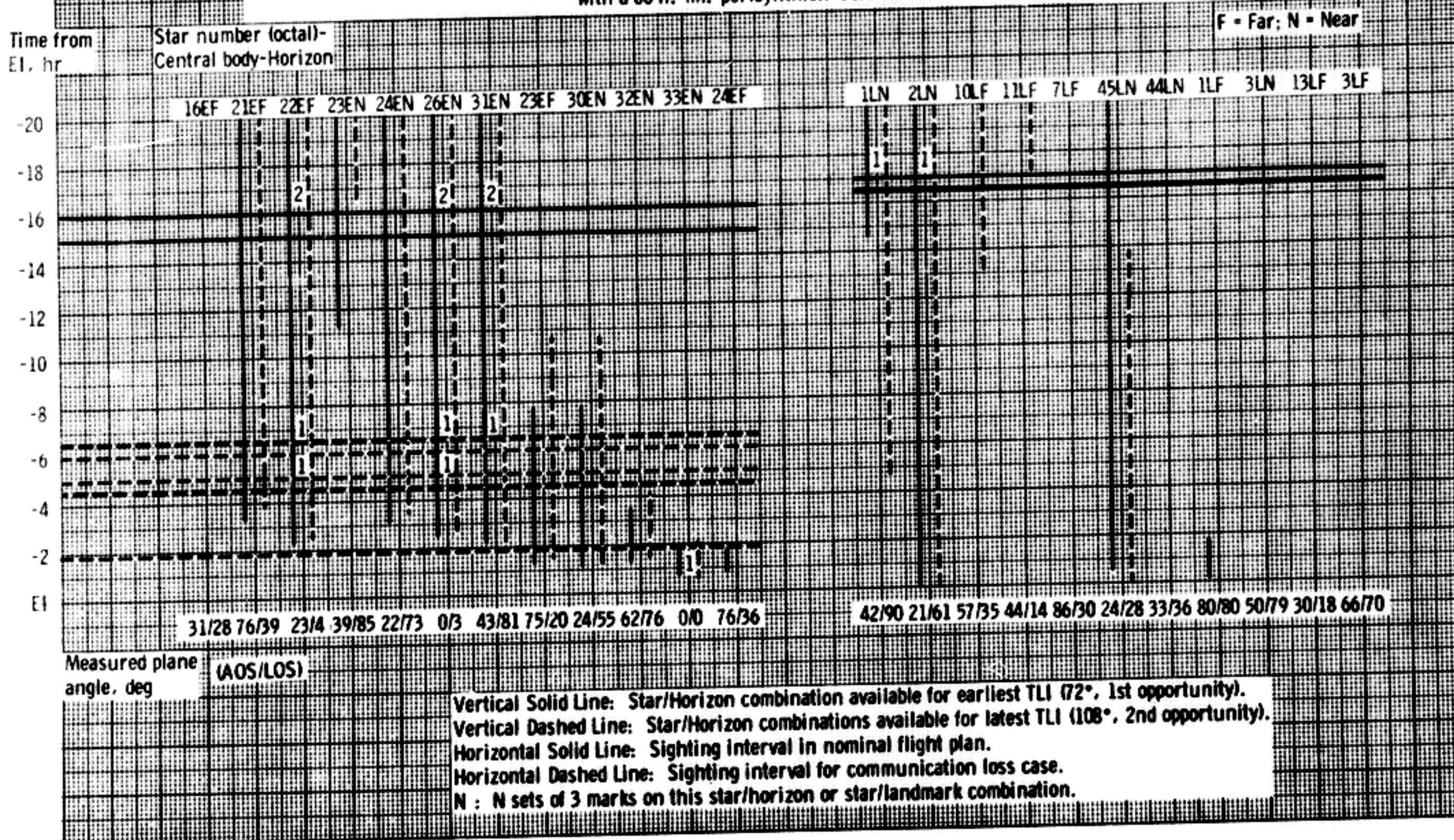
(c) Time from EI.

Figure 2. - Detailed sighting schedule for December 21, 1968, flyby trajectories with a 60 n. mi. pericynthion-Continued.



(d) Time from EI - Concluded.

Figure 2. - Detailed sighting schedule for December 21, 1968, flyby trajectories with a 60 n. mi. pericynthion-Concluded.



DEC 21 LUNAR FLYBY
TEC = 67 HOURS

FLIGHT PLAN

TIME FROM
PC

00:00
06:00
12:00

PERICYNTHIAN

P52
CMP - 8 SETS OF
STAR/LUNAR
HORIZON SIGHTINGS
PTC

EAT PERIOD
(ALL)

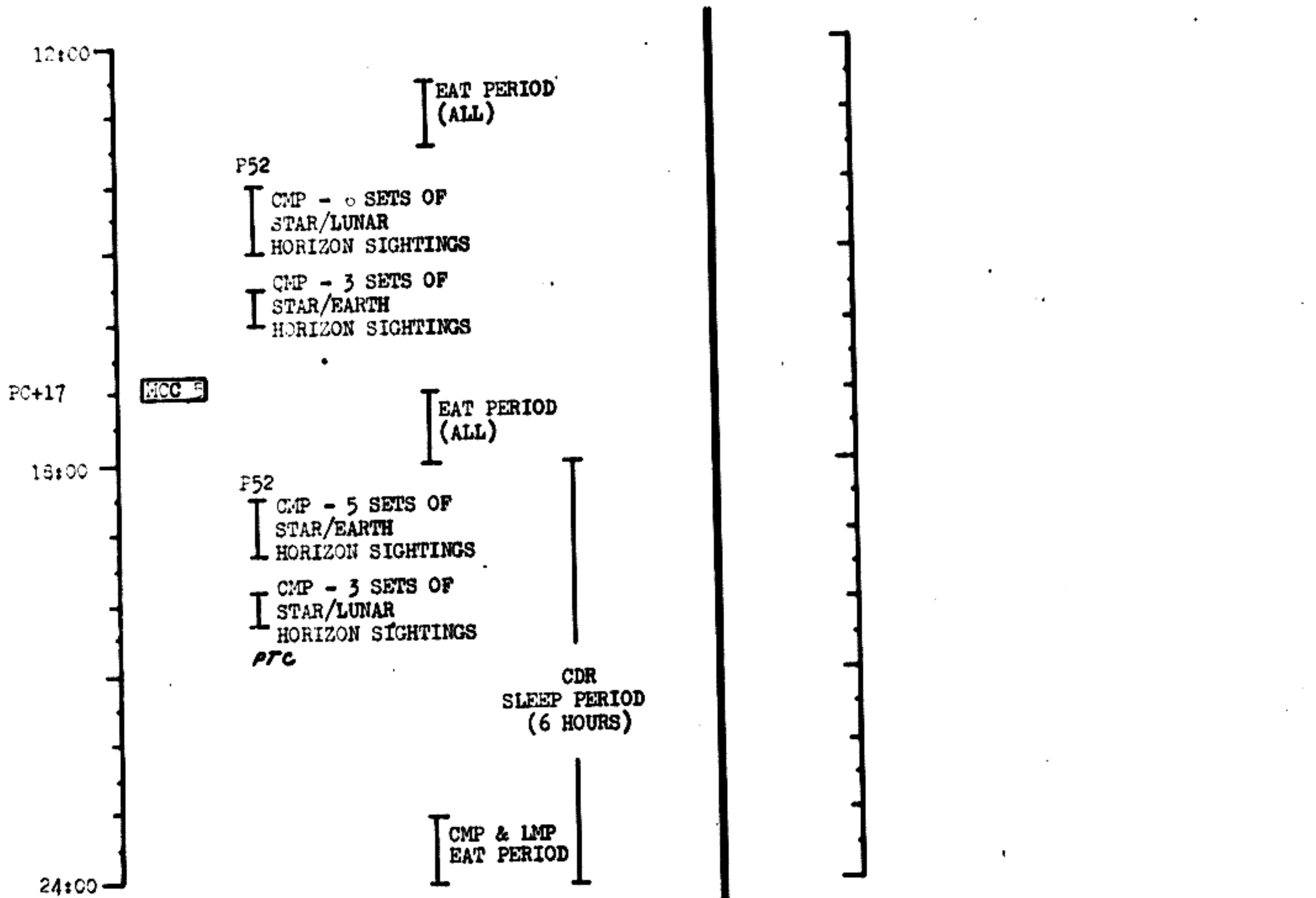
CDR
SLEEP PERIOD
(5 HOURS)

CMP & LMP
EAT PERIOD
CDR
EAT PERIOD

CMP & LMP
SLEEP PERIOD
(5 HOURS)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL			TEC	1

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV.	PAGE

FLIGHT PLAN

24:00

CDR
EAT PERIOD

CMP & LMP
SLEEP PERIOD
(6 HOURS)

30:00

EAT PERIOD
(ALL)

P52
CMP - 3 SETS OF
STAR/LUNAR
HORIZON SIGHTINGS
CMP - 3 SETS OF
STAR/EARTH
HORIZON SIGHTINGS

MCC 6

EAT PERIOD
(ALL)

36:00

CMP - 3 SETS OF
STAR/LUNAR
HORIZON SIGHTINGS
PTC

MISSION	EDITION	DATE	TIME	DAY/REV.	PAGE

FLIGHT PLAN

36:00
42:00
48:00

P52
LUMP - 6 SETS OF
STAR/EARTH
HORIZON SIGHTINGS
PTC

CDR
SLEEP PERIOD
(6 HOURS)

CMP & LMP
EAT PERIOD
CDR
EAT PERIOD

CMP & LMP
SLEEP PERIOD
(6 HOURS)

EAT PERIOD
(ALL)

P52

MISSION	EDITION	DATE	TIME	DAY/REV.	PAGE

FLIGHT PLAN

48:00

CMP - 3 SETS OF
STAR/LUNAR
HORIZON SIGHTINGS

MCC 7

EAT PERIOD
(ALL)

CMP - 6 SETS OF
STAR/EARTH
HORIZON SIGHTINGS

54:00

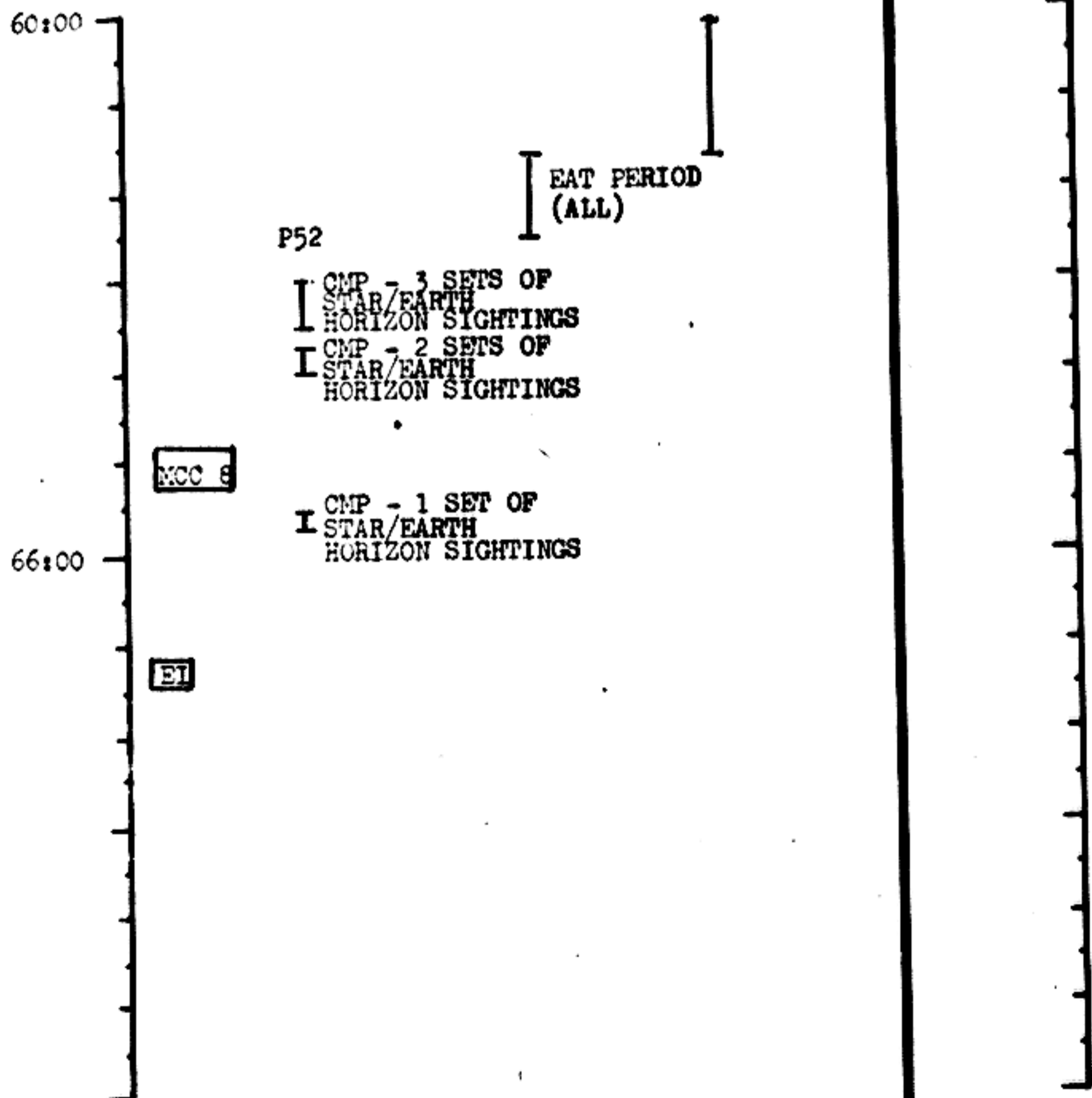
CDR
SLEEP PERIOD
(5.5 HOURS)

60:00

CMP & LMP
SLEEP PERIOD
(5.5 HOURS)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
ASE03/103	PTMAI.				

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
AS503/103	FINAL			TEC	6

LUNAR FLYBY PHOTO PROCEDURES

Hp<180NM

1/80/NEW B&W, 1/250, F2.8
BRKT, INT, CHART FOR F STOPS

* VERTICAL STRIP PHOTOGRAPHY
WITH EXTRA EXPOSURES AS POSSIBLE

* CHANGE TO 250 LENS AT Hp+20MIN

2/250/NEW C, 1/60, F5.6, CHART

* TERMINATOR PHOTOGRAPHY

* PHOTOGRAPH TARGETS AND GENERAL
SCENE AS RAPIDLY AS POSSIBLE

* REPLACE MAG WITH NEW B&W

* USE R&B ON TARGET 59 AT Hp+50
MIN: THREE PAIRS OF EXPOSURES
AT 3, 4, AND 5 STOPS WIDER THAN SPOT

16/18/NEW CEX 1/250 F2.8 1FPS SPOT

* SYSTEMATIC COVERAGE OF TERMINATORS
AND SUNLIT SIDE

* EARTH SET AND EARTHRISE

* CHANGE TO LONGER LENS AS
DISTANCE INCREASES

Hp>180NM

SAME AS ABOVE EXCEPT BEGIN VERTICAL
STRIP WITH 250 LENS

STORAGE

MAY SCHEDULE

DAY

FLYBY

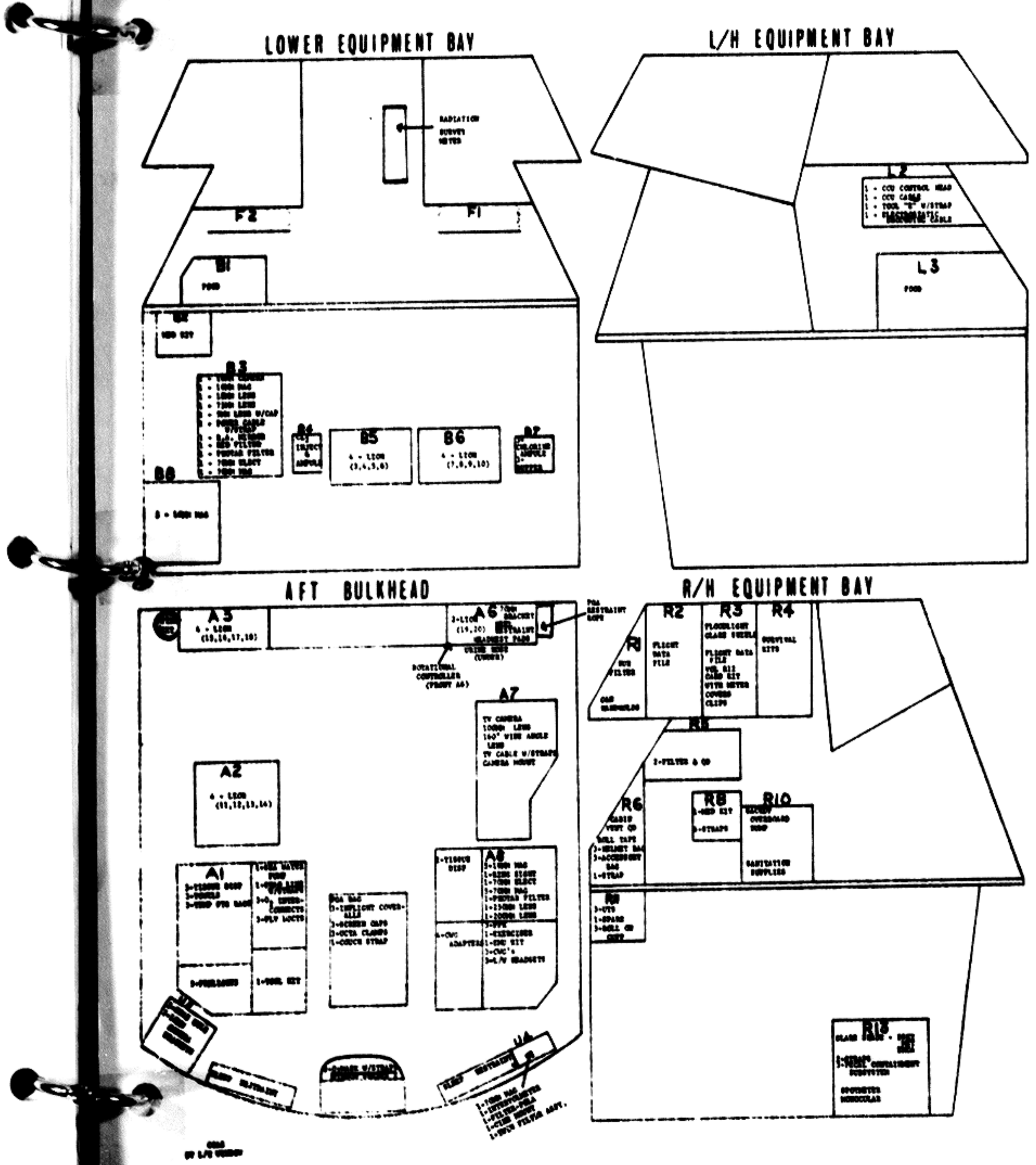
DAY 3

DAY 4

DAY 5

DAY 6

DAY 7



STORAGE

ONE OF TWO

ADAPTER, CWG A-8
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