

MCC-H

0222 CST

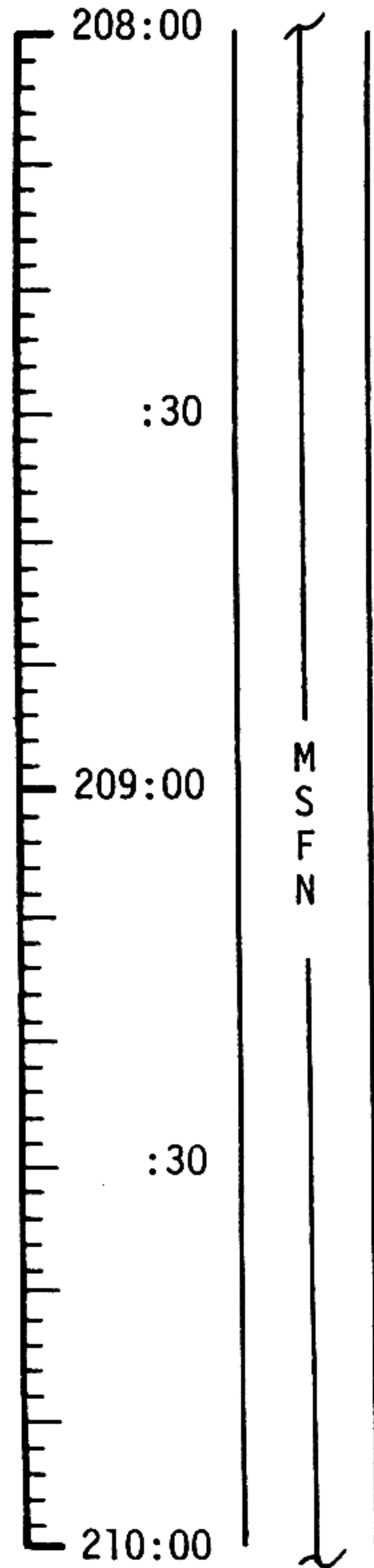
# FLIGHT PLAN

NOTES

UPDATE TO CSM  
CONSUMABLES  
FLIGHT PLAN

---

UPLINK TO CSM  
STATE VECTOR & V66



O<sub>2</sub> FUEL CELL PURGE  
WASTE WATER DUMP  
LiOH CANISTER CHANGE NO 16  
(18 INTO B, STOW 16 IN A4)

EAT PERIOD

EMS ENTRY CHECK

POSTSLEEP CHECKLIST:  
CREW STATUS REPORT  
CONSUMABLES UPDATE  
CYCLE H<sub>2</sub> & O<sub>2</sub> FANS  
FLIGHT PLAN UPDATE  
NORMAL LUNAR COMM EXCEPT:  
S-BD AUX TAPE - OFF  
TAPE RCDR FWD - OFF  
OMNI OPS  
S-BD ANT - OMNI  
S-BD ANT OMNI - B  
HGA OPS  
S-BD ANT - HI GAIN  
CREW MANAGES ANT  
OPS

PTC  
P 270, Y 0

CREW STATUS REPORT			
	CDR	CMP	LMP
SLEEP	_____	_____	_____
PRD	_____	_____	_____

CSM CONSUMABLES UPDATE			
GET:	_____	:	_____
RCS TOTAL	_____	%	
QUAD A	_____	%	B _____ %
	C _____	%	D _____ %
H <sub>2</sub> TOTAL	_____	%	
O <sub>2</sub> TOTAL	_____	%	

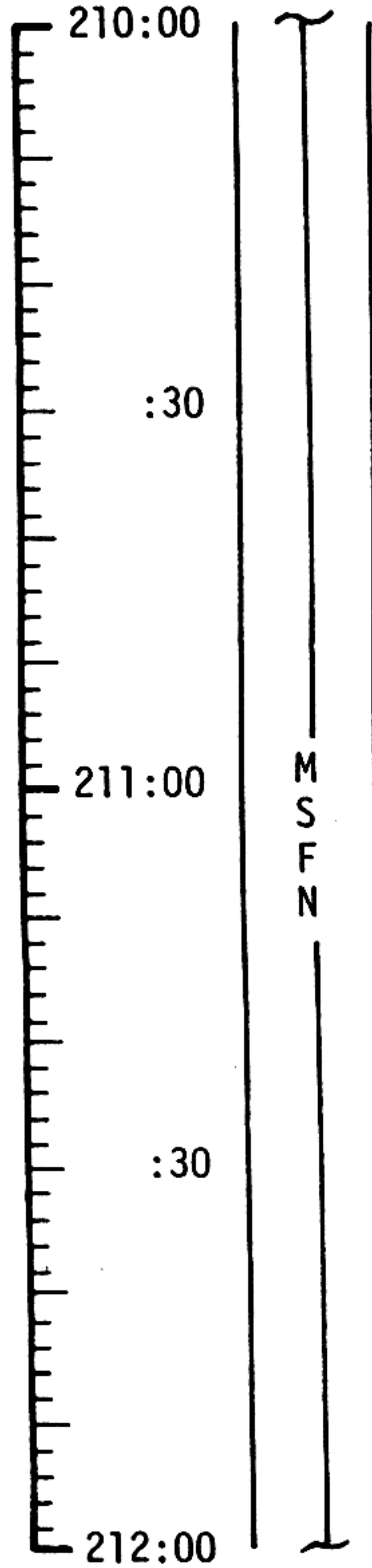
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	208:00 - 210:00	9/TEC	3-180

MCC-H

0422 CST

# FLIGHT PLAN

## NOTES



M  
S  
F  
N

P52-IMU REALIGN  
 OPTION 3 REFSMMAT  
 (OPTIONAL)  
 REPORT GYRO TORQUING ANGLES

P52 (PTC ORIENT)  
 N71: \_\_\_\_ , \_\_\_\_  
 N05: \_\_\_\_ . \_\_\_\_  
 N93:  
 X \_\_\_\_ . \_\_\_\_  
 Y \_\_\_\_ . \_\_\_\_  
 Z \_\_\_\_ . \_\_\_\_  
 GET \_\_\_\_ : \_\_\_\_ : \_\_\_\_

PTC  
P 270, Y 0

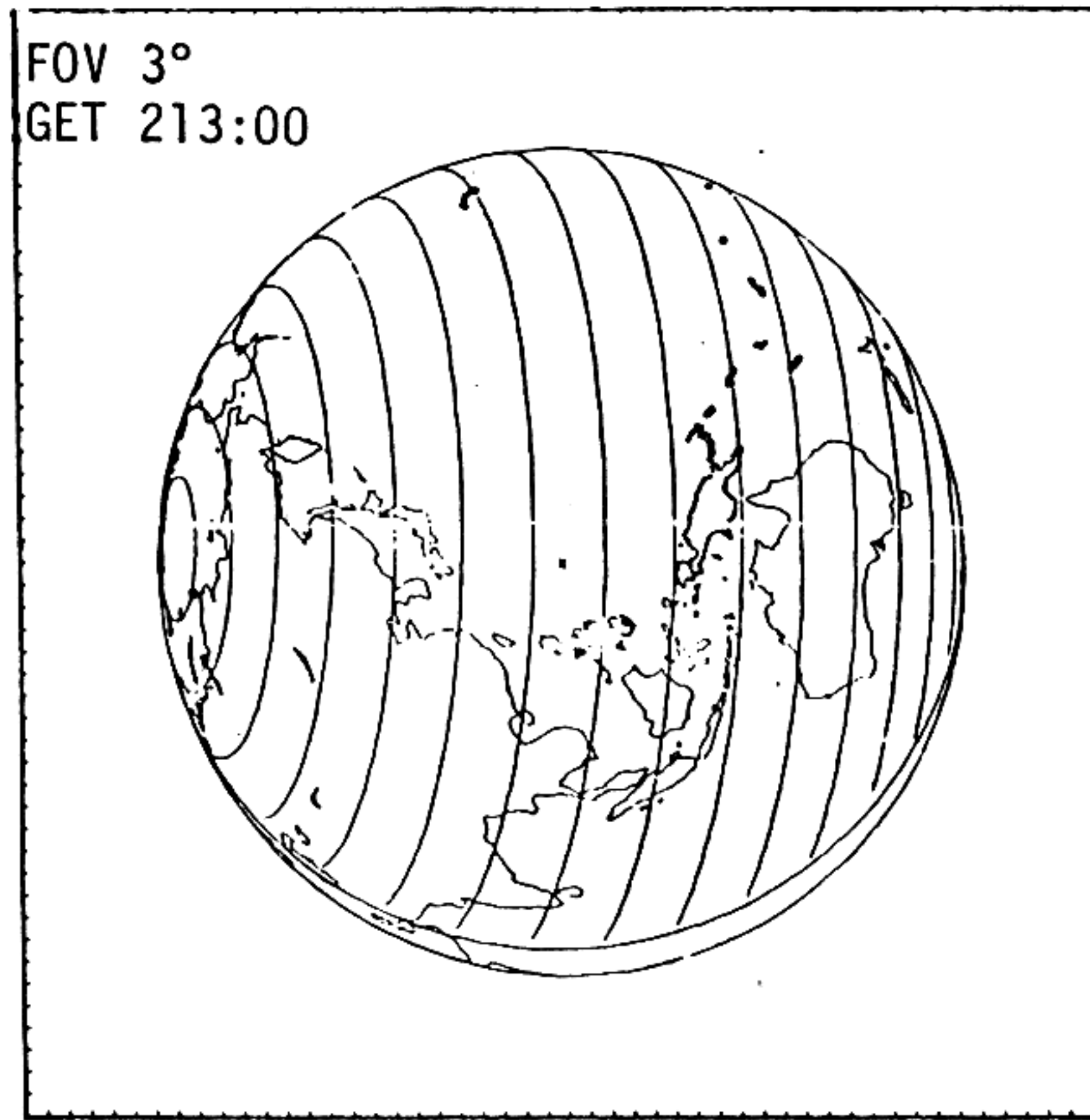
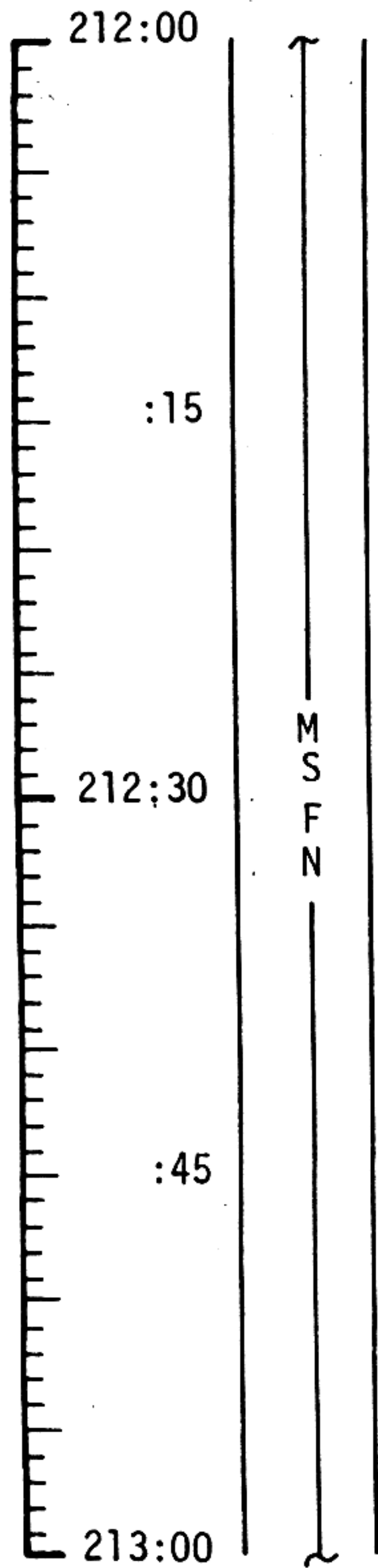
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	210:00 - 212:00	9/TEC	3-181

MCC-H

0622 CST

# FLIGHT PLAN

NOTES



PTC  
 P 270, Y 0

STOP PTC AT ROLL 235°

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	212:00 - 213:00	9/TEC	3-182

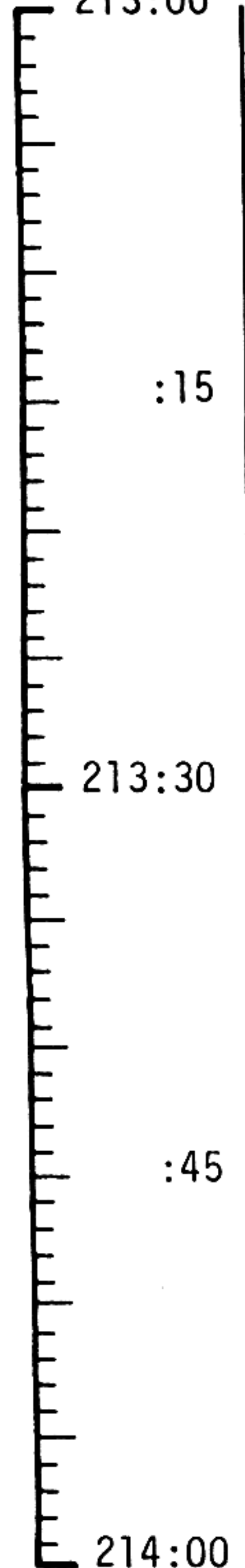
MCC-H

0722

# FLIGHT PLAN

NOTES

213:00



MNVR TO OPTICS CALIBRATION ATT  
 P23 - CISLUNAR NAVIGATION  
 OPTICS CALIBRATION  
 STAR 1 2

R 235  
 P 272  
 Y 0

P00  
 V49 - MNVR TO SIGHTING ATT  
 STAR/EARTH HORIZON  
 P23 - CISLUNAR NAVIGATION

R 90  
 P 159  
 Y 328

LOAD W MATRIX (R1 +4 5 0 0 0)(R2 +0 0 0 0 6)  
 1. VENUS ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -6 9 2 0 2)(R2 = -6 7 0 1 8)(R3 = -2 6 8 3 2)

2. STAR 2 0 4 ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -2 1 3 8 9)(R2 = -9 3 8 6 8)(R3 = -2 7 0 4 2)

3. STAR 2 6 EFH (R3 = 0 0 1 2 0)

4. STAR 1 6 0 EFH (R3 = 0 0 1 2 0)  
 N88: (R1 = -9 4 7 0 3)(R2 = -2 5 6 7 8)(R3 = 1 9 2 8 6)

5. STAR 1 6 5 ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -5 8 2 1 6)(R2 = -4 6 1 3 9)(R3 = -6 6 9 4 8)

6. STAR 3 1 EFH (R3 = 0 0 1 2 0)

M  
S  
F  
N

3 MARKS ON EACH STAR  
  
 INCORPORATE P23  
 MARK DATA AND  
 UPDATE ONBOARD  
 STATE VECTOR

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	213:00 - 214:00	8/TEC	3-183

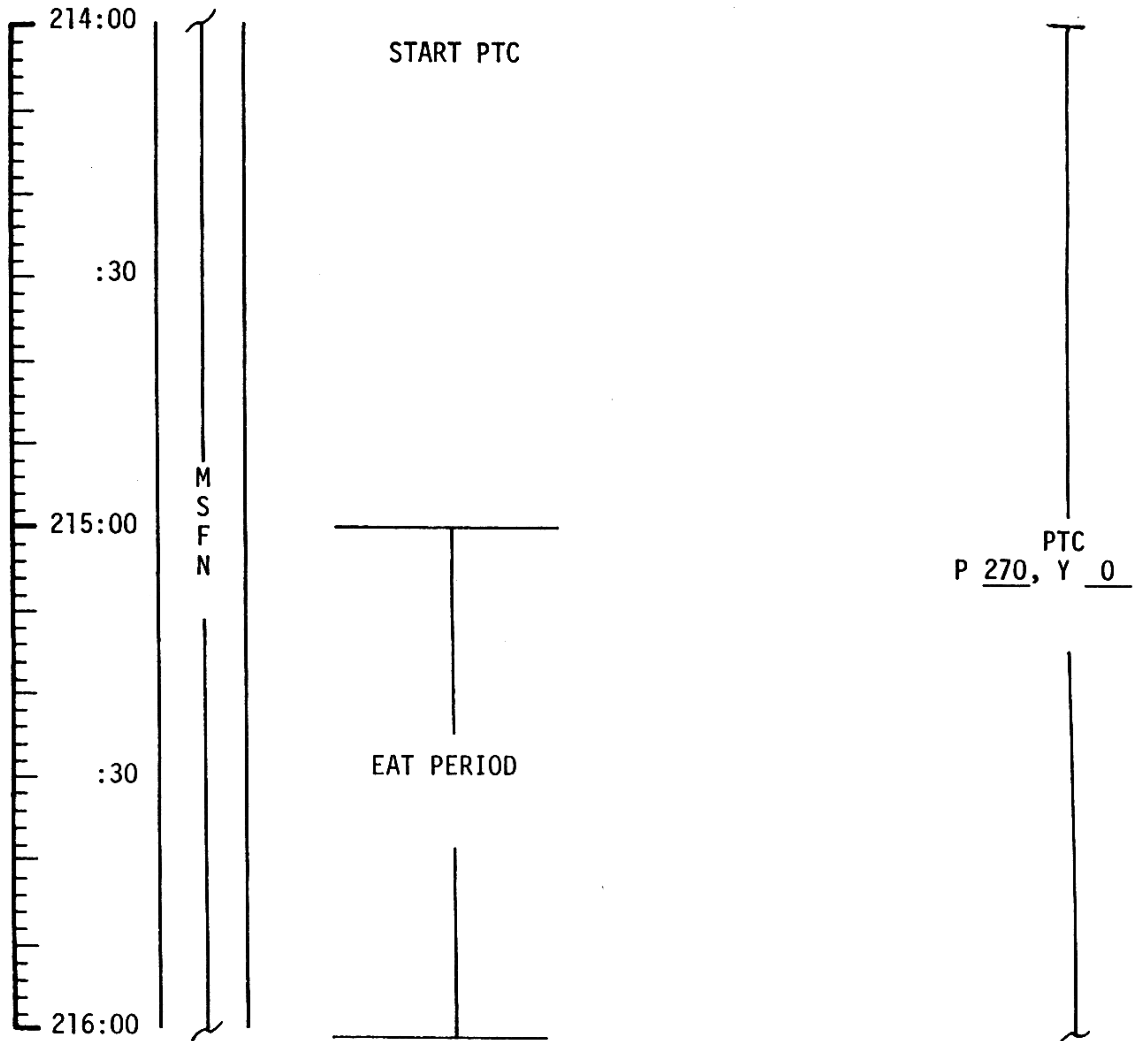
MCC-H

0822 CST

# FLIGHT PLAN

NOTES

UPDATE TO CSM  
QUADS TO DISABLE  
FOR PTC (LOWEST  
QUANTITY PRPLNT)



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV. 14)	OCTOBER 15, 1969	214:00 - 216:00	9/TEC	3-184

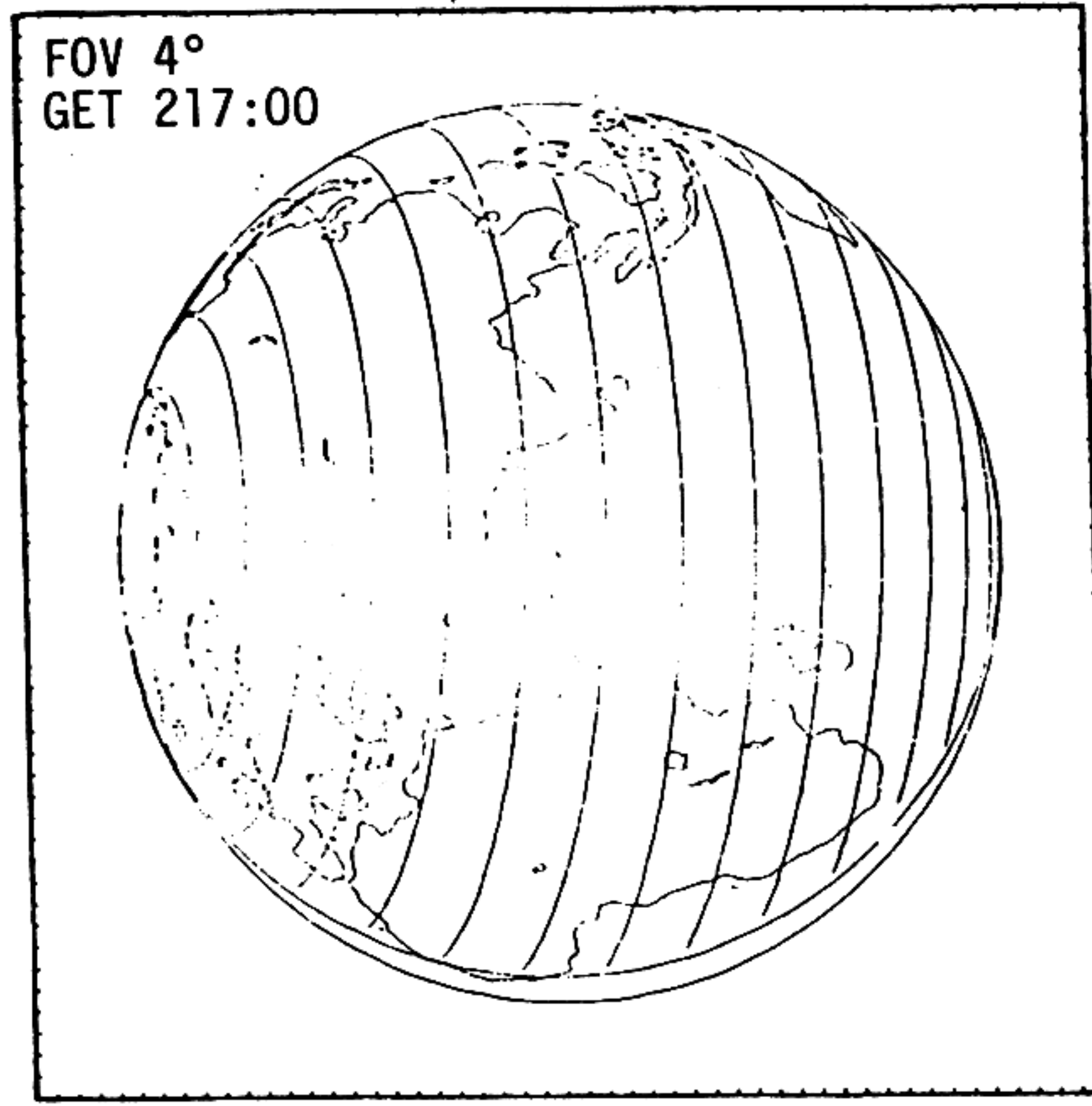
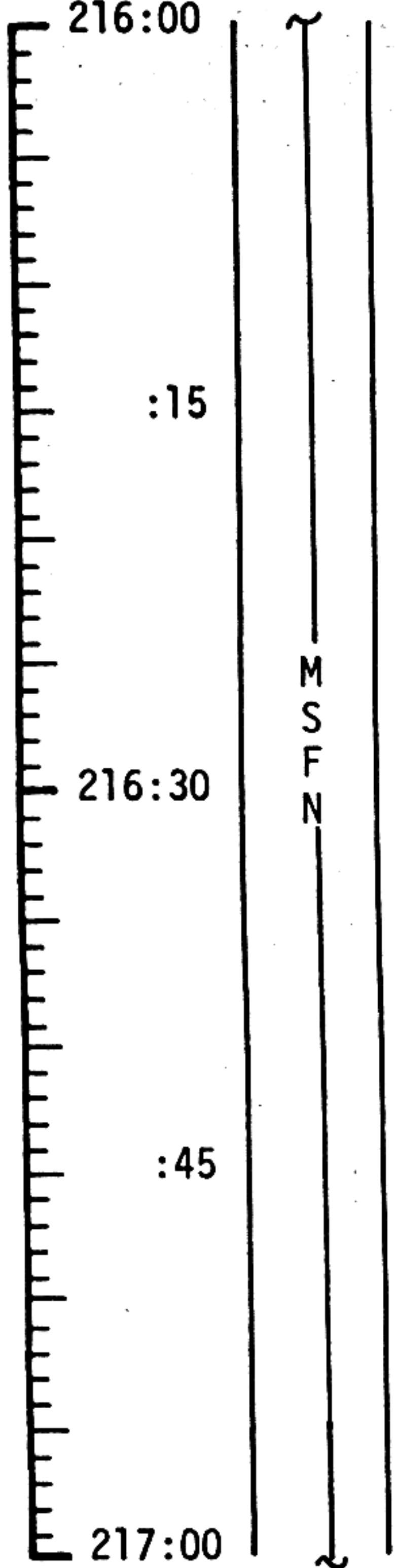


MCC-H

1022 CST

# FLIGHT PLAN

NOTES



PTC  
P 270, Y 0

STOP PTC AT ROLL 235°

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	216:00 - 217:00	9/TEC	3-185

MCC-H

1122 CST

# FLIGHT PLAN

NOTES

217:00

:15

217:30

:45

218:00

M  
S  
F  
N

MNVR TO OPTICS CALIBRATION ATT R 235  
 P23 - CISLUNAR NAVIGATION P 272  
 OPTICS CALIBRATION Y 0  
 STAR 1 2

P00  
 V49 - MNVR TO SIGHTING ATT R 90  
 STAR/EARTH HORIZON P 135  
 P23 - CISLUNAR NAVIGATION Y 329

1. STAR 1 7 2 ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -6 4 9 4 7)(R2 = -7 4 3 1 2)(R3 = -1 6 1 1 4)

2. STAR 2 4 EFH (R3 = 0 0 1 2 0)

3. STAR 2 0 4 ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -2 1 3 8 9)(R2 = -9 3 8 6 8)(R3 = -2 7 0 4 2)

4. JUPITER EFH (R3 = 0 0 1 2 0)  
 N88: (R1 = -8 9 9 7 6)(R2 = -4 0 7 8 2)(R3 = -1 5 5 3 8)

5. STAR 3 1 EFH (R3 = 0 0 1 2 0)

6. STAR 1 6 6 ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -5 2 0 0 3)(R2 = -4 3 6 0 7)(R3 = -7 3 4 4 5)

3 MARKS ON EACH STAR

INCORPORATE P23  
MARK DATA AND  
UPDATE ONBOARD  
STATE VACTOR

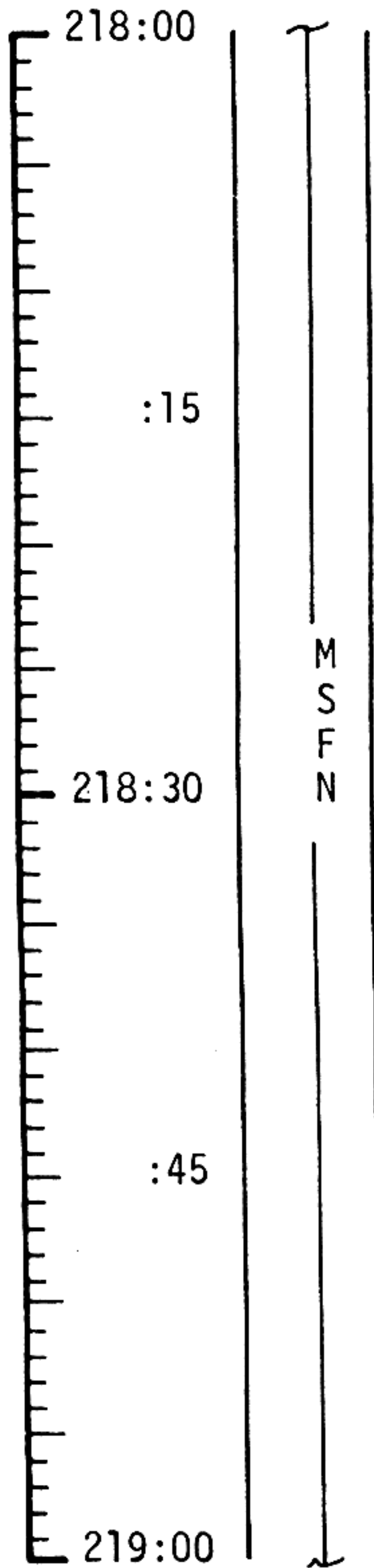
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	217:00 - 218:00	9/TEC	3-186

MCC-H

1222 CST

# FLIGHT PLAN

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	218:00 - 219:00	9/TEC	3-186A

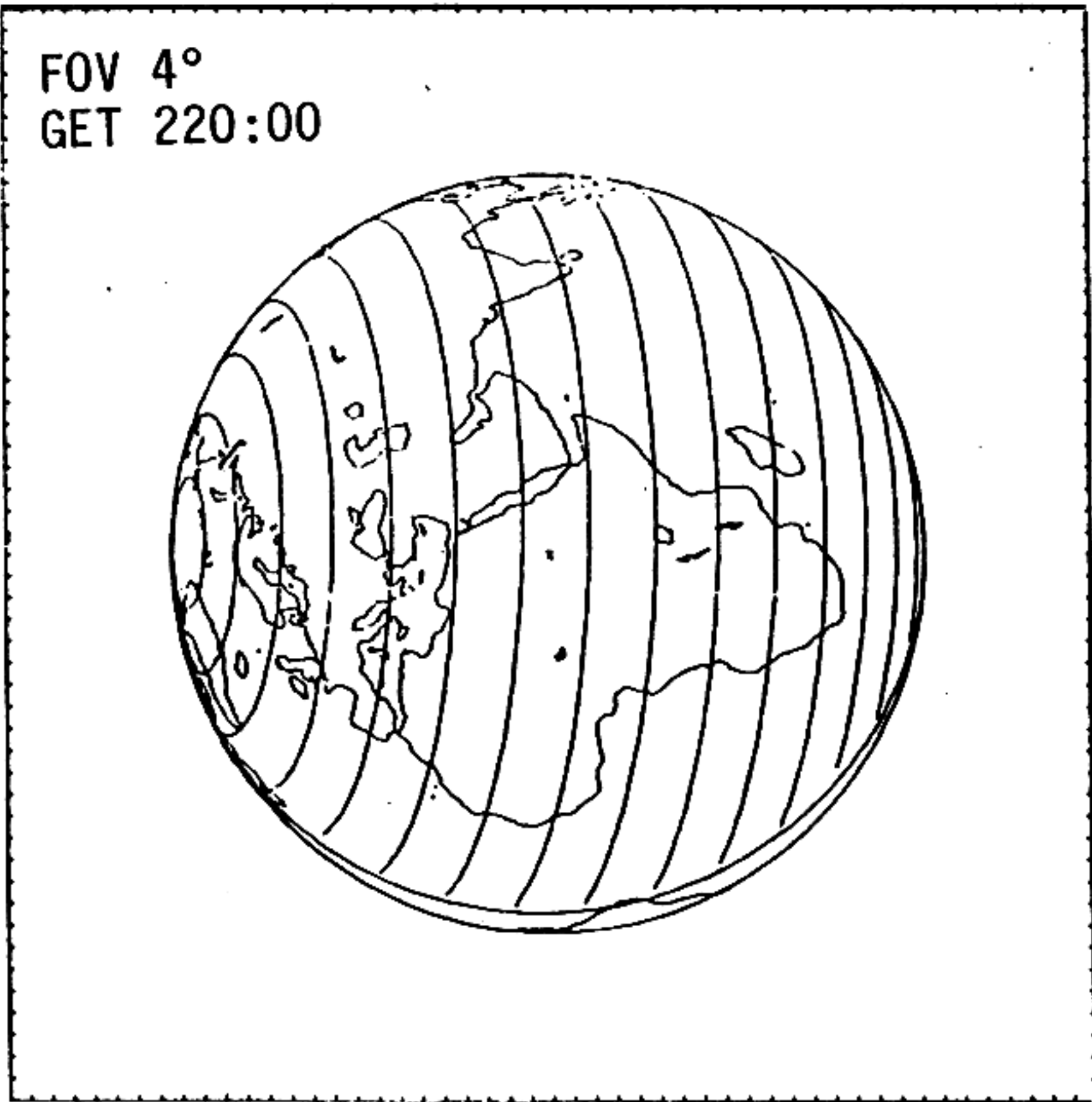
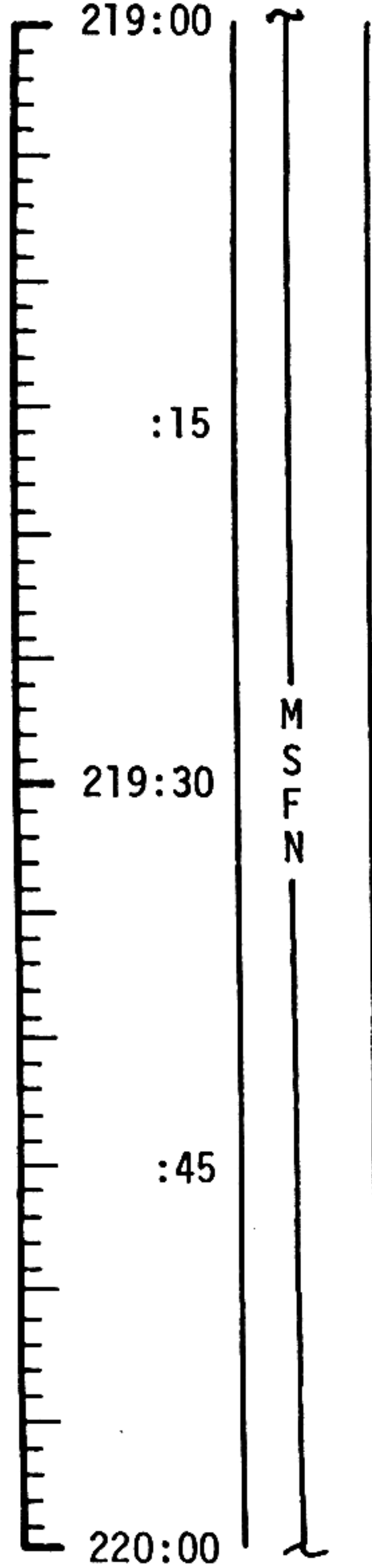


MCC-H

1322 CST

# FLIGHT PLAN

NOTES



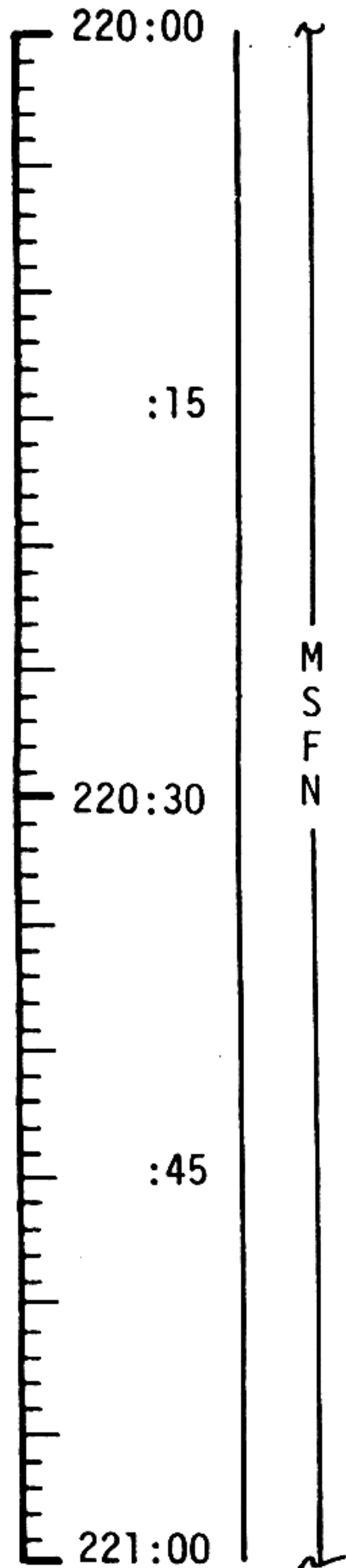
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	219:00 - 220:00	9/TEC	3-187

MCC-H

1422 CST

# FLIGHT PLAN

NOTES



MNVR TO OPTICS CALIBRATION ATT R 235  
 P23 - CISLUNAR NAVIGATION P 272  
 OPTICS CALIBRATION Y 0  
 STAR 1 2

P00  
 V49 - MNVR TO SIGHTING ATT R 90  
 STAR/EARTH HORIZON P 118  
 P23 - CISLUNAR NAVIGATION Y 330

1. STAR 1 6 1 EFH (R3 = 0 0 1 2 0)  
 N88: (R1 = -7 5 6 1 5)(R2 = -2 7 1 1 3)(R3 = -5 9 5 5 9)

2. STAR 1 7 4 ENH (R3 = 0 0 1 1 0)  
 N88: (R1 = -5 5 9 9 2)(R2 = -8 2 0 7 3)(R3 = 1 1 3 5 3)

3. STAR 2 6 EFH (R3 = 0 0 1 2 0)

4. STAR 1 5 6 EFH (R3 = 0 0 1 2 0)  
 N88: (R1 = -9 8 4 4 6)(R2 = -1 7 4 2 0)(R3 = -0 2 2 4 3)

5. JUPITER EFH (R3 = 0 0 1 2 0)  
 N88: (R1 = -8 9 9 7 6)(R2 = -4 0 7 8 2)(R3 = -1 5 5 3 8)

6. STAR 1 2 5 ENH (R3 = 0 0 1 1 0)

N88: (R1 = -2 5 4 7 2)(R2 = -7 8 6 4 7)(R3 = -5 6 2 6 6)

3 MARKS ON EACH STAR

INCORPORATE P23  
MARK DATA AND  
UPDATE ONBOARD  
STATE VECTOR

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	220:00 - 221:00	9/TEC	3-188

MCC-H

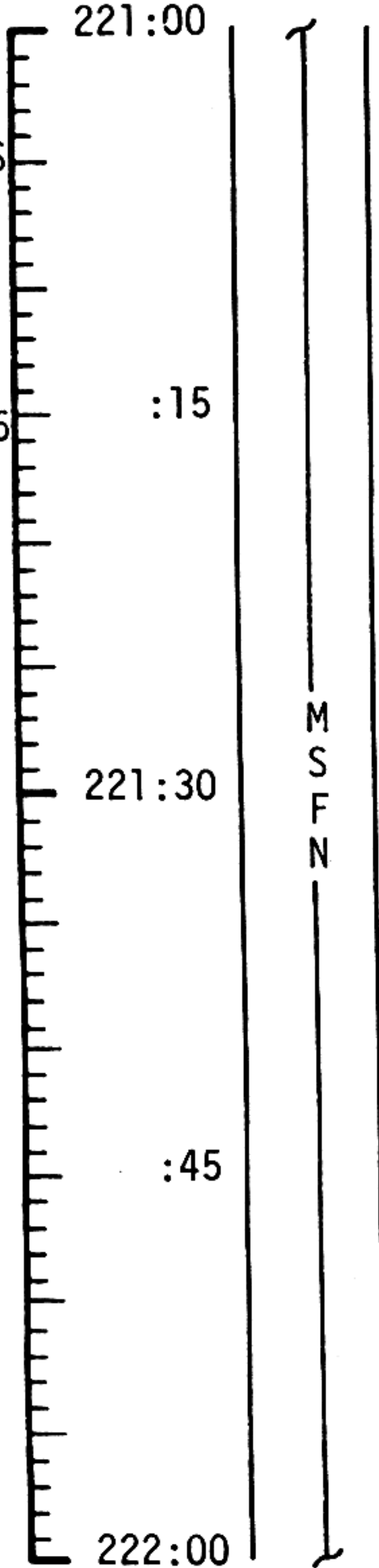
1522 CST

# FLIGHT PLAN

NOTES

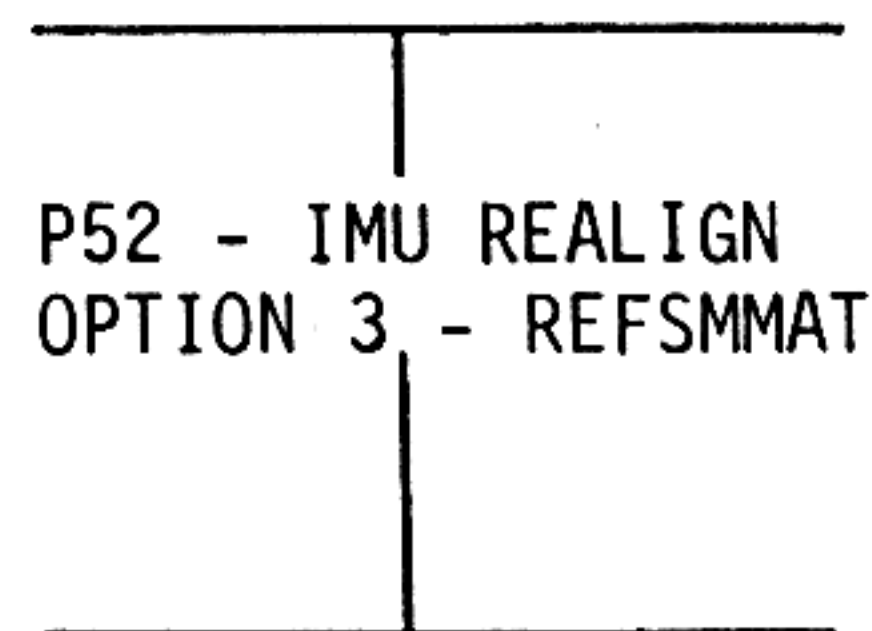
UPDATE TO CSM  
MCC-6 PAD DATA  
ENTRY PAD (ASSUMES  
MCC-6)

UPLINK TO CSM  
STATE VECTOR & V66  
MCC-6 TGT LOAD



LiOH CANISTER CHANGE NO. 17  
(19 INTO A, STOW 17 IN A6)

WIPE EXCESSIVE MOISTURE FROM  
TUNNEL HATCH AREA  
CONTAMINATION CONTROL



P52 - IMU REALIGN  
OPTION 3 - REFSMMAT

REPORT GYRO TORQUING ANGLES

P30 EXTERNAL  $\Delta V$   
H<sub>2</sub> PURGE LINE HTRS - ON

P52 (PTC ORIENT)	
N71:	___ . ___
N05:	___ . ___
N93:	
X	___ . ___
Y	___ . ___
Z	___ . ___
GET	___ : ___ : ___

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	221:00 - 222:00	9/TEC	3-189

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# FLIGHT PLAN

MCC-6  
BURN TABLE

P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TAKEOVER	+10° TAKEOVER	BT + 1 SEC	TRIM X AXIS ONLY TO 0.2

TABLE 3-13  
3-190



MCC-H

1622 CST

# FLIGHT PLAN

NOTES

222:00

V49 - MNVR TO BURN ATT  
 SXT STAR CHECK  
 H2 & O2 FUEL CELL PURGE  
 WASTE WATER DUMP  
 P40/41 - SPS/RCS THRUST  
 GDC ALIGN TO IMU

TIG: 222:21:47.5  
 $\Delta V$ : NOMINALLY ZERO

MCC-6

V66 - TRANSFER CSM SV TO LM SLOT  
 MCC-6 BURN STATUS REPORT  
 MNVR TO TV ATTITUDE BY 223:15

R \_\_\_\_\_ HGA  
 P \_\_\_\_\_ P \_\_\_\_\_  
 Y \_\_\_\_\_ Y \_\_\_\_\_

BURN STATUS REPORT				
X	X	<input type="checkbox"/>	•	$\Delta$ TIG
X	X		•	BT
<input type="checkbox"/>			•	V <sub>gx</sub>
TRIM				
X	X	X		R
X	X	X		P
X	X	X		Y
<input type="checkbox"/>				V <sub>gx</sub>
<input type="checkbox"/>			•	V <sub>gy</sub>
<input type="checkbox"/>			•	V <sub>gz</sub>
<input type="checkbox"/>			•	$\Delta V_c$ *
X	X	X		FUEL *
X	X	X		OX *
X	X	X		UNBAL

\*ITEMS TO BE REPORTED TO MSFN

(EI-22 HRS)

UPDATE TO CSM  
QUADS TO DISABLE  
FOR PTC (LOWEST  
QUANTITY PRPLNT)

:30

223:00

MSFN

TV (GDS) 223:15-223:45  
 CM 4/TV-IN (f5.6/f22)

EAT PERIOD

:30

224:00

MNVR TO PTC ATTITUDE P 270  
 WIPE EXCESSIVE MOISTURE FROM Y 0  
 TUNNEL HATCH AREA

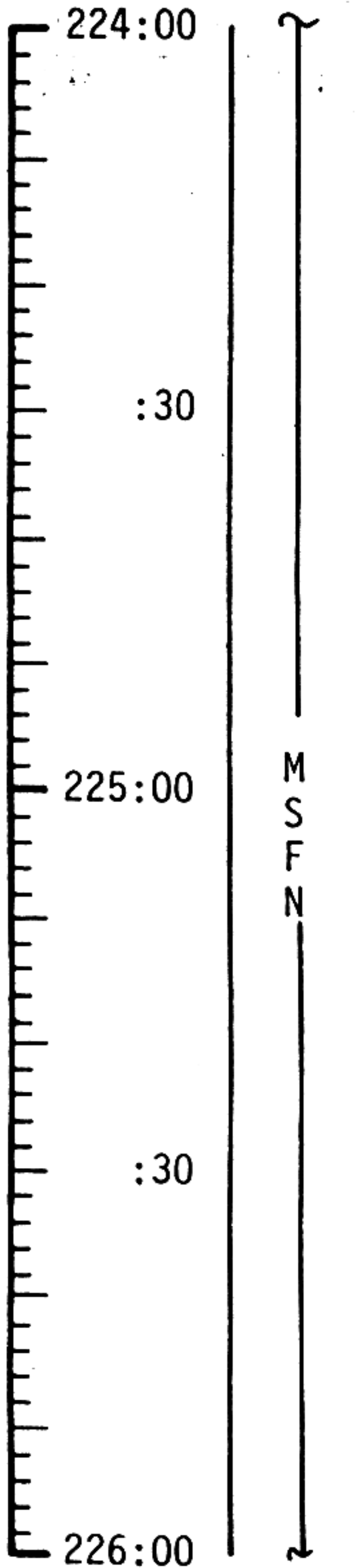
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	222:00 - 224:00	9/TEC	3-191

1822 CST

# FLIGHT PLAN

MCC-H

UPDATE TO CSM  
QUADS TO DISABLE  
FOR PTC (LOWEST  
QUANTITY PRPLNT)



START PTC  
REPORT CM RCS INJECTOR  
VALVE TEMPS (SYS TEST METER  
5C,D,6A,B,C,D)

PTC  
P 270 Y 0

**PRESLEEP CHECKLIST:**  
CREW STATUS REPORT (MED)  
ONBOARD READOUTS  
CYCLE O2 & H2 FANS  
CHLORINATE POTABLE WATER  
VERIFY:  
WASTE MNGT OVBD DRAIN - OFF  
WASTE STOW VENT VLV - CLOSED  
EMER CABIN PRESS VLV - BOTH  
SURGE TK O2 VLV - ON  
REPRESS O2 VLV - OFF  
LM TUNNEL VENT - OFF  
"E" MEMORY DUMP  
**NORMAL LUNAR COMM EXCEPT:**  
S-BD NORMAL MODE VOICE - OFF  
S-BD SQUELCH - ENABLE  
S-BD AUX TAPE - OFF  
S-BD ANT - OMNI  
S-BD ANT OMNI - B  
TAPE RCDR FWD - OFF

REST PERIOD  
(10 HOURS)

## NOTES

CM RCS INJECTOR TEMP	
5C _____	5D _____
6A _____	6B _____
6C _____	6D _____

ONBOARD READOUT	
BAT C	_____
PYRO BAT A	_____
PYRO BAT B	_____
RCS A	_____
B	_____
C	_____
D	_____
DC IND SEL - MNA OR B	

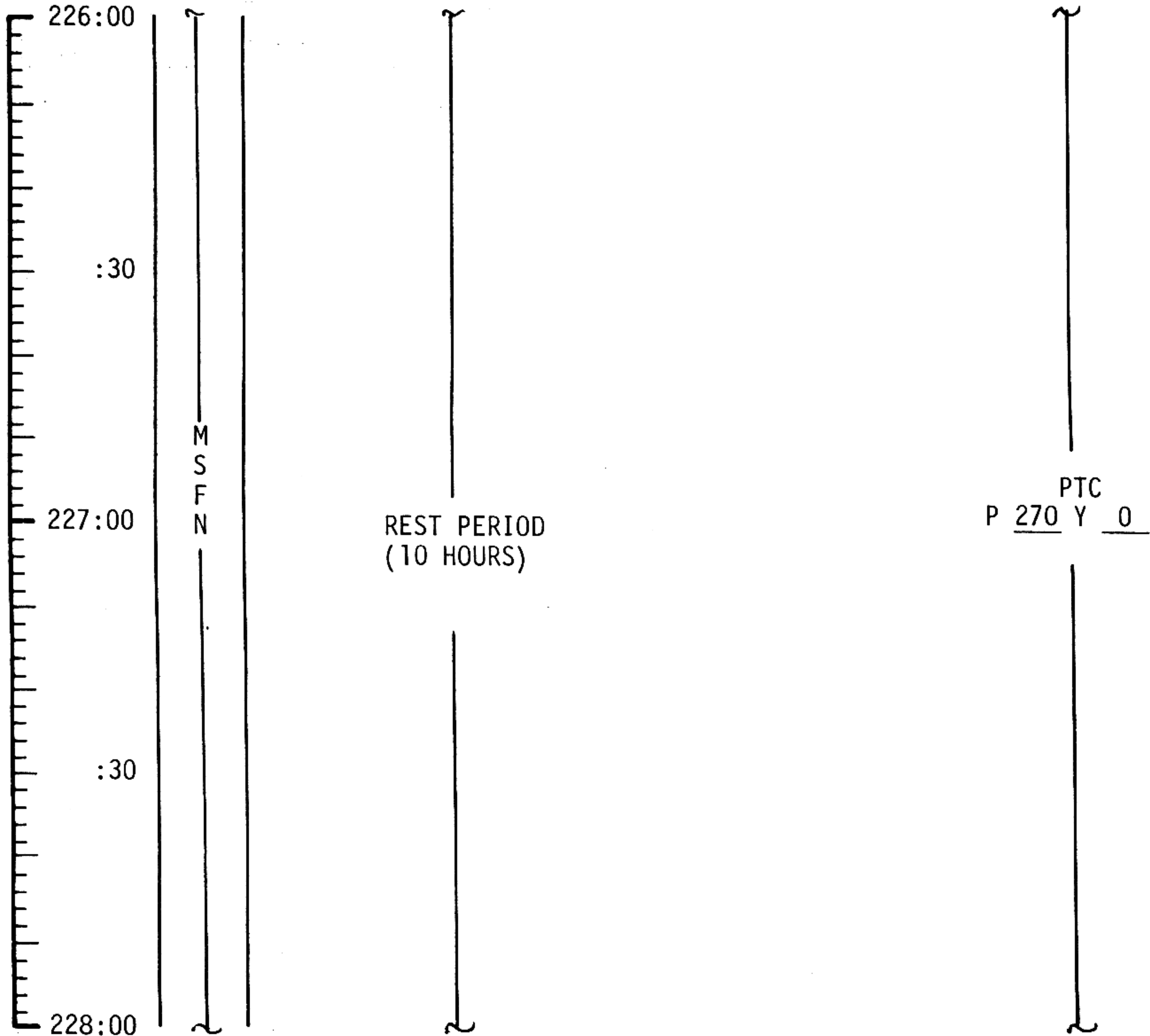
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	224:00 - 226:00	9/TEC	3-192

MCC-H

2022 CST

# FLIGHT PLAN

NOTES



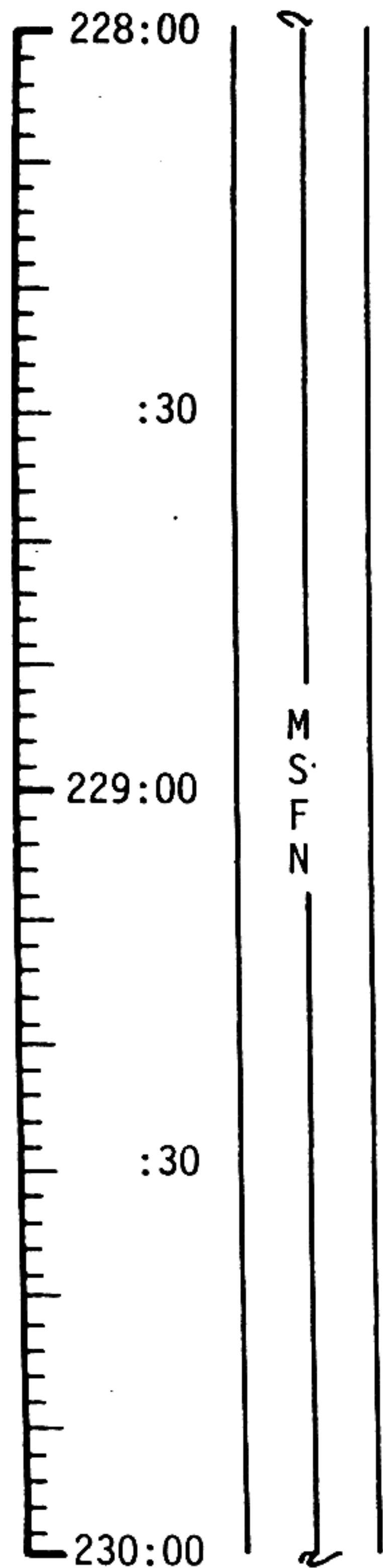
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	-FINAL (NOV 14)	OCTOBER 15, 1969	226:00 - 228:00	9/TEC	3-193

MCC-H

2222 CST

# FLIGHT PLAN

NOTES



REST PERIOD  
(10 HOURS)

PTC  
P 270 Y 0

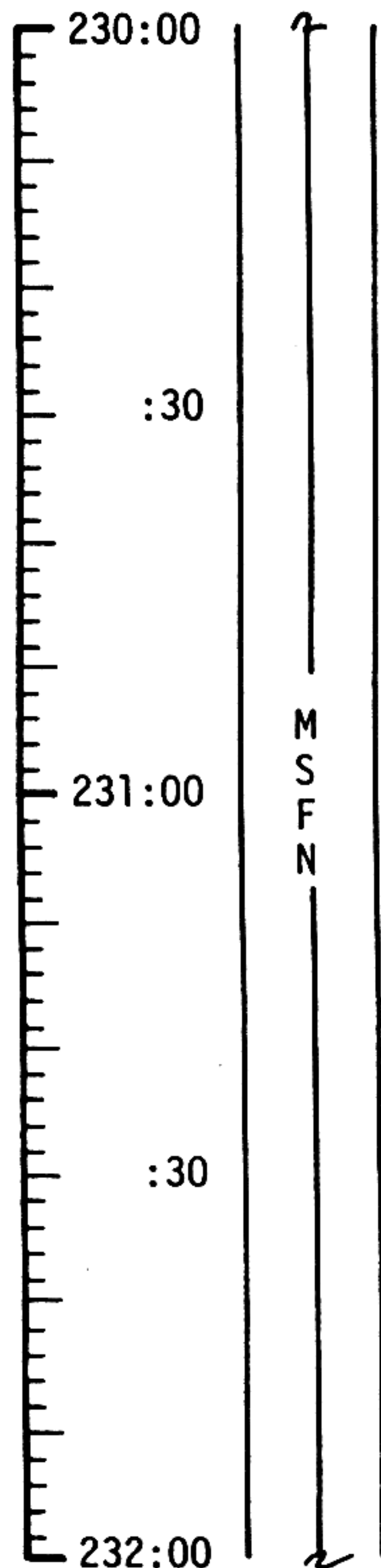
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	228:00 - 230:00	9/TEC	3-194

MCC-H

0022 CST

# FLIGHT PLAN

NOTES



REST PERIOD  
(10 HOURS)

PTC  
P 270 Y 0

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NGV 14)	OCTOBER 15, 1969	230:00 - 232:00	9/TEC	3-195

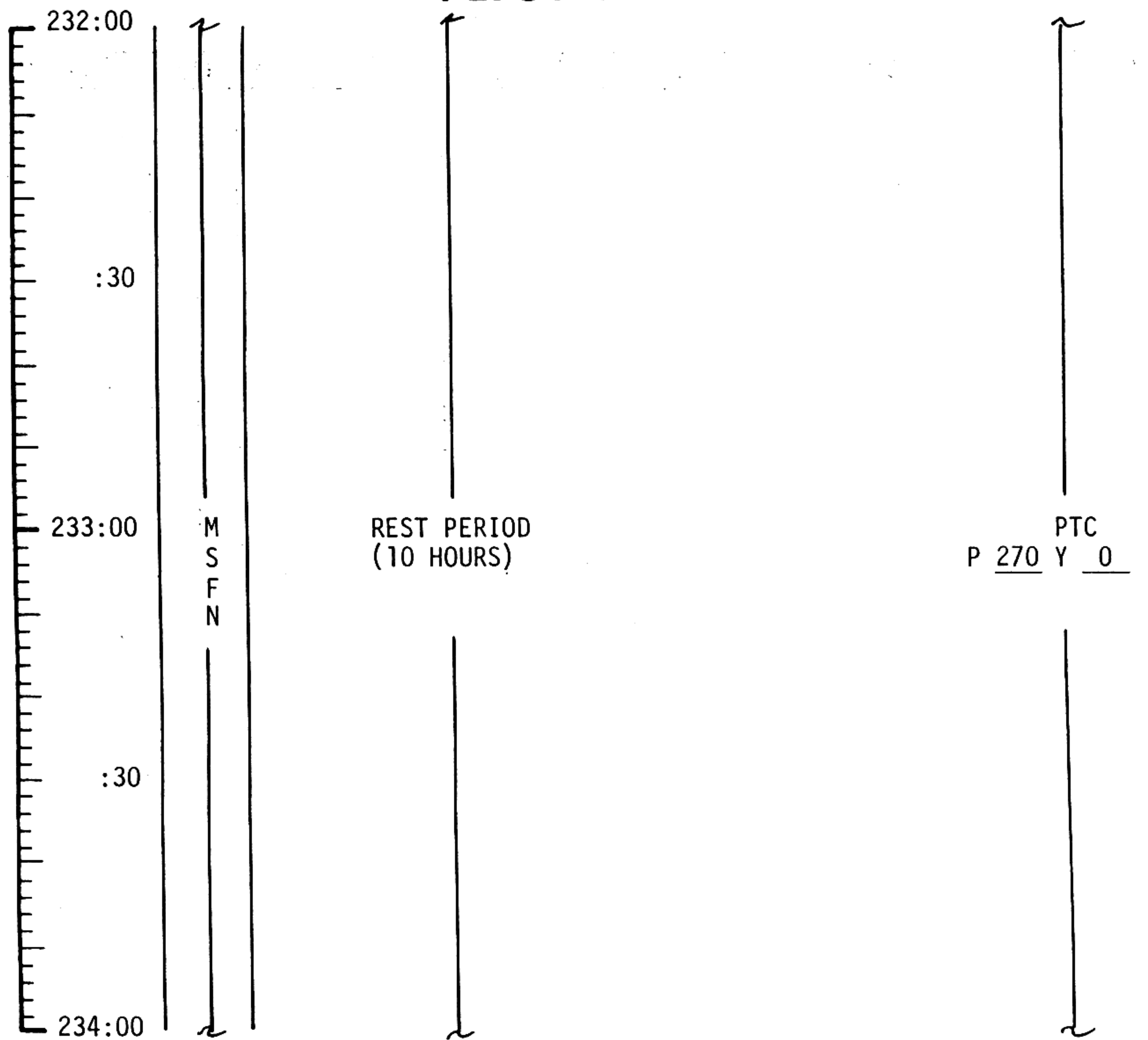


MCC-H

0222 CST

# FLIGHT PLAN

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 12	FINAL (NOV 14)	OCTOBER 15, 1969	232:00 - 234:00	9/TEC	3-196