

FLIGHT PLAN

MCC-H

1154 CST

NOTES

00:00
(31102)
(01111)

T
M
S
F
N

LIFT-OFF APRIL 16, 1972 CSM LAUNCH CHECKLIST
BOOST PAGE L/2-7

:10

T
C
Y
I

SECO
INSERTION AND SYSTEM CHECKS PAGE L/2-11

:20

T
C
Y
I

P52 IMU REFSMMAT REALIGN CHECK PAGE L/2-17

00:30

:40

GDC ALIGN

:50

T
C
R
O

REPORT: GYRO TORQUING ANGLES

01:00

T
C
R
O

AT SECO+20 SEC, S-IVB
MNVRS TO LH AND
INITIATES ORB RATE
(HEADS DOWN)

P52 IMU REALIGN	
N71:	__ __ . __ __
N05:	__ __ . __ __
N93:	
X	__ __ . __ __
Y	__ __ . __ __
Z	__ __ . __ __
GET	__ __ : __ __

UPDATE TO CSM
Z TORQUING ANGLE

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	00:00 - 01:00	1/LAUNCH-E.0	3-1

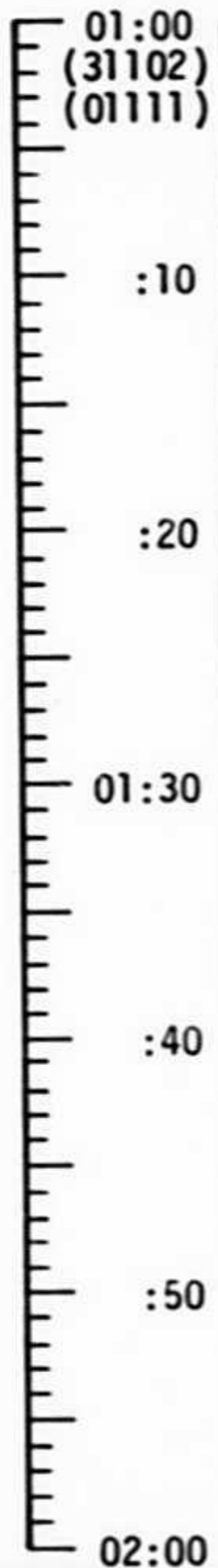
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1254 CST

NOTES



MSFN

MSFN

CYI

DUMP DSE
UPDATE TO CSM
TLI PAD
TLI +90 MIN ABORT
PAD
P37 (L/O+8) PAD
UPLINK TO CSM
CSM S.V. & V66

GO/NO-GO FOR PYRO
ARM

SCS ATT REF COMPARISON CHECK PAGE L/2-17
EXTEND DOCKING PROBE PAGE L/2-18

U.S. PASS THROUGH BDA

GO/NO-GO FOR PYRO ARM (CUE MSFN)
LOGIC ON

WATCH FIRES & SIGNS OF AFRICA

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	01:00 - 02:00	1/E.O.	3-2

FLIGHT PLANNING BRANCH



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TLI
BURN TABLE

ROLL RATES	P OR Y RATES	P OR Y ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
>20°/SEC TERMINATE	>10°/SEC TERMINATE	+45° TERMINATE	V_i = PAD VALUE + 2 SEC	NO TRIM

FLIGHT PLAN

MCC-H

1354 CST

NOTES



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TLI PREPARATION PAGE L/2-27

TLI, NOMINAL & MANUAL PAGE L/2-28

TB6 02:23:57.1

GO/NO-GO FOR TLI

TLI

P00

V66 SET CSM S.V. INTO LM S.V.

*Moon is out of Window #2
 CM 2/EL/250/CX/Ring Sight
 (55.6, 1/250, ∞)*

TLI BURN STATUS REPORT
 CDR - TRANS TO CENTER COUCH, CMP - LEFT COUCH

NORMAL SC/BOOSTER SEPARATIONS PAGE L/3-1
 DIRECT O2 VLV - OPEN, UNTIL CABIN IS 5.7 PSI, THEN CLOSE
 V48 (11103)(01111)

S-IVB MNVRS TO SEP ATT 02:54:20

(359,146,319) OMNI C
 GO/NO-GO FOR TRANSPOSITION AND DOCKING
 CSM SEPARATION PREP PAGE L/3-1

GO/NO-GO FOR TLI

GO/NO-GO FOR T&D

TIG: 02:33:35.1
 BT: 5 MIN 44.2 SEC
 ΔVC: 10,374.3 FPS

AT SECO: S-IVB INERTIAL
 AT SECO +2 MIN 31 SEC:
 S-IVB TO LOCAL
 HORIZONTAL, ORB RATE,
 HEADS DOWN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	02:00 - 03:00	E.O./TLC	3-5

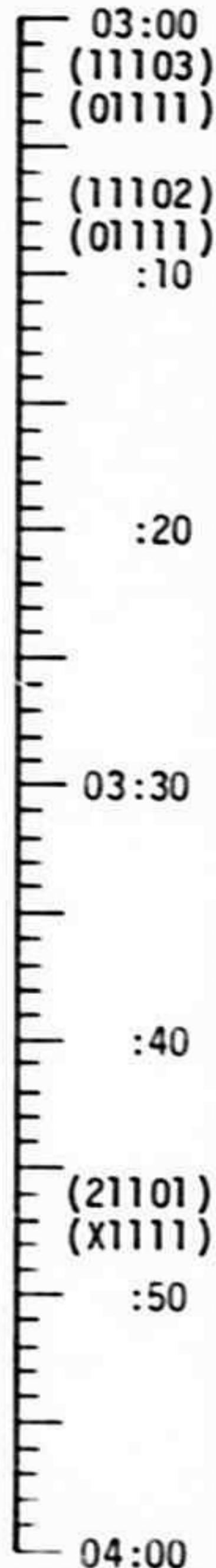
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1454 CST

NOTES



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CSM/S-IVB SEP 03:04:20

CSM MNVR TO DOCK ATT (301,326,041) (03:13)
V48 (11102)(01111)
TV (GDS) 3:09 TO 3:28 CM4 - BRKT (f22,MONITOR)
VISUALLY INSPECT AND PHOTOGRAPH S-IVB AND LM, MAG(AA,NN)

DOCK 03:14:20

CM/LM PRESSURE EQUALIZATION (DECAL) PAGE L/3-5
TUNNEL HATCH REMOVAL (DECAL)
DOCKING LATCH VERIFICATION (DECAL)
LM UMBILICAL CONNECTIONS (DECAL)
HATCH INSTALLATION (DECAL)
PRE LM SEP & EJECTION

S-IVB NON-PROPULSIVE VENT START (03:39)

V48 (21101) (X1111)
GO/NO-GO FOR PYRO ARM (CUE MSFN)
LOGIC ON
PYRO ARM
P47 THRUST MONITOR

S-IVB NON-PROPULSIVE VENT COMPLETE (03:54)
PHOTOGRAPH LM EJECTION, MAG (AA,NN)

CSM/LM EJECTION

TIG: 03:59:20
BT: 3 SEC
ΔVT: 0.4 FPS
ULLAGE: NONE

T&D MNVR
+X FOR 3 SEC (ΔV ~0.5 FPS)
AFTER 15 SEC PITCH UP AT
0.5°/SEC. V49 AUTO MNVR
TO DOCKING ATT. NULL
TRANSLATION AND RATES,
+X FOR 4 SEC (ΔV ~0.7 FPS)

*Earth out of window #1
CM 1/EL/BO/CEX
(311, 4250, ∞)*

SPRING ACTUATOR ΔV
~ 0.8 FPS. 5 SEC AFTER
EJECTION THERE IS A
4 JET RCS -X TRANSLA-
TION FOR 3 SEC (ΔV
~ 0.4 FPS) TOTAL ΔV
~ 1.2 FPS.

DUMP DSE

GO/NO-GO FOR
PYRO ARM AND
CSM/LM EJECTION

TLI CUTOFF +
1 HR 20 MIN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	03:00 - 04:00	1/TLC	3-6

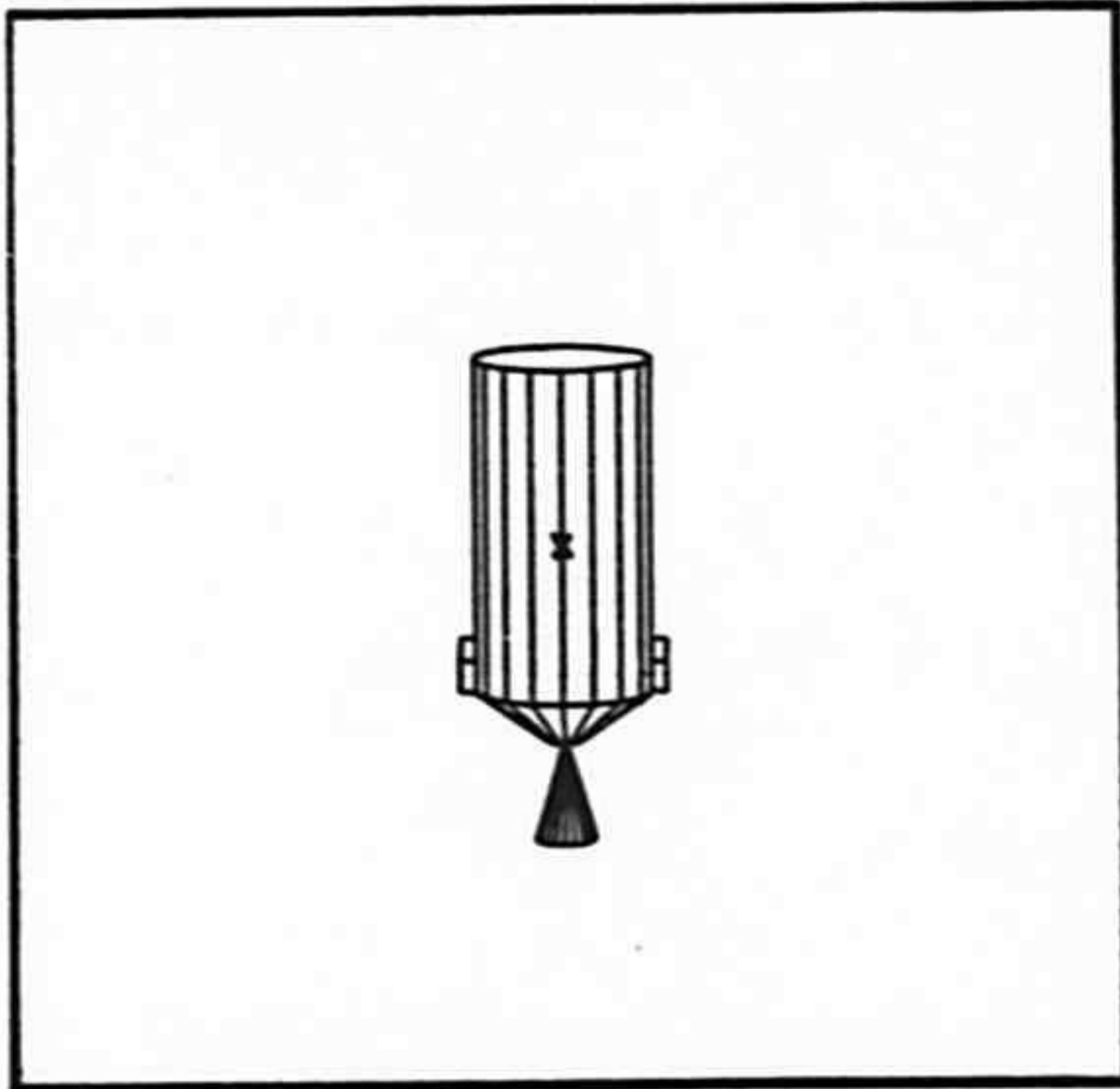
FLIGHT PLANNING BRANCH

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FLIGHT PLAN

GET 04:20

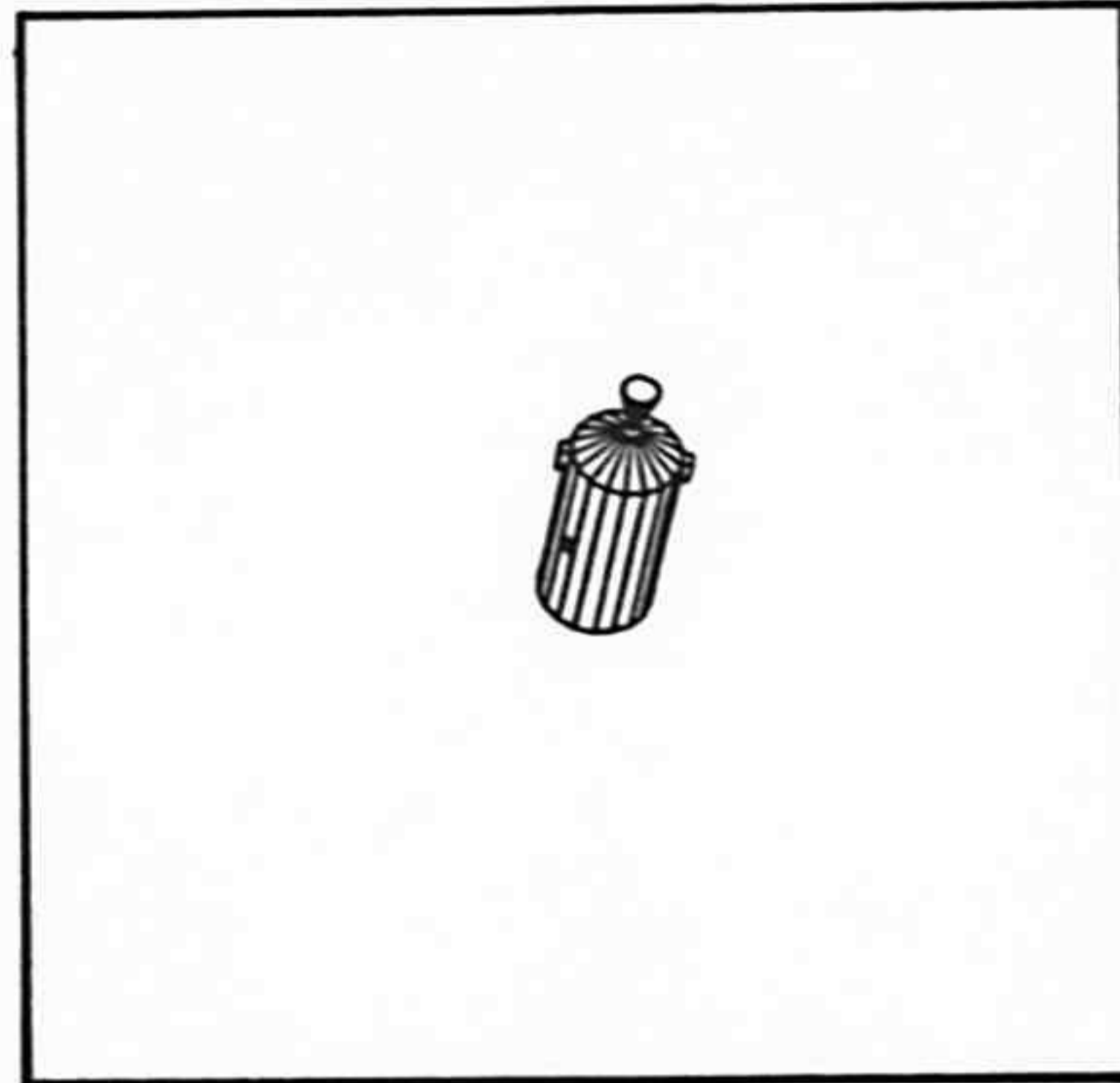
FOV 5°



S-IVB APS EVASIVE INITIATION

GET 04:41

FOV 1°



S-IVB LOX DUMP INITIATION

FLIGHT PLAN

MCC-H

1554 CST

NOTES

04:00
(21101)
(X1111)

:10

:20

04:30

:40

:50

05:00

M
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POO, V66 SET CSM S.V. INTO LM S.V.

REPORT: GOOD EJECTION

V49 MNVR TO VIEW S-IVB IN HATCH WINDOW BY 04:12

(090,326,356) OMNI A

REPORT: GO FOR S-IVB YAW MNVR

VISUALLY INSPECT S-IVB/IU THERMAL SHROUD

*CM3/EL/250/CEX
(58, 1/250, 00)
NOTE: 80mm Lens is
400ft.*

S-IVB YAW MNVR 04:12:20 (GROUND COMMAND)

REPORT: GO FOR S-IVB EVASIVE BURN

S-IVB APS EVASIVE BURN 04:22:20 (GROUND COMMAND)

V49 MNVR TO P52 ATTITUDE (05:25)

DOFF AND STOW PGA'S

TRANSFER ITEMS OUT OF PGA POCKETS

TRANSFER PRD TO CWG

(040,326,035)

HGA P -47, Y 98

S-IVB MNVRS TO PROPELLANT DUMP ATT 04:32

REPORT: LM/CM ΔP

CHARGE BATTERY B

S-IVB CONTINUOUS H₂ VENT - ON 04:39

S-IVB LOX DUMP 04:43

INSTALL CABIN FAN FILTER (U2)

TIME & LOG ALL URINE VOIDS AND MEASURE FLUID INTAKE
UNTIL ~ 66:30 GET

THE MNVR TO ACQUIRE THE S-IVB WILL BE PERFORMED AT 0.2°/SEC AND WILL BE INITIATED AFTER GOOD EJECTION IS VERIFIED.

GO FOR S-IVB YAW MNVR INDICATES THAT THE S-IVB IS IN THE CREW FIELD OF VIEW AND ADEQUATE SPACECRAFT SEPARATION HAS BEEN ACHIEVED.

THE S-IVB YAW MNVR WILL BE PERFORMED NOMINALLY AT LM EJECTION +13 MIN

EVASIVE BURN ΔV
~ 9.4 FPS

LOX DUMP ΔV ~ 28 FPS

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	04:00 - 05:00	1/TLC	3-9

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1654 CST

NOTES

05:00
(21101)
(X1111)

:10

:20

05:30

:40

:50

06:00

M
S
F
N

FILM MAGS REQD FOR REST OF DAY:
DAC: CIN-JJ
EL: UV-00, CEX-NN

LIMIT CYCLE - ON
ATT DEADBAND - MIN
RATE - LOW
BMAG (3) - ATT 1/RATE 2
SC CONT - SCS
P52 (OPTION 3)
(LAUNCH ORIENT)

STARS _____,
SA _____,
TA _____,

REPORT: GYRO TORQUING ANGLES

P52 (OPTION 1)
(PTC ORIENT)

GDC ALIGN
SC CONT - CMC
BMAG (3) - RATE 2

VHF A SIMPLEX - OFF
WASTE STOWAGE VENT VALVE - VENT (VERIFY)

SC INTERIOR PHOTOGRAPHY AT CREW OPTION
CM/DAC/10/CIN- SPOT
(T2.8,1/60,3) 6 fps
(87% MAG)
MAG (JJ) _____, FR # _____

S-IVB APS MCC-1
GET ~05:30
 ΔV ~30 FPS

P52	IMU REALIGN
N71:	_____
N05:	_____
N93:	
X	_____
Y	_____
Z	_____
GET	_____ : _____ : _____

P37 PAD ASSUMES
NO MCC-1

UPLINK TO CSM
DESIRED ORIENT (PTC)
ZERO TRUNNION BIAS

UPDATE TO CSM
P37 PAD (L/O+15)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16) CHGA	3/6/72 4/7/72	05:00 - 06:00	1/TLC	3-10

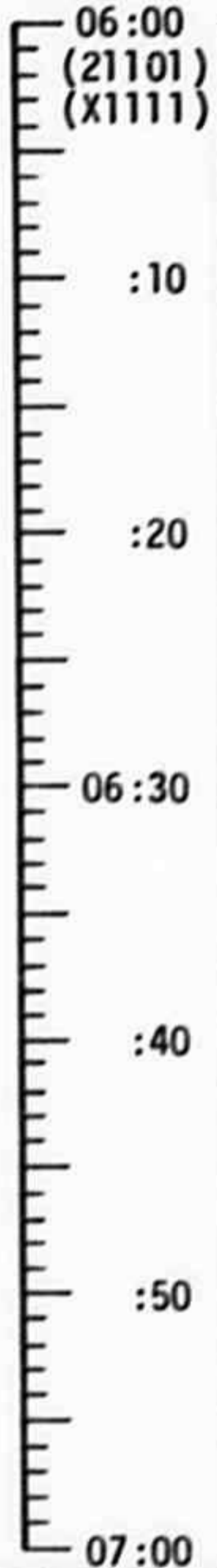
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1754 CST

NOTES



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EAT PERIOD

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	06:00 - 07:00	1/TLC	3-11

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1854 CST

NOTES

07:00
(21101)
(X1111)

:10

:20

07:30

:40

:50

08:00



CSM EXP/EVA CHECKLIST

V49 MNVR TO EARTH UV PHOTO ATT (07:15)
(207,355,039) OMNI D
EARTH UV PHOTOGRAPHY SEQ A, PAGE X/2-16
MAG (00)
MAG (NN)

CSM SYSTEMS CHECKLIST

DEACTIVATE PRIMARY EVAP PAGE S/1-16

EARTH DISTANCE
~ 33,300 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16) CHANGE A	3/27/72-3/6/72	07:00 - 08:00	1/TLC	3-12

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1954 CST

NOTES

08:00
(21101)
(X1111)

:10

:20

08:30

:40

:50

09:00

M
S
F
N

V49 MNVR TO OPTICS CALIBRATION ATTITUDE (08:06)
(157,246,330). HGA P -85, Y 153

P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00042)
P00

V49 MNVR TO SIGHTING ATTITUDE (08:20)
(174,288,320) HGA P -58, Y 350
V67 (+80000) (+00070) (+00003)

P23 CISLUNAR NAVIGATION
5 MARKS ON EACH STAR, UPDATE STATE VECTOR
1. N70 (00000) (00000) (00120)
N88 (-45035)(-60456)(-65703)

2. N70 (00000) (00000) (00110)
N88 (+27321)(-89225)(-35950)

3. N70 (00000) (00000) (00110)
N88 (+22735)(-83636)(-49882)

EARTH DISTANCE
~38,900 NM

42 PEACOCK

LOAD W MATRIX

173 GAMMA LUPI
(EFH)

235 PI SAGITTARII
(ENH)

214 ZETA SAGITTARII
(ENH)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	CHANGE A (4/16)	3/27/72	08:00 - 09:00	1/TLC	3-13

FLIGHT PLANNING BRANCH

MCC-H

2054 CST

FLIGHT PLAN

NOTES

09:00
(21101)
(X1111)

:10

:20

09:30

(21111)
(X1111)

:40

:50

10:00

M
S
F
H

4. N70 (00000) (00000) (00120)
N88 (-21341)(-93878)(-27046)

**INSTALL AND EVALUATE POLAROID
FILTER ON LAST P23**

LOOK AT DARK PORTION OF EARTH IN SXT- REFLECTION!

P00
V49 MNVR TO OPTICS CALIBRATION ATTITUDE (9:30)
(157,246,330) HGA P -85, Y 153

P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00042)

**READ & NOTE TPAC Values vs. N91
CHECK TPAC DRIFTS in CMC & MANUAL**

OMNI B
SECURE HGA: MAN, WIDE HGA P -52, Y 270

V49 MNVR TO THERMAL ATTITUDE (9:40)
(033,246,330) OMNI C

V48 (21111)
(X1111)

INFLIGHT EXERCISER (A-8 SECTION !)

* **CSM G&C CHECKLIST**

*EMS ΔV TEST & NULL BIAS CHECK PAGE G/2-5

*REPORT: BIAS

CREW EXERCISE PERIOD

204 SABIK
(EFH)

42 PEACOCK

S-IVB APS MCC-2
GET ~09:30
ΔV NOM. ZERO

*PERFORM IF MCC-1
IS REQUIRED

UPDATE TO CSM
GO/NO-GO FOR MCC-1

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	CHANGE A (4/16)	3/27/72	09:00 - 10:00	1/TLC	3-14

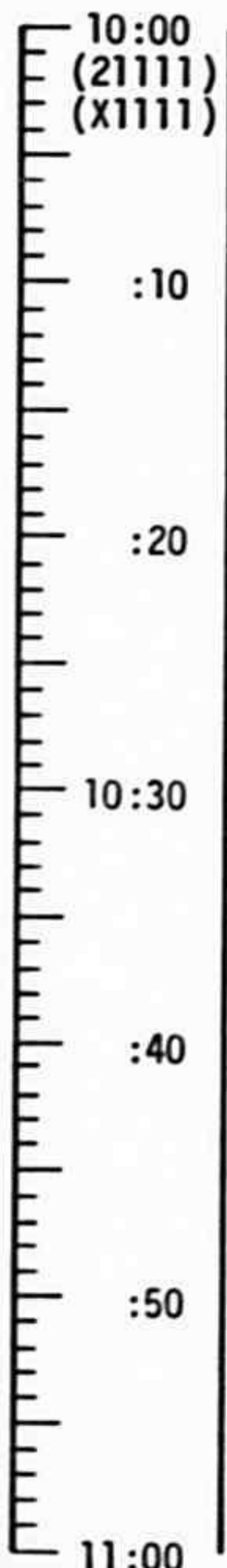
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2154 CST

NOTES



M
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CREW EXERCISE PERIOD

P52 (OPTION 3)
(PTC ORIENT)

REPORT: GYRO TORQUING ANGLES
GDC ALIGN

EARTH DISTANCE
~ 51,400 NM

P52	IMU REALIGN
N71:	___ . ___
N05:	___ . ___
N93:	
X	___ . ___
Y	___ . ___
Z	___ . ___
GET	___ : ___

UPDATE TO CSM
MCC-1 MNVR PAD
CSM S.V.
UPLINK TO CSM
CSM S.V. & V66
MCC-1 TGT LOAD

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	10:00 - 11:00	1/TLC	3-15

FLIGHT PLANNING BRANCH

MCC-1
 BURN TABLE
NO MANUAL START OR RESTART

P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	+10° TERMINATE	BT + 1 SEC	IF <2 FPS, TRIM X AXIS TO 0.2 FPS IF >2 FPS, NO TRIM

FLIGHT PLAN

MCC-H

2254 CST

NOTES



- WASTE STOWAGE VENT VLV - CLOSE (8 HOURS FROM VENT)
- *P30 EXTERNAL ΔV
- *CYCLE CMC MODE - FREE/AUTO
- *V48 (2110!)(X1111)
- *V49 MNVR TO PAD BURN ATTITUDE
- *IF SPS MIDCOURSE REQUIRED:
- * PRE SPS BURN SIM PREP (CUE CARD)
- *SXT STAR CHECK
- *P40 SPS THRUSTING OR P41 RCS THRUSTING
- O₂ FUEL CELL PURGE
- WASTE WATER DUMP

*PERFORM IF MCC-1 IS REQUIRED

TLI CUTOFF +9 HR

MCC-1

TIG: 11:39
 BT: NOM ZERO
 ΔVT : NOM ZERO
 ULLAGE: NONE

- *V66 SET CSM S.V. INTO LM S.V.
- *REPORT: BURN STATUS
- *IF SPS MIDCOURSE PERFORMED:
- * PC - OFF
- * MC - OFF
- * SM/AC PWR - OFF

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		UNBAL

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	11:00 - 12:00	1/TLC	3-17

FLIGHT PLANNING BRANCH

MCC-H

2354 CST

FLIGHT PLAN

NOTES



M
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REPORT: LM/CM ΔP
VENT BATTERIES UNTIL SYSTEM TEST METER 7A=0

LiOH CANISTER CHANGE
(3 INTO A, STOW 1 IN B5)
IF MCC-1 NOT PERFORMED
CYCLE CMC MODE - FREE/AUTO
V48 (21101) (X1111)

CSM EXP/EVA CHECKLIST

V49 MNVR TO EARTH UV PHOTO ATT (12:30)
(207,356,030) OMNI D
EARTH UV PHOTOGRAPHY SEQ B, PAGE X/2-17
MAG (00)
MAG (NN)

V48 (21111)
(X1111)

CREW EXERCISE PERIOD

EARTH DISTANCE
~ 58,100 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16) CHANGE A	3/27/72 3/6/72	12:00 - 13:00	1/TLC	3-18

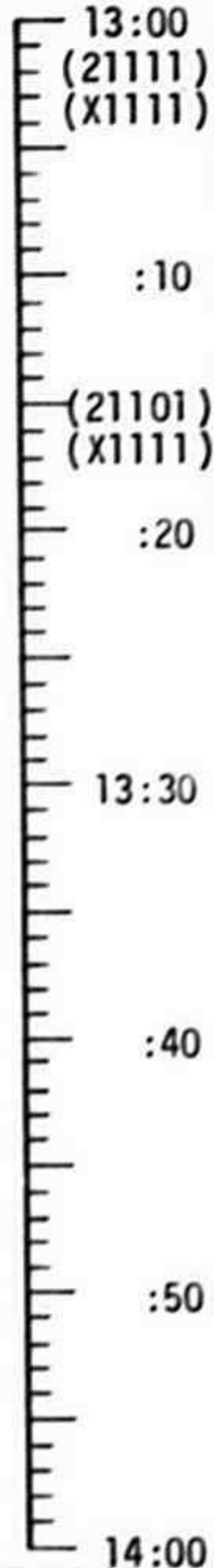
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0054 CST

NOTES



UPDATE TO CSM
QUADS TO ENABLE
FOR PTC SPINUP

UPDATE TO CSM
P37 PADS (LAUNCH
+25,35,45, & 55)

M
S
F
N

CREW EXERCISE PERIOD

CYCLE CMC MODE - FREE/AUTO
V48 (21101)(X1111)

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2
V49 MNVR TO PTC ATTITUDE
(N20,270,000)
P20 OPT 2 X-AXIS
N78 (0,0,0)
N79 (-0.4200, +000.50)
N34 (0,0,0)

EAT PERIOD

PTC

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	13:00 - 14:00	1/TLC	3-19

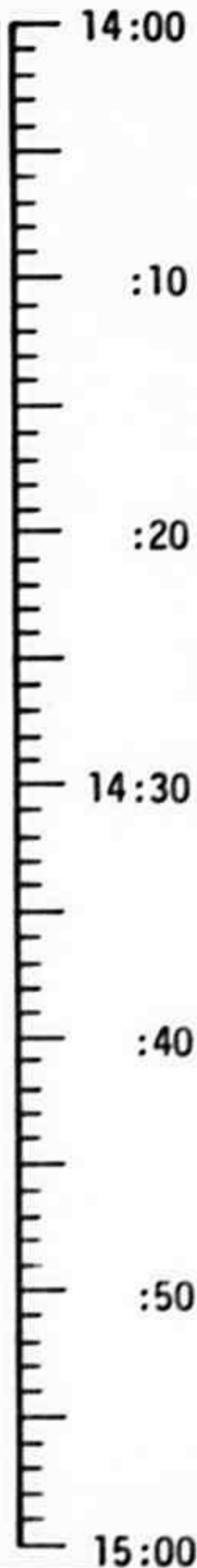
FLIGHT PLANNING BRANCH

MCC-H

0154 CST

FLIGHT PLAN

NOTES



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EAT PERIOD

CSM SYSTEMS CHECKLIST

- PRE-SLEEP CHECKLIST PAGE S/1-29
- COMM - OMNI
- CDR & CMP DOFF BIOMED HARNESS
- H₂ HEATERS 1&2 - AUTO (VERIFY)
- H₂ FANS 3 - AUTO
- O₂ HEATERS 1&2 - OFF
- O₂ HEATERS 3 - AUTO

FILM MAGS REQD FOR NEXT DAY:
EL: HBW- UU, UV- OO, CEX- NN

PTC

DAP LOAD STATUS
(21101)(X1111)

EARTH DISTANCE
~68,400 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16) Chg. B	3/6/72 4/7/72	14:00 - 15:00	1/TLC	3-20

FLIGHT PLANNING BRANCH

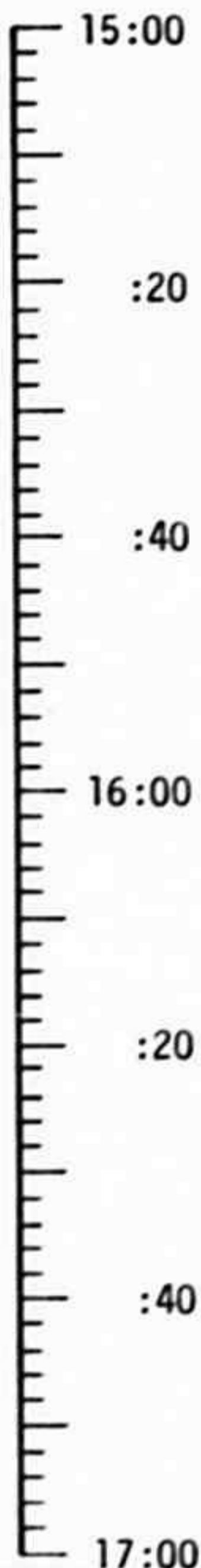
FLIGHT PLAN

MCC-H

0254 CST

NOTES

DAP LOAD STATUS
(21101) (X1111)



M
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REST PERIOD
(8 HOURS)

PTC

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	15:00 - 17:00	1/TLC	3-21

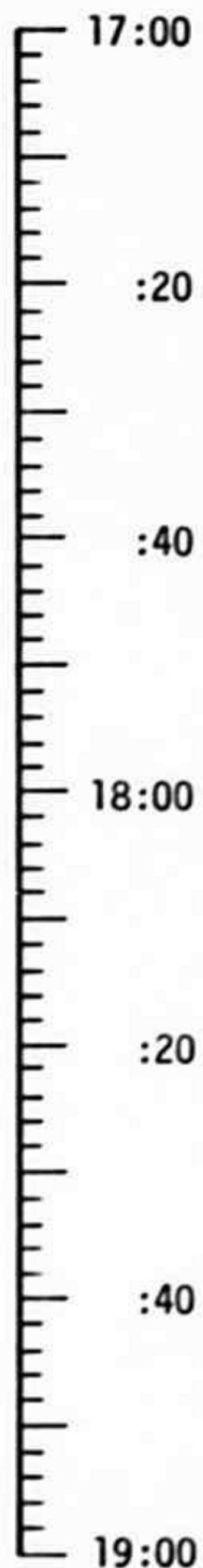
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0454 CST

NOTES



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REST PERIOD
(8 HOURS)

PTC

DAP LOAD STATUS
(21101) (X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	17:00 - 19:00	1/TLC	3-22

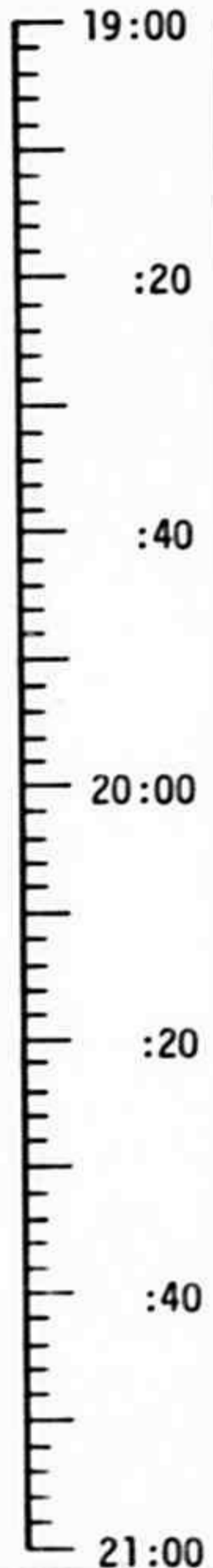
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0654 CST

NOTES



M
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REST PERIOD
(8 HOURS)

PTC

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	19:00 - 21:00	1/TLC	3-23

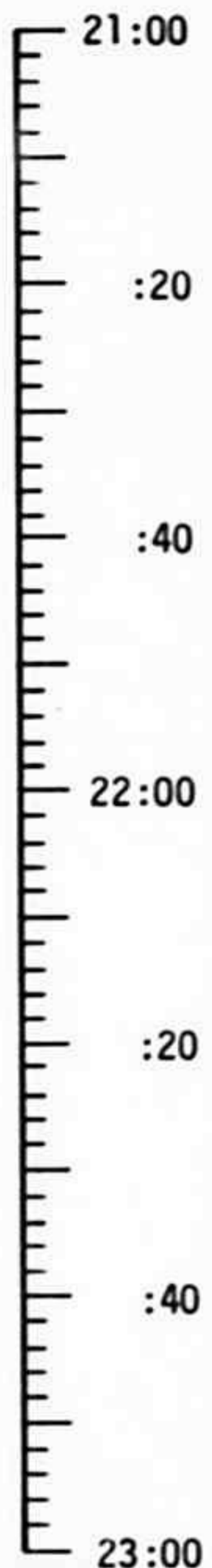
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0854 CST

NOTES



M
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REST PERIOD
(8 HOURS)

PTC

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 16	FINAL (4/16)	3/6/72	21:00 - 23:00	1/TLC	3-24

FLIGHT PLANNING BRANCH