Apollo 15 Flight Plan

Please note that most of the hand-written additions to this document were added during the compilation of the Apollo 15 Flight Journal in 1998 to 2000. To a large extent, they reflect changes read up to the crews during the course of the mission.

David Woods – Editor: Apollo Flight Journal

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FINAL

FLIGHT PLAN

PREPARED BY

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FLIGHT PLANNING BRANCH
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MANNED SPACECRAFT CENTER
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APOLLO 15

(JULY 26, 1971)

FLIGHT PLAN

FINAL

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FLIGHT PLAN

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ABBREVIATIONS

ABB	abbreviation or abbreviated
AC	alternating current
ACCEL	accelerometer
ACN	Ascension
ACT	activation
ACQ	acquisition or acquire
AEA	abort electronics assembly
AGS	abort guidance subsystem
AH	ampere hours
ALSCC	Apollo lunar surface close-up camera
ALSD	Apollo lunar surface drill
ALSEP	Apollo lunar surface experiment package
ALT	altitude
ALTM	altimeter
AM	amplitude modulation
AMP or amp	amperes
AMPL	amplifier
ANG	Antigua
ANT	antenna
AOH	Apollo Operations Handbook
AOL	Atlantic Ocean line
AOS	acquisition of signal or acquisition of site
AOT	alignment optical telescope
AP	alpha particle spectrometer
APS	ascent propulsion subsystem
ARIA	Apollo range instrumentation aircraft
ARS	atmosphere revitalization system
ASC	ascent
A/T	alignment technique
ATT	attitude
AUX	auxiliary
AZ	azimuth
BAT	battery
BEF	blunt end forward
BD	band
BDA	Bermuda
BIOMED	bio-medical data
BKWD	backward
BMAG	body mounted attitude gyro
BP	barber pole
BRKT	bracket
BSLSS	buddy secondary life support system
BT	burn time
BU	backup
BW	black and white (Film 3400)

BWD	backward
BW1	black and white (Film 3401)
CAP COM	capsule communicator
CAL	calibration
CAMR or CAM	camera
CB	circuit breaker
CCGE	cold cathode gage experiment
CCIG	cold cathode ion gage
CCW	counter clockwise
CDH	constant delta altitude
CDR	Commander
CDU	coupling data unit
CEX	color exterior (S0368)
CIN	color interior (S0168)
CIRC	circulation
CK	check
CKT	circuit
C/L	centerline or checklist
CM	command module
CMC	command module computer
CMD	command
CMP	Command Module Pilot
CNTL	control
C/O	check out
COAS	crew optical alignment sight
COMM	communications
CONFIG	configuration
COMP	compare or compensate
CONT	continue or contingency
CP	control point
CPLEE	charged particle lunar environment experiment
CRO	Carnarvon, Australia
CRYO	cryogenic
CS	contingency sample
CSI	coelliptic sequence initiation
CSM	command and service modules
CST	central standard time
C/S	central station
CTR	center
C&WS	caution and warning system
CW	clockwise
CWEA	caution and warning electronics assembly
CWG	constant wear garment
CYI	Grand Canary Island

DAC	data acquisition camera
DAP	digital auto pilot
DB	deadband
DC	direct current or data camera (70mm)
DCA	digital command assembly
DEDA	data entry and display assembly
DEG	degrees
DEPL	depletion
DES	descent
DET	digital event timer
DIFF	difference
DIR	direct
DK	docked
DO	detailed objective
DOI	descent orbit insertion
DPLY	deployment
DPS	descent propulsion system
DR	door
DRT	dome removal tool
DS	documented sample
DSCRM	discriminator
DSE	data storage equipment(CSM)
DSEA	data storage equipment assembly (LM)
DSKY	display and keyboard
DSM	deep space measurement
DTO	detailed test objective
DUA	digital uplink assembly
DWN	down
E	erasable or enter
ECS	environmental control system
ED	explosive device
EDT	eastern daylight time
EFH	earth far horizon
EI	earth (atmosphere) interface and entry interface
EKG	electrocardiogram
EL	electric Hasselblad camera
ELEV	elevation
EMER	emergency
EMS	entry monitor system
EMU	extravehicular mobility unit
ENG	engine
ENH	earth near horizon
ENT	entry
E.O.	earth orbit
EOM	end of mission
EPO	earth parking orbit
EPHEM	Ephemeris

EPS	electrical power subsystem
EQUIP	equipment
ERECT	erectable
ERR	error
EST	eastern standard time
ETB	equipment transfer bag
EV	extravehicular
EVA	extravehicular activity
EVAP	evaporator
EVCS	extravehicular communications system
EVT	extravehicular transfer
EXP	experiment
EXT	external or extend
f	f-stop
FAM	familiarize or familiarization
FC	fuel cell
FCS	fecal containment system
FDAI	flight director attitude indicator
FLT	flight
FM	frequency modulated
FOV	field of view
FPS	feet per second
fps	frames per second
FR	frame(s)
FREQ	frequency
FT or ft	feet
FTO	flight test objective
FTP	full throttle position
FTT	fuel tranfer tool
FWD	forward
G.A.	gas analysis
GA	gimbal angle
GBI	Grand Bahama Islands
GBM	Grand Bahama (MSFN)
GDC	gyro display coupler
GDS	Goldstone, California
GET	ground elapsed time
GETI	ground elapsed time of ignition
GETIL	ground elapsed time of landing for TIG time of abort burn
GLY	glycol
GMT	Greenwich mean time
G&C	guidance and control
G&N	guidance and navigation
GNCS	guidance, navigation and control system (CSM)
GR	gamma ray spectrometer
GWM	Guam
GYM	Guaymas, Mexico

H2	hydrogen
HA	apogee altitude
HAW	Hawaii
HBR	high bit rate (TLM)
HD	highly desirable
HDC	hasselblad data camera
HFE	heat flow experiment
HGA	high-gain antenna
HI	high (switch position)
HOR	horizon
H2O	water
HP	perigee altitude
HR	hour(s)
HSK	Honeysuckle (Canberra, Australia)
HTC	hand tool carrier
HTR	heater
HTV	USNS Huntsville
ICDU	inertial coupling data unit
ID	identification
ICG	inflight coverall garment
IGA	inner gimbal angle
IGN	ignition
IMU	inertial measurement unit
INCR	increase
IND	indicator
INIT	initialization
INT	interval
IP	initial point
ISA	interim stowage assembly
IU	instrumentation unit
IVC	intervehicular communications
IVL	intervalometer
IVT	intravehicular transfer
iR	inclination of the ascending return
JETT	jettison
KG	kilogram
KM	kilometer
kwh	kilowatt hour
LA	launch azimuth or laser altimeter
LAT	latitude
LBR	low bit rate (TLM)
LB or lb	pound(s)
LCG	liquid cooled garment
LCRU	lunar communications relay unit

L/D	lift/drag
LD	lunar day (TV lens)
LDG	landing
LDMK	landmark
LEB	lower equipment bay
LEC	lunar equipment conveyor
LEVA	lunar extravehicular visor assembly
LFH	lunar far horizon
LGC	LM guidance computer
LH	left-hand
L/H	local horizontal
LHEB	left-hand equipment bay
LHFEB	left-hand forward equipment bay
LHSSC	left-hand side storage container
LiOH	lithium hydroxide
LLM	lunar landing mission
LLOS	landmark line of sight
LM	lunar module
LMP	Lunar Module Pilot
LNH	lunar near horizon
L/O	lift-off
LOI	lunar orbit insertion
LONG	longitude
LOS	loss of signal or loss of site
LPD	landing point designator
LPO	lunar parking orbit
LPM	lunar portable magnetometer
LR	landing radar
LRRR or LR3	laser ranging retro-reflector
LRV	lunar roving vehicle
L/S or LS	landing site or lunar surface
LSM	lunar surface magnetometer
LT	light
LTG	lighting
LUB	lubrication
LV	launch vehicle
L/V	local vertical
LVPD	launch vehicle pressure display
M	mandatory
MAD	Madrid, Spain
MAG	magazine (camera)
MAN	manual
MAX	maximum
MAX Q	maximum dynamic pressure
MBW	medium black and white film
MC	mapping camera
MCC	midcourse correction

MCC-H	Mission Control Center - Houston
MDC	main display console
MEAS	measurement
MED	medical
MESA	modular experiment stowage assembly
MET	mission event timer
MGA	middle gimbal angle
M/I	minimum impulse
MIN	minimum or minutes(s)
MIR	mirror
MLA	Merrit Island, Florida, launch area
mm or MM	millimeter
MNA or MNB	main electrical bus A or B
MNVR	maneuver
MON	monitor
MONO	monaural
MPL	mid-Pacific line
MPS	main propulsion system
M/R	mixture ratio (fuel to oxidizer)
MS	mass spectrometer
MSFN	Manned Space Flight Network
MSO	mass spectrometer outgasing
MTVC	manual thrust vector control
MULT	multiple
N2	nitrogen
NAV	navigation
NK	nikon camera
NM	nautical miles
NO.	number
NOM	nominal
NXX	Noun XX
O2	oxygen
OBS	observation
O/F	oxidizer to fuel ratio
OGA	outer gimbal angle
OID	octal identifier
OMNI	omnidirectional antenna
OPR	operate
OPS	oxygen purge system
OPT	option
ORB	orbital
ORDEAL	orbit rate display earth and lunar
ORIENT	orientation
OVBD	overboard
OVHD	overhead

P	pitch or program
PAD	voice update
PAN	panoramic
PART	particle
PCM	pulse code modulation
PC	plane change or chamber pressure
PDI	powered descent initiation
PER or PC	Pericynthion
PGA	pressure garment assembly
PGNCS	primary guidance, navigation and control system (LM)
PGNS	primary guidance navigation system (LM)
PHOTO	photograph
PIPA	pulse integrating pendulous accelerometer
PKG	package
PLSS	portable life support system
PM	phase modulated
POL	polarity or polarizing
PRD	passive radiation dosimeter
PREF	preferred
PREP	preparation
PRESS	pressure
PRIM	primary
PROP	proportional
PRN	pseudo random noise
PRPLNT	propellant
PSE	passive seismic experiment
PSIA	pounds per square inch absolute
PSID	pounds per square inch differential
PSIG	pounds per square inch gage
PT	point
PTC	passive thermal control
PU	propellant utilization
PUGS	propellant utilization gaging system
PWR	power
PXX	Program XX
PYRO	pyrotechnic
QTY	quantity
QUAD	quadrant
R	roll or range
R&B	red and blue
RAD	radiator, radial, or radiation
RCDR	recorder
RCS	reaction control system
RCU	remote control unit
RCV	receiver
REACQ	reacquire

REFSMMAT	reference stable member matrix
REG	regulator
REL	release
REQD	required
RETR	retract
REV	revolution
RH	right-hand
RHC	rotational hand controller
RING	ringsight
RLS	radius of landing site
RMT	
RNDZ	rendezvous
RNG	range or ranging
ROD	rate of descent
RR	rendezvous radar
RSI	roll stability indicator
RSLV	resolver
RT	realtime
RTC	realtime command
RTG	radioisotope thermoelectric generator
RXX	Routine XX
SA	shaft angle
SATT	satellite
S-BD	S-BAND
SC	spacecraft
SCE	signal conditioning equipment
SCS	stabilization control system
SCT	scanning telescope
SE	southeast or subearth
SEC	secondary
SECO	S-IVB engine cutoff
SECS	sequential events control system
SEF	sharp end forward
SEL	select
SEP	separate
SEQ	sequence
SEVA	standup extravehicular activity
SIDE	suprathermal ion detector experiment
SII	Saturn II (second stage)
SIM	scientific instrument module
S-IVB	Saturn IVB(third stage)
SLA	service module LM adapter
SLOS	star line-of-sight
SM	service module
SPECT	spectrometer
SPOT	spot meter

SPS	service propulsion system
SR	sunrise
SRC	sample return container
SRX	S-Band receiver mode no. X
SS	sunset or subsolar
STBY	standby
STX	S-Band transmit mode no. X
SUBSAT	subsatellite
S.V.	state vector
SW	switch
SWC	solar wind composition
SWE	solar wind experiment
SXT	sextant
SYS	system
T EPHEM	time of Ephemeris update
TA	trunnion angle
TAN	Tananarive, Madagascar
TB	time base or talkback
TCA	time of closest approach
TD	touchdown
T&D	transposition and docking
TD&E	transposition docking and LM ejection
TDS	thermal degradation sample
TEC	transearth coast
TECH	technique
TEI	transearth injection
TEMP	temperature
TERM	terminate
TEX	Corpus Christi, Texas
TGT	target
THC	translation hand controller
TIG	time of ignition
TLC	translunar coast
TLI	translunar injection
TLM or TM	telemetry
TPF	terminal phase final
TPI	terminal phase initiation
TPM	terminal phase midcourse
T/R	transmitter/receiver
TRANS	translation
TRK	track or tracking
TRUN	trunnion
TV	television
TVC	thrust vector control
TWR	tower

UCTA	urine collection transfer assembly
UHT	universal hand tool
ULL	ullage
UMB	umbilical
UNBAL	unbalance (meter)
UNDK	undock
US	United States
UV	ultraviolet
V	velocity
VG_{IMU}	velocity to be gained as related to IMU orientation
VGX	velocity to be gained (X-body axis)
VGY	velocity to be gained (Y-body axis)
VGZ	velocity to be gained (Z-body axis)
VR	resultant velocity
VX	velocity along the X-axis
VY	velocity along the Y-azis
VZ	velocity along the Z-axis
VAN	USNS vanguard
VHBW	very high speed black and white film
VHF	very high frequency
VLV	valve
VOX	voice keying
VXX	Verb XX
WRT	with respect to
X	time of closest approach (symbol)
XDOT	rate of change along the X-axis
XFER	transfer
XMIT	transmit or transmitter
XPNDER XPNDR	transponder
XR	X-ray spectrometer
Y	yaw
YDOT	rate of change along the Y-axis
ZDOT	rate of change along the Z-axis
ZPN	impedance pneumogram

ΔAz	azimuth change (difference)
ΔH	altitude change (difference)
ΔP	pressure change (difference)
ΔR	position change (difference)
ΔV	velocity change (difference)
ΔVC	velocity change at engine cutoff
ΔVT	velocity change loaded pre-burn
#	frame number(s) (for camera data)
ϕ	latitude
λ	longitude

PHOTOGRAPHIC NOMENCLATURE

AAA/BBB/CCC/DDD - EEE, EEE, (fGG, HHH, III) (JJ fps or JJ FR) (KK MIN) (LL% MAG)

AAA - Location from which photography is to be accomplished

BBB - Camera

CCC - Lens

DDD - Film Type

EEE - Photography aids (i.e., brackets, intervalometer, mirror, etc.)

fGG - Lens Aperture Setting

HHH - Shutter Speed

III - Focus Distance in Feet

JJ - Number of frames for DC, EL & NK cameras or
JJ - Frame Rate for the DAC only

KK - Magazine percent for the DAC only
KK - Operating time (minutes) for TV

LL - Magazine percent for the DAC only

CODE EXAMPLE:

1. CM4/DAC/18-CEX-BRKT, SPOT (S,1/250,∞)(12 fps)(4 min)(50% MAG)

Meaning: Photos are taken from CM right hand rendezvous window using the DAC with 18mm lens and SO368 film. The camera will be bracket mounted with the following camera settings: f-stop from spotmeter reading, shutter speed 1/250 of a second, focus at infinity, 12 frames per second, 50% MAG for 4 min to be used.

2. CM4/EL/80/BW-BRKT, IVL (f5.6,1/250,∞) 10 FR

Meaning: Photos are taken from CM right hand rendezvous window using the Electric Hasselblad camera with the 80mm lens and black & white film (3400). The camera will be bracket mounted with the following settings f-stop (aperture) f5.6, shutter speed 1/250, and focus at infinity. The operation of the shutter will be controlled by the intervelometer. Ten frames have been alloted for this sequence.

PHOTOGRAPHIC NOMENCLATURE (CONT)

CAMERA LOCATIONS

COMMAND MODULE

CM-1	LH Side Window
CM-2	LH Rendezvous Window
CM-3	Hatch Window
CM-4	RH Rendezvous Window
CM-5	RH Side Window

LUNAR MODULE

LM-1	LH Window
LM-2	Docking Window
LM-3	RH Window

CAMERA MOUNTS

CSM

Electric Hasselblad (EL) +X axis +12°

Electric Hasselblad (EL) normal to RH Side Window

Data Acquisition Camera with right angle mirror (DAC) +X axis

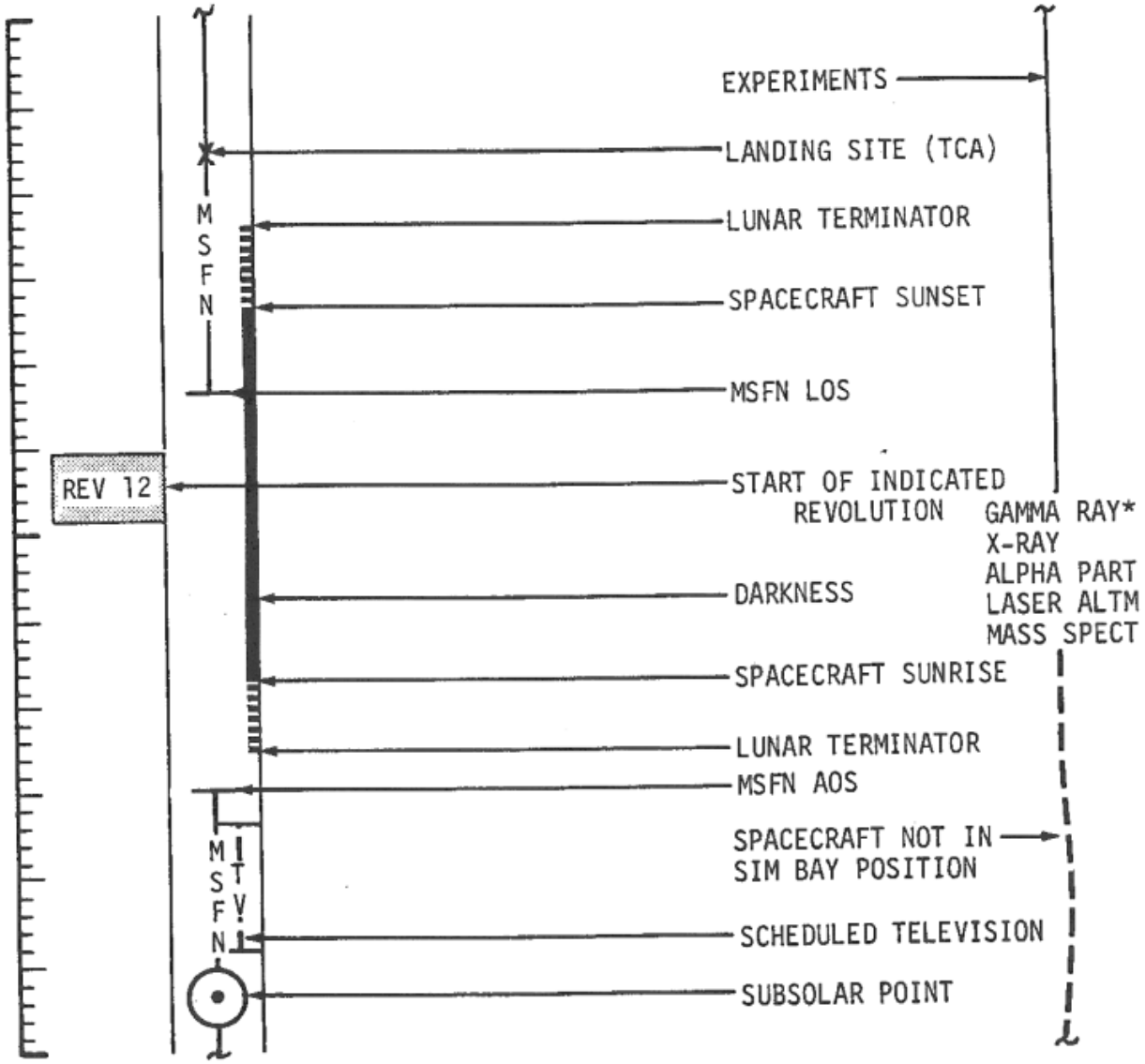
Data Acquisition Camera with SXT Adapter - same as SXT shaft & trunnion

NIKON (NK) Two positions

parallel to +X axis

+X axis +30°

SYMBOL NOMENCLATURE



*DEGRADED SIM BAY DATA

FLIGHT PLAN NOTES

I. Crew

A. Crew designations are as follows:

Designation	Prime	Backup
Commander (CDR)	Scott	Gordon
Command Module Pilot (CMP)	Worden	Brand
Lunar Module Pilot (LMP)	Irwin	Schmitt

B. The nominal CM couch positions are:

Activity	Left	Center	Right
Launch thru TLI	CDR	CMP	LMP
T&D thru Entry	CMP	CDR	LMP

C. The PGA's are worn as shown in Table 2-1.

D. The Crew Biomedical Harness and sensor wearing schedule is shown in Table 2-2.

E. Crew status reports are voiced to MCC-H before and after crew sleep periods. After waking, the crew reports sleep obtained during the last 24 hours and personal dosimeter readings. Before going to sleep, the crew reports medication used and any other pertinent information on activities performed.

F. Negative reporting is used in reporting completion of each checklist.

G. All onboard gauge readings are read directly from the gauges with no calibration bias applied.

II. CSM Systems

A. Communications

1. The preferred S-Band communication modes are:
   (a) Uplink Mode 6 (Voice, PRN, and Updata)
   (b) Downlink Mode 2 (Voice, PRN, TLM-HBR)

2. VHF Duplex B is used for launch, and Simplex A is used for earth-orbit operations.

3. Table 2-3 summarizes the MSFN coverage available for the CSM.

4. Table 2-4 contains a summary of the scheduled CSM & LM TV transmissions.

5. MCC-H switches OMNI antennas during TLC and TEC rest periods and TLC PTC awake periods. MCC-H switches OMNI and HGA during TEC PTC awake periods. The crew manages antenna operations during all other TLC and TEC periods.

6. To optimize the return of SIM Bay data, the crew will manually acquire with the HGA during awake period.

B. DSE

1. During the earth-orbit phase, the CSM LBR data is recorded when the CSM is not within MSFN coverage. The DSE is dumped during the pass over the US prior to TLI if possible.

2. CSM HBR data will be recorded during all P24 landmark tracking.

3. CSM HBR will be recorded during all CSM engine burns, at Sim Door Jettison, TD&E, and during DAC/SXT Photo test.

4. LM LBR data will be recorded during LOS periods between CSM/LM Separation and PDI.

5. Along with manually acquiring MSFN with the HGA, the crew, instead of the ground, will rewind the DSE prior to the manual HGA acquisition to optimize the return of SIM Bay data. The crew will rewind manually for playback at a specific time.

6. All entry data will be recorded in HBR during the blackout.

C. Electrical Power

1. The CSM normally remains powered up throughout the mission.

2. Table 2-5 lists the fuel cell purges.

3. Based on cryo purity and performance, the time between fuel cell 02 purges may be increased to coincide with water dump times. The 02 purge at 10.5 hours allows a judgement to be made on the defined purge schedule.

4. The cryogenic heaters are managed such that the planned usage is obtained out of each O_2. The H_2 fans are operated manually for one minute before and after each sleep cycle, prior to SPS or S-IVB thrusting and pre-CSM/LM ejection.

5. Table 2-6 contains the battery charge schedule.

D. ECS and Water Management

1. Potable water is chlorinated once a day after the eat period prior to each sleep period.

2. Waste water dump and fuel cell purge criteria:

(a) Waste water dumps, fuel cell purges, and urine dumps in lunar orbit are scheduled at the following times: (see table 2-5 for the scheduled fuel cell purges and waste water dumps)

(1) Once during each 24 hours, if possible, following the initial dump and purge

(2) H_2 fuel cell purges are scheduled at every other O_2 fuel cell purge after the first O2 fuel cell purge

(b) The most opportune time to perform waste water dumps and fuel cell purges are as follows:

(1) Immediately after the sextant star check in maneuver preparation or cislunar navigation

(2) Behind the moon, with completion of dump or purge before AOS

(c) If possible, dumps and purges are not scheduled during the following periods:

(1) Ten hours before MCC-2 or a TLC P23 or until just before the midcourse change only

(2) Eight hours before MCC-5

(d) Dumps and purges are not scheduled during the following MSFN tracking periods:

(1) Between MCC-4 and LOI

(2) Four hours before DOI

(3) Ten hours before MCC-7 until entry

(e) All waste water dumps are manual.

3. Only one CO2 absorber filter (LiOH canister) is changed at a time. Table 2-7 lists the LiOH canister change schedule. There are 30 filters on board, with 28 stowed at launch, only 23 are required.

4. At lift-off, the cabin contains 60% O_2 and 40% N_2. The CM ispurged after launch. The purge is terminated prior to LM pressurization after TLI. After the LM is configured for ejection, it is isolated and the CM is purged for eight more hours.

5. CSM O_2 pressurizes the LM after transposition and docking; and repressurizes the LM before TLC LM entry, Sim Door Jett and LM activation.

E. Guidance and Navigation

1. REFSMMAT Definitions

(a) The "Launch Pad" REFSMMAT is used for launch, TLI, and TD&E. This REFSMMAT places the IMU X-axis along the launch azimuth at the pad and the Z-axis along the negative radius vector. The FDAI, at launch, will display roll 170° (launch azimuth +90°), pitch 90°, and yaw 0°.

(b) The "PTC" REFSMMAT is used for all midcourse maneuvers (except MCC-7) and for other operations during TLC and TEC. This REFSMMAT places the X-axis in the ecliptic plane and perpendicular to the earth-moon line projection in the ecliptic plane at the average time of transearth injection for the monthly launch window and azimuth range. The Z-axis is then perpendicular to the ecliptic and directed south. At the beginning of the PTC Mode the spacecraft maneuvers to an FDAI display of pitch 90°.

(c) A "Preferred" REFSMMAT is used by the CSM for LOI, Lunar-Orbit Plane Change, and TEI. The CSM IMU X-axis aligns normally with the spacecraft X-body axis at the vehicle attitude for ignition with the thrust directed through the center of gravity. At burn ignition, the FDAI displays roll 0°, pitch 0°, and yaw 0°. In the case of the DOI TRIM burn, the IMU X-axis may be aligned 45° from the spacecraft body axis at ignition attitude. The Z-axis is in the plane formed by the X-axis and the position vector and directed down toward the moon.

(d) The "Landing Site" REFSMMAT is used for DOI, PDI, landing, and CSM lunar orbit activities up to the second plane change. This REFSMMAT places the CSM IMU X-axis along the positive lunar radius vector at the landing site at the predicted landing time and places the Z-axis in the direction of flight parallel to the CSM orbital plane. At nominal touchdown, the LM FDAI displays roll 0°, pitch 0°, and yaw 0°.

(e) The "Lift-Off" REFSMMAT is used for all lunar activities after plane change 2, through rendezvous, and LM jettison. This REFSMMAT places the CSM IMU X-axis along the positive lunar radius vector at the landing site at predicted lift-off time, with the Z-axis down range parallel to the CSM orbital plane. At nominal lift-off time, the LM FDAI displays roll 0°, pitch 0°, and yaw 0° with slight differences reflecting actual touchdown yaw and slope tilt angles.

(f) The "Entry" REFSMMAT aligns the IMU X-axis in the local horizontal plane in the direction of flight at entry interface. The entry REFSMMAT is used for MCC-7 and all remaining activities. The Z-axis is down along the negative radius at entry interface. At entry interface, with wings level, local horizontal, heat shield for-

ward, inplane, lift up, heads down, the FDAI displays roll 0°, pitch 180°, and yaw 0°.

2. The CSM external lighting is operated during the rendezvous from lift-off to docking. The running lights only are on from CSM/LM separation to PDI.

3. The time tags on maneuvers in Section 3 indicate the completion time of the maneuvers unless otherwise stated. All maneuver angles are the angles read on the FDAI after the maneuver has been completed.

4. CSM/LM and CSM attitude maneuvers are normally performed at the rate of 0.2°/sec (0.5°/sec after rendezvous and docking) unless other rates are required. LM maneuvers are normally performed at 2°/sec unless otherwise specified.

5. The SIM Bay jett configuration provides single jet control authority in each axis to eliminate RCS contamination of the SIM experiments. See Table 2-8 for the period in lunar orbit when the CSM is in a non-SIM Bay configuration.

6. Undocking is done radially, CSM below, using the soft undocking procedure. The probe is extended its full length with the LM held on by the capture latches. When the rates are nulled, the CSM releases the LM. The separation maneuver is then performed immediately.

7. LM jettison is done radially, CSM below, with final sep pyros providing approximately 0.4 foot per second thrust radial. The separation burn is performed five minutes after jettison, providing one foot per second thrust retrograde.

F. Propulsion Systems

1. In order to conserve SM RCS, the SPS engine is used to "back-up" all nominal LM rendezvous burns. The SPS gimbal motors are not turned on during the normal maneuver preparation.

2. The SPS is always started using a single bank, however, the other bank will be opened 2 to 5 seconds after ignition for burns longer than 6 seconds.

3. Table 2-9 lists the CSM propulsion burns.

III. LM Systems

A. Communications

1. The preferred S-Band communications are:
   (a) Uplink Mode 7 (Voice, Updata)
   (b) Downlink Mode 2 (Voice, TLM-HBR, PRN, BIOMED)

2. The LM DSEA schedule is shown in Table 2-10.

B. ECS

1. The LM contains ambient air at lift-off. During launch the pressure bleeds to zero psia. CSM 02 pressurizes the LM after T&D. After T&D, the LM is isolated and allowed to bleed down via leakage. After the first LM egress, the LM is isolated and allowed to leak down. For the entry into the LM before undocking, the CSM 02 is used to pressurize the LM. This procedure insures a higher percentage of oxygen in the LM at the first EVA.

2. LM 02 is used to pressurize the LM five times; after the SEVA, EVA-1, EVA-2, EVA-3, and after equipment jettison.

C. Guidance Systems

1. The LGC and CMC use the same landing site and lift-off REFSMMATS.

2. The AGS is placed in standby after the "GO" is given for lunar stay at T3.

3. The IMU is powered down and the LGC placed in standby approximately 1 hour after TD until prior to Post EVA-3 cabin cleanup. The LGC is placed in operate several times to update the computer clock.

4. To prevent overheading of the antenna, the rendezvous radar is pointed away from the sun and turned off when no functional use is required.

5. Lunar gravity measurement data are provided by putting the LGC in P00 for 10 minutes prior to surface powerdown, and for approximately 45 minutes prior to the P22 Lunar Surface Navigation before ascent.

6. The LM tracking light is operated continuously in the S/C dark period during rendezvous.

D. Propulsion Systems

1. The APS/RCS interconnect is used during the lunar lift-off and ascent only.

2. Table 2-11 lists the LM propulsion burns.

E. Electrical Power System

1. The LM is powered down to a minimum level to conserve battery consumables on the lunar surface from PDI +1:15 to lift-off -1:15.

2. LM battery management is scheduled on the lunar surface to equalize the usage of the five descent stage batteries. Battery management periods are at 105:35, 118:10, 127:45, 148:50, 160:15 and 169:40.

IV. Procedures

A. CSM - Crew procedures called out in the Flight Plan may be found in the following documents:

1. Apollo Operations Handbook - CSM 112 (AOH), Volume 2
2. Crew Checklists
3. CSM Rendezvous Procedures
4. Photographic and TV Procedures
5. Lunar Landmark Tracking Attitude Studies
6. Lunar Orbit Attitude Sequence for Mission J-1

B. LM - Crew procedures called out in the flight plan may be found in the following documents:

1. Apollo Operations Handbook LM-10, Volume 2
2. Crew Checklists
3. LM Rendezvous Procedures
4. LM Descent/Ascent Procedures
5. Photographic and TV Procedures
6. EVA Procedures
7. Lunar Surface Procedures

V. Synchronization of Ground Elapsed Time (GET)

The realtime GET is synchronized with the Flight Plan GET. In TLC, the GET is synchronized at 53:00 if the difference is more than +1 minute. In lunar orbit the GET is synchronized at 96:50 and at 150:20 if the difference is more than +2 minutes. The time changes are based on the expected difference between realtime and flight plan GET's at the start of lunar orbit revs. The synchronization is performed by a V70 uplink from the ground followed by the crew synchronizing the mission timer to the CMC clock.

VI. Miscellaneous

A. Table 2-12 contains a summary of the expected block data update times.

B. Table 2-13 contains landmark tracking and landing site data.

C. Table 2-14 is a schedule of the P23 cislunar navigation sightings.

D. Table 2-15 contains a film budget for the Mapping Camera.

E. Table 2-16 contains a film budget for the Panoramic Camera.

TABLE 2-1

SUIT WEARING SCHEDULE

ACTIVITY	PRESSURIZED (HARD SUIT)	SUITED (SOFT SUIT)	PARTIAL SUIT WITH-OUT HELMET & GLOVES	SHIRTSLEEVES (ICG)
LAUNCH		ALL		
EARTH ORBIT THRU S-IVB EVASIVE MNVR			ALL	
SIM DOOR JETTISON	ALL			
TLC & TEC EXCEPT TEC EVA				ALL
LM ACTIVATION			ALL*	
UNDOCKING -40MIN TO UNDOCKING +5MIN		CDR & LMP*	CMP**	
UNDOCKING +5MIN THRU CIRC			ALL*	
CIRC TO TD - 1 HR			CDR & LMP*	CMP
TD - 1 HR TD +15MIN		CDR & LMP*		CMP
LUNAR STAY EXCEPT SEVA & EVA				ALL
SEVA* & SURFACE EVA's	CDR & LMP			CMP
LIFTOFF -25MIN THRU DOCKING		CDR & LMP	CMP	
LM JETT THRU TEI				ALL
TEC EVA	ALL			
ENTRY				ALL

*The CDR & do not wear the LCG during these phases.
**The CMP dons helmet and gloves for latch cocking and then doffs.

TABLE 2-2

CREW BIOMED HARNESS WEARING SCHEDULE
(7/26)

Time, g.e.t.	CDR	CMP	LMP
Prelaunch	on	on	on
13:30	off	off	
26:10	on		off
37:30	off	on	
49:00		off	on
60:00	on		off
71:15	off	on	
85:50		off	on
97:05	on		
97:30		on	
107:19			off*
117:50			on*
127:50	off*		
139:18	on*		
149:30			off*
159:45			on*
178:05	off	off	
189:00	on		off
202:14	off	on	
211:42		off	on
226:40		on	off
240:50	on		on
243:25		off	off
249:30	off		on
261:38		on	off
274:41	on	off	
288:30	off		on

*Crew option - the CDR & LMP may elect to wear their biosensors throughout the period of lunar surface activities.

TABLE 2-3
(7/26)
SC COVERAGE BY MSFN STATIONS USING 85FT/210FT DISH ANTENNA

	GOLDSTONE (GDS)		PARKS (PKS)		HONEYSUCKLE (HSK)		MADRID (MAD)	
	AOS	LOS	AOS	LOS	AOS	LOS	AOS	LOS
EARTH ORBIT	01:28	01:33						
TLI (2:50)	02:57	16:09						
							03:16	08:01
			13:15	21:21				
					10:45	23:49		
TRANSLUNAR COAST							22:27	32:47
	30:00	40:31						
					34:59	48:19		
			37:45	45:52				
							46:52	56:54
	54:17	64:36						
					59:03	72:29		
			61:35	70:03				
							71:05	78:23
LOI (78:31)	78:20	78:23						
TEI (233:46)							223:58	229:18
	227:58	237:05						
					231:34	246:11		
			234:18	243:30				
TRANSEARTH COAST							244:55	253:13
	252:13	261:04						
					255:35	270:35		
			258:24	267:47				
							269:05	277:13
	276:56	285:12						
					279:55	299:52		
EI (294:58)			282:56	292:49				

TABLE 2-3 (CONT)

SC COVERAGE BY MSFN STATIONS USING 85FT/210FT DISH ANTENNA

REV	GET AT END OF REV	GOLDSTONE (GDS)		PARKS (PKS)		HONEYSUCKLE (HSK)		MADRID (MAD)	
LOI	78:31	AOS	LOS	AOS	LOS	AOS	LOS	AOS	LOS
1	80:41	78:55	80:20					78:56	80:20
2	82:49	81:03	82:28						
3	84:43	83:16	84:21			83:16	84:21		
4	86:39	85:09	86:14	85:43	86:14	85:09	86:14		
5	88:30	87:03	88:08	87:03	88:08	87:03	88:08		
6	90:23			88:57	90:02	88:57	90:02		
7	92:17			90:50	91:56	90:50	91:56		
8	94:11			92:44	93:49	92:44	93:49		
9	96:04					94:38	95:43	95:42	95:42
10	97:58					96:31	97:10	96:31	97:36
11	99:52							98:24	99:30
12	101:45							100:18	101:23
13	103:43	103:19	103:21					102:10	103:22
14	105:41	104:08	105:20					104:08	105:20
15	107:40	106:06	107:18						
16	109:38	108:04	109:16			108:04	109:16		
17	111:36	110:02	111:14	110:18	111:14	110:02	111:14		
18	113:34	112:01	113:13	112:00	113:13	112:00	113:13		
19	115:32			113:59	115:11	113:59	115:11		
20	117:30			115:56	117:09	115:56	117:09		
21	119:28			117:55	119:07	117:55	119:07		
22	121:27					119:53	121:06	120:46	121:05
23	123:25					121:51	122:09	121:51	123:03
24	125:23							123:49	125:01
25	127:21							125:47	126:59
26	129:19	128:18	128:58					127:46	128:58
27	131:17	129:43	130:56					129:44	129:57

TABLE 2-3 (CONT)

SC COVERAGE BY MSFN STATIONS USING 85FT/210FT DISH ANTENNA

REV	GET AT END OF REV	GOLDSTONE (GDS)		PARKS (PKS)		HONEYSUCKLE (HSK)		MADRID (MAD)	
		AOS	LOS	AOS	LOS	AOS	LOS	AOS	LOS
28	133:15	131:42	132:54			132:15	132:54		
29	135:14	133:40	134:52			133:40	134:52		
30	137:12	135:38	136:50	135:38	136:50	135:38	136:50		
31	139:10	137:26	137:57	137:36	138:48	137:36	138:48		
32	141:08			139:34	140:47	139:34	140:47		
33	143:06			141:33	142:45	141:32	142:45		
34	145:04			143:31	144:28	143:31	144:43		
35	147:03					145:28	146:41	145:48	146:40
36	149:01							147:27	148:39
37	150:59							149:25	150:37
38	152:57							151:23	152:35
39	154:55	153:21	154:33					153:21	154:33
40	156:53	155:19	156:31						
41	158:51	157:17	158:29			157:17	158:29		
42	160:50	159:15	160:28	159:50	160:28	159:15	160:28		
43	162:48	161:14	162:26	161:13	162:26	161:13	162:26		
44	164:46			163:12	164:24	163:12	164:24		
45	166:44			165:10	166:22	165:10	166:22		
46	168:42			167:08	168:21	167:08	168:21		
47	170:40			169:06	169:24	169:06	170:19		
48	172:39					171:04	172:14	171:04	172:16
49	174:37							173:00	174:14
50	176:35							175:00	176:13
51	178:33							176:58	178:11
52	180:31	178:56	180:09					178:57	179:29
53	182:29	180:54	182:07			181:53	182:07		
54	184:27	182:53	184:05			182:52	184:05		
55	186:25	184:51	186:03	184:50	186:03	184:50	186:03		
56	188:23	186:49	187:40	186:48	187:59	186:48	187:59		

TABLE 2-3 (CONT)

SC COVERAGE BY MSFN STATIONS USING 85FT/210FT DISH ANTENNA

REV	GET AT END OF REV	GOLDSTONE (GDS)		PARKS (PKS)		HONEYSUCKLE (HSK)		MADRID (MAD)	
		AOS	LOS	AOS	LOS	AOS	LOS	AOS	LOS
57	190:22			188:47	189:59	188:47	189:59		
58	192:20			190:45	191:57	190:45	191:57		
59	194:17			192:42	193:55	192:43	195:55		
60	196:16					194:41	195:54	195:49	195:53
61	198:14					196:39	197:09	196:39	197:31
62	200:12							198:37	199:49
63	202:10							200:35	201:47
64	204:08	203:16	203:45					202:33	203:46
65	206:06	204:31	205:43						
66	208:04	206:29	207:41			206:53	207:41		
67	210:02	208:27	209:39			208:27	209:39		
68	212:00	210:26	211:38	210:25	211:37	210:25	211:37		
69	213:58	212:23	212:41	212:23	213:35	212:23	213:35		
70	215:56			214:21	215:33	214:21	215:33		
71	217:54			216:19	217:32	216:19	217:32		
72	219:52			218:18	219:18	218:18	219:30		
73	221:51					220:15	221:28	220:37	221:28
TEI	223:46							222:13	223:25

TABLE 2-4
APOLLO 15 TV SCHEDULE
(7/26)

DAY	DATE	CDT	GET HR:MIN	DURATION HR:MIN	ACTIVITY SUBJECT	VEHICLE	STATION
Monday	26 July	11:59 AM	03:25	00:25	TRANSPOSITION & DOCKING	CSM	GDS
Tuesday	27 July	6:19 PM	33:45	00:45	INTERIOR & IVT TO LM	CSM	GDS
Friday	30 July	7:32 AM	94:58	00:10	LANDING SITE	CSM	HSK
Saturday	31 July	8:34 AM	120:00	06:40*	LUNAR SURFACE EVA-1	LM/LRV	HSK/MAD
Sunday	1 Aug	6:04 AM	141:30	06:30*	LUNAR SURFACE EVA-2	LRV	PKS/HSK/MAD
Monday	2 Aug	2:44 AM	162:10	05:40*	LUNAR SURFACE EVA-3	LRV	PKS
Monday	2 Aug	12:04 PM	171:30	00:15	LM LIFTOFF	LRV	MAD
Monday	2 Aug	1:44 PM	173:10	00:06	RENDEZVOUS	CSM	MAD
Monday	2 Aug	2:05 PM	173:31	00:05	DOCKING	CSM	MAD
Thursday	5 Aug	10:41 AM	242:07	00:30	TRANSEARTH EVA	CSM	HSK/PKS
Friday	6 Aug	2:54 PM	270:20	00:30	PRESS CONFERENCE	CSM	MAD

*SEE SECTION 3 FOR DETAILED START/STOP TIMES DURING EVA

TABLE 2-5

FUEL CELL PURGE, URINE DUMP AND WASTE WATER DUMP SCHEDULE

(7/26)

GET (HR:MIN)	O_2 FUEL CELL PURGE & WASTE H_2O DUMP		URINE DUMP		H_2 FUEL CELL PURGE	
	NUMBER	ΔTIME (HR:MIN)	NUMBER	ΔTIME (HR:MIN)	NUMBER	ΔTIME (HR:MIN)
11:40	1	11:40	1	11:40*		
30:40	2	19:00	2	19:00*	1	30:40
56:15	3	25:35	3	25:35*		
73:15	4	17:00	4	17:00*	2	42:35
97:38	5	24:23	5	24:23		
125:20	6	27:42	6	27:42	3	52:05
146:59	7	21:39	7	21:39		
170:25	8	23:26	8	23:26	4	45:05
193:58	9	23:33	9	23:33		
221:41	10	27:43	10	27:43	5	51:16
238:18			11	16:37		
244:00	11	22:19				
272:27			12	32:54		
272:40	12	28:40			6	50:59

*URINE DUMP NOT CRITICAL PERFORM AT THE SAME TIME AS WASTE H_2O DUMP

TABLE 2-6

BATTERY CHARGE SCHEDULE
(7/26)

GET HR:MIN	BATTERY
4:30	B
25:10	A
31:00 (IF MCC 2 IS PERFORMED)	A
50:00	B
120:30	B
141:51	A
189:02	B
214:24	A
239:02	B
270:30	A

TABLE 2-7

CSM LiOH CANISTER CHANGE SCHEDULE (7/26)

CHANGE NO.	APPROXIMATE GET, HR:MIN	APPROXIMATE AT, HR	INSTALL		REMOVE & STOW	
			CANISTER	POSITION	CANISTER NO.	STOWAGE LOCATION
1	12:10	14	3	A	1	B5
2	26:00	12	4	B	2	B5
3	38:00	13	5	A	3	B5
4	51:00	11	6	B	4	B5
5	61:45	14	7	A	5	B6
6	75:55	10	8	B	6	B6
7	85:55	12	9	A	7	B6
8	98:08	24	10	B	8	B6
9	122:00	24	11	A	9	A9
10	146:00	23	12	B	10	A9
11	169:00	11	13	A	11	A9
12	179:38	12	15	B	12	A3
13	191:59	12	16	A	13	A3
14	203:30	12	17	B	15	A3
15	215:27	11	18	A	16	A3
16	226:35	12	19	B	17	A4
17	238:57	12	20	A	18	A4
18	251:00	12	21	B	19	A4
19	263:02	12	22	A	20	A4
20	274:57	14	23	B	21	A5
21	288:35		24	A	22	A5

LM LiOH CARTRIDGE CHANGE:GET (HR:MIN) 161:30 & 151:10

TABLE 2-8

LUNAR ORBIT NON-SIM BAY RCS JET CONFIGURATION PERIODS
(7/26)

REASON	FROM	TO	TOTAL	ULLAGE
LOI TRACKING & LOI THRU BAILOUT	74:00	83:55	9:55	16 SEC (DOI), 16 SEC (BAILOUT)
LM ACT DAY*	94:58	105:40	10:42	14 SEC (CIRC)
UV & DIM LIGHT PHOTOGRAPHY	123:15	125:30	2:15	NONE
LOPC 1**, RNDZ, & DOCKING	164:08	174:00	9:52	13 SEC (LOPC1)
LM JETT & CSM SEP	176:16	177:45	1:29	NONE
SHAPING BURN & TEI	222:42	224:03	1:21	13 SEC

NOTES:

SIM BAY SINGLE JET AUTHORITY WILL BE USED IN ALL LUNAR ORBIT PERIODS EXCEPT AS IDENTIFIED ABOVE

SIM BAY SINGLE JET AUTHORITY INHIBITS ALL JETS EXCEPT A1 & C2 or B2 & D1 FOR ROLL, A3 & C4 FOR PITCH AND B3 & D4 FOR YAW CONTROL

*AN SPS DOI TRIM MAY BE REQUIRED WHICH WILL REQUIRE AN ULLAGE FOR ~14 SEC.

**IF Y&Z TRIMS ARE REQUIRED FOR LOPC 1, THE CMP WILL ROLL THE CSM SO THAT JETS B1 AND A2 ARE NOT USED.

TABLE 2-9
CSM BURN/EVENT SCHEDULE
(7/26)

BURN/ MNVR	GETI/ BURN TIME	ΔVT (FPS)	ULLAGE/ Δt (FPS)	REFSMMAT	RESULTANT HA/HP(NM)	REMARKS
TLI	2:49:58 5 MIN 56 SEC	10421.0		LAUNCH		S-IVB BURN
CSM EJECTION	4:16:00 3 SEC	0.4	-----	LAUNCH		RCS BURN
MCC-1	11:55:54	-----	-----	PTC		NOM ZERO
MCC-2	30:55:54	-----	-----	PTC		NOM ZERO
MCC-3	56:31:14.7	-----	-----	PTC		NOM ZERO
MCC-4	73:31:14.7	-----	-----	PTC		NOM ZERO
LOI	78:31:14.7 6 MIN 32 SEC	2997.9	NOT REQ'D	LOI	HA 170.0 HP 58.3	SPS BURN
DOI	82:39:32.6 22.9 SEC	207.6	4 JET 16 SEC	LDG SITE	HA 58.4 HP 9.6	SPS BURN
BAILOUT BURN	82:26:16.9 10.2 SEC	94.0	4 JET 16 SEC	LDG SITE	HA 71.0 HP 3.9	SPS BURN
DOI TRIM	96:17:00			LS OR PC AS REQ'D		SPS BURN NOM ZERO
UNDOCK & SEP	100:13:56.1 3.3 SEC	1.0	-----	LDG SITE	HA 59.8 HP 8.4	RCS BURN
CSM CIRC	101:34:55.1 3.9 SEC	70.8	4 JET 14 SEC	LDG SITE LDG SITE	HA 64.7 HP 54.5	SPS BURN
LOPC	165:12:50.6 16.5 SEC	308.6	4 JET 13 SEC	PLANE CHANGE	HA 59.8 HP 59.2	SPS BURN
LM JETT	177:20:45	~0.4		LIFTOFF		NO BURN
CSM SEP	177:25:45 6.4 SEC	1.0	-----	LIFTOFF	HA 59.9 HP 58.7	RCS BURN
CSM SHAPE	221:25:52 3.4 SEC	64.2	4 JET 13 SEC	TEI	HA 77.6 HP 57.5	SPS BURN
TEI	223:46:06 2MIN 17.8 SEC	3049.7	4 JET 13 SEC	TEI		SPS BURN
MCC-5	238:46:06	-----	-----	PTC		NOM ZERO
MCC-6	272:58:20	-----	-----	PTC		NOM ZERO
MCC-7	291:58:20	-----	-----	ENTRY		NOM ZERO
EI	294:58:20			ENTRY		NO BURN

TABLE 2-10

APOLLO 15/LM - 10 DSEA SCHEDULE (7/26)

ACTIVITY	MODE	GET (HR:MIN)	RECORD TIME X DUTY CYCLE = TAPE USED (HR:MIN)	ACCUM. TAPE USED (HR:MIN)
LM COMM ACTIVATION	ICS/PTT	98:24	5:56 X 100% = 5:56	5:56
PDI PREP	(VOX)	104:20		
PDI PREP	VOX	104:20	0:29 X 63% = 0:17	6:13
POST TOUCHDOWN	OFF	104:49		
EVA-1 FINAL PREP	VOX	119:10	0:50 X 63% = 0:32	6:45
	OFF	120:00		
EVA-2 FINAL PREP	VOX	140:28	0:50 X 63% = 0:32	7:17
	OFF	141:18		
EVA-3 FINAL PREP	VOX	161:07	0:50 X 63% = 0:32	7:49
	OFF	161:57		
ASCENT COMM (L/O-17)	ICS/PTT	171:20	0:15 X 100% = 0:15	8:04
LIFTOFF - 2 MIN	(VOX)	171:35		
LIFTOFF - 2 MIN	VOX	171:35	0:10 X 63% = 0:06	8:10
INSERTION	(ICS/PTT)	171:45		
INSERTION	ICS/PTT	171:45	1:50 X 100% = 1:50	10:00*
POST-DOCKING	OFF	173:35		

*END OF TAPE

TABLE 2-11

LM BURN SCHEDULE
(7/26)

BURN/ MNVR	GETI/ BURN TIME	ΔV_T (FPS)	ULLAGE/ ΔV (FPS)	REFSMMAT	RESULTANT HA & HP	REMARKS
PDI	104:28:54.8 12 MIN 2.1 SEC	6700.0	4 JET 7.5 SEC	LDG SITE	---	DPS BURN
ASCENT	171:37:23.9 7 MIN 15.2 SEC	6055.5	NONE	LIFT-OFF	HA 45.6 HP 9.0	APS BURN
TPI	172:29:39.1 2.6 SEC	73.6	4 JET 10.0 SEC	LIFT-OFF	HA 61.5 HP 43.9	APS BURN
LM DEORBIT	179.06:22.7 1 MIN 22.3 SEC	195.4	N/A	LIFT-OFF	HA 62.0 HP-52.8	RCS BURN

TABLE 2-12
APOLLO 15 RETURN TO EARTH BLOCK DATA SCHEDULE (7/26)

DATA	GET UPDATE	GETI	PAD TYPE
TLI+90	1:30	4:16:34.32	Complete P-30
LO+8	1:30	8:00:00	P-37
LO+15	6:00	15:00:00	P-37
LO+25	13:30	25:00:00	P-37
LO+35	13:30	35:00:00	P-37
LO+45	13:30	45:00:00	P-37
LO+60	13:30	60:00:00	P-37
LOI-5	35:00	73:29:25.00	Complete P-30 (docked)
FLYBY PER+2	72:00	80:28:20.99	ABBRR-30 (docked)
TEI-4	76:50	87:12:24.45	ABBRR-30
TEI-5	81:40	88:25:54.66	
TEI-12	85:38	101:47:06.57	
TEI-19	95:25	115:28:46.69	
TEI-26	108:57	129:21:36.43	
TEI-37	126:44	150:57:57.96	
TEI-45	150:20	166:38:52.24	
TEI-52	163:35	180:20:15.47	
TEI-58	179:36	192:13:36.08	
TEI-60	189:05	196:11:15.16	
TEI-62	193:42	200:08:54.90	
TEI-64	196:50	204:06:34.11	
TEI-69	203:20	213:49:29.41	
TEI-71	213:28	217:47:07.83	
TEI-73	216:54	221:43:59.16	ABB P-30
PREL. $\overline{\text{TEI-74}}$	220:22	223:43:57.86	Complete P-30
NOM $\overline{\text{TEI-74}}$	222:43	223:43:57.86	Complete P-30
TEI-75	222:43	225:43:00.96	ABB P-30

Data are based on MCS IN71-FM112,S/C OT, Vol II., dated March 26, 1970.

NOTES:

1. All block data maneuvers are to the MPL line except:
   a. TLI+90^m abort is to the AOL.
   b. Nominal TEI (TEI_{74}) is to EOM target (λ= 158°W).
   c. TEI_{75} is also to EOM target (λ = 158°W).

TABLE 2-12 (CONT)

2. Pass flyby early if pericynthion is not clear of moon.
3. The flyby and PER+2 maneuvers are docked. All other aborts are undocked.
4. PER+2 fast return to MPL assumes MCC_4.
5. TEI_4 assumes LOI and no DOI.
6. TEI_5 assumes DOI.
7. TEI_{12} assumes no circ.
8. TEI_{19} assumes circ but no LOPC.
9. TEI_{45} assumes no LOPC.
10. TEI_{52} assumes LOPC.
11. TEI_{73} assumes no shaping maneuver.
12. All TEI's are constrained to 40° inclination.

TABLE 2-13

LANDMARK AND LANDING SITE DATA

SITE	REV	LATITUDE DEG	LONGITUDE DEG	ALTITUDE** NM
J-1	3 & 10	25.958 N	11.3278 E	0.000
15-1	12* 13	26.065 N	3.671 E	-1.935
15-2	12* 47	25.991 N	3.613 E	-1.744
15-3	12	26.039 N	3.496 E	-1.795
15-4	12*	26.352 N	3.323 E	-1.867
15-5	12*	25.809 N	2.808 E	-1.854
15-6	12*	25.541 N	2.818 E	-1.877
HADLEY		26.074 N	3.654 E	-1.917

** Difference between landmark radius vector and 938.4935 NM (Mean Lunar Radius)

* Landing Site Landmark to be determined in real-time

TABLE 2-14

P23 CISLUNAR NAVIGATION (7/26)

GET	STAR/HORIZON	COMMON NAME
8:00	1/ENH	ALPHERATZ
	45/EFH	FOMALHAUT
	131/ENH	BETA ARIETIS
	224/EFH	MARKAB
236:20	57/EFH	BELLA TRIX
	50/ENH	POLLUX
	13/EFH	CAPELLA
251:10	50/ENH	POLLUX
	11/EFH	ALDEBARAN
	13/EFH	CAPELLA
263:15	142/EFH	ZETA TAURI
	11/EFH	ALDEBARAN
	13/EFH	CAPELLA
267:48	60/EFH	EL NATH
	13/EFH	CAPELLA
	21/ENH	ALPHARD
273:05	60/EFH	EL NATH
	13/EFH	CAPELLA
	21/ENH	ALPHARD
276:00	60/EFH	EL NATH
	13/EFH	CAPELLA
	21/ENH	ALPHARD
289:00	40/MFH	ALTAIR
	221/MFH	DELTA CAPRICORNI
	223/MNH	BETA PEGASI
	224/MNH	MARKAB
	126/MNH	GAMMA PEGASI
292:02	126/MNH	GAMMA PEGASI
	120/MFH	ALPHA GRUIS
	40/MFH	ALTAIR

TABLE 2-15
MAPPING CAMERA FILM BUDGET (7/26)

REV	START		STOP		REMARKS	FRAMES USED	FILM USED FT	FILM REMAINING FT
	GET (H:M:S)	LONG(DEG)	GET (H:M:S)	LONG(DEG)				
3/4	84:42:35	179.6W (E TERM)	84:54:15	142.5°E		36	15	1445.0
15	105:52:20	144.5E	106:17:20	74.0°E		59	24.6	1420.4
15/16	106:56:15	49.8W	108:54:40	50.8W	FULL REV	295	122.9	1297.5
22/23	119:33:35	162.7E (E TERM)	121:32:02	161.7E (E TERM)	FULL REV	297	123.8	1173.7
23	121:37:04	143.7E	122:31:28	18.8W (W TERM)	FORWARD OBLIQUES	118	49.2	1124.5
27	129:26:27	157.7E (E TERM)	130:26:00	22.8W (W TERM)	LIGHTSIDE PASS	152	63.4	1061.1
33/34	141:16:34	151.6E (E TERM)	143:15:02	150.6E (E TERM)	FULL REV	298	124.2	936.9
34	143:15:02	150.6E (E TERM)	144:09:00	11.8W	BKWD OBLIQUES	118	49.2	887.7
35	145:13:30	149.6E (E TERM)	146:12:55	30.8W (W TERM)	NORTH OBLIQUES	130	54.2	833.5
37/38	150:08:58	32.9W (W TERM)	152:08:20	33.9W (W TERM)	FULL REV	303	126.4	707.1
44	162:59:44	140.6E (E TERM)	163:59:10	39.9W (W TERM)	LIGHTSIDE PASS	152	63.4	643.7
50	174:50:06	134.6E (E TERM)	175:49:22	45.9W (W TERM)	LIGHTSIDE PASS	152	63.4	580.3
58/59	190:37:25	126.6E (E TERM)	192:35:51	125.6E (E TERM)	FULL REV	303	126.4	453.9
62/63	199:30:22	57.9W (W TERM)	201:28:11	58.9W (W TERM)	FULL REV	303	126.4	327.5
69	212:19:43	115.6E (E TERM)	214:18:10	114.6E (E TERM)	FULL REV	313	130.5	197.0
71	216:16:37	113.6E (E TERM)	217:15:47	66.9W (W TERM)	SOUTH OBLIQUES	130	54.2	142.8
71/72	217:20:00	82.9W (W TERM)	219:14:14	67.9W (W TERM)		292	121.7	21.1

TABLE 2-17

CRYO MANAGEMENT SCHEDULE				
GET (HRS:MIN)	(TANK NUMBERS)			
	OXYGEN HEATERS		HYDROGEN HEATERS	
	AUTO	OFF	AUTO	OFF
0:00	1,2	3	1,2	3*
13:25	3	1,2	1,2,3	
25:18			3	1,2
74:20	1,2	3	1,2	3
95:00	3	1,2		
109:00	1,2	3		
190:00	3	1,2		
194:00	1,2	3		
218:00	3	1,2		
222:00	1,2	3		
241:25	1,2,3			
243:30	1,2	3		

* Manual Mode

TABLE 2-18

PDI 2 ABORT PADS

I

PURPOSE		PDI$_2$ PAD					
GETI PDI	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	

J

PURPOSE		PDI$_2$ ABORT EARLY PAD					
GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	

K

PURPOSE		PDI$_2$ ABORT LATE PAD					
GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	

E, F, G, H

PURPOSE		NO PDI$_2$ + 12 ABORT					
E GETI N33	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	
F N84 LOCAL VERT	ΔVX					↓	
	ΔVY					↓	
	ΔVZ					↓	
G GETI CSI N11	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	
H GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	

L, M

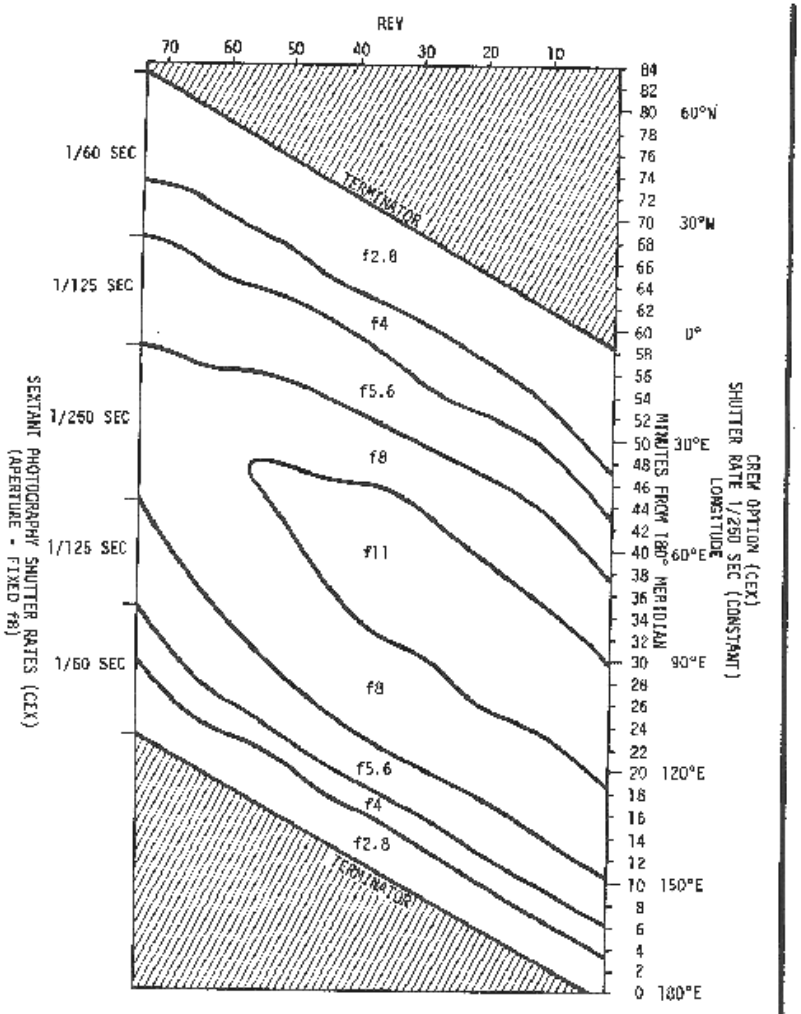
PURPOSE		T2-2 ABORT PAD					
L GETI T2	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	
M GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	

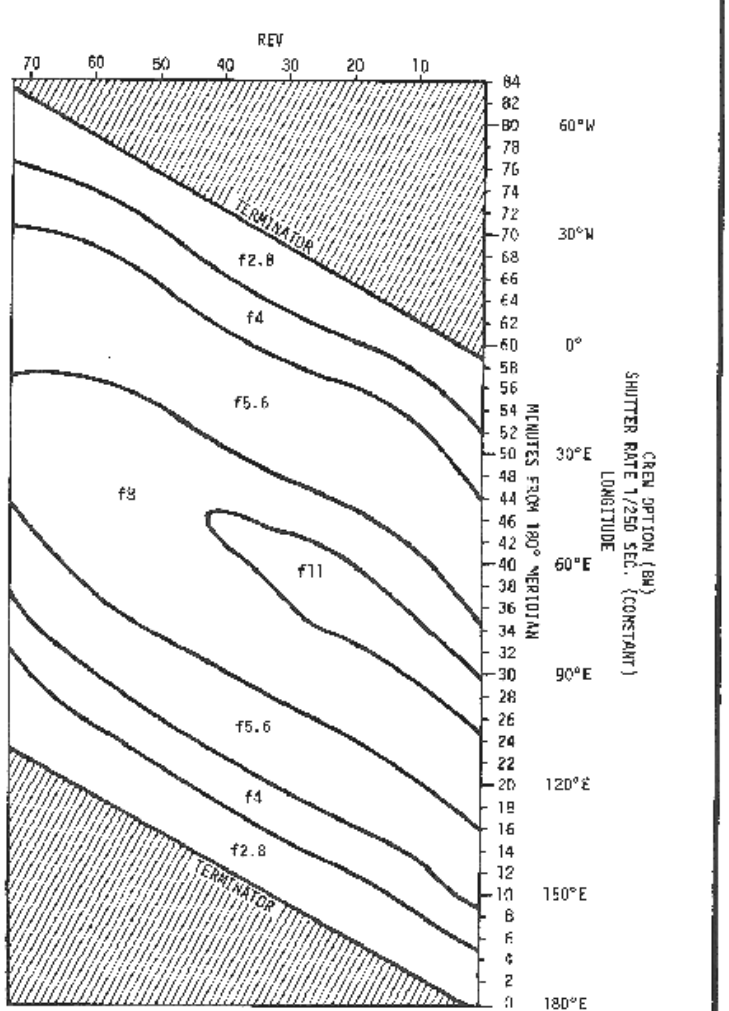
N

PURPOSE		T3 ABORT PAD					
GETI T3	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			↓	

TABLE 2-19

FLIGHT PLAN CREW OPTION PHOTO CHARTS





FLIGHT PLAN

MCC-H

0834 CDT

00:00
(31102)
(01111)

:10

:20

00:30

:40

:50

01:00

MSFN

CYI

CRO

LIFT-OFF JULY 26, 1971 | CSM LAUNCH CHECKLIST

SECO

INSERTION AND SYSTEM CHECKS PAGE L/2-11

UPDATE TO CSM
Z TORQUING ANGLE

P52 IMU REALIGN
OPTION 3 REFSMMAT
(LAUNCH ORIENT)

REPORT: GYRO TORQUING ANGLES

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

NOTES

L/O CREW POSITIONS
LEFT COUCH - CDR
CENTER COUCH - CMP
RIGHT COUCH - LMP
AT SECO+20 SEC, S-IVB MNVRS TO LH AND INITIATES ORB RATE (HEADS DOWN)

THE DAP LOAD WILL BE SHOWN WHEN APPLICABLE IN THE TIME COLUMN OR AS A NOTE TO INDICATE STATUS

THE PANORAMIC AND MAPPING CAMERAS WILL BE PLACED IN BOOST AND STBY MODES RESPECTIVELY FOR LAUNCH THROUGH TD&E, AND ALL SPS BURNS.

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	00:00 - 01:00	1/E.O.	3-1

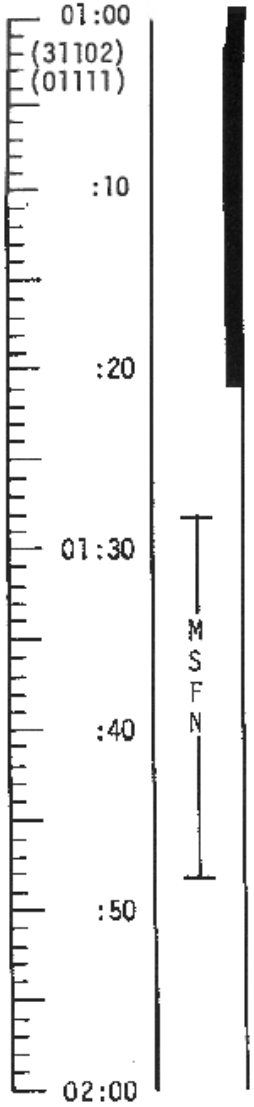
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0934 CDT

NOTES



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

UV PHOTOS OF CLOUD COVER, LAND MASSES, OR WATER AS AVAILABLE

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

TLI PREPARATION PAGE L/2-23

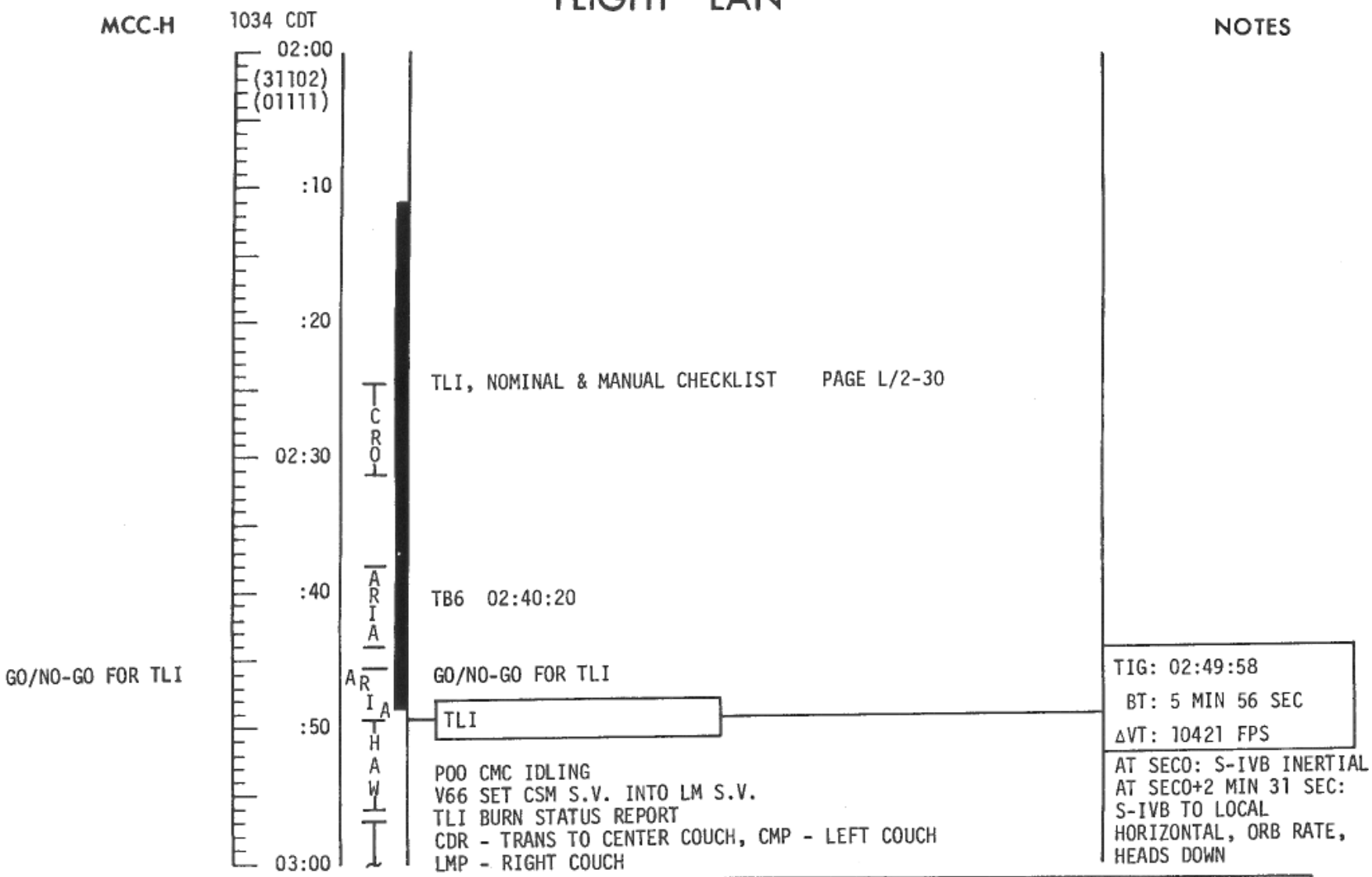
PYRO ARM

AS A GENERAL RULE, EXCEPT DURING TEC, UNDOCKED PERIODS, AND WHILE THE LM IS ON THE LUNAR SURFACE, MCC-H WILL UPLINK THE STATE VECTOR TO THE CSM SLOT AND TRANSFER IT VIA V66 TO THE LM SLOT IN ORDER TO HAVE REDUNDANT STATE VECTORS ONBOARD.

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	01:00 - 02:00	1/E.O.	3-2

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	02:00 - 03:00	1/TLC	3-5

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1134 CDT

DUMP DSE

GO/NO-GO FOR T&D

03:00

(11103)
(01111)

:10

:20

(11102)
(01111)

03:30

:40

:50

04:00

MSFN

TV

WASTE STOWAGE VENT - CLOSED PAGE L/2-26
NORMAL SC/BOOSTER SEPARATIONS PAGE L/3-1
DIRECT O_2 VLV - OPEN, UNTIL CABIN IS 5.7 PSI, THEN CLOSE

V48 (11103)(01111)

S-IVB MNVRS TO SEP ATT 03:10:54

(359,077,320) OMNI C

GO/NO-GO FOR TRANSPOSITION AND DOCKING
CSM SEPARATION PREPARATION PAGE L/3-1

CSM/S-IVB SEP 03:21

CSM MNVR TO DOCK ATT (301,257,040) (03:29)
V48 (11102)(01111) HGA P -22, Y 276, BEAM WIDE, REACQ
TV (GDS) 3:25 TO 3:50 CM4/TV - PEAK, BRKT (f22)
VISUALLY INSPECT AND PHOTOGRAPH S-IVB AND LM

DOCK 03:31

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

S-IVB NON-PROPULSIVE VENT START (03:55:54)

NOTES

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

DURING TLC, HGA IS REQUIRED FOR TD&E, TV TRANSMISSION, SIM DOOR JETTISON, DAC/SXT PHOTO TEST, FILM CYCLING, CAMERA TEMP SENSING AND AND MCC'S. THE ANTENNA WILL BE STOWED AT OTHER TIMES. DURING PTC MCC-H WILL COMMAND OMNI SELECTION.

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	03:00 - 04:00	1/TLC	3-6

FLIGHT \NNING BRANCH

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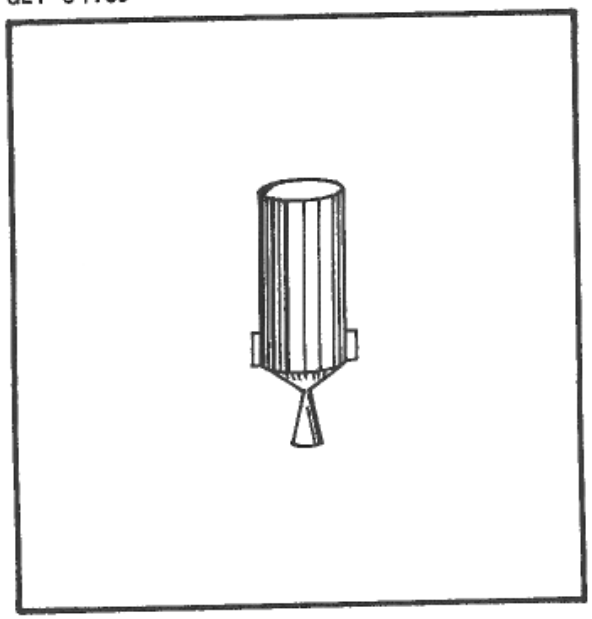
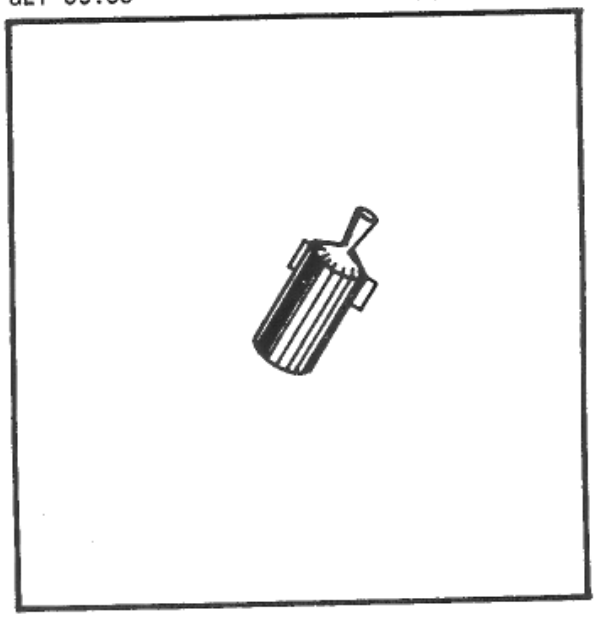
FLIGHT PLAN

GET 04:39 FOV 5°



S-IVB APS EVASIVE INITIATION

GET 05:00 FOV 1°



S-IVB LOX DUMP INITATION

FLIGHT PLAN

MCC-H	1234 CDT		NOTES
GO/NO-GO FOR PYRO ARM AND CSM/LM EJECTION	04:00 (21101) (X1111)	V48 (21101) (X1111) GO/NO-GO PYRO ARM (CUE MSFN) LOGIC ON PYRO ARM P47 THRUST MONITOR	SPRING ACTUATOR ΔV ~ 0.8 FPS. 5 SEC AFTER EJECTION THERE IS A 4 JET RCS -X TRANSLATION FOR 3 SEC (ΔV ~ 0.4 FPS). TOTAL ΔV ~ 1.2 FPS.
	:10	S-IVB NON-PROPULSIVE VENT COMPLETE (04:10:54) PHOTOGRAPH LM EJECTION	
TLI CUTOFF + 1 HR 20 MIN		CSM/LM EJECTION	TIG: 04:16 BT: 3 SEC ΔVT: 0.4 FPS ULLAGE: NONE ORBIT: N/A
	:20	P00, V66 SET CSM S.V. INTO LM S.V. REPORT: GOOD EJECTION V49 MNVR TO VIEW S-IVB IN HATCH WINDOW BY 04:29 (090,257,355) OMNI A REPORT: GO FOR S-IVB YAW MNVR VISUALLY INSPECT S-IVB/IU THERMAL SHROUD	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 INITIATION	04:30	S-IVB YAW MNVR 04:29 (GROUND COMMAND) CHARGE BATTERY B	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.
GO/NO-GO FOR S-IVB EVASIVE BURN		REPORT: GO FOR S-IVB EVASIVE BURN	
DUMP DSE	:40	S-IVB APS EVASIVE BURN 04:39 (GROUND COMMAND) V49 MNVR TO P52 ATTITUDE (05:25) (215,084,315) DOFF AND STOW PGA'S HGA P -60, Y 76 TRANSFER ITEMS OUT OF PGA POCKETS TRANSFER PRD TO CWG	THE S-IVB YAW MNVR WILL BE PERFORMED NOMINALLY AT LM EJECTION +13 MIN
	:50	S-IVB MNVRS TO PROPELLANT DUMP ATT (04:49) REPORT: LM/CM ΔP	
		S-IVB CONTINUOUS H_2 VENT-ON (04:56)	EVASIVE BURN ΔV ~ 9.4 FPS
	05:00		

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	04:00 - 05:00	1/TLC	3-9

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1334 CDT

05:00 (21101) (X1111)

S-IVB LOX DUMP (05:00)

UPLINK TO CSM
DESIRED ORIENTATION
(PTC)
ZERO TRUNNION BIAS

:10

:20

ATT DEADBAND - MIN
RATE - LOW
BMAG (3) - ATT 1/RATE 2
SC CONT - SCS

M
S
F
N

05:30

P52 IMU REALIGN
OPTION 3 REFSMMAT
(LAUNCH ORIENT)

REPORT: GYRO TORQUING ANGLES

:40

P52 IMU REALIGN
OPTION 1 PREFERRED
(PTC ORIENT)

:50

SC CONT - CMC
BMAG (3) - RATE 2

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

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

06:00

NOTES

LOX DUMP ΔV ~ 28 FPS

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

STARS_____,_____
SA_____,_____
TA_____,_____

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

S-IVB APS MCC-1
GET ~05:45
ΔV ~30 FPS

P37 PAD ASSUMES
NO MCC-1

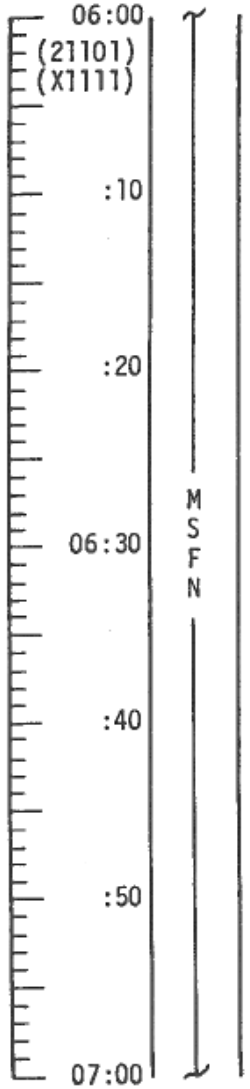
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	05:00 - 06:00	1/TLC	3-10

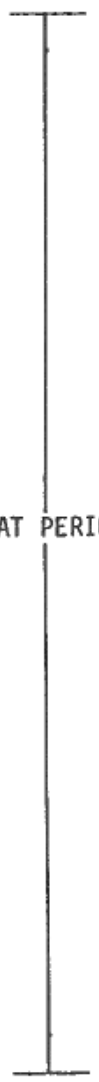
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1434 CDT





NOTES

EARTH DISTANCE
~ 25,527 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	06:00 - 07:00	1/TLC	3-11

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1534 CDT

NOTES

07:00
(21101)
(X1111)

:10

:20

07:30

:40

:50

08:00

MSFN

CSM SYSTEMS CHECKLIST

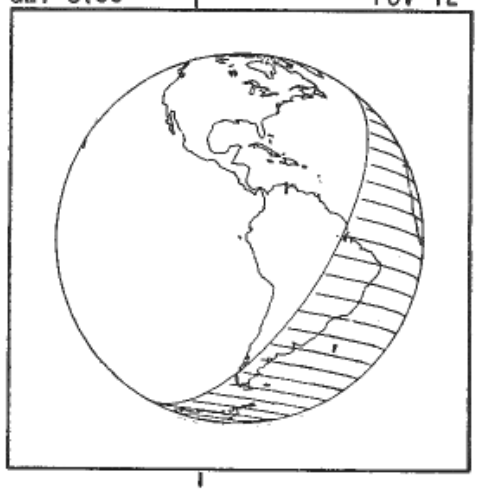
DEACTIVATE PRIMARY EVAP PAGE S/1-13

CSM G&C CHECKLIST

ΔV TEST & NULL BIAS CHECK PAGE G/2-5
REPORT: BIAS

GET 8:00

FOV 12°



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	07:00 - 08:00	1/TLC	3-12

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1634 CDT

		NOTES
08:00	V49 MNVR TO OPTICS CALIBRATION ATTITUDE (08:06)	EARTH DISTANCE
(21101)	(210,339,330)	~ 37,581 NM
(X1111)		
	P23 CISLUNAR NAVIGATION	
	OPTICS CALIBRATION STAR N70 (00001)	
	P00	
:10	V49 MNVR TO SIGHTING ATTITUDE (08:20)	
	(221,327,330)	
	V67 (+80000) (+00070) (+00003)	LOAD W MATRIX
	P23 CISLUNAR NAVIGATION	
	5 MARKS ON EACH STAR, UPDATE STATE VECTOR	
:20	1. N70 (00001) (00000) (00110)	001 ALPHERATZ (ENH)
	M S F N	
08:30	2. N70 (00045) (00000) (00120)	045 FOMALHAUT (EFH)
:40		
:50	3. N70 (00000) (00000) (00110)	131 BETA ARIETIS (ENH)
	N88 (+82401)(+44316)(+35301)	
09:00		

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	08:00 - 09:00	1/TLC	3-13

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1734 CDT

09:00
(21101)
(X1111)
:10
:20
09:30
:40
:50
10:00

MSFN

4. N70 (00000) (00000) (00120)
N88 (+93634)(-23622)(+25973)

P00
V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(210,339,330)
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00001)

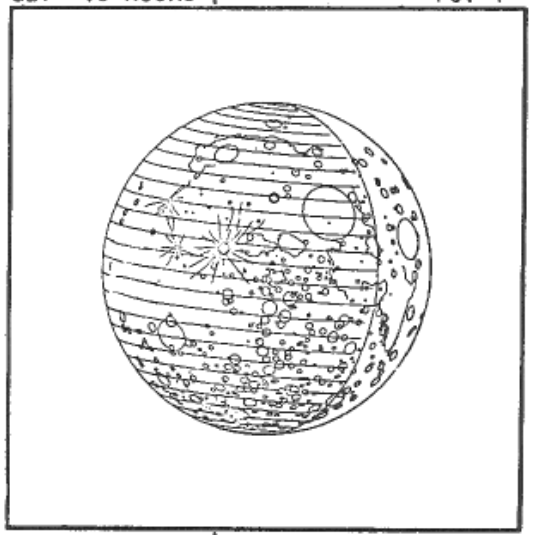
UV PHOTOS

NOTES

224 MARKAB (EFH)

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

GET= 10 HOURS FOV=1°



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	09:00 - 10:00	1/TLC	3-14

FLIGHT PLANNING BRANCH

FLIGHT PLAN

UV PHOTOS - CISLUNAR COAST

V49 MNVR TO EARTH UV PHOTO ATT (335,319,331) (09:55)
OMNI D

CONFIGURE CAMERA: (UV)
CM5/EL/105/UV-BRKT, CONT (f4.3,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____
REMOVE RT2 FLIGHT DATA FILE STOWAGE BOX

DAMP RATES
INHIBIT ALL JETS EXCEPT A1 & C2 OR B2 & D1,
A4, C3, B4, D3
VERIFY FDAI SCALE - 5/1
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ON FDAI ARE <0.2°/SEC IN ALL AXES
REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE
AND CAMERA
2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
2 FRAMES, FILTER 2, EXP TIME 20 SEC (ANOTHER FOR 2 SECS EXP)
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4
RECORD FR # _____
CONFIGURE CAMERA: (UV COLOR)
CM5/EL/105/CEX- CONT (f8,1/250,∞) (1 FR)
RINGSLIDE
MAG (M) _____, FR # _____
1 FRAME, FILTER 4
RECORD FR # _____

ch @ 9:23:00

V49 MNVR TO MOON UV PHOTO CAL ATT (169,223,014) (10:20)
HGA P -33, Y 213

CONFIGURE CAMERA: (UV CALIBRATION)
CM5/EL/105/UV-BRKT, CONT (f4.3,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____

DAMP RATES
VERIFY FDAI SCALE - 5/1
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ON FDAI ARE <0.2°/SEC IN ALL AXES
2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
2 FRAMES, FILTER 2, EXP TIME 20 SEC
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4
RECORD FR # _____
REMOVE CAMERA AND UV CARDBOARD SHADE
COMMENT - CONDITION OF CM5 WINDOW
REPLACE CM5 WINDOW COVER
ENABLE ALL JETS

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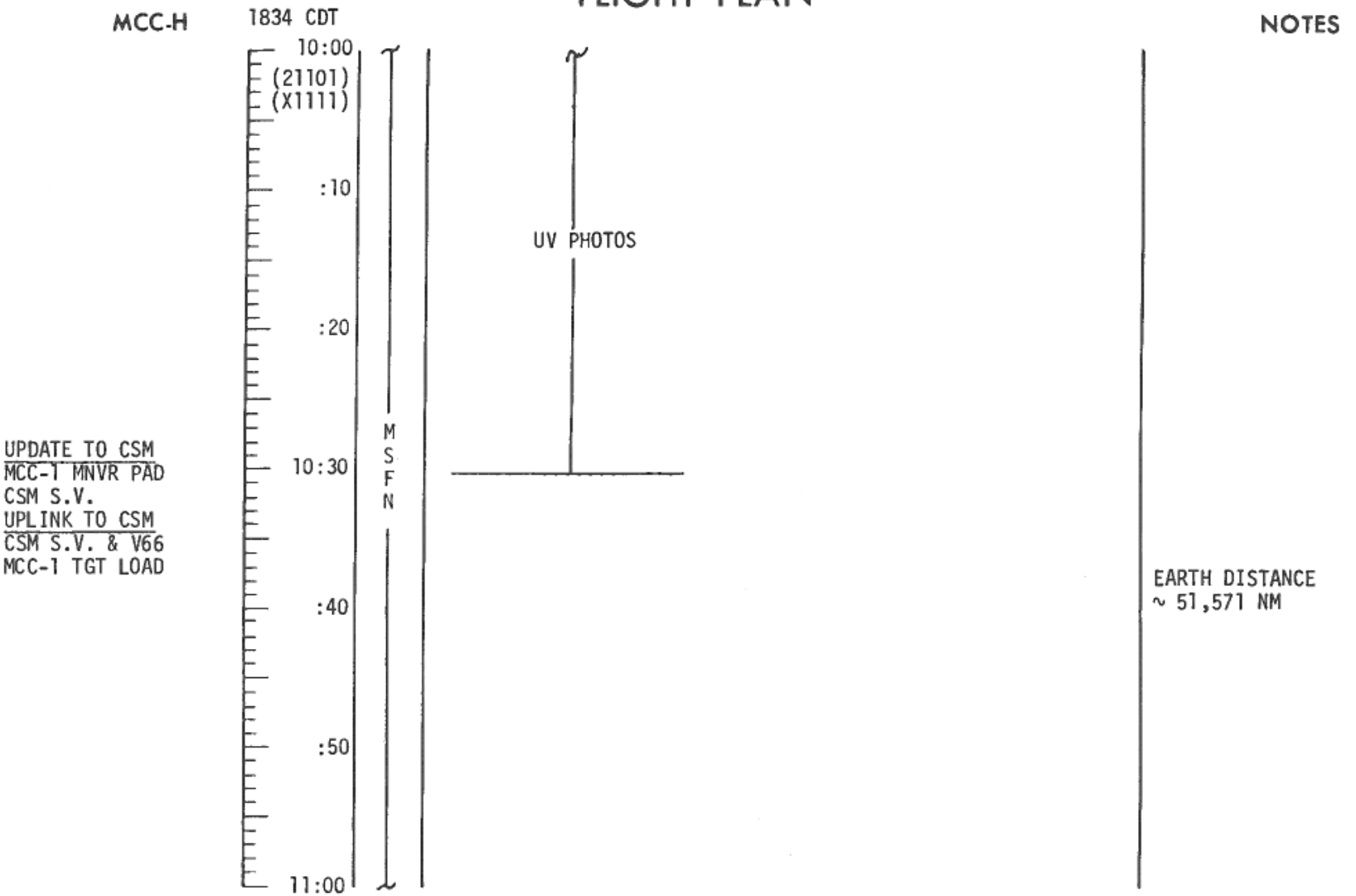
FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	10:00 - 11:00	1/TLC	3-17

FLIGHT PLANNING BRANCH

MCC-1
BURN TABLE

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

1934 CDT

11:00
(21101)
(X1111)

:10

:20

11:30

:40

:50

12:00

MSFN

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENT

REPORT: GYRO TORQUING ANGLES

WASTE STOWAGE VENT VLV - CLOSE (8 HOURS FROM VENT)
P30 EXTERNAL ΔV
V49 MNVR TO PAD BURN ATTITUDE
IF SPS MCC REQD:
  SM SECTOR 1 SM/AC PWR - ON (UP)
  PANORAMIC CAMERA PWR - BOOST
  MAPPING CAMERA IMAGE MTN - OFF (VERIFY)
  MAPPING CAMERA ON - STBY
SXT STAR CHECK
P40 SPS THRUSTING OR P41 RCS THRUSTING

O_2 FUEL CELL PURGE
WASTE WATER DUMP

MCC-1 CANCELLED

TLI CUTOFF +9 HR

MCC-1

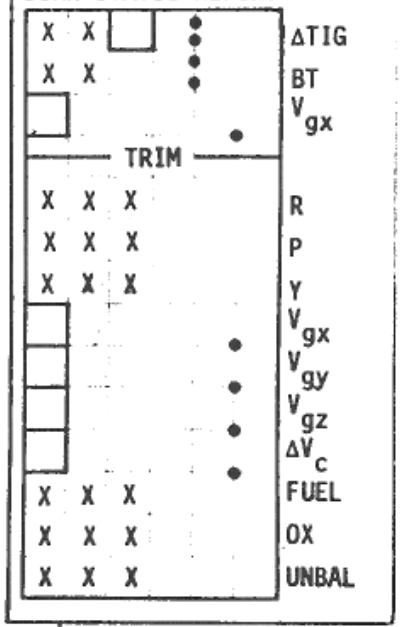
V66 SET CSM S.V. INTO LM S.V.
BURN STATUS REPORT

TIG: 11:55:54
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: NONE
ORBIT: N/A

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

NOTES

BURN STATUS REPORT



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	11:00 - 12:00	1/TLC	3-19

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2034 CDT

NOTES

12:00
(21101)
(X1111)

EARTH DISTANCE
~ 57,281 NM

DAP LOAD STATUS
(21101)(X1111)

UPDATE TO CSM
QUADS TO ENABLE
FOR PTC SPINUP

:10

REPORT: LM/CM ΔP
VENT BATTERIES UNTIL SYSTEM TEST METER 7A=0
OMNI B
SECURE HGA, HGA TRACK-MAN HGA P -52, Y 270
LiOH CANISTER CHANGE
(3 INTO A, STOW 1 IN B5)

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2
V49 MNVR TO PTC ATTITUDE
(N20,090,000)
P20 OPT 2 X-AXIS
N78 (0,0,0)
N79 (-0.3500, 000.50)
N34 (0,0,0)

:20

IF SPS MCC PERFORMED:
PANORAMIC CAMERA PWR - OFF
MAPPING CAMERA ON - OFF
SM SECTOR 1 SM/AC PWR - OFF

12:30

MSFN

PTC

:40

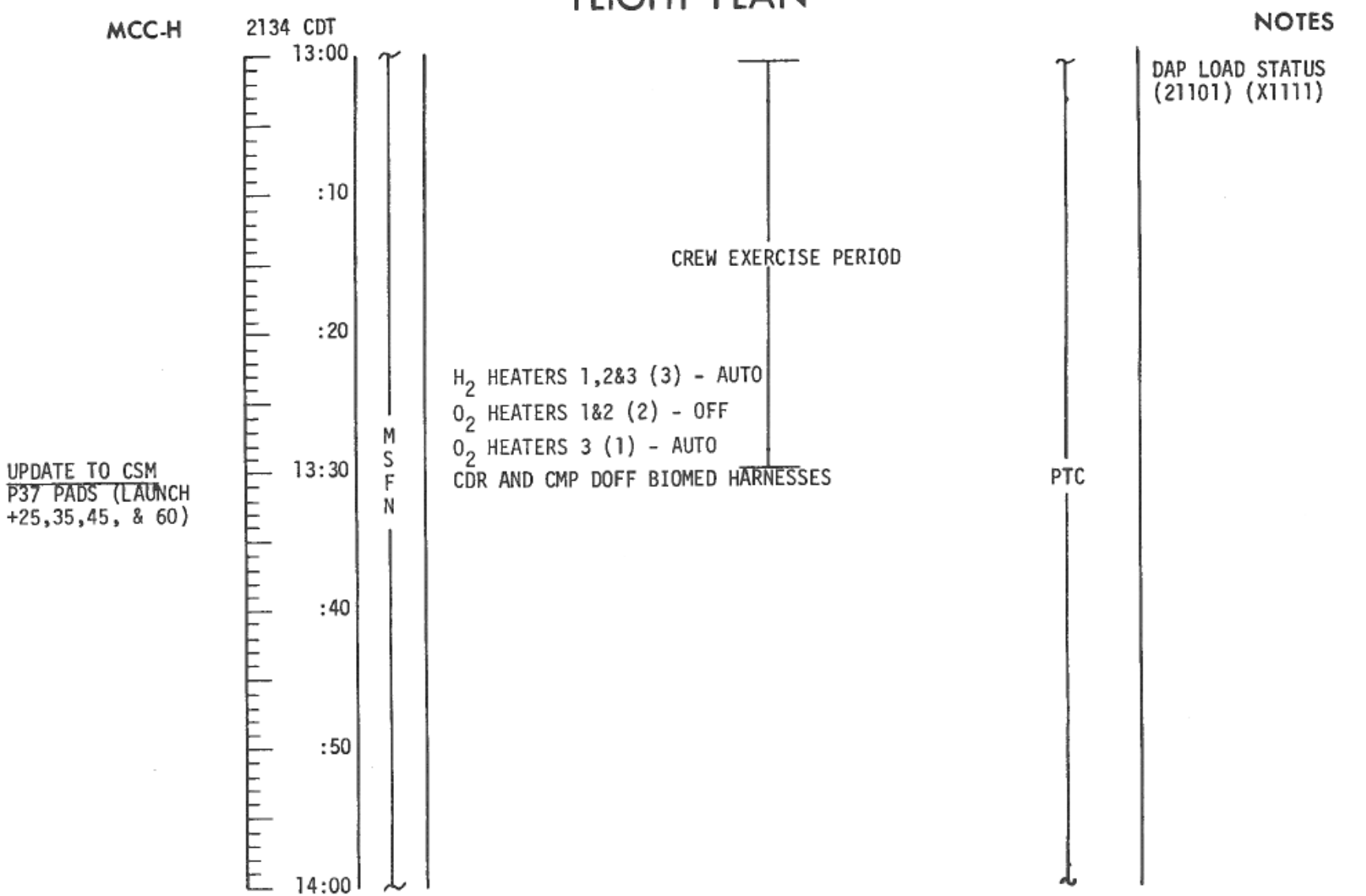
:50

13:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	12:00 - 13:00	1/TLC	3-20

FLIGHT PLANNING BRANCH

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	13:00 - 14:00	1/TLC	3-21

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2234 CDT

14:00
:20
:40
15:00
:20
:40
16:00

MSFN

EAT PERIOD

CSM SYSTEMS CHECKLIST
PRE-SLEEP CHECKLIST
COMM - OMNI

PAGE S/1-26

REST PERIOD
(10 HOURS)

PTC

NOTES

DAP LOAD STATUS
(21101) (X1111)

ONBOARD READOUT

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

EARTH DISTANCE
~ 70,000 NM

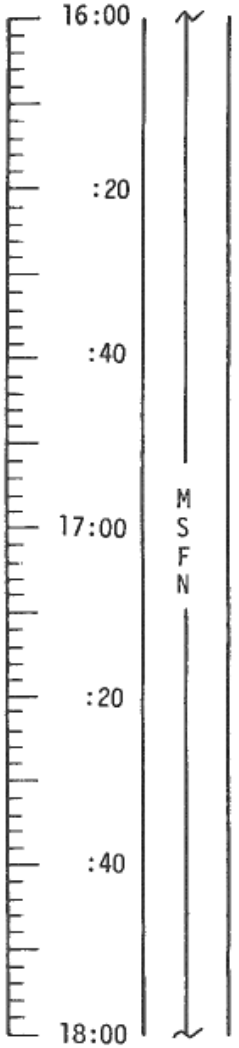
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	14:00 - 16:00	1/TLC	3-22

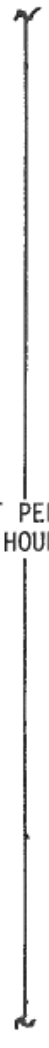
FLIGHT PLANNING BRANCH

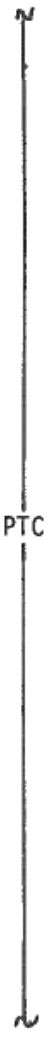
FLIGHT PLAN

MCC-H

0034 CDT







NOTES

DAP LOAD STATUS
(21101) (X1111)

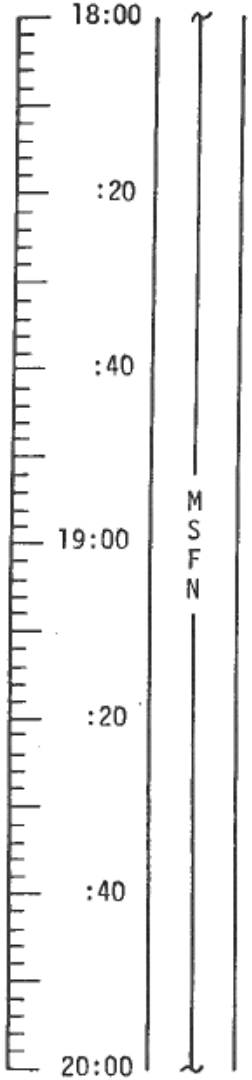
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	16:00 - 18:00	1/TLC	3-23

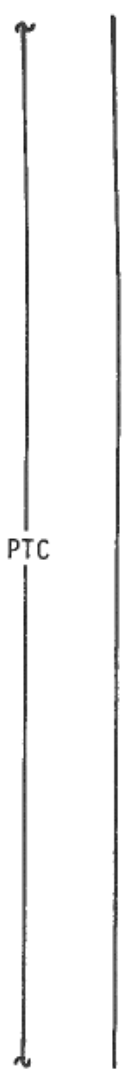
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0234 CDT





NOTES

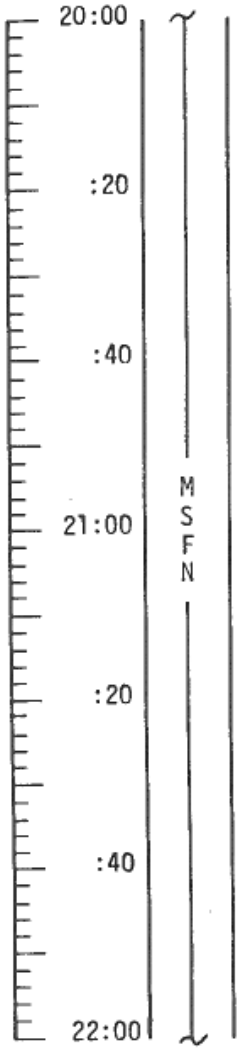
DAP LOAD STATUS
(21101) (X1111)

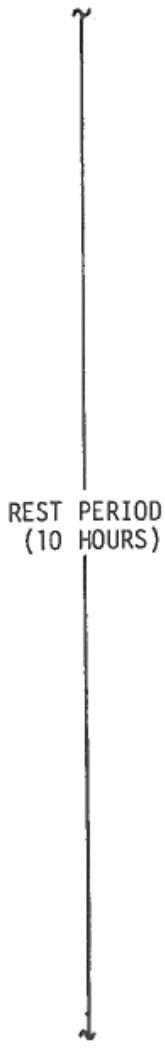
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	18:00 - 20:00	1/TLC	3-24

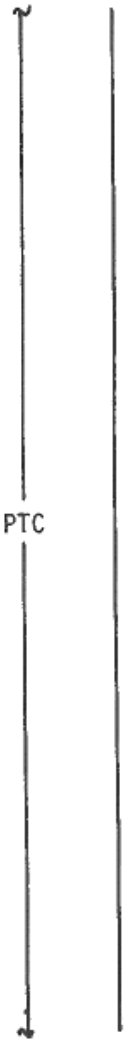
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H







NOTES

DAP LOAD STATUS
(21101)(X1111)

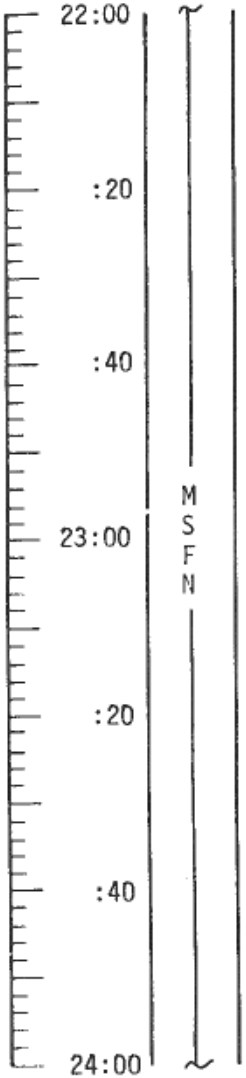
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	20:00 - 22:00	1/TLC	3-25

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0634 CDT



M
S
F
N

REST PERIOD
(10 HOURS)

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	22:00 - 24:00	1/TLC	3-26

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0834 CDT

24:00

:20

:40

25:00

:20

:40

26:00

M
S
F
N

UPDATE TO CSM
CONSUMABLES
FLIGHT PLAN

REST PERIOD
(10 HOURS)

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST PAGE S/1-26

~~CHARGE BATTERY A~~ ch 25:46:51 (retrospective)

H_2 HEATERS 1&2 (2) - OFF

EAT PERIOD

REPORT: LM/CM ΔP

NOTES

DAP LOAD STATUS
(21101)(X1111)

CSM CONSUMABLES UPDATE

GET: __ __ __:__ __

RCS TOTAL _____

QUAD A _____ B _____

C _____ D _____

H_2 TANK 1 _____ 2 _____ 3 _____

O_2 TANK 1 _____ 2 _____ 3 _____

PTC

EARTH DISTANCE
~ 105,000 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	24:00 - 26:00	1-2/TLC	3-27

FLIGHT PLANNING BRANCH

FLIGHT PLAN

CYCLE FILM IN PANORAMIC AND MAPPING CAMERAS

ACQ MSFN, HGA: REACQ, NARROW (CUE MSFN FOR PITCH AND YAW)
VERIFY:
  cb SCI EQUIP SEB 1 & 2 - CLOSE
  NON ESS BUS - MNA
  cb SM SECTOR 1 AC2 (3) - CLOSE
  MAPPING CAMERA IMAGE MTN - OFF

PCM BIT RATE - HIGH
S-BD AUX TV - SCI
SM SECTOR 1 SM/AC PWR - ON (UP)
DATA SYS ON - ON
MAPPING CAMERA ON - STBY/tb-GRAY
PANORAMIC CAMERA MODE - STBY
PANORAMIC CAMERA POWER - ON (UP)/tb-BP (2 SEC), then GRAY

CONFIRM MSFN HAS TLM, CYCLE FILM ON MSFN CUE

MAPPING CAMERA ON - ON (2 MIN) then OFF
PANORAMIC CAMERA SELF TEST - ON (UP)/tb-BP (5 FR), then GRAY
PANORAMIC CAMERA SELF TEST - OFF (CTR)
PANORAMIC CAMERA POWER - OFF

AFTER MAPPING CAMERA OFF FOR 1 MIN:
  SM SECTOR 1 SM/AC PWR - OFF
DATA SYS ON - OFF
OMNI B
SECURE HGA, TRACK MAN HGA P -52, Y 270
S-BD AUX TV - OFF (CTR)
PCM BIT RATE - LOW

FLIGHT PLAN

MCC-H

1034 CDT

NOTES

UPDATE TO CSM
HGA ANGLES FOR
FILM CYCLE

26:00

LiOH CANISTER CHANGE
(4 INTO B, 2 INTO B5)
CYCLE FILM IN PANORAMIC AND MAPPING CAMERAS

DAP LOAD STATUS
(21101)(X1111)

CDR DON BIOMED HARNESS
LMP DOFF BIOMED HARNESS

:10

:20

MSFN

26:30

PTC

:40

:50

P52 IMU realign OPT 3 (ck at 25:46:51)

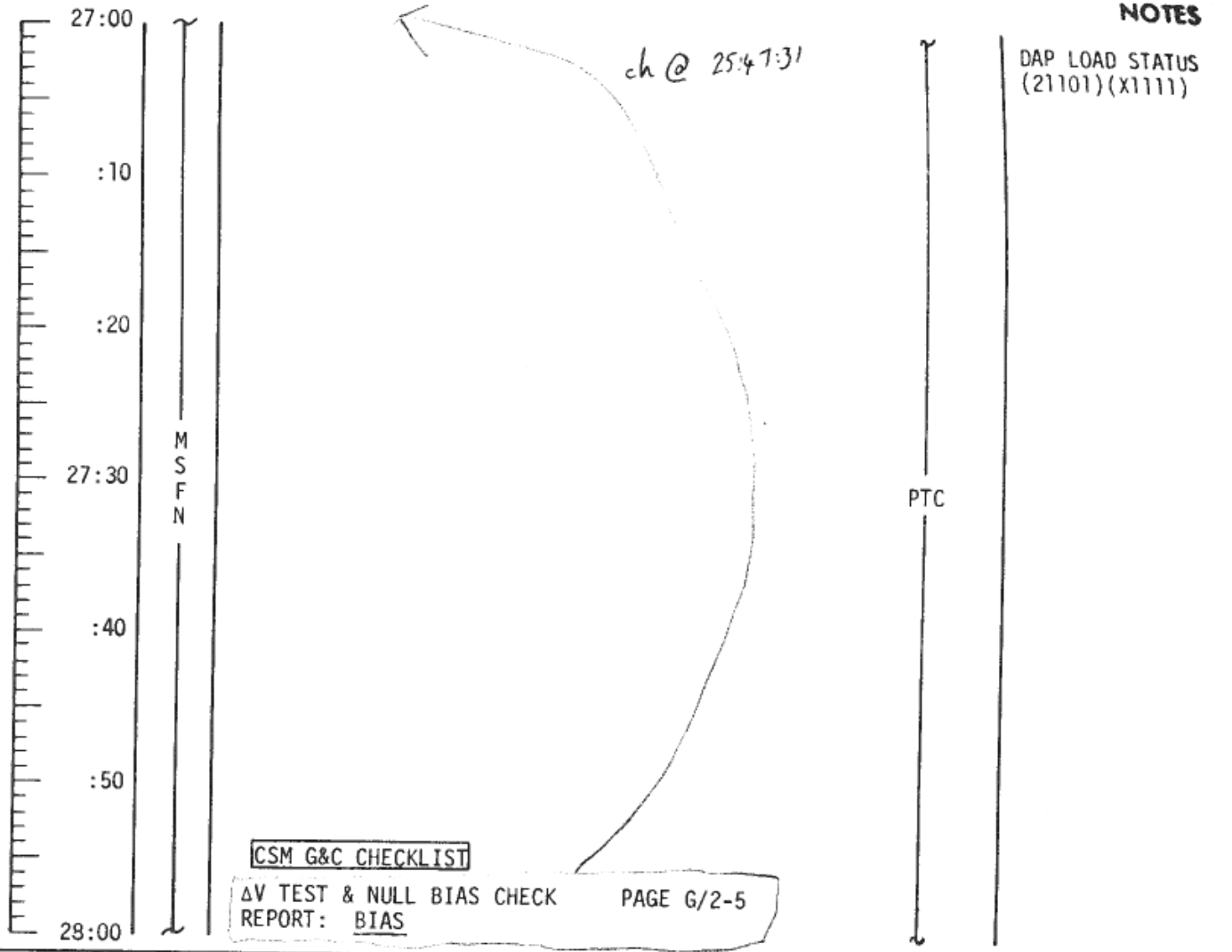
27:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	26:00 - 27:00	2/TLC	3-29

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	27:00 - 28:00	2/TLC	3-30

FLIGHT [illegible] INING BRANCH

FLIGHT PLAN

MCC-H

UPLINK TO CSM
CSM SV and VERB 66

UPDATE TO CSM
SPS TEST MNVR PAD

1234 CDT

28:00
:10
:20
28:30
:40
:50
29:00

MSFN

H_2 Purge Line Heaters - ON
EXIT G+N PTC
MANEUVER TO BURN PAD ATT
ch @ 25:47:31

deleted @ 25:47:51

SEXTANT STAR CHECK ~~CREW EXERCISE PERIOD~~
ch @ 25:52:08

SM SECTOR 1 SM/AC PWR - ON (UP)
PAN CAMERA PWR - BOOST
MAP CAMERA IMG MTN - OFF (VERIFY)
MAP CAMERA OM - STANDBY
H_2O_2 FUEL CELL PURGE
WASTE WATER DUMP

MOVED FROM 30:30
ch @ 25 53:01

H_2 PURGE LINE HEATERS - OFF

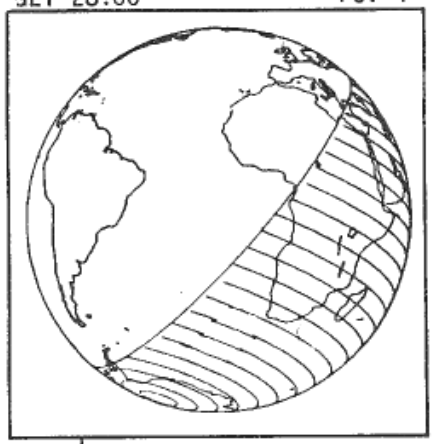
SPS BURN TEST
V66, SET CSM SV into LM SV

NOTES

DAP LOAD STATUS
(21101)(X1111)

PTC

GET 28:00 FOV 4°



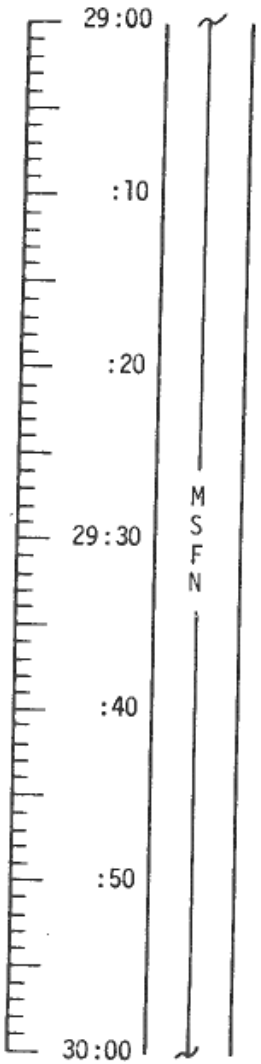
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	28:00 - 29:00	2/TLC	3-31

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1334 CDT



UPLINK TO CSM
CSM S.V. & V66
MCC-2 TGT LOAD

UPDATE TO CSM
GO/NO-GO MCC-2
MCC-2 MNVR PAD

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

EARTH DISTANCE
~ 118,447 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	29:00 - 30:00	2/TLC	3-32

FLIGHT PLANNING BRANCH

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FLIGHT PLAN

MCC-2
BURN TABLE

P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	±10° TERMINATE	[illegible]	IF < 2 FPS, TRIM [illegible]

FLIGHT PLAN

MCC-H

1434 CDT

30:00

:10

:20

(21101)

(X1111)

30:30

:40

:50

31:00

MSFN

P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENT)

REPORT: GYRO TORQUING ANGLES

~~TERMINATE BATTERY CHARGE A~~ IF MCC-2 REQUIRED
~~H_2 PURGE LINE HEATERS - ON~~

~~EXIT G&N PTC~~ ~~PAGE G/8-3~~
P30 EXTERNAL ΔV
V49 MNVR TO PAD BURN ATTITUDE
~~IF SPS MCC REQD:~~
~~SM~~ SECTOR 1 SM/AC PWR - ON (UP)
PANORAMIC CAMERA PWR - BOOST
MAPPING CAMERA IMAGE MTN - OFF (VERIFY)
MAPPING CAMERA ~~ON~~ - STBY
SXT STAR CHECK
P40 SPS THRUSTING OR P41 RCS THRUSTING
~~H_2 & O_2 FUEL CELL PURGE~~
~~WASTE WATER DUMP~~

SEVEN LINES MOVED TO 28:20 (ch@ 25:53:01) (All deletes read up @ 25:54:55)

~~H_2 PURGE LINE HEATERS - OFF~~

MCC-2

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

PTC

TLI CUTOFF +28 HR

TIG: 30:55:54
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: NONE
ORBIT: N/A

NOTES

DAP LOAD STATUS
(21101)(X1111)

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

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	30:00 - 31:00	2/TLC	3-35

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1534 CDT

31:00
(21101)
(X1111)

:10

:20

31:30

:40

:50

32:00

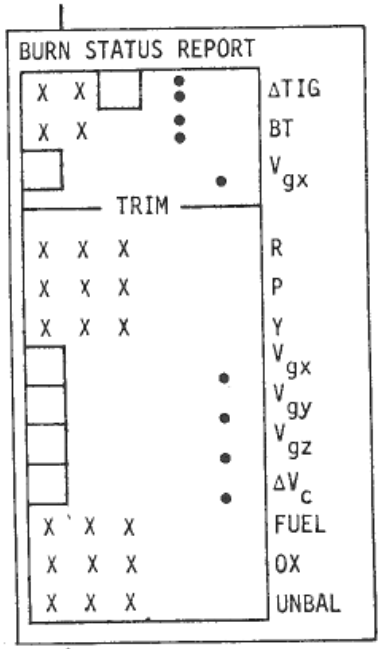
MSFN

BURN STATUS REPORT
CHARGE BATTERY A
IF SPS MCC PERFORMED:
PANORAMIC CAMERA PWR - OFF
MAPPING CAMERA ON - OFF
SM SECTOR 1 SM/AC PWR - OFF

EAT PERIOD

IF LM/CM ΔP <2.7 PSID, TUNNEL VENT VLV - VENT
UNTIL ΔP ≥2.7 PSID

NOTES



EARTH DISTANCE
~ 123,808 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	31:00 - 32:00	2/TLC	3-36

FLIGHT PLANNING BRANCH

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FLIGHT PLAN

SXT PHOTO TEST

1. V49 MNVR TO SXT PHOTO TEST ATT (32:15)
   (040,012,050) HGA P -38, Y 318

2. CONFIGURE CAMERA
   CM/DAC/SXT/VHBW-PCM CABLE (EXP 1/500) 24 fps (5% MAG)
   MAG (H) _____, MAG % _____
   UTILITY POWER - ON

3. DISABLE JETS A3, B3, C4, D4
   P52 (NO MARKS)
   N70 (00000)
   N88 (+78675)(+47868)(+38950)
   VERIFY THRU SXT THAT OPTICS BORESIGHTED ON STAR
   G&N PWR (AC-PNL 5) - OFF
   MOUNT DAC ON SXT
   DIM INTERIOR LIGHTS, DAC - ON, 24 fps FOR 2 SEC
   CHANGE TO TIME & T/60
   1 FRAME - 60 SEC EXP TIME
   1 FRAME - 20 SEC EXP TIME
   1 FRAME - 5 SEC EXP TIME
   1 FRAME - 1 SEC EXP TIME
   CHANGE TO 24 fps & 1/500 SEC
   RUN DAC FOR 2 SEC, LIGHTS UP
   ENABLE JETS

4. V49 MNVR TO SXT PHOTO TEST ATT (32:25)
   (090,000,043) HGA P -47, Y 353

5. REPEAT STEP 3

6. RECORD MAG % _____
   REMOVE AND STOW DAC

UV PHOTOS - CISLUNAR COAST

V49 MNVR TO EARTH UV PHOTO ATT (150,052,033) (32:50)
OMNI D

CONFIGURE CAMERA: (UV)
CM5/EL/105/UV-BRKT, CONT (f8,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____
REMOVE R12 FLIGHT DATA FILE STOWAGE BOX

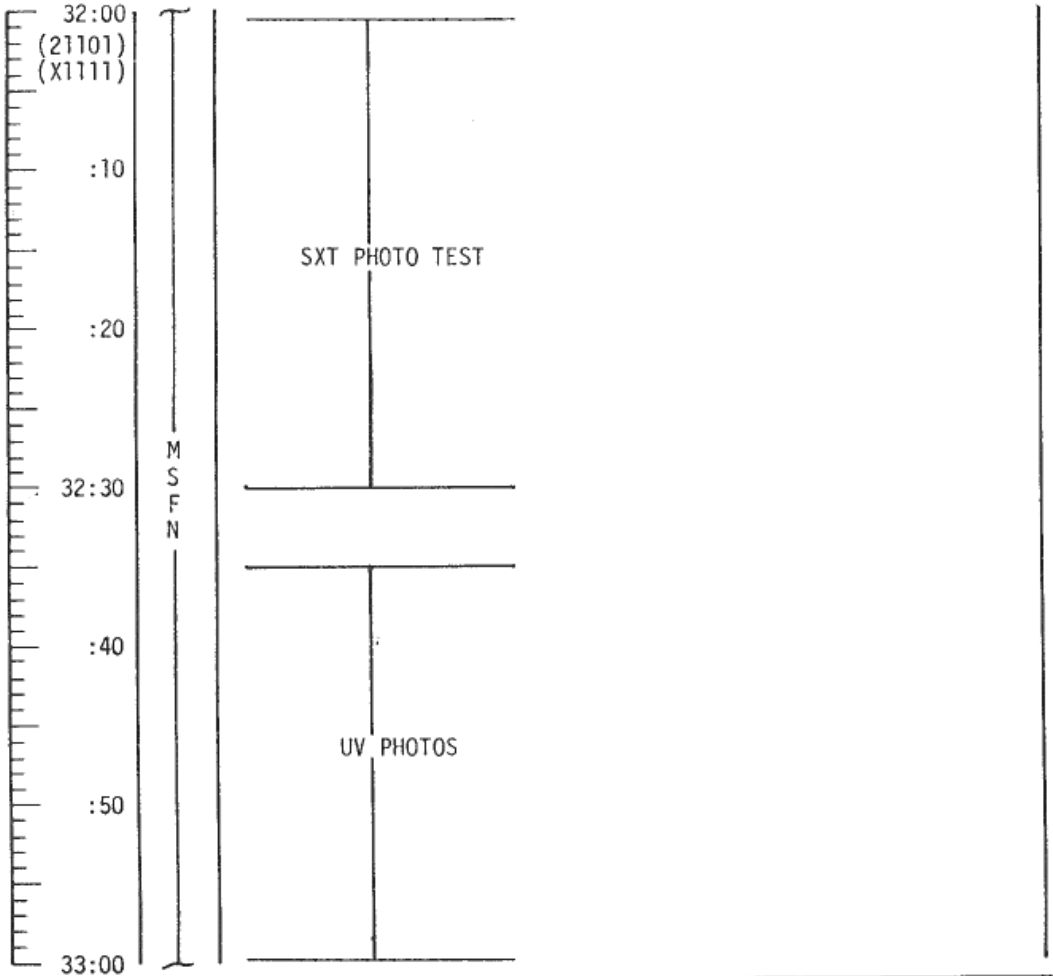
DAMP RATES
INHIBIT ALL JETS EXCEPT A1 & C2 OR B2 & D1, A4,
C3, B4, D3
VERIFY FDAI SCALE - 5/1
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ON FDAI ARE <0.2°/SEC IN ALL AXES
REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE
AND CAMERA
2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
2 FRAMES, FILTER 2, EXP TIME 20 SEC) @ 2 sec exp.
CHANGE SHUTTER TO 1/250 ch @ 11:40:01
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4
RECORD FR # _____
CONFIGURE CAMERA
CM5/EL/105/CEX- CONT (f8,1/250,∞) (1 FR)
RINGSLIDE
MAG (M) _____, FR # _____
1 FRAME, FILTER 4
RECORD FR # _____
REMOVE CAMERA AND UV CARDBOARD SHADE
COMMENT - CONDITION OF CM5 WINDOW
REPLACE CM5 WINDOW COVER
ENABLE ALL JETS

FLIGHT PLAN

MCC-H

1634 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	32:00 - 33:00	2/TLC	3-39

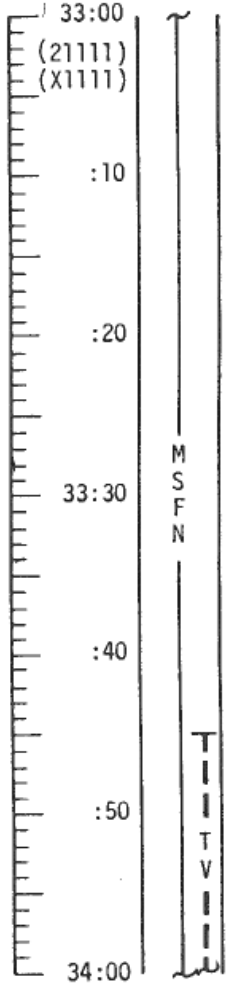
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1734 CDT

NOTES



V48 (21111)(X1111)
PREPARE TRANSFER ITEMS PER LM ACTIVATION CHECKLIST
REMOVE 16MM & 70MM MAG FROM A8 AND R13

CSM SYSTEMS CHECKLIST

IVT TO LM (CHECKOUT TLC) PAGE S/2-1

V49 MNVR TO TV/LM CHECKOUT ATTITUDE (305,090,000)(33:45)
ACQ MSFN HGA P -30, Y 276

PRESSURIZE LM PAGE S/2-3

TV (GDS) 33:45 TO 34:30 CM/TV - AVG (f5.6)

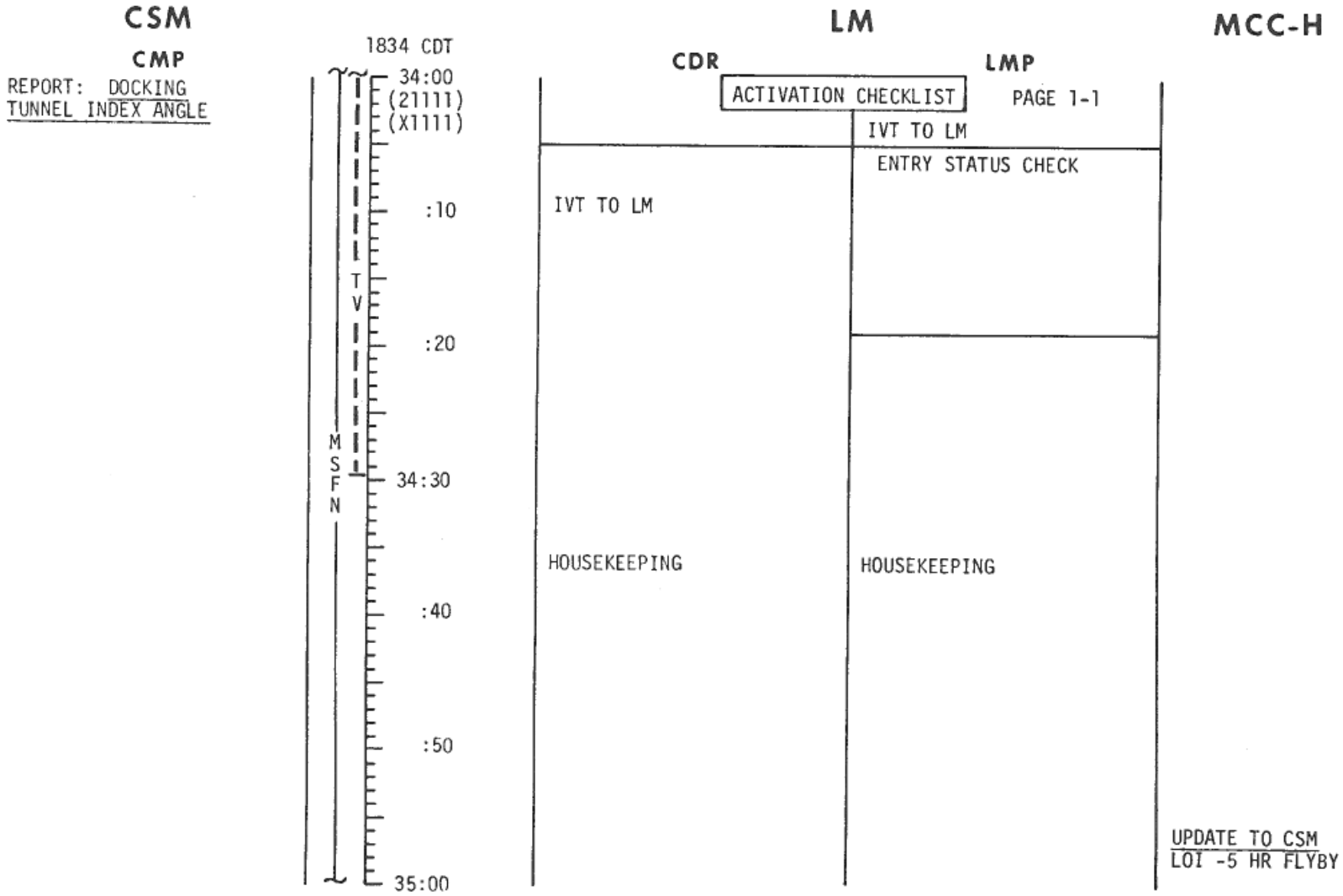
PREPARE FOR LM INGRESS
REMOVE TUNNEL HATCH AND STOW
REMOVE PROBE & DROGUE AND STOW

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	33:00 - 34:00	2/TLC	3-40

FLIGHT P' `NING BRANCH

FLIGHT PLAN

F'IG ᵀ PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	34:00 - 35:00	2/TLC	3-41

FLIGHT PLAN

CSM		LM	
CMP	1934 CDT	CDR	LMP
	35:00 (21111) (X1111)	HOUSEKEEPING	HOUSEKEEPING
	:10		
CSM POWER TO LM-OFF (AT LMP REQUEST) GET (___:___:___)	:20	COMM ACTIVATION	COMM ACTIVATION
	35:30		S-BAND/VHF SIMPLEX VOICE TEST
	:40		
		OPS CHECKOUT	OPS CHECKOUT
	:50		
CSM POWER TO LM - ON (AT LMP REQUEST) GET (___:___:___)		COMM DEACTIVATION	COMM DEACTIVATION
	36:00		

MSFN

MCC-H

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 1.	FINAL (7/26)	6/21/71	35:00 - 36:00		3-/

FLIGHT PLAN

MCC-H

2034 CDT

36:00
(21111)
(X1111)

:10
(21101)
(X1111)

:20

36:30

:40

:50

37:00

MSFN

LMP & CDR IVT TO CSM & CLOSE LM HATCH
INSTALL PROBE, DROGUE AND CM HATCH

LM TUNNEL VENT VALVE - LM/CM ΔP
CYCLE CMC MODE - FREE/AUTO
V48 (21101)(X1111)
OMNI B
SECURE HGA, TRACK - MAN HGA P -52, Y 270

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2

V49 MNVR TO PTC ATTITUDE
(N20,090,000)
P20 OPT 2 X-AXIS
N78 (0,0,0)
N79 (-0.3500,000.50)
N34 (0,0,0)

UPDATE TO CSM QUADS TO ENABLE FOR PTC SPINUP

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	36:00 - 37:00	2/TLC	3-43

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2134 CDT

37:00

:10

:20

37:30

:40

:50

38:00

MSFN

CREW EXERCISE PERIOD

CMP DON BIOMED HARNESS
CDR DOFF BIOMED HARNESS

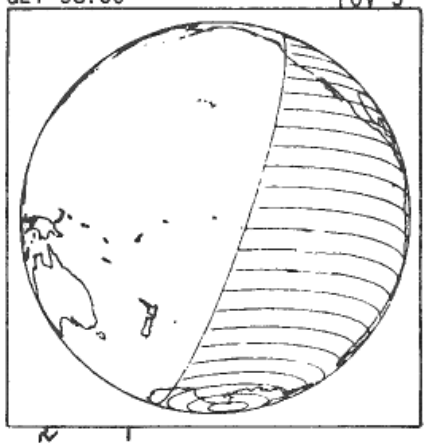
LiOH CANISTER CHANGE
(5 INTO A, 3 INTO B5)

NOTES

DAP LOAD STATUS
(21101)(X1111)

PTC
GET 38:00

FOV 3°



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	37:00 - 38:00	2/TLC	3-44

FLIGHT PLA[illegible]ING BRANCH

FLIGHT PLAN

MCC-H

2234 CDT

38:00
:20
:40
39:00
:20
:40
40:00

MSFN

CSM SYSTEMS CHECKLIST

PRE-SLEEP CHECKLIST
COMM-OMNI

EAT PERIOD

PAGE S/1-26

REST PERIOD
(9 HOURS)

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

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

EARTH DISTANCE
~ 141,176 NM

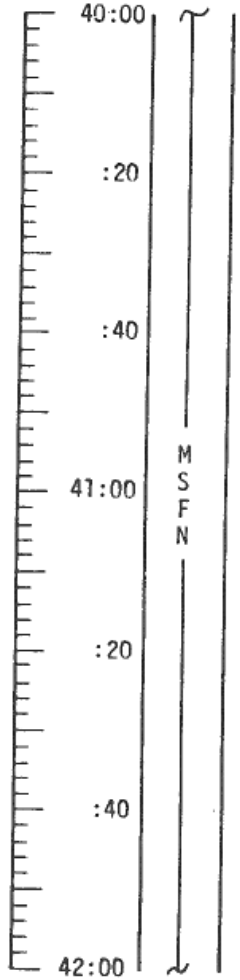
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	38:00 - 40:00	2/TLC	3-45

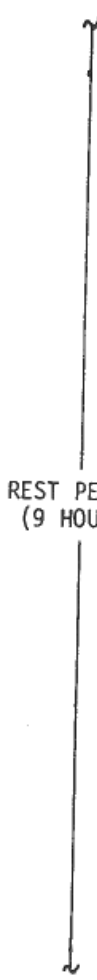
FLIGHT PLANNING BRANCH

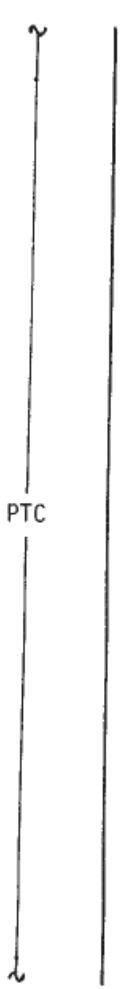
FLIGHT PLAN

MCC-H

0034 CDT







NOTES

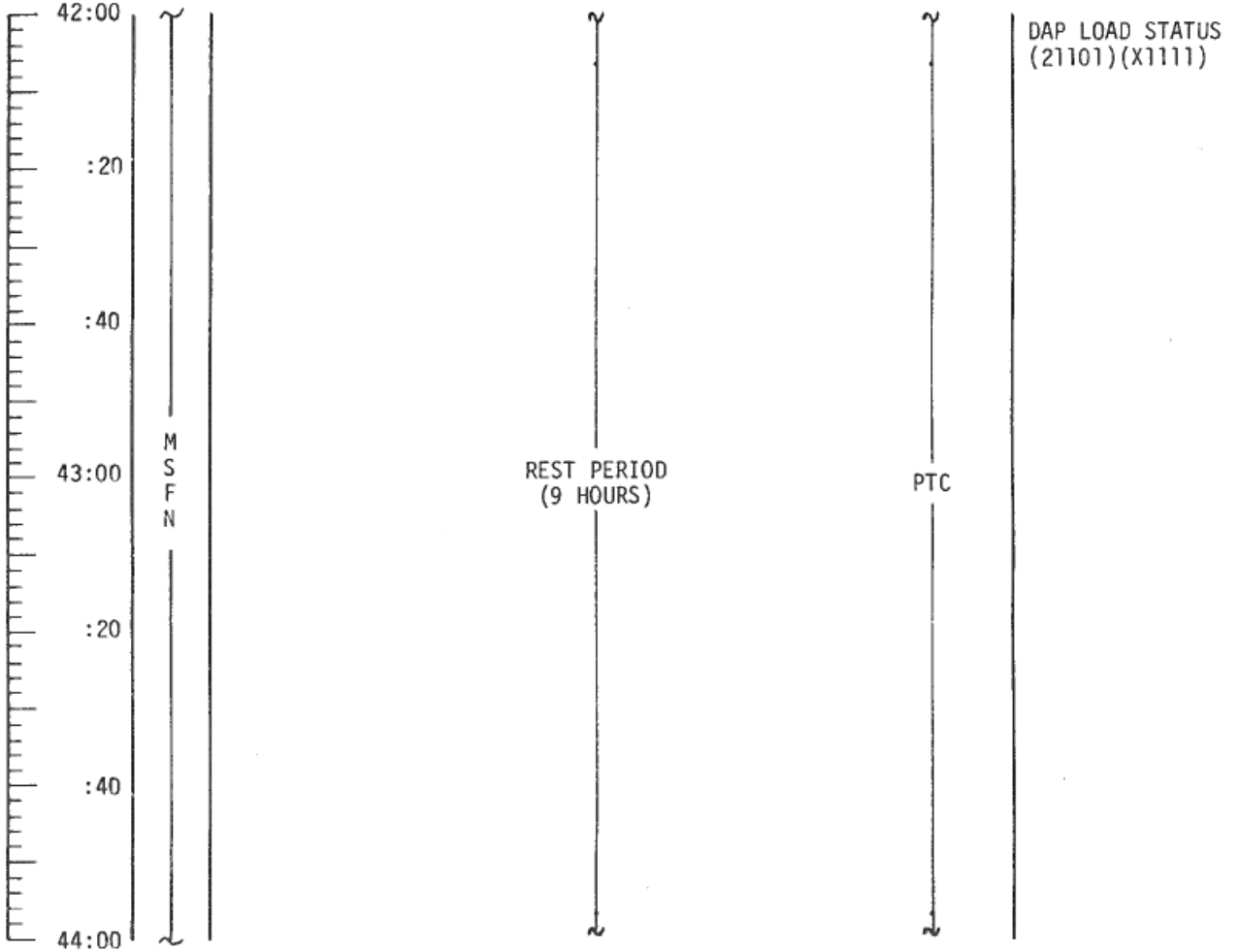
DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	40:00 - 42:00	2/TLC	3-46

FLIGHT P 'NING BRANCH

FLIGHT PLAN

MCC-H



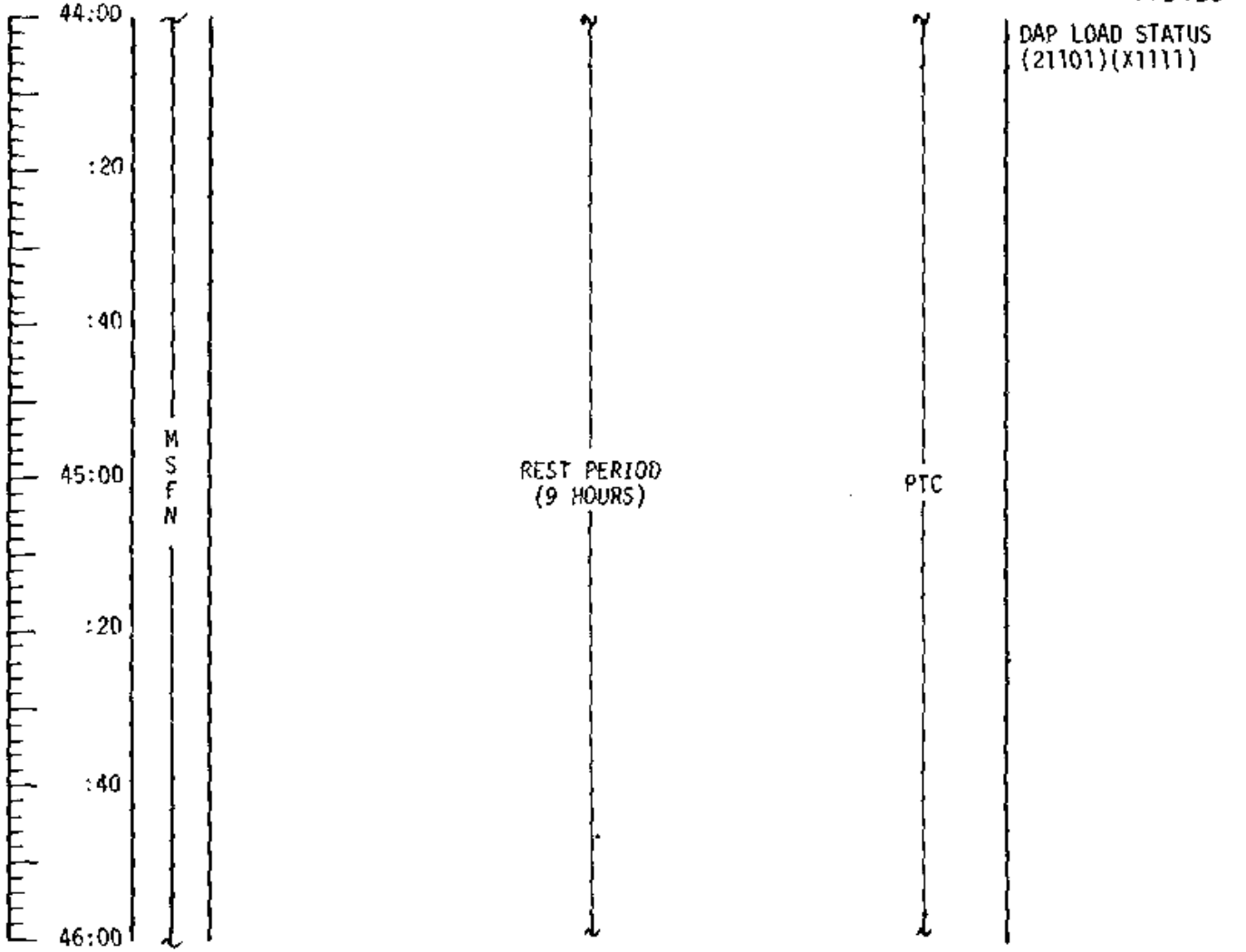
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	42:00 - 44:00	2/TLC	3-47

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0434 CDT



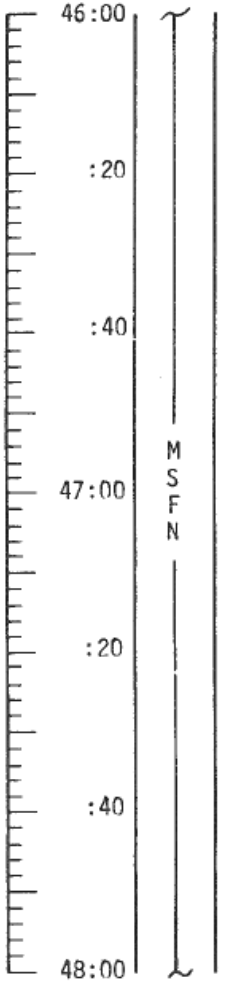
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	44:00 - 46:00	2/TLC	3-48

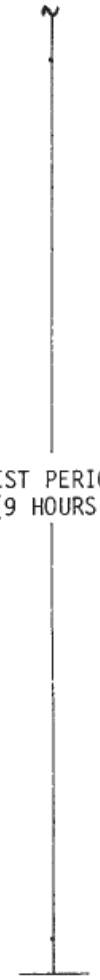
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0634 CDT





NOTES

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	46:00 - 48:00	2/TLC	3-49

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

UPDATE TO CSM
CONSUMABLES
FLIGHT PLAN

0834 CDT

48:00

:20

:40

49:00

:20

:40

50:00

M
S
F
N

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST PAGE S/1-26

EAT PERIOD

LMP DON BIOMED HARNESS
CMP DOFF BIOMED HARNESS

CHARGE BATTERY B

NOTES

DAP LOAD STATUS
(21101)(X1111)

CSM CONSUMABLES UPDATE

GET: __ __ __:__ __

RCS TOTAL _____

QUAD A _____ B _____

C _____ D _____

H_2 TANK 1 ____ 2 ____ 3 ____

O_2 TANK 1 ____ 2 ____ 3 ____

PTC

EARTH DISTANCE
~ 162,962 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	48:00 - 50:00	3/TLC	3-50

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1034 CDT

50:00

:10

:20

50:30

:40

:50

51:00

MSFN

VISUAL LIGHT FLASH PHENOMENON EXPERIMENT
SET KITCHEN TIMER TO 50 MIN
ALL CREWMEN DON EYESHIELDS
REPORT: DON EYESHIELDS (GET ___:___:___)
FLASH FREQUENCY
FLASH DESCRIPTION
CREW POSITION W.R.T. X, Y, AND Z AXES
AND LOCATION IN CM

REPORT: DOFF EYESHIELDS (GET ___:___:___)

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

DURING FIRST 50 MINUTES ONE CREWMAN WILL FACE THE DIRECTION OF THE -X AXIS. DURING THE LAST 10 MINUTES HE WILL FACE THE DIRECTION OF THE +X AXIS. EXPERIMENT WILL BE TERMINATED ON MSFN CUE.

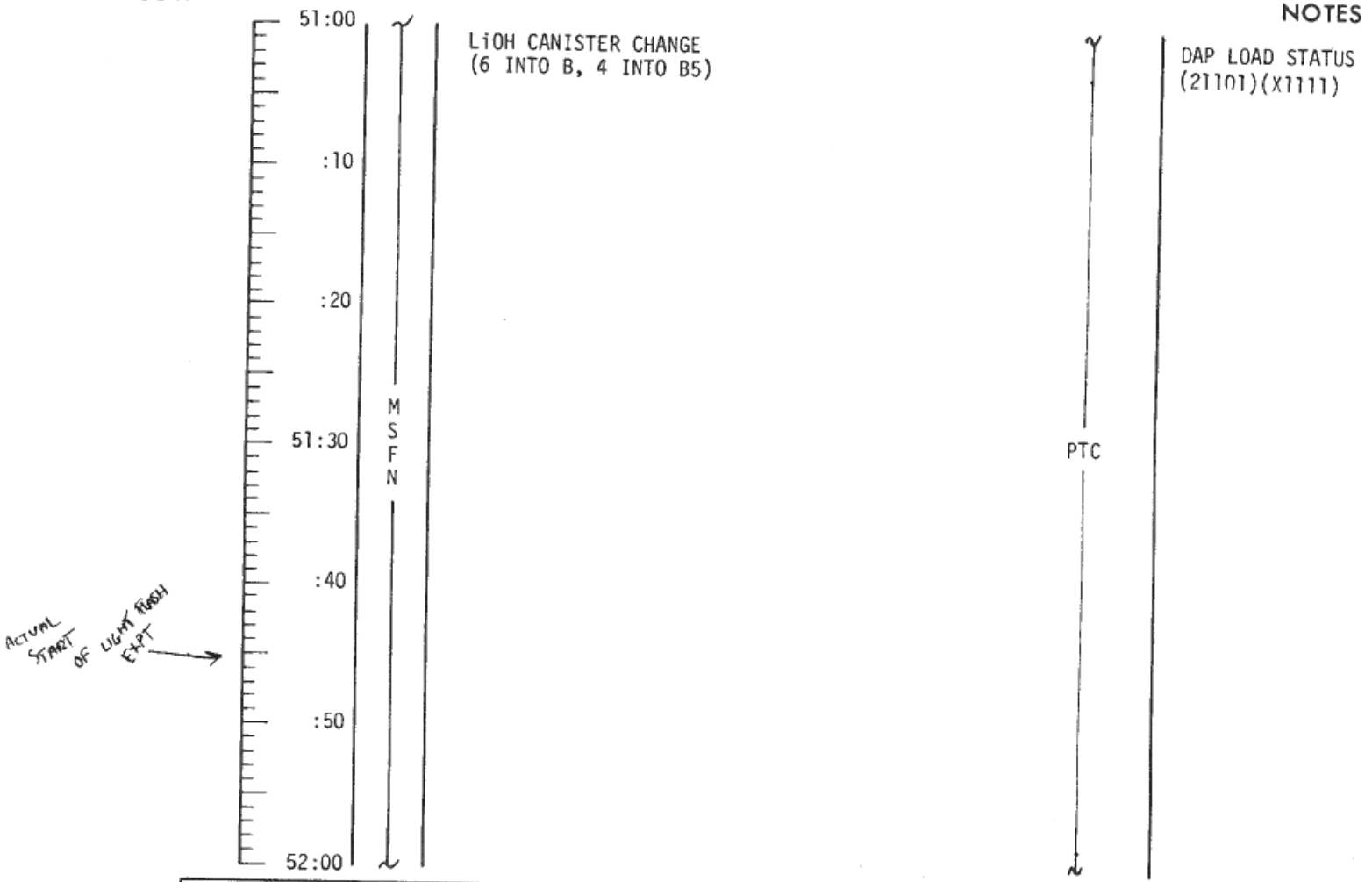
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	50:00 - 51:00	3/TLC	3-51

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1134 CDT

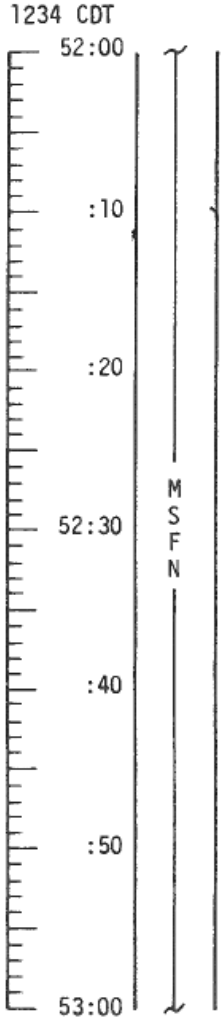


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	51:00 - 52:00	3/TLC	3-52

FLIGHT PL NING BRANCH

FLIGHT PLAN

MCC-H



CREW EXERCISE PERIOD

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	52:00 - 53:00	3/TLC	3-53

FLIGHT PLANNING BRANCH

CYCLE FILM IN PANORAMIC AND MAPPING CAMERAS

ACQ MSFN, HGA: REACQ, NARROW (CUE MSFN FOR PITCH AND YAW)
VERIFY:
  cb SCI EQUIP SEB 1 & 2 - CLOSE
  NON ESS BUS - MNA
  cb SM SECTOR 1 AC2 (3) - CLOSE
  MAPPING CAMERA IMAGE MTN - OFF

PCM BIT RATE - HIGH
S-BD AUX TV - SCI
SM SECTOR 1 SM/AC PWR - ON (UP)
DATA SYS ON - ON
MAPPING CAMERA ON - STBY/tb-GRAY
PANORAMIC CAMERA MODE - STBY
PANORAMIC CAMERA POWER - ON (UP)/tb-BP (2 SEC), then GRAY

CONFIRM MSFN HAS TLM, CYCLE FILM ON MSFN CUE

MAPPING CAMERA ON - ON (2 MIN), then OFF
PANORAMIC CAMERA SELF TEST - ON (UP)/tb-BP (5 FR), then GRAY
PANORAMIC CAMERA SELF TEST - OFF (CTR)
PANORAMIC CAMERA POWER - OFF

AFTER MAPPING CAMERA OFF FOR 1 MIN:
~~SM SECTOR 1 SM/AC PWR - OFF~~ MAPPING CAMERA ON - STBY/tb-GRAY ck @ 49:35:59
OMNI B
SECURE HGA, TRACK-MAN HGA P -52, Y 270
S-BD AUX TV - OFF (CTR)
PCM BIT RATE - LOW

FLIGHT PLAN

MCC-H

1334 CDT

UPLINK TO CSM
LIFT-OFF TIME
(IF REQUIRED)

Not Req'd. (52:46:19)

UPDATE TO CSM
T EPHEM
(IF REQUIRED)

53:00

:10

:20

53:30

:40

:50

54:00

MSFN

SYNCHRONIZE MISSION TIMER TO CMC CLOCK (IF REQUIRED)
V05N01E, 1706E

CSM G&C CHECKLIST

ΔV TEST & NULL BIAS CHECK PAGE G/2-5
REPORT: BIAS

CYCLE FILM IN PANORAMIC AND MAPPING CAMERAS

UPDATE TO CSM
HGA ANGLES FOR
FILM CYCLE

NOTES

DAP LOAD STATUS
(21101)(X1111)

T EPHEM UPDATE

OID	LOAD B
03	_ _ _ _ _
04	_ _ _ _ _
05	_ _ _ _ _

PTC

LIFT-OFF TIME WILL BE UPDATED IF THE TIME PROPAGATED AHEAD TO START OF REV 2 DIFFERS FROM 80:40:37.6 BY MORE THAN 1 MIN

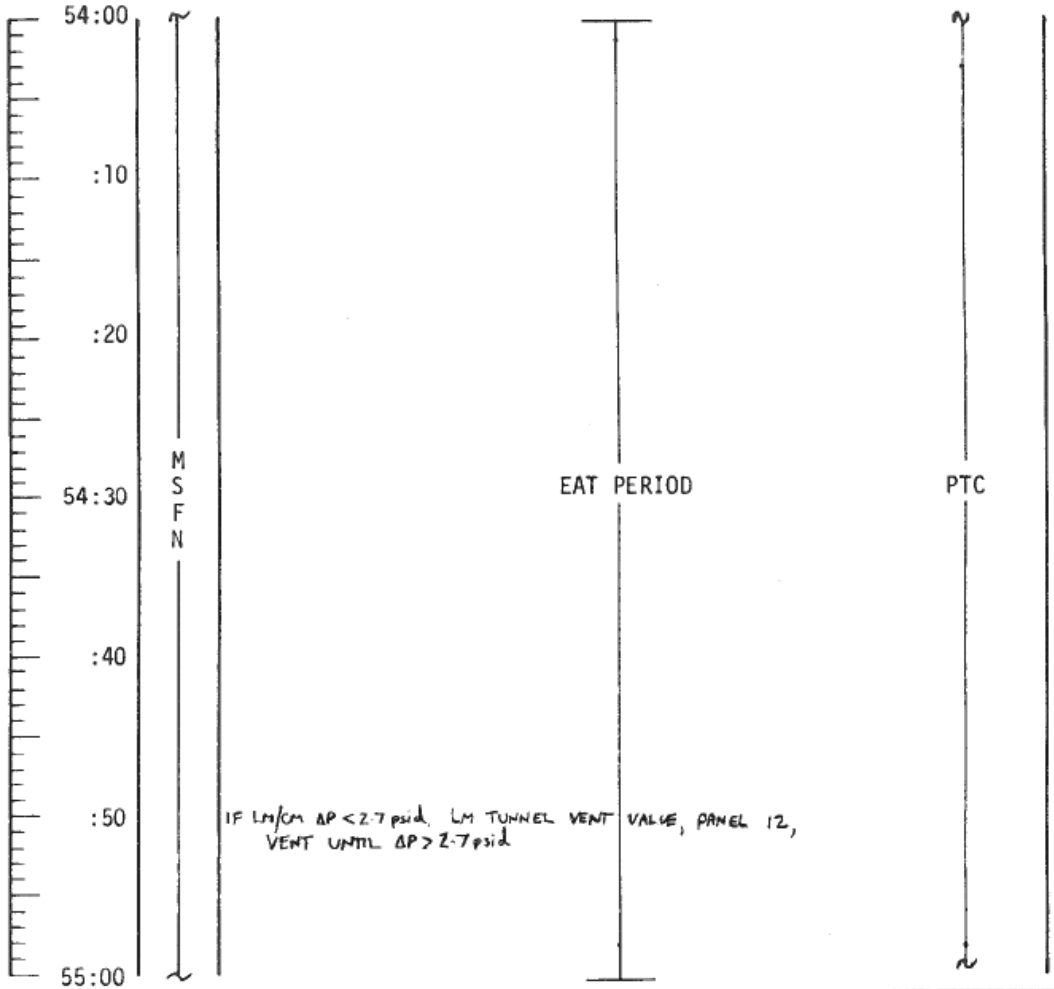
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	53:00 - 54:00	3/TLC	3-55

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1434 CDT



NOTES

DAP LOAD STATUS
(21101)(X1111)

EARTH DISTANCE
~ 173,355 NM

chd @ 49:33:15

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	54:00 - 55:00	3/TLC	3-56

FLIGHT P[illegible]NING BRANCH

FLIGHT PLAN

UV PHOTOS - CISLUNAR COAST

V49 MNVR TO EARTH UV PHOTO ATT (153,050,030) (55:35)
  OMNI D

CONFIGURE CAMERA: (UV)
  CM5/EL/105/UV-BRKT, CONT (f4.3,1/60,∞) (8 FR)
  RINGSLIDE
  MAG (N) _____, FR # _____
  REMOVE RT2 FLIGHT DATA FILE STOWAGE BOX

DAMP RATES
  INHIBIT ALL JETS EXCEPT A1 & C2 OR B2 & D1, A4, C3, B4, D3
  VERIFY FDAI SCALE - 5/1
  WAIT 5 MIN FOR RATES TO DAMP
  VERIFY RATES ON FDAI ARE <0.2°/SEC IN ALL AXES

REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE AND CAMERA
  2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
  2 FRAMES, FILTER 2, EXP TIME 20 SEC and 1 @ 2 sec exp
  CHANGE SHUTTER TO 1/250 ch @ 11:40:01
  2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
  2 FRAMES, FILTER 4
  RECORD FR # _____

CONFIGURE CAMERA
  CM5/EL/105/CEX-CONT (f8,1/250,∞) (1 FR) (takes ?)
  RINGSLIDE
  MAG (M) _____, FR # _____
  1 FRAME, FILTER 4
  RECORD FR # _____

REMOVE CAMERA AND UV CARDBOARD SHADE
COMMENT - CONDITION OF CM5 WINDOW
REPLACE CM5 WINDOW COVER
ENABLE ALL JETS

MAPPING CAMERA TO STBY MODE

cb SCI EQUIP SEB 1 & 2 - CLOSE (VERIFY)
NON ESS BUS - MNA (VERIFY)
SM SECTOR 1 SM/AC PWR - ON (UP)
MAPPING CAMERA IMAGE MTN - OFF (VERIFY)
MAPPING CAMERA ON - STBY

PANORAMIC CAMERA TO HTRS MODE

cb SCI EQUIP SEB 1 & 2 - CLOSE (VERIFY)
NON ESS BUS - MNA (VERIFY)
cb SM SECTOR 1 SM/AC2 (3) - CLOSE (VERIFY)
SM SECTOR 1 SM/AC PWR - ON (UP)
PANORAMIC CAMERA POWER - OFF (VERIFY)
PANORAMIC CAMERA MODE - STBY
PANORAMIC CAMERA SELF TEST - HTRS

FLIGHT PLAN

MCC-H

1534 CDT

55:00

UPLINK TO CSM
CSM S.V. & V66
MCC-3 TGT LOAD
UPDATE TO CSM
GO/NO-GO FOR MCC-3
MCC-3 MNVR PAD

:10
(21101)
(X1111)

:20

55:30

:40

:50

56:00

MSFN

P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENT)

REPORT: GYRO TORQUING ANGLES
EXIT G&N PTC PAGE G/8-3

STOP PTC @ ROLL 56° HGA ANGLES: PITCH -48, YAW + 82

~~MAPPING CAMERA TO STBY MODE~~ ch'd @ 49:34:51
~~PANORAMIC CAMERA TO HTRS MODE~~
ch'd @ 49:37:22

UV PHOTOS

~~P30 EXTERNAL ΔV~~ ch'd @ 49:37:22
~~V49 MNVR TO PAD BURN ATT~~ V49 MNVR TO LM CHECKOUT ATT
305, 090, 000
HGA ANGLE: PITCH -30
YAW, 276
ch'd @ 49:38:44

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

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

GET 56 HOURS FOV 3°

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	55:00 - 56:00	3/TLC	3-59

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-3
BURN TABLE

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

1634 CDT

56:00
(21101)
(X1111)

:10

:20

LOI - 22 HR

56:30

:40

:50

57:00

MSFN

~~IF SPS MCC REQD:~~
~~SM SECTOR 1 SM/AC PWR - ON (UP) (VERIFY)~~
~~PANORAMIC CAMERA PWR - BOOST~~
~~MAPPING CAMERA IMAGE MTN - OFF (VERIFY)~~
~~MAPPING CAMERA ON - STBY (VERIFY)~~
~~SXT STAR CHECK~~
~~P40 SPS THRUSTING OR P41 RCS THRUSTING~~
O_2 FUEL CELL PURGE
WASTE WATER DUMP

chk'd @ 49:37:51

DIRECT O_2 OPEN UNTIL CABIN PRESSURE EQUALS 5.7 psia
chk @ 50:02:03

~~MCC-3~~

TIG: 56:31:14.7
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: NONE
ORBIT: N/A

~~V66 SET CSM S.V. INTO LM S.V.~~
~~BURN STATUS REPORT~~

chk'd @ 49:38:16.

~~IF SPS MCC PERFORMED:~~
~~PANORAMIC CAMERA PWR - OFF~~

CSM SYS CHKLIST, IVT TO LM PAGE 5/2-1 chk @ 49:42:59
EARLY LM IVT FOR EXTRA BATTERY CHECKOUT

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

NOTES

MCC-3 WILL BE DELAYED TO MCC-4 IF PROPELLANT COST IS NOT PROHIBITIVE

EARTH DISTANCE
~ 177,000 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	56:00 - 57:00	3/TLC	3-61

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

UPDATE TO CSM
QUADS TO ENABLE
FOR PTC SPINUP

1734 CDT

57:00
:10
:20
57:30
:40
:50
58:00

MSFN

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2

V49 MNVR TO PTC ATTITUDE
(N20,090,000)
P20 OPT 2 X-AXIS
N78 (0,0,0)
N79 (-0.3500,000.50)
N34 (0,0,0)

MOVED UNTIL AFTER LM BATTERY CHECKOUT FINISHED
ch@ 49:43:43

~~CSM SYSTEMS CHECKLIST~~

~~IVT TO LM (CHECKOUT TLC)~~ ~~PAGE S/2-1~~
~~START AT COUCH CONFIGURATION~~

ch'd @ 49:42:59
round to 56:50

PTC

S-BND AUX TV - SCIENCE, PAN CAMERA PWR - ON
LM HOUSEKEEPING ch'd@ 49:49:38 (5 MIN/OFF)
ch'd at 49:53:38

S-BND AUX TV - OFF

PREPARE FOR LM ~~INGRESS~~
REMOVE TUNNEL HATCH AND STOW
~~REMOVE~~ PROBE & DROGUE AND STOW

CSM - PROCEED WITH PTC ACTIVATION

About here

N

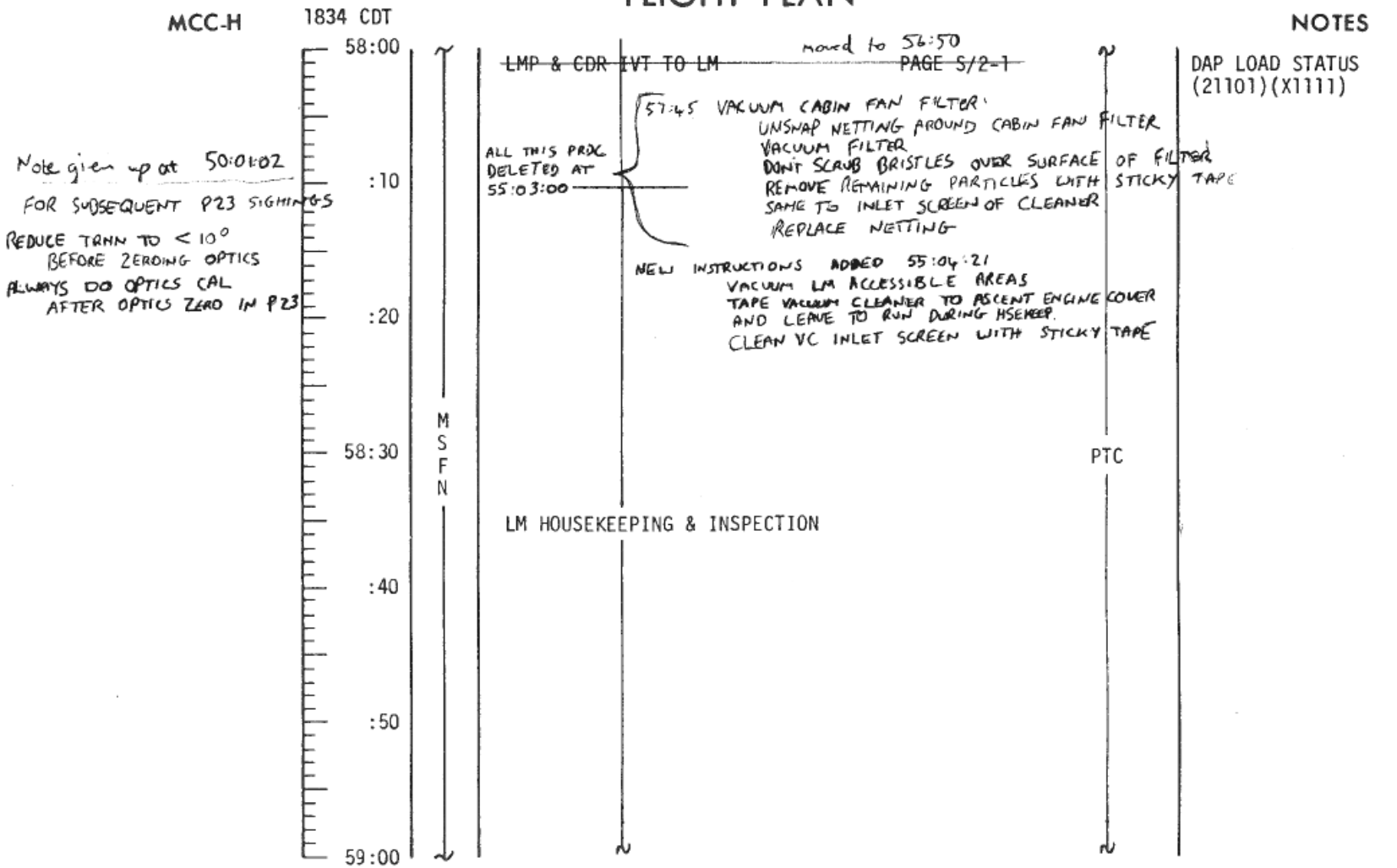
NOTES

DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	57:00 - 58:00	3/TLC	3-62

FLIGHT PLANNING BRANCH

FLIGHT PLAN

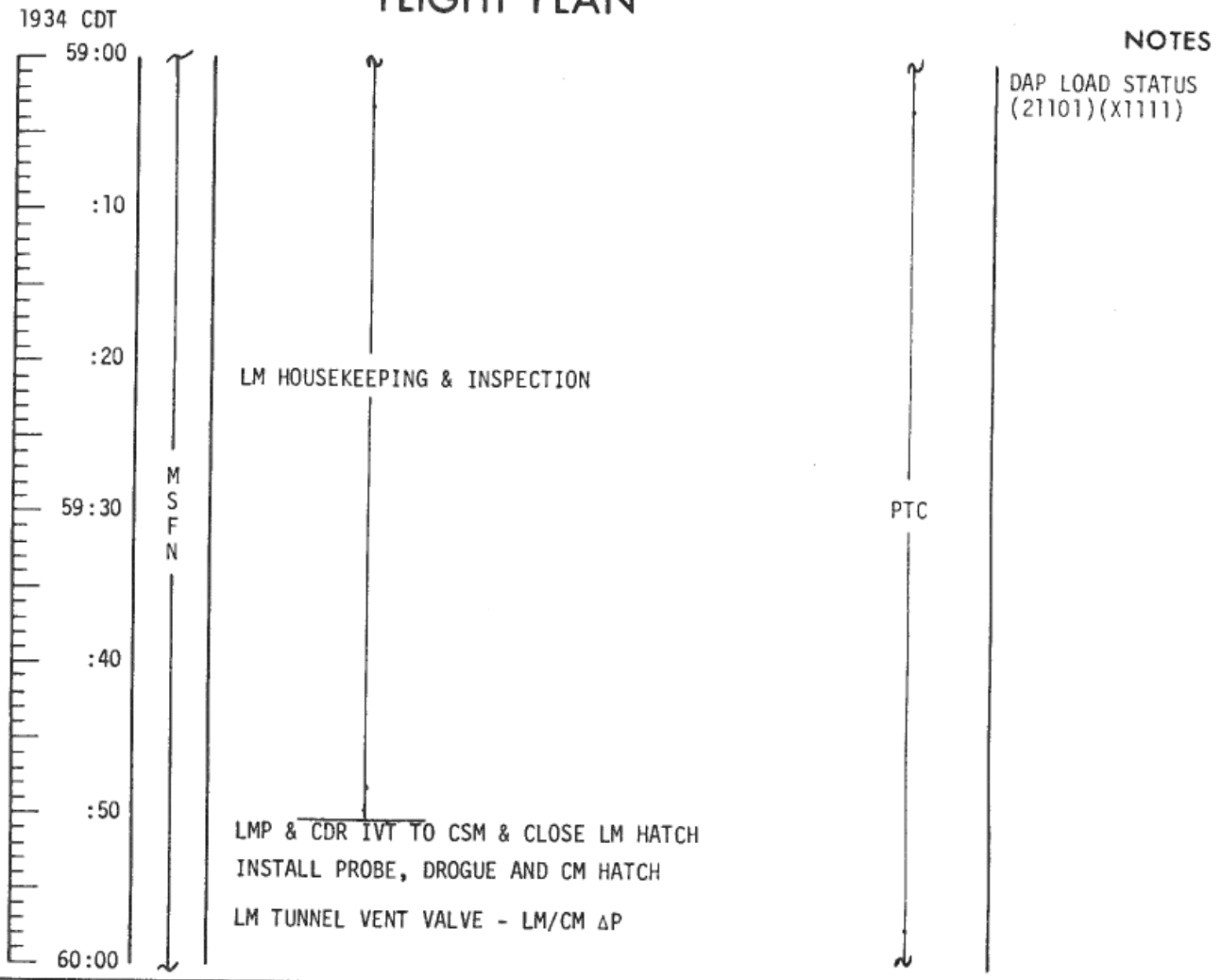


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	58:00 - 59:00	3/TLC	3-63

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	59:00 - 60:00	3/TLC	3-64

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

UPDATE TO CSM
HGA ANGLES FOR
CAM TEMP MONITOR
MCC-H MONITOR
DATA SYSTEM
FOR CAMERA LENS
TEMPERATURES

2034 CDT

60:00 — :10 — :20 — 60:30 — :40 — :50 — 61:00

MSFN

PANORAMIC CAMERA POWER - ON (FOR 5 MIN)/OFF
CDR DON BIOMED HARNESS
LMP DOFF BIOMED HARNESS

60:00 ch@ 49:58:10 after S-BND AUX TV to OFF
added:
PAN CAMERA SELF TEST to OFF
MAP CAMERA ON to OFF

CREW EXERCISE PERIOD

S-170 BISTATIC RADAR FREQUENCY CHECK
VHF AM B - DUPLEX
VHF RANGING - ON
VHF ANT - LEFT (VERIFY)
NOTE: MSFN WILL TURN OFF
S-BAND UPLINK FOR
APPROXIMATELY 5 MIN
WHILE S-BAND DOWNLINK
FREQUENCY IS MEASURED

ON GROUND CUE:
VHF AM B - OFF
VHF RANGING - OFF

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

further ch @ 59 48:56

60:00 S-BND AUX TV - SCIENCE
PAN CAM PWR - ON (FOR 5 min)/OFF
WAIT FOR MSFN @
PAN CAM SELF TEST - OFF
MAP CAM. ON - OFF
S-BND AUX, TV - OFF

FOR THIS TASK
HGA P, -30 Y, 90

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	60:00 - 61:00	3/TLC	3-65

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2134 CDT

61:00

:20

:40

62:00

:20

:40

63:00

MSFN

LiOH CANISTER CHANGE
(7 INTO A, 5 INTO B6)

CSM SYSTEMS CHECKLIST

PRE-SLEEP CHECKLIST
COMM-OMNI

EAT PERIOD

PAGE S/1-26

REST PERIOD
(8 HOURS)

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

ONBOARD READOUT

BAT C _____

PYRO BAT A _____

PYRO BAT B _____

RCS A _____

B _____

C _____

D _____

DC IND SEL - MNA OR B

EARTH DISTANCE
~ 187,336 NM

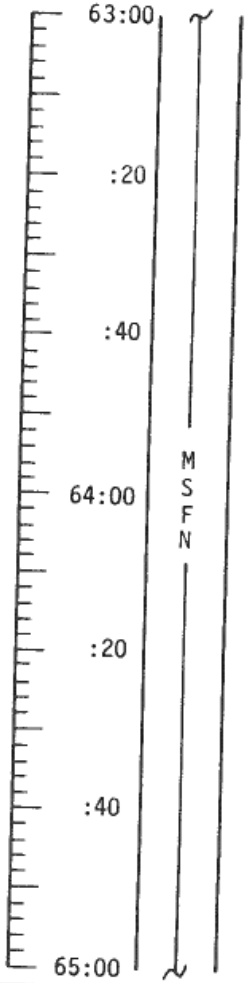
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	61:00 - 63:00	3/TLC	3-66

FLIGHT PL ' NING BRANCH

FLIGHT PLAN

MCC-H

2334 CDT



MSFN

REST PERIOD
(8 HOURS)

PTC

NOTES

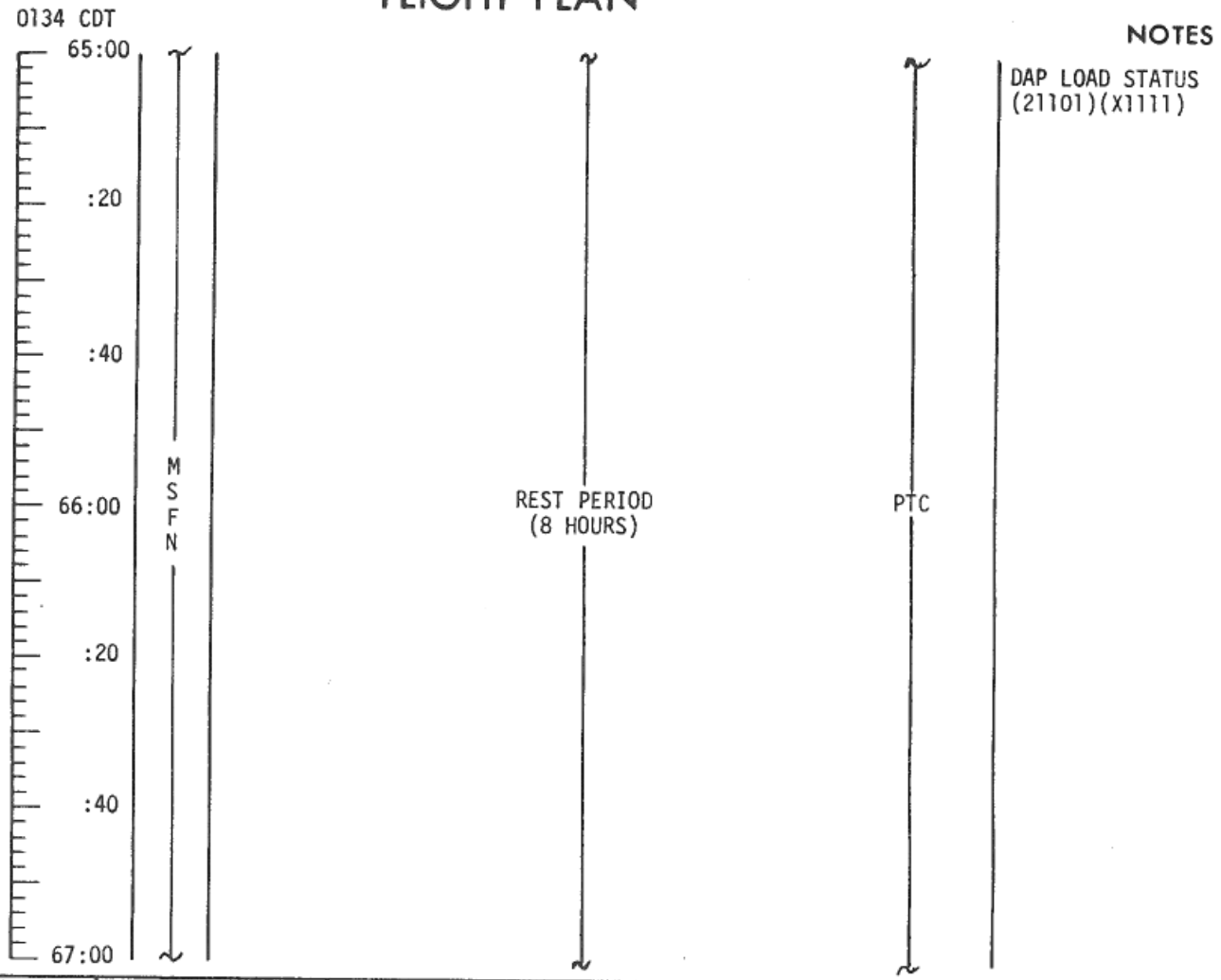
DAP LOAD STATUS
(21101)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	63:00 - 65:00	3/TLC	3-67

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

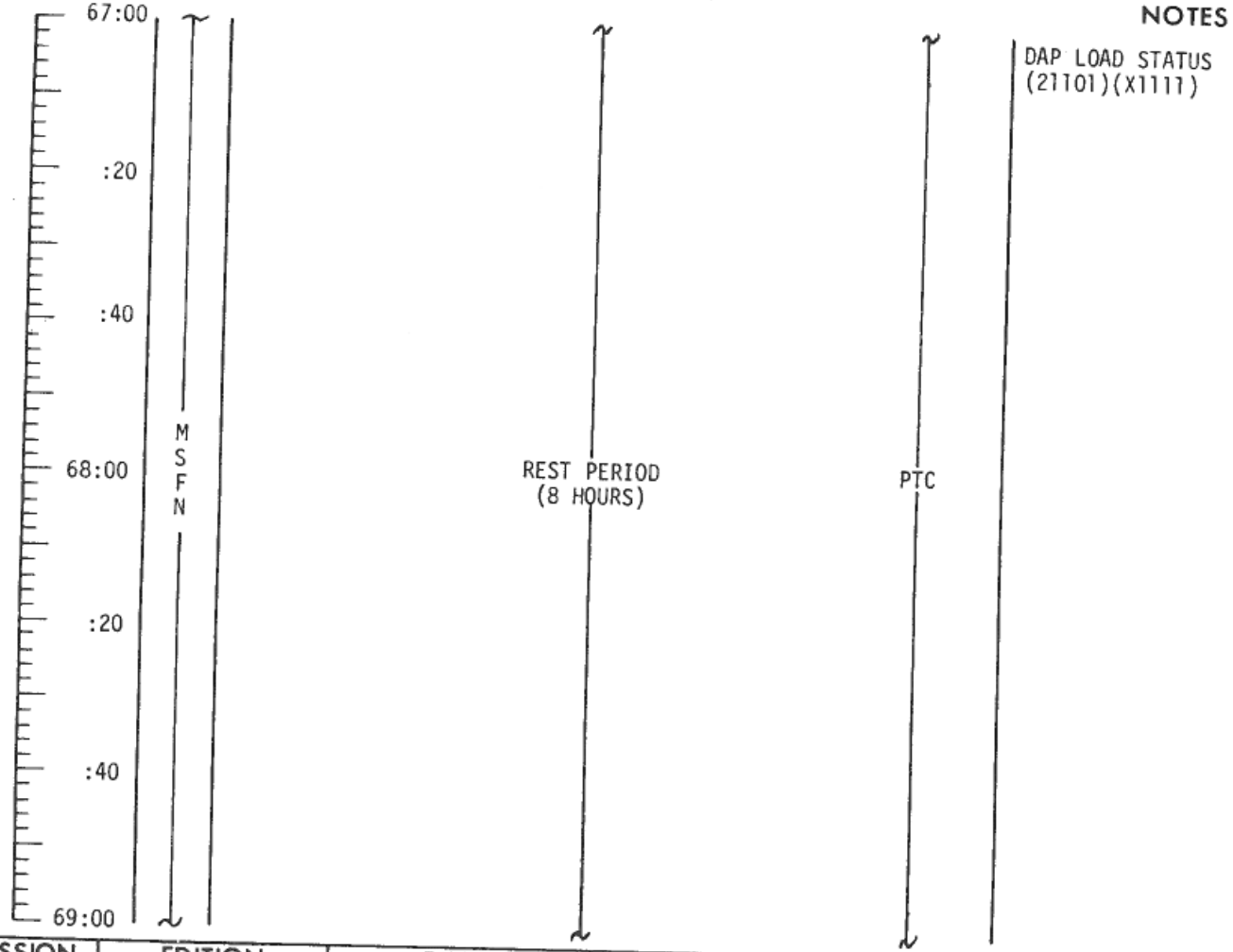


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	65:00 - 67:00	3/TLC	3-68

FLIGHT P' 'NING BRANCH

MCC-H 0334 CDT

FLI HT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	67:00 - 69:00	3/TLC	3-69

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0534 CDT

NOTES

DAP LOAD STATUS
(21101)(X1111)

69:00

:20

:40

70:00

:20

:40

71:00

MSFN

REST PERIOD
(8 HOURS)

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST

PAGE S/1-26

EAT PERIOD

PTC

PDATE TO CSM
LIGHT PLAN
ONSUMABLES

CSM CONSUMABLES UPDATE
GET: _ _ _ : _ _
RCS TOTAL _____
QUAD A _____ B _____
C _____ D _____
H_2 TANK 1 ____ 2 ____ 3 ____
O_2 TANK 1 ____ 2 ____ 3 ____

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	69:00 - 71:00	3-4/TLC	3-70

FLIGHT NNING BRANCH

FLIGHT PLAN

MCC-H

0734 CDT

71:00
:10
:20
71:30
:40
:50
72:00

MSFN

CSM G&C CHECKLIST

ΔV TEST & NULL BIAS CHECK
REPORT: BIAS

PAGE G/2-5

CSM SYSTEMS CHECKLIST

CM/LM PRESSURE EQUALIZATION (DECAL)
PRESS EQUAL VLV - CLOSE (ch @ 70:34:31)
CMP DON BIOMED HARNESS
CDR DOFF BIOMED HARNESS

DON PGA'S WITHOUT HELMETS AND GLOVES

PAGE S/2-3

ch @ 70:32:39
HGA ON MSFN CUE
S-BND AUX. TV - SCIENCE
PAN CAMERA MODE - STBY (VERIFY)
PAN CAMERA PWR - ON
PAN CAMERA SELF TEST - HEATERS
MAP CAMERA ON - STBY
WAIT 5 MINS
PAN CAMERA PWR - OFF
S-BND AUX. TV - OFF

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

GET 72 HOURS FOV 3°

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	71:00 - 72:00	4/TLC	3-71

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0834 CDT

72:00

:10

:20

72:30

:40

:50

73:00

M S F N

UPDATE TO CSM
MCC-4 MNVR PAD
PERICYNTHION +2 HR
ABORT PAD
UPLINK TO CSM
CSM S.V. & V66
MCC-4 TGT LOAD

CONFIGURE CAMERA FOR SIM DOOR JETT PHOTOS
CM5/DAC/75/CEX (f8,1/250,100) 12 fps (5% MAG)

MAG (E) _____, MAG % _____

H_2 PURGE LINE HEATERS - ON

P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENT)

REPORT: GYRO TORQUING ANGLES

EXIT G&N PTC PAGE G/8-3
P30 EXTERNAL ΔV
V49 MNVR TO PAD BURN ATT

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

PERICYNTHION +2 HR
ABORT PAD TARGETED
FOR A FAST RETURN
TO MPL.

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

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	72:00 - 73:00	4/TLC	3-72

FLIGHT NNING BRANCH

OPTICS CAL PROCEDURES

(READ UP AT 70:38:11)

IF OPTICS POWER IS OFF
PLACE 'ZERO' SWITCH-OFF
BEFORE OPTICS POWER - ON

AFTER OPTICS. POWER ON
DRIVE OPTICS MANUALLY
TO TRUNNION OF < 10°
BEFORE 'ZERO' SWITCH - ON

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MCC-4
BURN TABLE

P OR Y RATE	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	±10° TERMINATE	BT + 1 SEC	TRIM ONLY X AXIS TO 0.2 FPS

FLIGHT PLAN

MCC-H

0934 CDT

73:00
(21101)
(X1111)

:10

:20

73:30

:40

:50

74:00

MSFN

LOI -5 HR

GO/NO-GO FOR
SIM DOOR JETT

IF SPS MCC REQD:
SM SECTOR 1 SM/AC PWR - ON (UP) (VERIFY)
PANORAMIC CAMERA PWR - BOOST
MAPPING CAMERA IMAGE MTN - OFF (VERIFY)
MAPPING CAMERA ON - STBY (VERIFY)
SXT STAR CHECK
P40 SPS THRUSTING OR P41 RCS THRUSTING
H_2 & O_2 FUEL CELL PURGE
~~WASTE WATER DUMP~~

H_2 PURGE LINE HEATERS - OFF

MCC-4

TIG: 73:31:14.7
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: NONE
ORBIT: N/A

V66 SET CSM S.V. INTO LM S.V.
BURN STATUS REPORT
V49 MNVR TO SIM DOOR JETTISON ATTITUDE (73:49)
(353,104,321)
ACQ MSFN HGA P -70, Y 269

DON HELMETS & GLOVES

SUIT CKT INTEGRITY CHECK

WHEN MNVR COMPLETE, BEGIN SIM DOOR JETT. PROCED.

GO/NO-GO FOR SIM DOOR JETTISON (CUE MSFN)

NOTES

EARTH DISTANCE
~ 206,000 NM

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 15	FINAL (7/26)	6/21/71	73:00 - 74:00	4/TLC	3-75

FLIGHT PLANNING BRANCH

FLIGHT PLAN

SIM DOOR JETTISON PROCEDURE

1. VERIFY:
   MAPPING CAMERA IMAGE MTN - OFF
   MAPPING CAMERA TRACK - OFF/TB-GRAY
   α RAY/X DR - α OFF
   SUBSAT EXTEND/LAUNCH - OFF/TB-GRAY
   DATA SYS ON - ON

2. PANORAMIC CAMERA PWR - ON (FOR 2 MIN ON MSFN CUE)
   PANORAMIC CAMERA PWR - BOOST

3. FC REACS VALVES - LATCH
   S-BD AUX TV - SCI

4. SIM DOOR JETTISON
   SM SECTOR 1 SM/AC PWR - OFF
   cb LOGIC POWER (2) - CLOSE
   LOGIC POWER (2) - JETT
   GO/NO-GO FOR SIM DOOR JETTISON (CUE MSFN)
   DOOR JETT - DOOR JETT 74:01
   DAC-ON (FOR 20 SEC)

LEXAN SHIELD IN CM5

   OBSERVE AND PHOTOGRAPH SIM DOOR THROUGH CM5 WINDOW
   DOOR JETT - OFF
   LOGIC POWER (2) - OFF (CTR)
   SM SECTOR 1 SM/AC PWR - ON
   FC REACS VALVES - NORM
   SM RCS PRPLNT TB(8)-GRAY (VERIFY)
   SM RCS He TB(8)-GRAY (VERIFY)
   SM RCS SEC PRPLNT FUEL PRESS (4) - CLOSE
   MAPPING CAMERA ON - STBY
   X-RAY - STBY
   α RAY/X DR - α ON
   MASS SPECT EXP - STBY

FLIGHT PLAN

MCC-H

1034 CDT

NOTES

74:00
(21101)
(X1111)

SIM DOOR JETTISON 74:01

:10

COMMENT ON PRIMARY AND SECONDARY HELIUM AND PROPELLANT ISOLATION VALVE INDICATOR FLAGS AND ANY OTHER CSM PERTURBATIONS

(21111)
(X1111)

V48 (21111)(X1111)
DOFF & STOW PGA'S
H_2 HEATERS 1&2 (2) - AUTO

:20

H_2 HEATERS 3 (1) - OFF
O_2 HEATERS 1&2 (2) - AUTO
O_2 HEATERS 3 (1) - OFF

MSFN

74:30

AP*

:40

:50

75:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	74:00 - 75:00	4/TLC	3-77

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1134 CDT

UPLINK TO CSM
CSM S.V. & V66
(PRELIMINARY)
LOI TGT LOAD
(PRELIMINARY)
DESIRED ORIENTATION
(LOI)

UPDATE TO CSM
LOI MNVR PAD
(PRELIMINARY)

75:00
(21111)
(X1111)
:10
:20
75:30
:40
:50
76:00

MSFN

V49 MNVR TO P52 ATT (315,107,336) (75:20) HGA P -31, Y 263
CHECK MISSION TIMER AGAINST CMC CLOCK

GAMMA RAY: EXP-ON, GAINSTEP - SHIELD ON

ATT DEADBAND - MIN
RATE - LOW
BMAG (3) - ATT 1/RATE 2
SC CONT - SCS

P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENT)

STARS_____,_____
SA_____,_____
TA_____;_____

REPORT: GYRO TORQUING ANGLES

P52 IMU REALIGN
OPTION 1 PREFERRED
(LOI ORIENT)

SC CONT - CMC
BMAG (3) - RATE 2

LiOH CANISTER CHANGE
(8 INTO B, 6 INTO B6)

NOTES

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

GR*
AP*

GET 76 HOURS FOV 3°

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	75:00 - 76:00	4/TLC	3-78

FLIC PLANNING BRANCH

FLIGHT PLAN

MCC-H

1234 CDT

NOTES

76:00
(21111)
(X1111)

CSM G&C CHECKLIST

ΔV TEST & NULL BIAS CHECK PAGE G/2-5
REPORT: BIAS

:10

:20

CREW EXERCISE PERIOD

MSFN

GR*
AP*

76:30

:40

CSM SYSTEMS CHECKLIST

PRE-LOI SECONDARY GLYCOL LOOP CHECK PAGE S/1-15
REPORT: LM/CM ΔP

UPDATE TO CSM
TEI 4 PAD

:50

TEI 4 PAD
ASSUMES NO DOI

77:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	76:00 - 77:00	4/TLC	3-79

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1334 CDT

77:00
(21111)
(X1111)

:10

:20

77:30

(21101)
(X1111)

:40

:50

78:00

M
S
F
N

UPDATE TO CSM
LOI MNVR PAD
MAP UPDATE REV 1

UPLINK TO CSM
CSM S.V. & V66
LOI TGT LOAD

CSM SYSTEMS CHECKLIST

C&W SYSTEM OPERATION CHECK	PAGE S/1-17
SPS MONITORING CHECK	PAGE S/1-1
SM RCS MONITORING CHECK	PAGE S/1-1
CM RCS MONITORING CHECK	PAGE S/1-1
ECS MONITORING CHECK	PAGE S/1-5

OXIDIZER FLOW VALVE INCR - NORM (VERIFY)

S-BD AUX TV - OFF
DATA SYS ON - OFF
GAMMA RAY EXP - OFF
X-RAY - OFF
α RAY/X DR - α OFF
MASS SPECT EXP - OFF

CYCLE CMC MODE - FREE/AUTO
V48 (21101)(X1111)
P30 EXTERNAL ΔV

V49 MNVR TO PAD BURN ATTITUDE (78:00)
(000,000,000)
OMNI C

NOTES

MAP UPDATE REV 1
LOS: ___ ___ ___:___ ___:___ ___
180°: ___ ___ ___:___ ___:___ ___
AOS WITH LOI: ___ ___ ___:___ ___:___ ___
AOS WITHOUT LOI: ___ ___ ___:___ ___:___ ___

GR*
AP*

THE PU VALVE SHOULD BE USED TO MAINTAIN THE INDICATED UNBALANCE TO WITHIN +50 LBS OF THE STABILIZED READING (TIG +25 SEC) UNTIL CROSSOVER. AFTER CROSSOVER THE VALVE SHOULD BE USED TO CONTROL THE THE GREEN BAND (0 + 100 LBS). THE APPROXIMATE TIME OF CROSSOVER IS 04:22 TO 04:29 MINUTES INTO THE LOI BURN.

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	77:00 - 78:00	4/TLC	3-80

FLIGHT PLANNING BRANCH

P30 MANEUVER

VEGA DENEB
SET STARS

R_{ALIGN} 264
P_{ALIGN} 090
Y_{ALIGN} 349

ULLAGE NONE

L	O	1				PURPOSE	LOI	
S	P	S	G	+	N	PROP/GUID	SPS/G+N	
+	6	6	2	4	4	WT N47	66244	
	0	0	1	2	1	P_{TRIM} N48	+1.21	
	0	0	0	1	2	Y_{TRIM}	-012	
+	0	0	0	7	8	HRS GETI	78	
+	0	0	0	3	1	MIN N33	31	
+	0	4	5	9	1	SEC	34.48	
	2	8	9	7	5	ΔV_X N81	2894.5	
	0	7	7	6	4	ΔV_Y	766.4	
	0	0	4	4	1	ΔV_Z	112.3	
X	X	X	0	0	0	R	0	
X	X	X	0	0	0	P	0	
X	X	X	0	0	0	Y	0	
+	0	1	6	9	6	H_A N44	169.5	
	0	0	5	8	4	H_P	58.3	
+	3	0	0	0	1	ΔVT	2996.4	
X	X	X	6	4	1	BT	6:40	
X	2	9	9	3	9	ΔVC	2990.2	
X	X	X	X	2	5	SXTS	25	
+	2	6	7	1	0	SFT	267.1	
+	2	2	8	0	0	TRN	228	
X	X	X				BSS		
X	X					SPA		
X	X	X				SXP		

redd-up at (74:51:56)

Set stars
VEGA DENEB

GDC ALIGN

R 264
P 90
Y 349

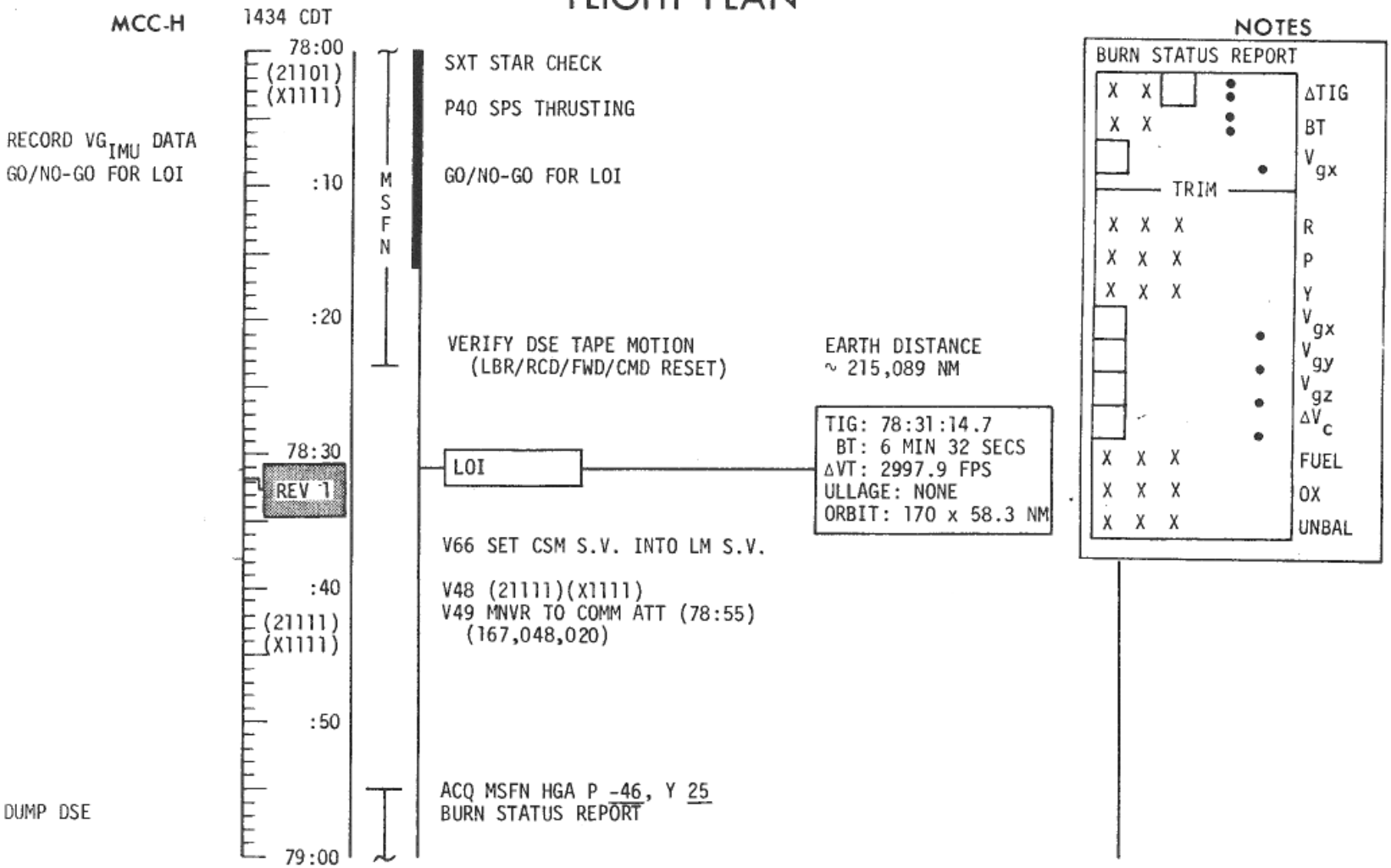
NO ULLAGE

FLIGHT PLAN

LOI
BURN TABLE

P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TAKEOVER & COMPLETE	±10° TAKEOVER & COMPLETE	BT + 10 SEC	DO NOT TRIM

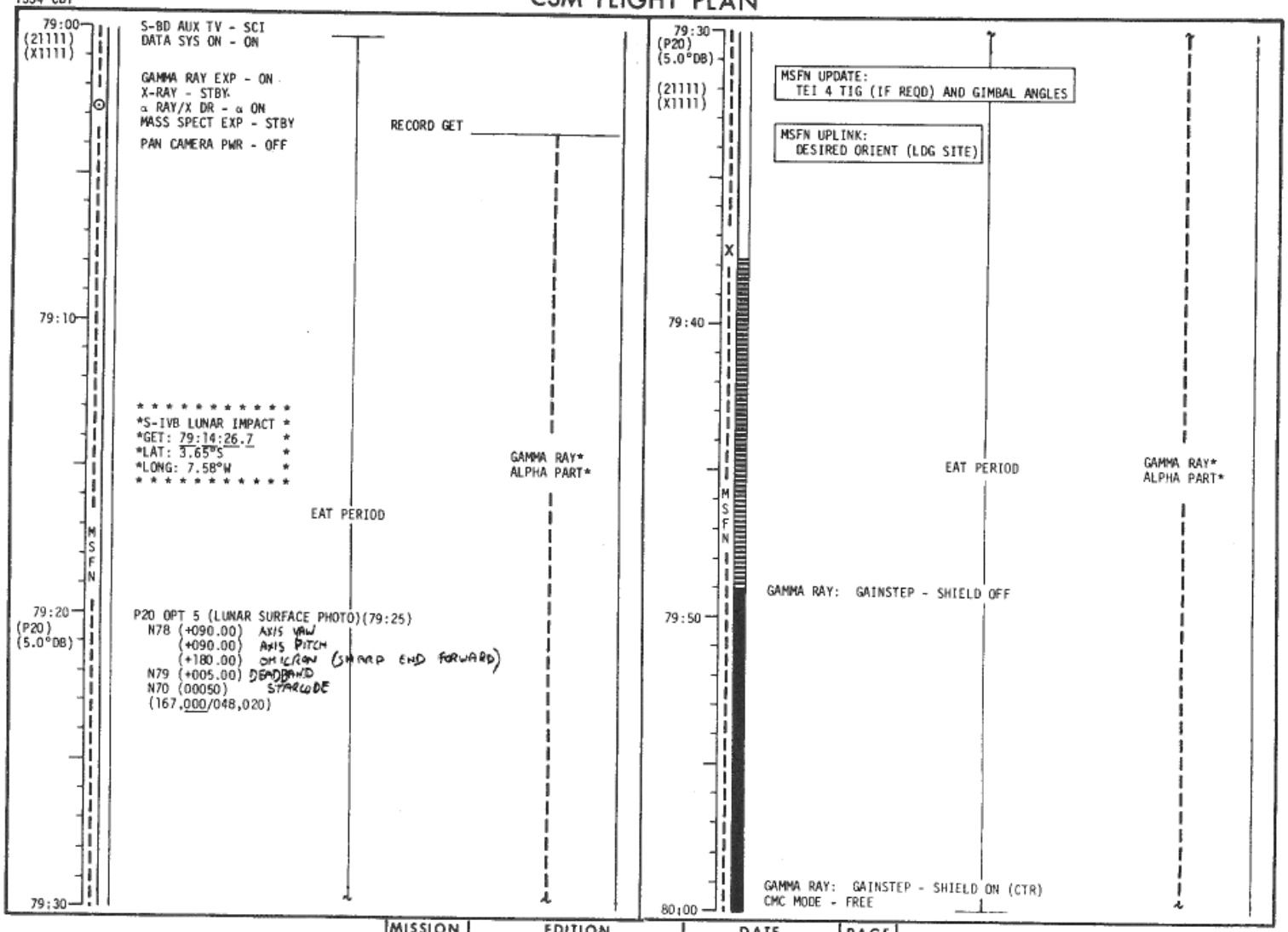
FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	78:00 - 79:00		3-83

FLIGHT PLANNING BRANCH

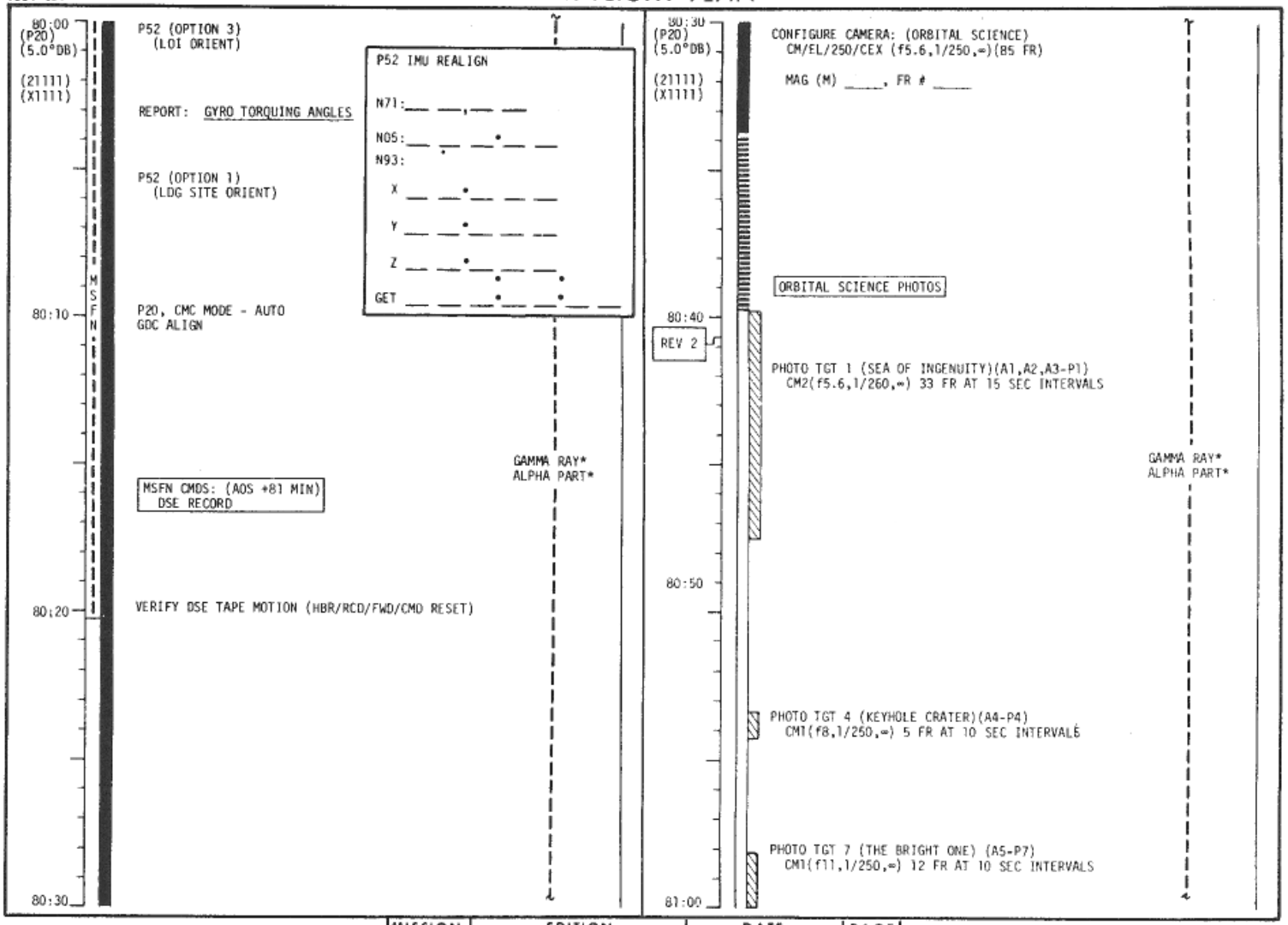
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-84

1634 Cr.

CSM FLIG... PLAN



CSM FLIGHT PLAN

1734 CDT

81:00
(P20)
(5.0°DB)
(21111)
(X1111)

ACQ MSFN HGA: MAN, WIDE P__, Y
S-BD ANT IND >1/2 SCALE HGA: REACQ, NARROW
CONFIGURE DSE (STOP/CMD RESET/REWIND)

CREW EXERCISE PERIOD

81:10

PHOTO TGT 11 (IBN YUNUS) (A7-P11)
CM1(f11,1/250,∞) 14 FR AT 20 SEC INTERVALS

MSFN CUE: (~AOS +8 MIN)
HGA AUTO
MSFN CMDS: (AOS +9 MIN)
DSE PLAYBACK

GAMMA RAY*
ALPHA PART*

81:20

MSFN UPDATE:
TERMINATOR PHOTO PAD (81:34)

81:30

PHOTO TGT 19 (NEWCOMB/POSIDONIUS) (A10,A11-P19)
CM1(f8,1/250,∞) 21 FR AT 20 SEC INTERVALS

MSFN

81:30
(P20)
(5.0°DB)
(21111)
(X1111)

MSFN UPLINK:
DOI TARGET LOAD
CSM S.V. AND V66
PIPA BIAS CHECK

TERMINATOR PHOTO PAD
T-START: _____
(TERMINATOR - 1 MIN 40 SEC)

RECORD FR # ____

MSFN UPDATE:
DOI MNVR PAD (82:15)
MAP UPDATE REV 3 (83:10)
J-1 LDMK OBS PAD (83:40)
TEI 5 PAD

81:40

CHG 70:36:06

CONFIGURE CAMERA: (TERMINATOR PHOTOS)
CM1 CM2/EL/250/VHBW,IVL (f5.6,1/125,∞) (6 FR)
PCM CABLE
MAG (R) ____, FR # ____

EL - ON (T START)

EL - OFF (T START +1:40)

RECORD FR # ____

GAMMA RAY*
ALPHA PART*

81:50

CSM SYSTEMS CHECKLIST
C&W WARNING OPERATIONAL CHECKLIST PAGE S/1-17
SPS MONITORING CHECK PAGE S/1-1
SM RCS MONITORING CHECK PAGE S/1-1
CM RCS MONITORING CHECK PAGE S/1-1
ECS MONITORING CHECK PAGE S/1-5

(21111)
(X1111)
82:00

P00

MSFN

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-86

1834

82:00 (21111) (X1111)

P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

GDC ALIGN
VERIFY ORDEAL

P30; VERIFY DOI TIG AND ΔV'S
CYCLE CMC MODE - FREE/AUTO
V48 (21101)(X1111)
P40

(21101) (X1111)

MSFN RECORD:
VG_{IMU} DATA

82:10

V49 MNVR TO DOI PAD BURN ATT (82:26)
ACQ MSFN OMNI C

MSFN CMDS:
DSE REWIND

PAN CAMERA PWR - BOOST
MAP CAMERA ON - STBY (VERIFY)
MAP CAMERA IMAGE MTN - OFF (VERIFY)
GAMMA RAY EXP - OFF
X-RAY - OFF
α RAY/X DR - α OFF
MASS SPECT EXP - OFF
DATA SYS ON - OFF
S-BD AUX TV - OFF (CTR)

82:20

MSFN UPDATE:
GO/NO-GO FOR DOI

MSFN CMDS:
DSE RECORD

SXT STAR CHECK
P40 (TRIM)

(P40) (0.5°DB)

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

82:30

MSFN

P52 IMU REALIGN

N71: ___ ___, ___ ___

N05: ___ ___ ___ ___ ___

N93:

X ___ ___.___ ___ ___

Y ___ ___.___ ___ ___

Z ___ ___.___ ___ ___

GET ___ ___ ___.___ ___.___ ___ ___

GAMMA RAY*
ALPHA PART*

RECORD GET _____

P30 MANEUVER

SET STARS	D S	O P	I S/G	&	N	PURPOSE / PROP/GUID	
	+					WT	N47
R_{ALIGN} ___ ___ ___		O	O			P_{TRIM}	N48
P_{ALIGN} ___ ___ ___		O	O			Y_{TRIM}	
Y_{ALIGN} ___ ___ ___	+	O	O			HRS	GETI
	+	O	O	O		MIN	N33
	+	O				SEC	
ULLAGE _____						ΔV_X	N81
_____						ΔV_Y	
_____						ΔV_Z	
_____	X	X	X			R	(000)
	X	X	X			P	(284)
	X	X	X			Y	(000)
	+					H_A	N44
						H_P	
	+					ΔVT	
	X	X	X			BT	
	X					ΔVC	
	X	X	X	X		SXTS	
	+				O	SFT	
	+			O	O	TRN	
	X	X	X			BSS	
	X	X				SPA	
	X	X	X			SXP	

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-87

CSM FLIGHT PLAN

1904 CDT

82:30
(P40)
(0.5°DB)
(21101)
(X1111)

82:40
(21101)
(X1111)

REV 3

82:50

83:00

DOI BURN TABLE			
P OR Y RATES	ATT DEVIATIONS	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	+10° TERMINATE	BT	*TRIM OVERBURNS IN X TO WITHIN 1 FPS, DO NOT TRIM Y & Z

*IF OVERBURN IS > 2.2 FPS AND < 10 FPS PITCH 180° AND TRIM WITH +X RCS THRUSTERS, IF > 10 FPS USE SPS

DOI (000,180/284,000)	TIG: 82:39:32.6 BT: 22.9 SEC ΔVT: 207.6 FPS ULLAGE: 4 JET, 16 SEC ORBIT: 58.4 x 9.6
_____:_____:_____._____	

P00; V66 SET CSM S.V. INTO LM S.V.

V49 MNVR TO BAILOUT BURN ATTITUDE
(340,032,000)

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						FUEL
X						OX
X						UNBAL

CSM FLIGHT PLAN

CDT
1934 CDT

83:00
(21101)
(X1111)

83:10

83:20

83:30

MSFN

ACQ MSFN HGA P -37, Y 318
MSFN CMDS:
DSE STOP
REPORT: BURN STATUS

MAP UPDATE REV 3

LOS :
180°:
AOS :

* AOS - NO UP VOICE PROCEDURE *
* 1. WAIT 30 SEC, CHECK HGA *
* 2. SELECT OMNI B *
* 3. SELECT SEC XPNDR *
* 4. AFTER 3 MIN GO TO LOSS OF COMM CUE CARD *

MSFN CMDS:
DSE REWIND

MSFN CMDS:
DSE PLAYBACK

MSFN UPDATE:
STAY/BAILOUT

SC CONT - SCS
P47 THRUST MONITOR
BAILOUT BURN (340,074/032,000)
_____:____:____.____
P00; V66 SET CSM S.V. INTO LM S.V.

TIG: 83:26:16.9
BT: 10.2 SEC
ΔVT: 94.0 FPS
ULLAGE: 4 JET, 16 SEC
ORBIT: 71.0 x 3.9

83:30
(21101)
(X1111)
(21102)
(X1111)

83:40

(21101)
(X1111)

83:50

(P20)
(0.5°DB)

84:00

MSFN CMDS:
DSE REWIND

V48 (21102)(X1111)
V49 MNVR TO LDMK OBS ATT (83:40)(IF NO BAILOUT REQD)
(015,291,000) OMNI C

P24 (ORB NAV MONITOR LDMK NO MARKS)
OPT ZERO - OFF, OPT MODE - CMC
OPT TEL TRUN - SLAVE TO SXT
OPT COUPLING - RSLV, OPT SPEED - HI

LDMK ACQUISITION

TCA

LDMK J-1 OBS
T HOR: 83:39:33
TCA -20 SEC: 83:41:25
LAT: +25.958
LONG/2: +05.664
ALT: +00000

V48 (21101)(X1111)

MSFN UPDATE:
MAP CAMERA PHOTO PAD (84:32)
PAN CAMERA PHOTO PAD (84:39)

S-BD AUX TV - SCI
PCM BIT RATE - HIGH (VERIFY)
DATA SYS ON - ON
PAN CAMERA PWR - OFF

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

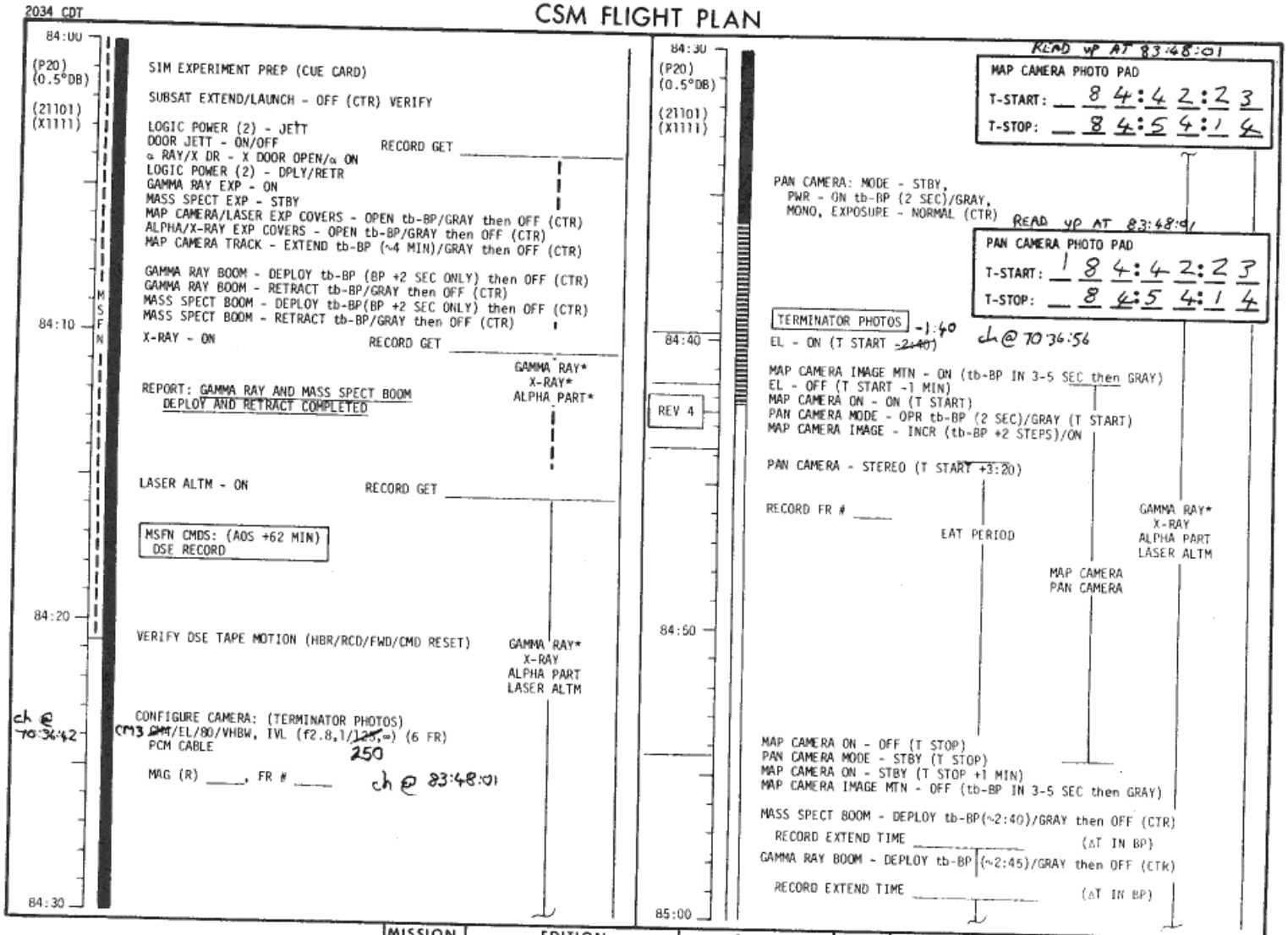
P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

GDC ALIGN
INHIBIT ALL JETS EXCEPT A1 & C2 OR D1 & B2,A3,C4,B3,D4
P20 OPT 5 (+X FWD SIM ATT) (84:14)
N78 (+090.00)
(+052.25)
(+180.00) SHARP END FORWARD
N79 (+000.50)
N70 (00050) Moon
(143,000/163,000) HGA P -12, Y 167

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-89

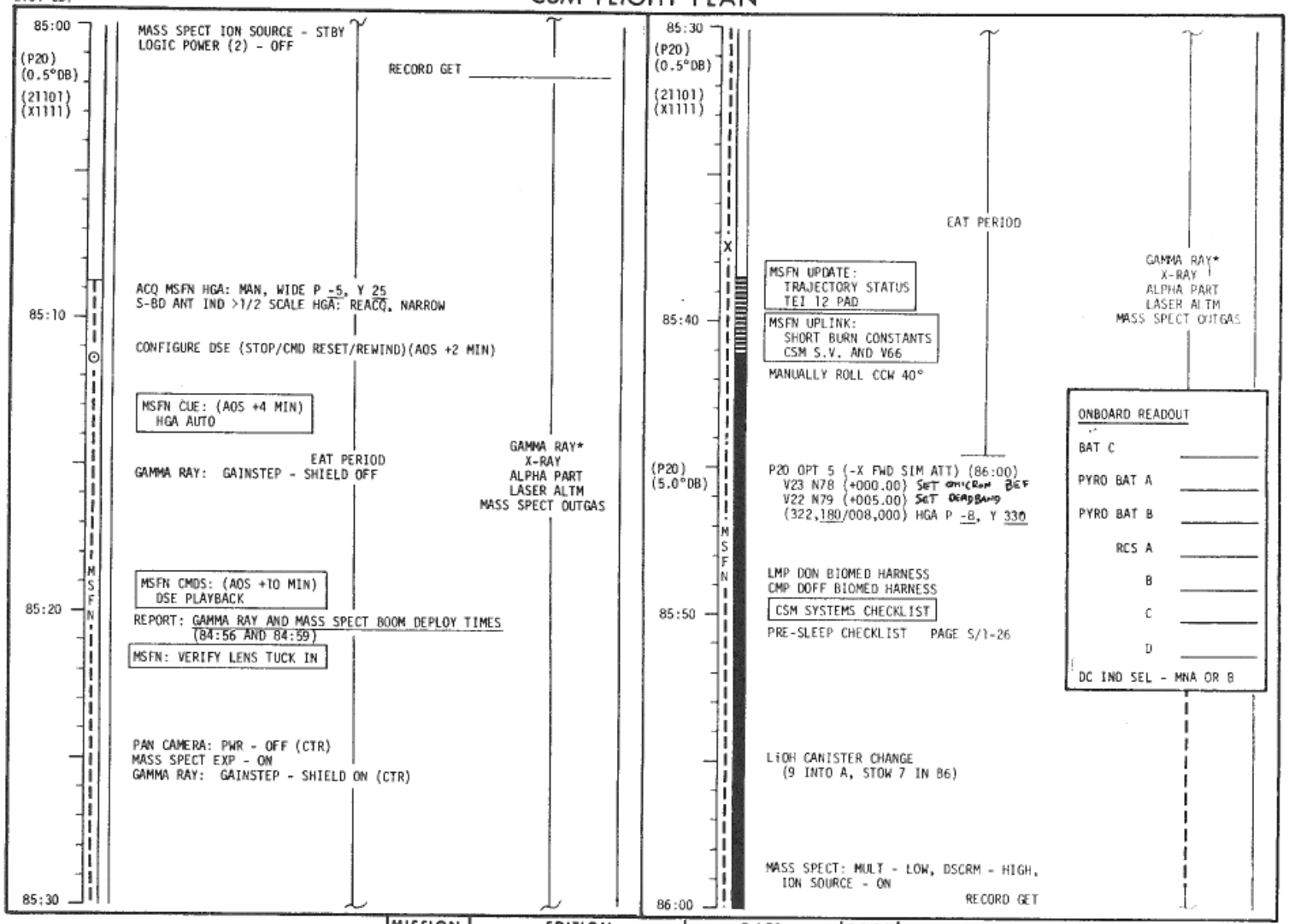
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-90

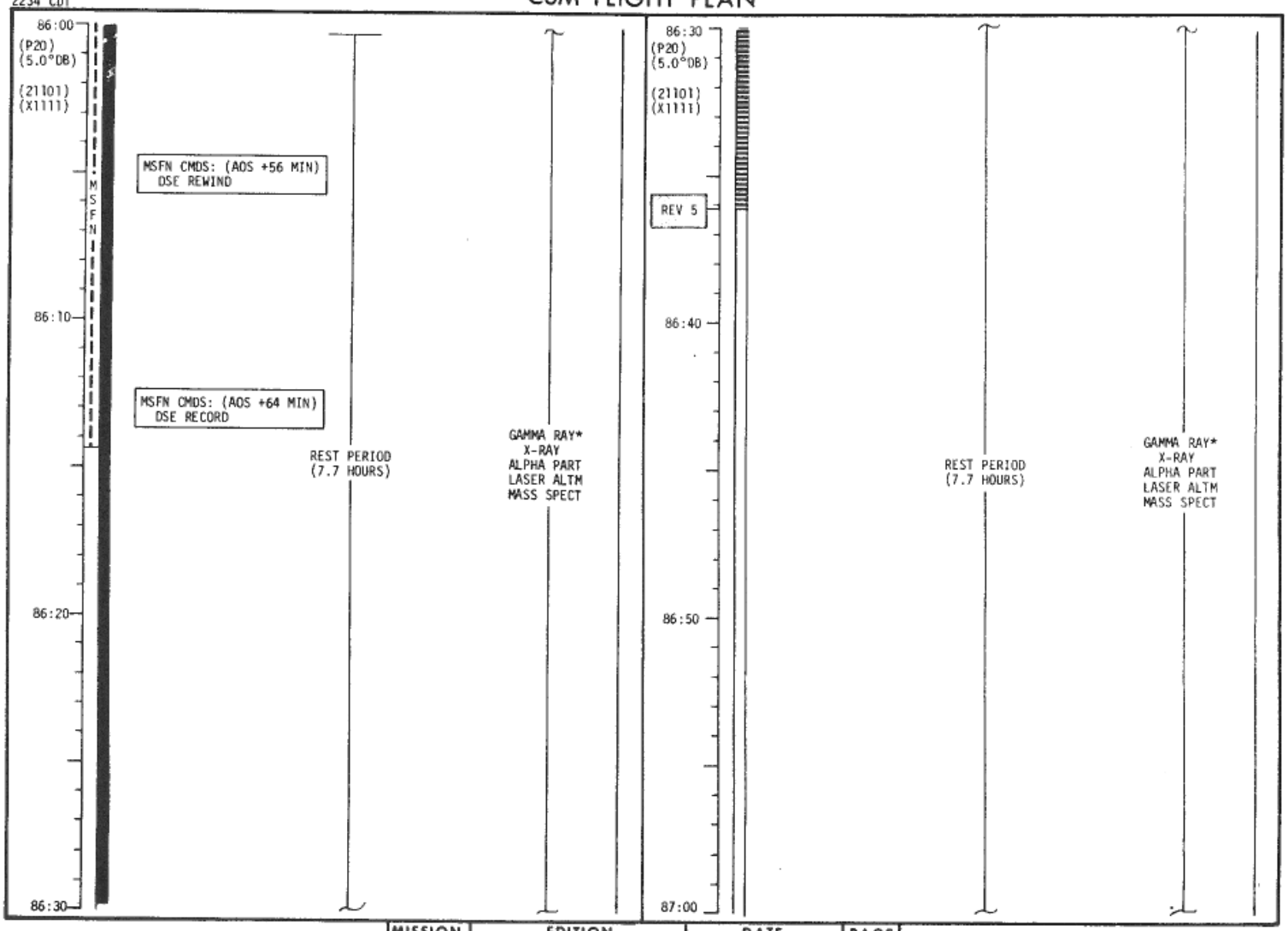
2134 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-91

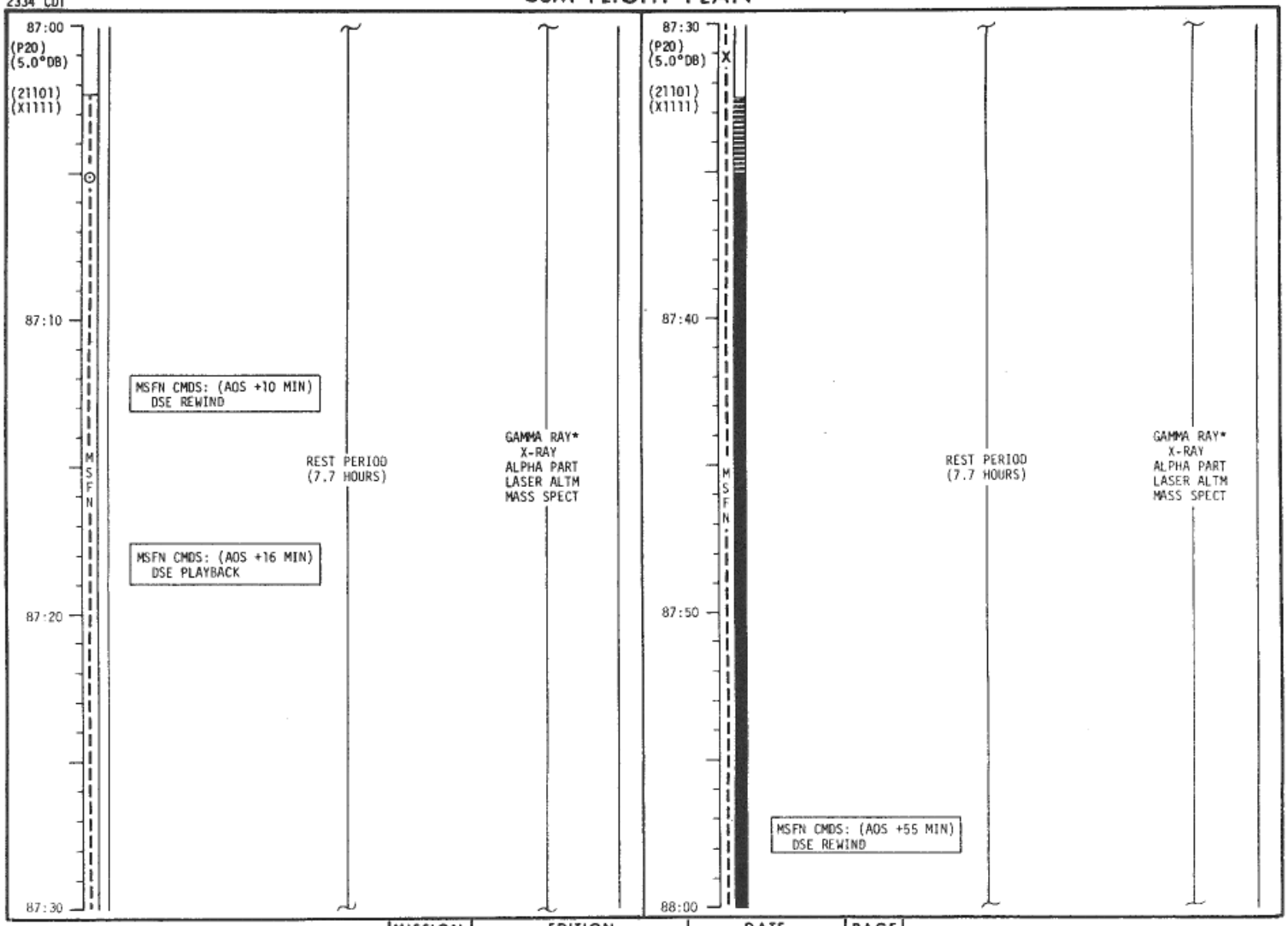
CSM FLIGHT PLAN



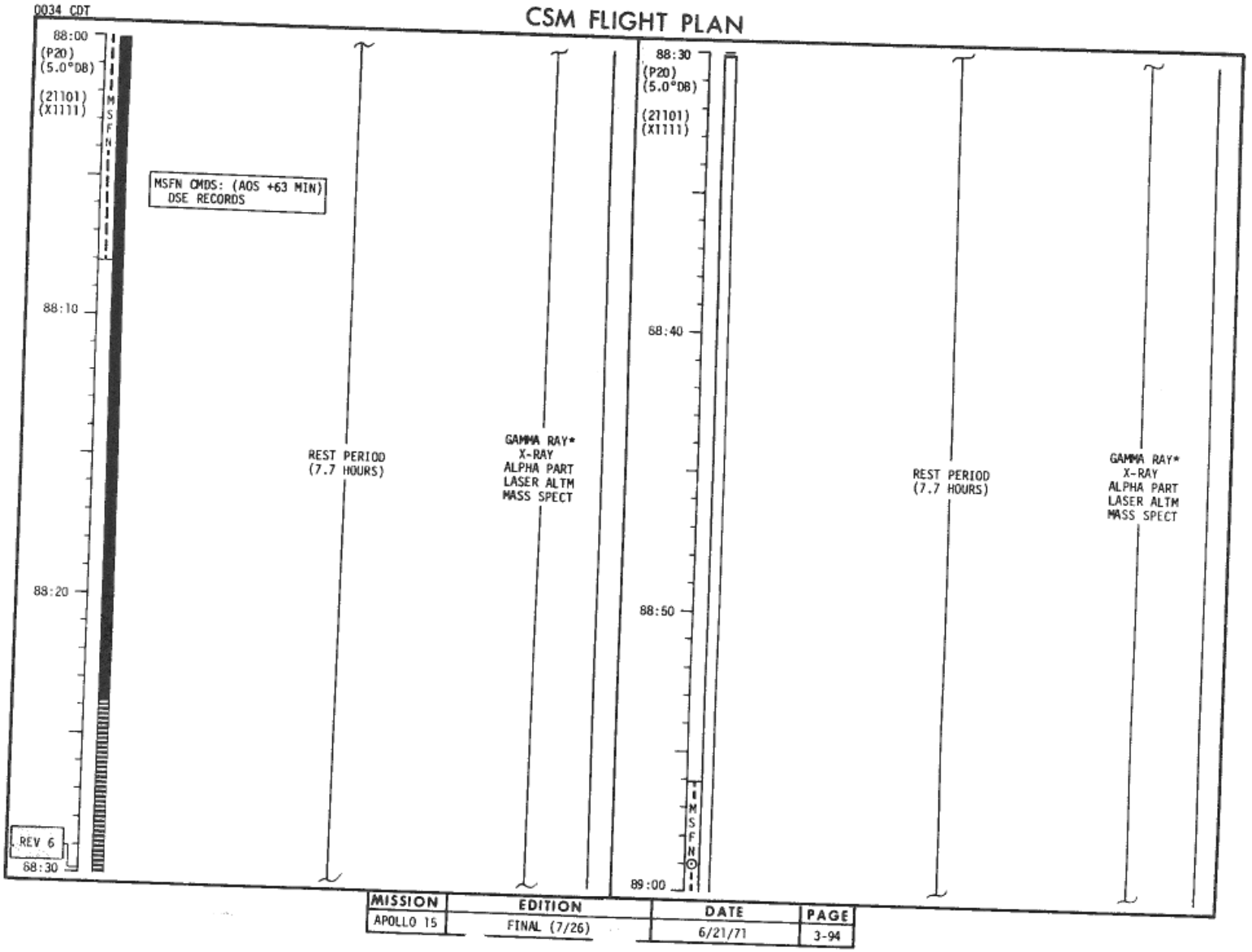
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-92

2334 Cur

CSM FLIGHT PLAN

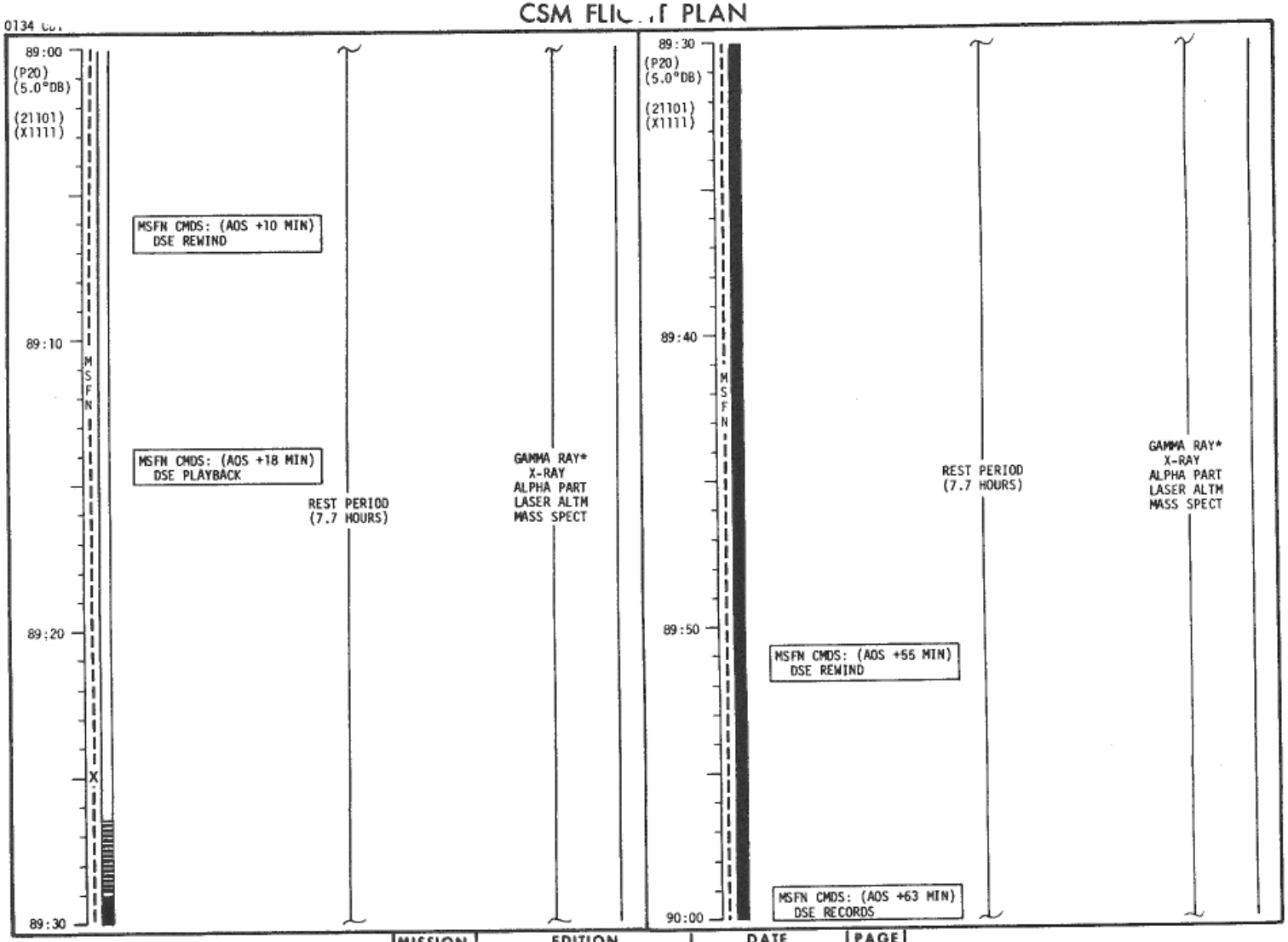


MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-93



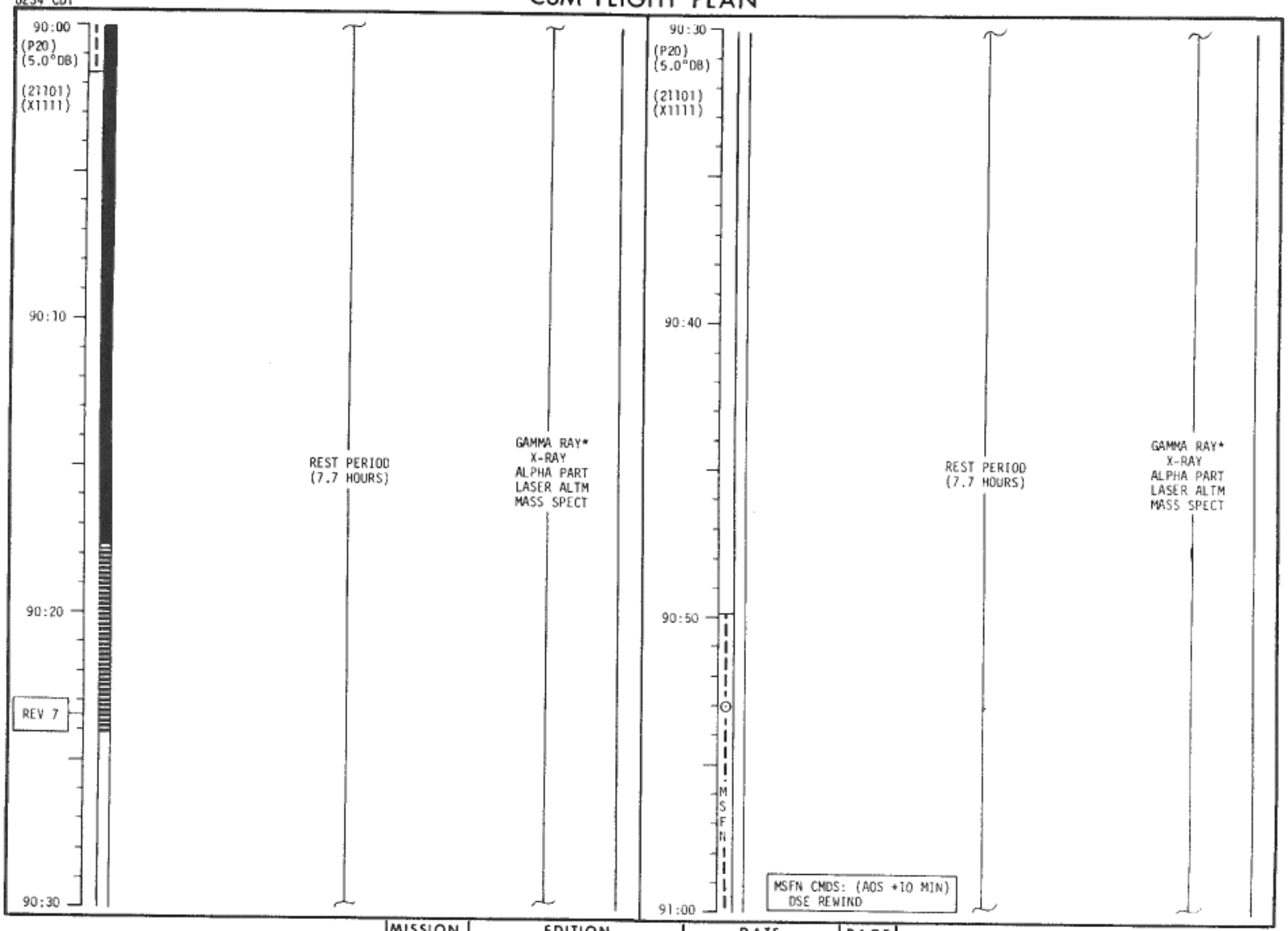
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-94

CSM FLIGHT PLAN



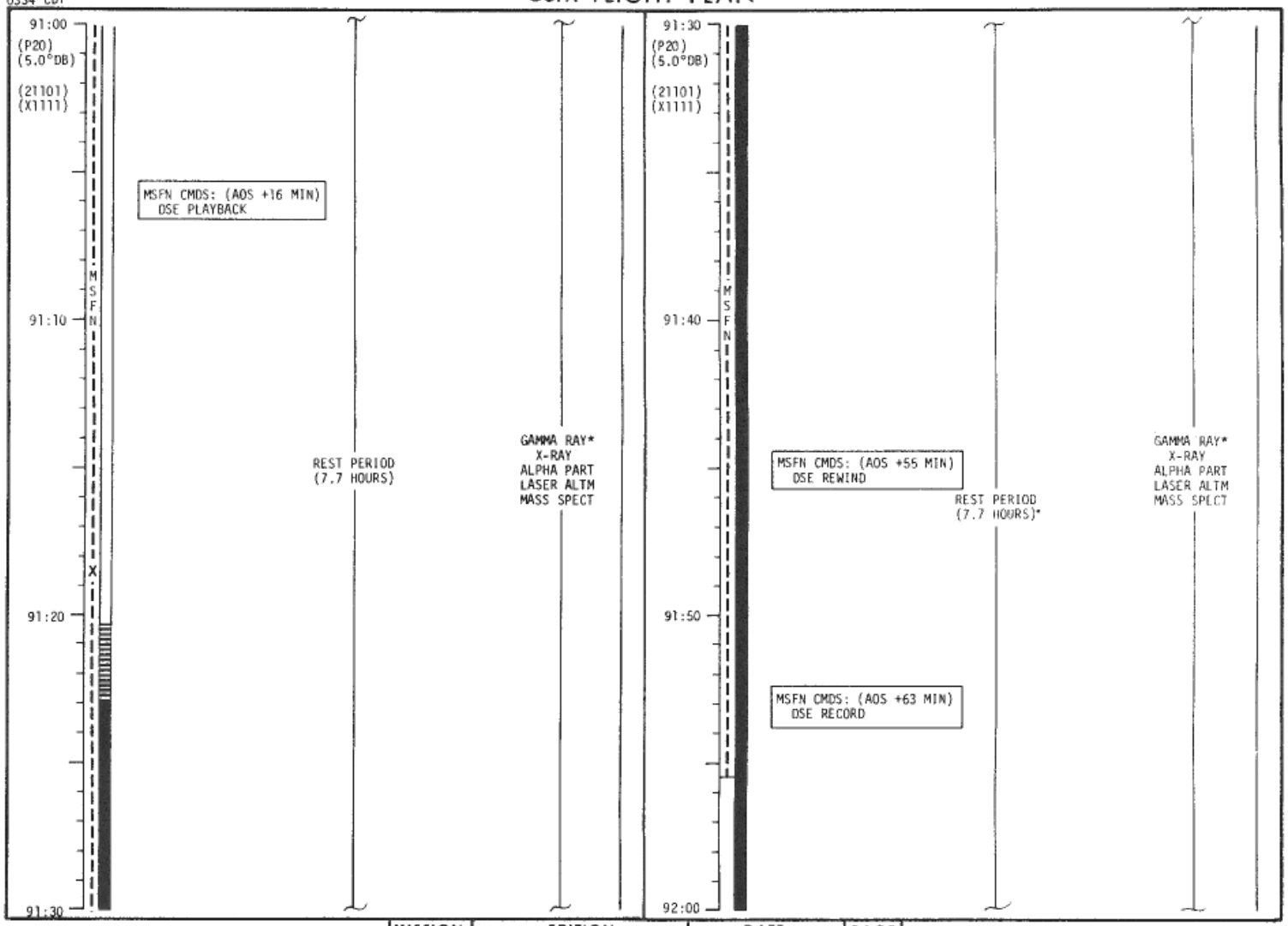
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-95

CSM FLIGHT PLAN



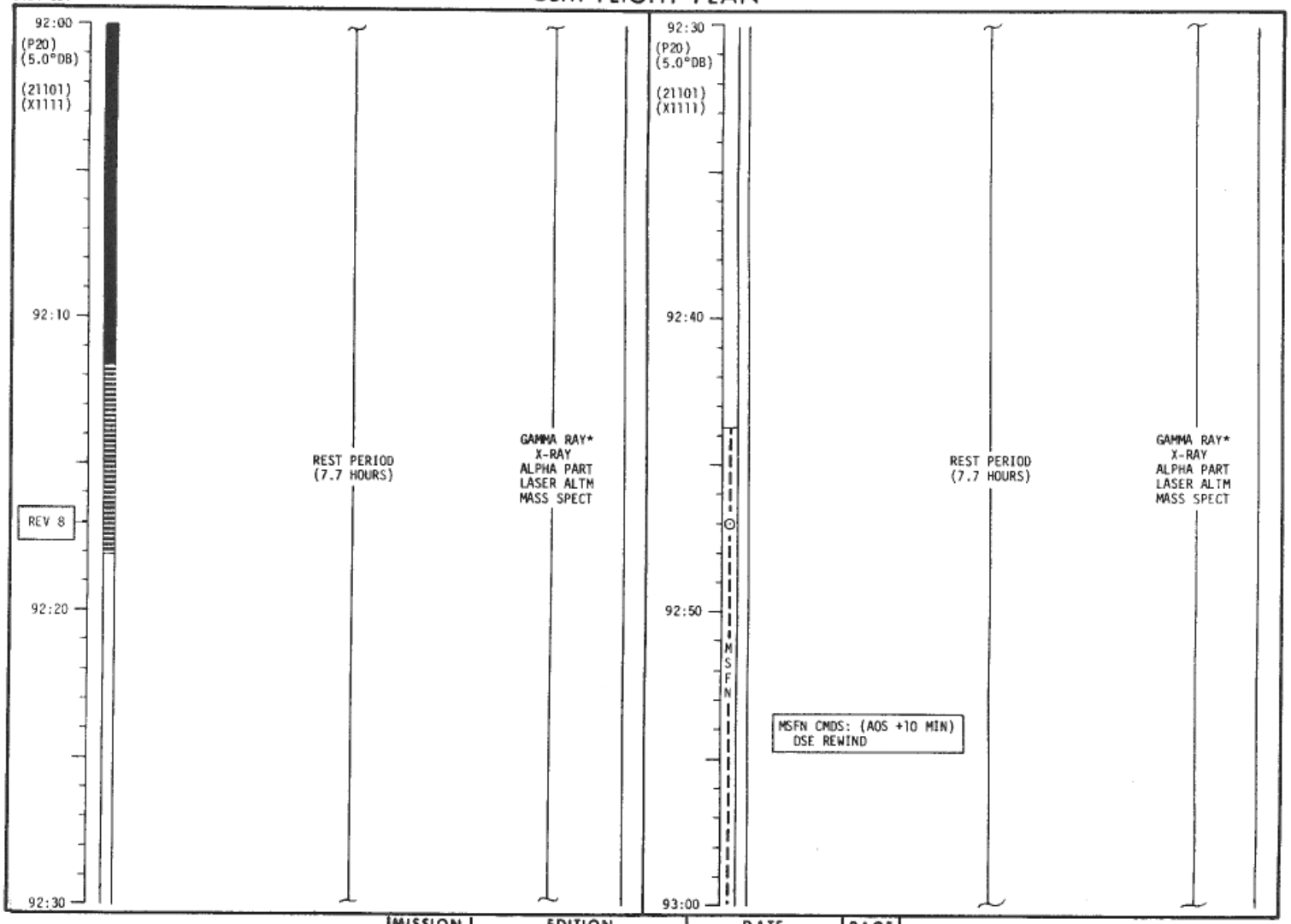
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-96

CSM FLIGHT PLAN



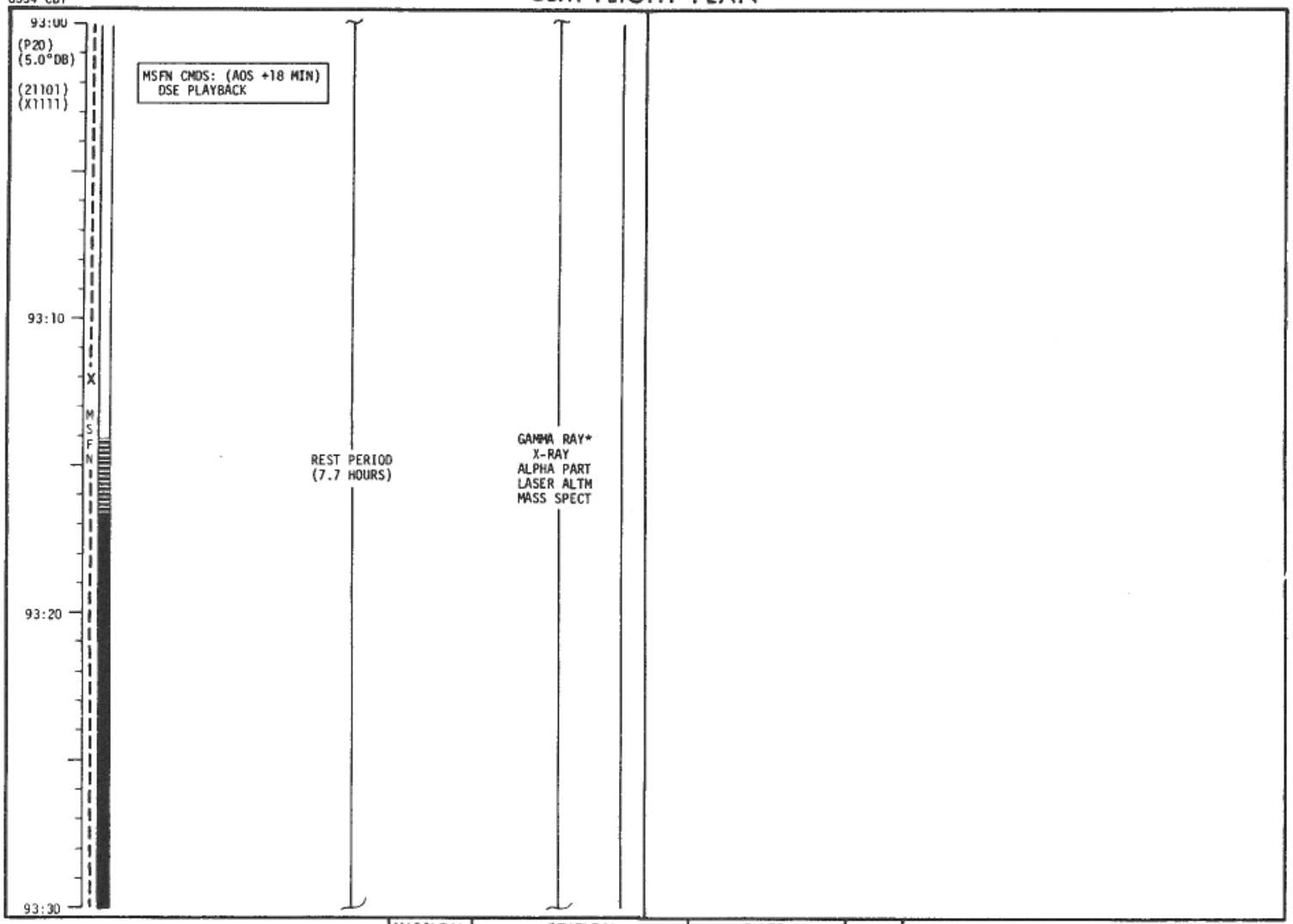
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-97

CSM FLIGHT PLAN



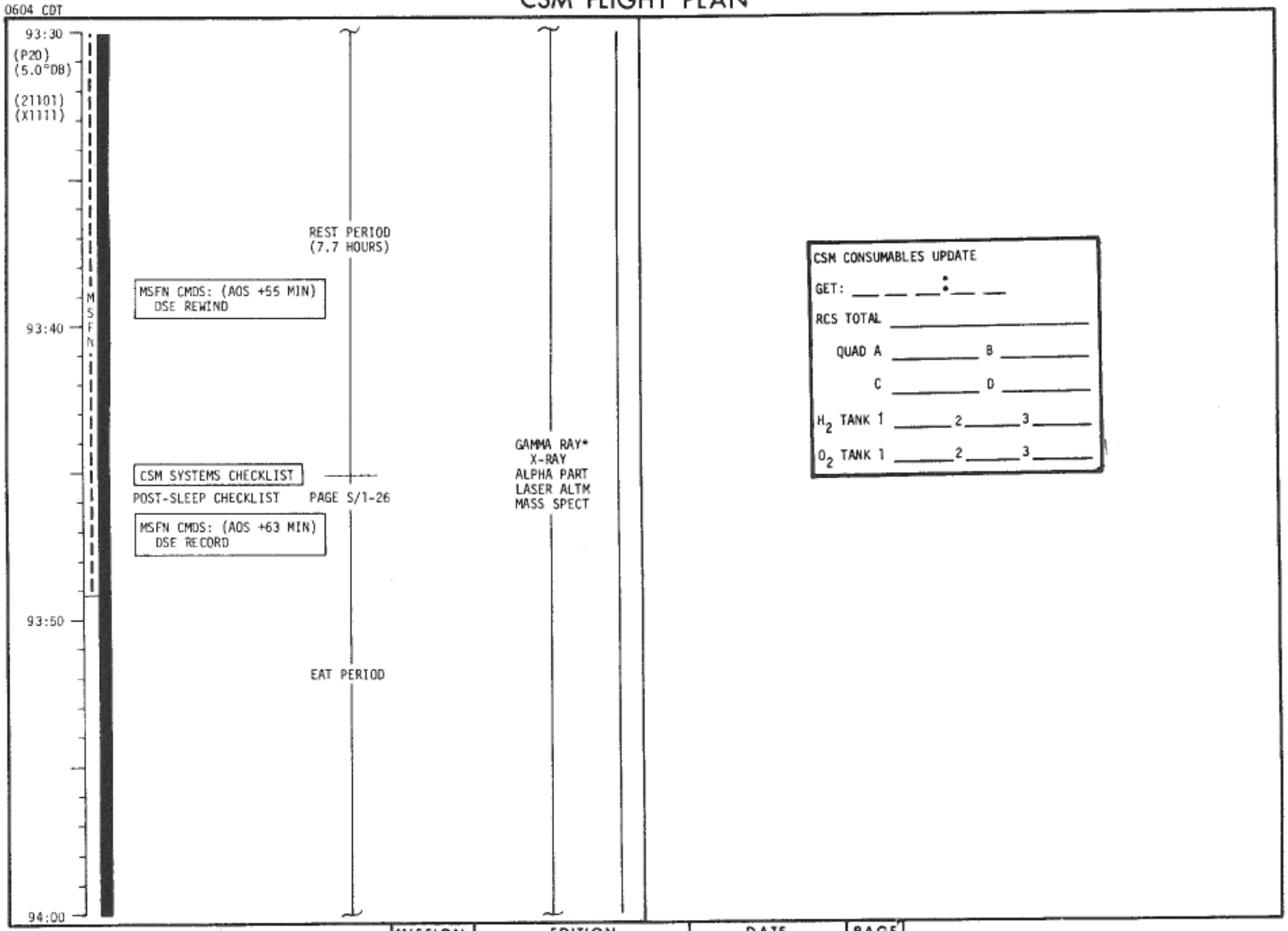
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-98

CSM FLIGHT PLAN

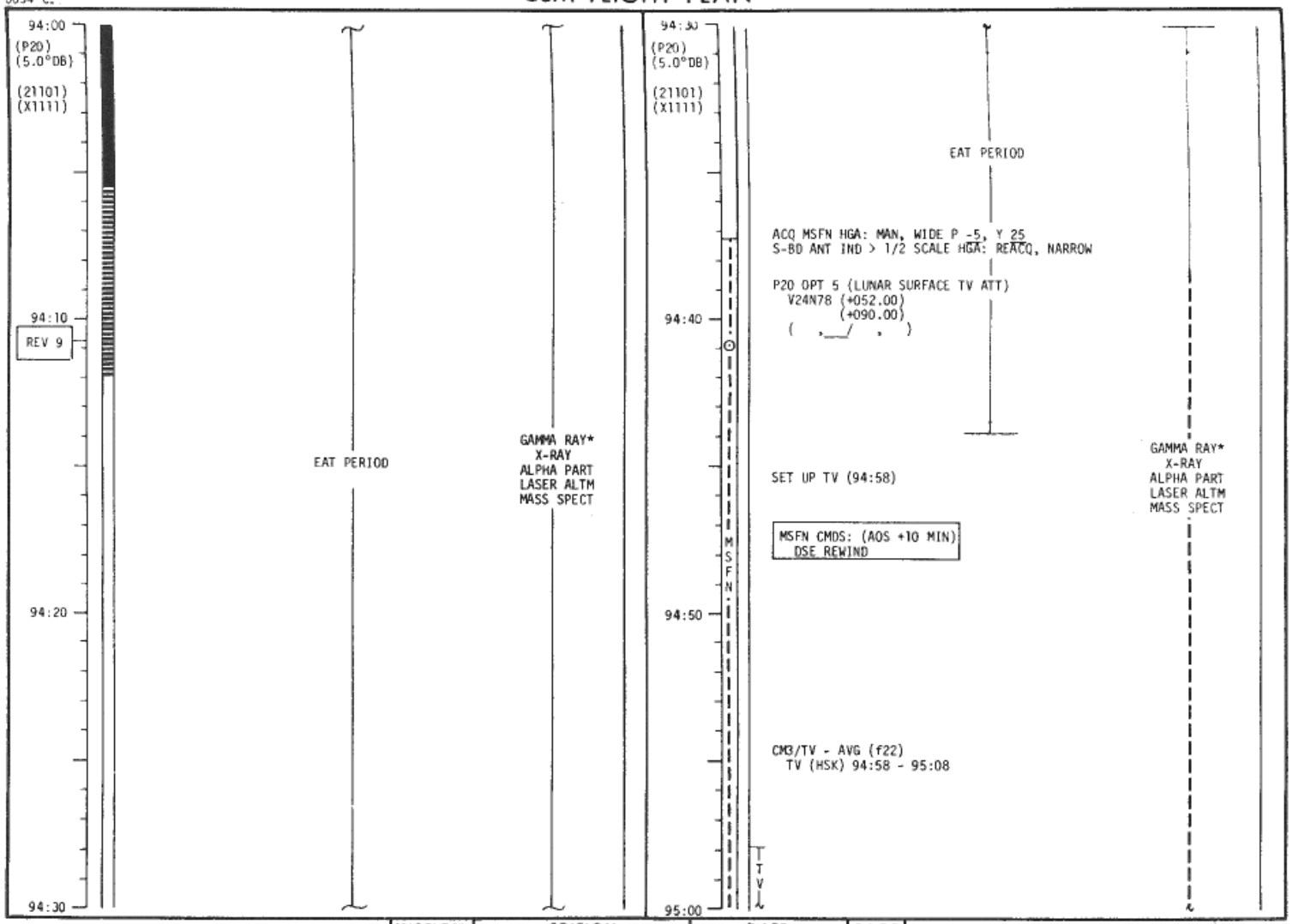


MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-99

CSM FLIGHT PLAN



CSM FLIC..T PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-101

CSM FLIGHT PLAN

0734 CDT

95:00
(P20)
(5.0°DB)
(21101)
(X1111)

O_2 HEATERS 1&2 (2) - OFF
O_2 HEATERS 3 (1) - AUTO
CB O2 TANK 100W HTRS – 3 MAIN B, OPEN (PNL 226)
(d@96:39:05)

T
V

X

MSFN CMOS: (AOS +31 MIN)
DSE PLAYBACK

95:10

GAMMA RAY: GAINSTEP - SHIELD OFF
MASS SPECT: EXP - STBY, ION SOURCE - OFF
CAUTION - WAIT 5 MIN BEFORE RETRACTING MASS SPECT BOOM
LASER ALTM - OFF, X-RAY - STBY
LOGIC POWER (2) - DPLY/RETR RECORD GET _____

MAP CAMERA TRACK - RETRACT tb-BP (~4 MIN)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)
MAP CAMERA/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

MASS SPECT BOOM - RETRACT tb-BP (~2:30)/GRAY then OFF (CTR)

RECORD RETRACT TIME 2:33 (ΔT IN BP)

GAMMA RAY: GAINSTEP - SHIELD ON (CTR)

GAMMA RAY BOOM - RETRACT tb-BP (~3:15)/GRAY then OFF (CTR)

M
S
F
N

95:20

RECORD RETRACT TIME 3:09 (ΔT IN BP)

LOGIC POWER (2) - OFF
ENABLE ALL JETS
cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE

REPORT: GAMMA RAY AND MASS SPECT BOOM RETRACT TIMES

MSFN UPDATE:
TRAJECTORY STATUS
CONSUMABLES
FLIGHT PLAN
GO/NO-GO FOR DOI TRIM
DOI TRIM MNVR PAD (95:50) (IF DOI TRIM REQD)
P52 MNVR ATT (96:21)(IF DOI TRIM REQD)
TEL 19 PAD

GAMMA RAY*
ALPHA PART*

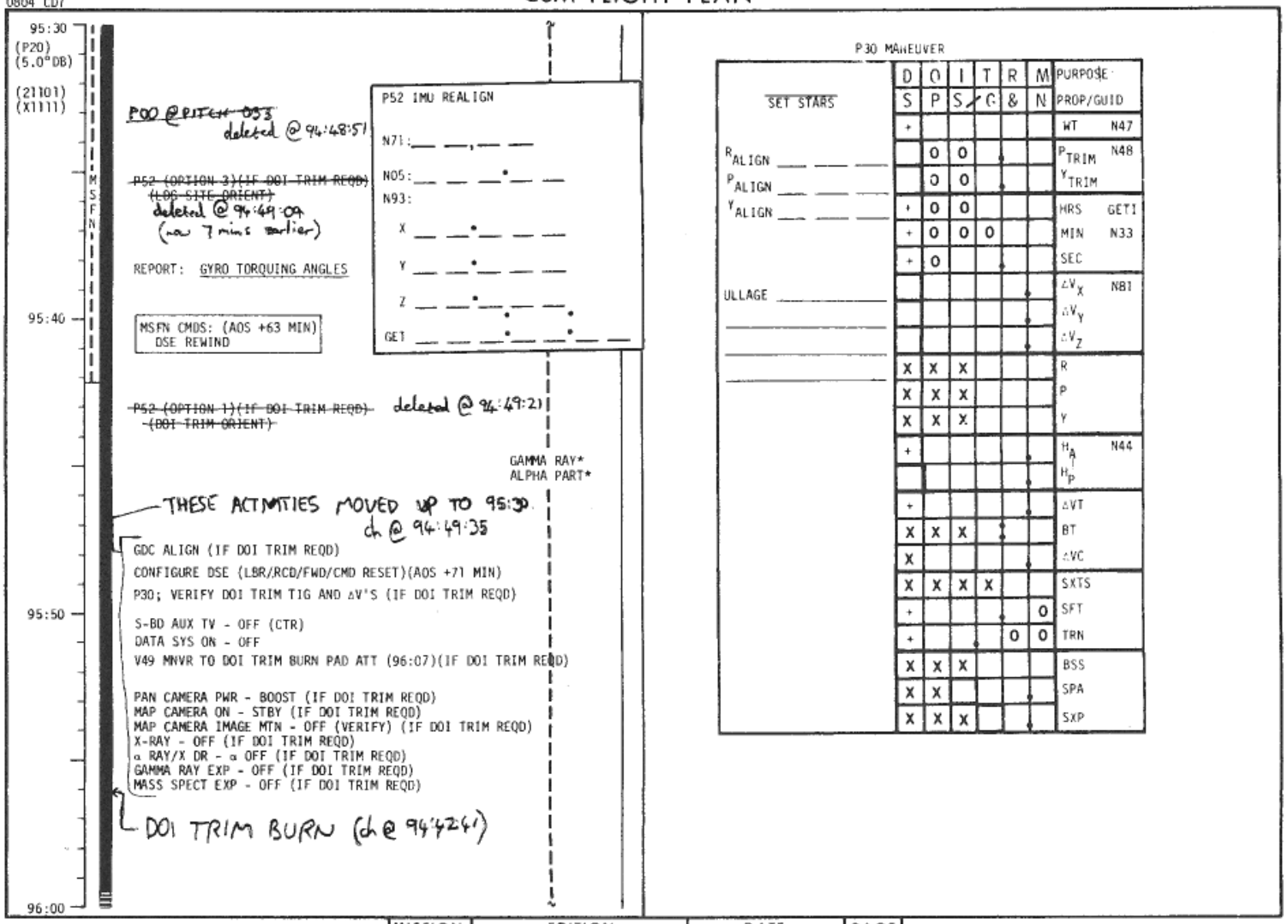
MSFN UPLINK:
DOI TRIM TARGET LOAD (IF DOI TRIM REQD)
CSM S.V. AND V66 (IF DOI TRIM REQD)
DESIRED ORIENT (DOI TRIM)(IF DOI TRIM REQD)

P52 opt 3
c@96:48:30

95:30

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	2-102

CSM FLIG... PLAN



P30 MANEUVER

SET STARS	DS	OP	IS/C	TR&M	RN	PURPOSE / PROP/GUID	
	+					WT	N47
R_{ALIGN} ___ ___ ___		O	O			P_{TRIM}	N48
P_{ALIGN} ___ ___ ___		O	O			Y_{TRIM}	
Y_{ALIGN} ___ ___ ___	+	O	O			MRS	GETI
	+	O	O	O		MIN	N33
	+	O				SEC	
ULLAGE ___						ΔV_X	NB1
						ΔV_Y	
						ΔV_Z	
	X	X	X			R	
	X	X	X			P	
	X	X	X			Y	
	+					H_A	N44
						H_P	
	+					ΔVT	
	X	X	X			BT	
	X					ΔVC	
	X	X	X	X		SXTS	
	+				O	SFT	
	+			O	O	TRN	
	X	X	X			BSS	
	X	X				SPA	
	X	X	X			SXP	

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-103

CSM FLIGHT PLAN

0834 CDT

96:00

(P20)
(5.0°DB)

(21101)
(X1111)

REV 10

SET DET COUNTING UP TO DOI TRIM

SXT STAR CHECK

(P40)
(0.5°DB)

P40 (TRIM)

96:10

GAMMA RAY*
ALPHA PART*

DOI TRIM (, / ,)	TIG: 96:17:00
95 : 56 : 00.00	BT: NOM. ZERO ΔVT: NOM. ZERO ULLAGE: NONE ORBIT: N/A

(21101)
(X1111)

96:20

P00; V66 SET CSM S.V. INTO LM S.V.

V49 MNVR TO P52/HGA ATT (96:30) (IF REQD)

R _____, P _____, Y _____

X-RAY - STBY (IF DOI TRIM REQD)
α RAY/X DR - α ON (IF DOI TRIM REQD)
GAMMA RAY: EXP - ON, GAINSTEP - SHIELD ON (IF DOI TRIM REQD)
MASS SPECT EXP - STBY (IF DOI TRIM REQD)
PAN CAMERA PWR - OFF (IF DOI TRIM REQD)

96:30

MISSION
APOLLO 15

DOI TRIM
BURN TABLE

BURN TYPE	P OR Y RATES	ATT DEVIATIONS	SHUTDOWN TIME	RESIDUALS
IN-PLANE BURN	10°/SEC TERMINATE	± 10° TERMINATE	BT	TRIM X TO 2 FPS DO NOT TRIM Y & Z
OUT-OF-PLANE BURN	10°/SEC TERMINATE	± 10° TERMINATE	BT	*TRIM V_{gy} TO 2 FPS IF - V_{gy} ROLL 90° CCW AND USE -Z THRUSTERS

*IF OVERBURN >3.2 FPS AND <10 FPS, PITCH 180° AND TRIM WITH +X RCS THRUSTERS.
IF >10 FPS USE SPS

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						FUEL
X						OX
X						UNBAL

CSM FLIGHT PLAN

0904 CDT

96:30
(P20)
(5.0°DB)
(21101)
(X1111)

ACQ MSFN HGA: MAN, WIDE P 25, Y 185
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW
REPORT: BURN STATUS (IF REQD)

MSFN UPDATE:
L/S OBS PAD (96:57)

MSFN CMDS:
DUMP DSE

MSFN UPLINK:
CSM S.V. AND V66
LIFT-OFF TIME (IF REQD)
DESIRED ORIENT (LDG SITE)

NOTE: LIFT-OFF TIME WILL BE UPDATED IF THE TIME OF REV 14 MERIDIAN CROSSING DIFFERS MORE THAN + 2 MIN FROM 103:43:13.3

96:40

V49 MNVR TO L/S OBS ATT (96:55)
(015,291,000) OMNI C

LMP DON PGA WITHOUT HELMET AND GLOVES

GAMMA RAY*
ALPHA PART*

MSFN UPDATE:
T EPHEM (IF REQD)
REFSMMAT 00 TIME COPY AT (97:25)
TEI 12 TIG (IF REQD)
TEI 19 TIG (IF REQD)

T EPHEM UPDATE

OID	LOAD B
03	_ _ _ _ _
04	_ _ _ _ _
05	_ _ _ _ _

96:50

P24 (ORB NAV MONITOR LDMK NO MARKS)
OPT ZERO - OFF, OPT MODE - CMC
OPT TEL TRUN - SLAVE TO SXT
OPT COUPLING - RSLV, OPT SPEED - HI

LDMK ACQUISITION

TCA

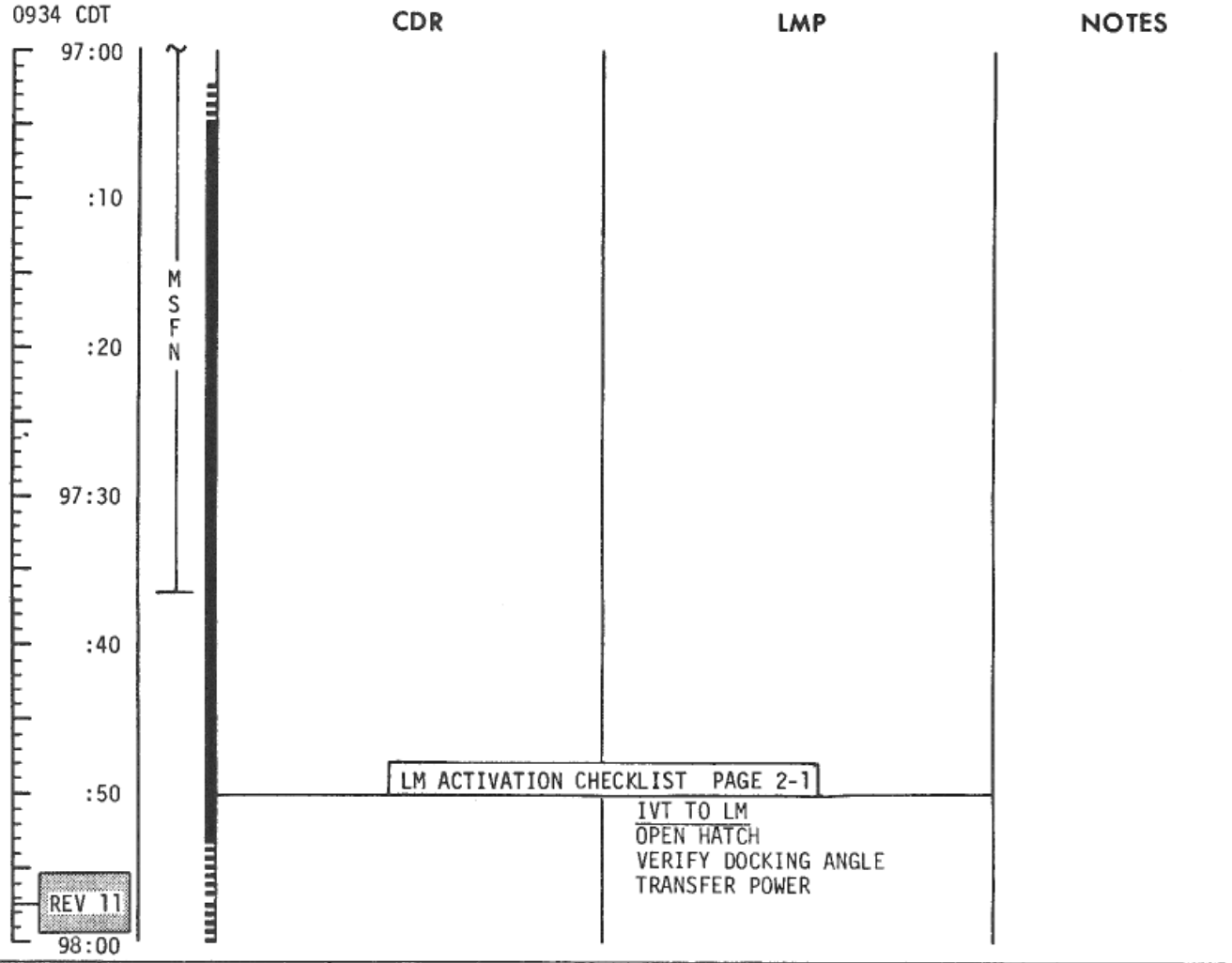
LDMK J-1 OBS
T HOR: __ __:__ __:__ __
TCA -20 SEC: __ __:__ __:__ __
LAT: +25.958
LONG/2: +05.664
ALT: +00000

97:00

CSM TO LM TRANSFER ITEMS:

SUIT WITH ACCESSORIES (EACH CREWMAN)	BIO-INSTRUMENTATION EQUIPMENT
UCTA	SCISSORS
FCS (U1)	PENLIGHT
LCG (U1)	EAR PLUGS
SUNGLASSES WITH POUCH	DOSIMETER
WRISTWATCH	COMM EARMOLD
PEN	FLIGHT DATA IN BAG
PEN - FELT TIP	LM TIMELINE BOOK
PENCIL	LM DATA CARD BOOK
CHECKLIST POCKET	LM LUNAR-SURFACE CHECKLIST
SCISSORS POCKET	ORBIT MONITOR CHART
GLOVES	ASCENT MONITOR CHART
HELMET	LM STAR CHARTS (3)
	ANCILLARY PKG (A-8)
	APOLLO FLIGHT CHART

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	97:00 - 98:00	5/10-11	3-106

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

0934 GDT

97:00
(P20)
(5.0°DB)
(21101)
(X1111)

SYNCHRONIZE MISSION TIME TO CMC (IF REQD)
V05N01E, 1706 E

VERIFY LM/CM ΔP < 2.4 PSID
IF ΔP > 2.4 PSID PRESSURIZE CSM TO 5.7 PSIA
REPORT ΔP TO MSFN

CDR DON BIOMED HARNESS, PGA WITHOUT HELMET AND GLOVES

97:10

CONFIGURE FOR URINE DUMP

(21111)
(X1111)

V48 (21111)
(X1111)
P00

P52 (OPTION 3)(IF DOI TRIM NOT PERFORMED)
(LDG SITE ORIENT)

97:20

REPORT: GYRO TORQUING ANGLES

GAMMA RAY*
ALPHA PART*

P52 (OPTION 1)
(LDG SITE ORIENT)

REFSMMAT 00 TIME						
+	0	0	1	0	6	HRS
+	0	0	0	4	1	MIN
+	0	6	3	0	0	SEC

97:30

GDC ALIGN

P52 IMU REALIGN

N71: __ __ , __ __

N05: __ __ __ __ __

N93:

X __ __ . __ __ __

Y __ __ . __ __ __

Z __ __ . __ __ __

GET __ __ __ . __ __ . __ __

97:30
(21111)
(X1111)

MSFN

CMP DON BIOMED HARNESS, PGA WITHOUT HELMET AND GLOVES

LMP VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

O_2 FUEL CELL PURGE
WASTE WATER DUMP
URINE DUMP

97:40

V49 MNVR TO UNDOCK ATT (97:55)
(000,106,000)

PREPARE COUCH FOR HATCH
REMOVE PROBE STRAPS (R5)
TUNNEL LIGHTS - LIGHTS
VERIFY LM/CM ΔP < 0.2 PSID
IF ΔP > 0.2 PSID PERFORM CM/LM PRESSURE EQUALIZATION (DECAL)
TUNNEL HATCH REMOVAL (DECAL); STOW HATCH
PROBE REMOVAL (DECAL); STOW PROBE
DROGUE REMOVAL (DECAL); STOW DROGUE

RECORD DOCKING TUNNEL INDEX ANGLE _____

97:50

LMP IVT TO LM

GAMMA RAY*
ALPHA PART*

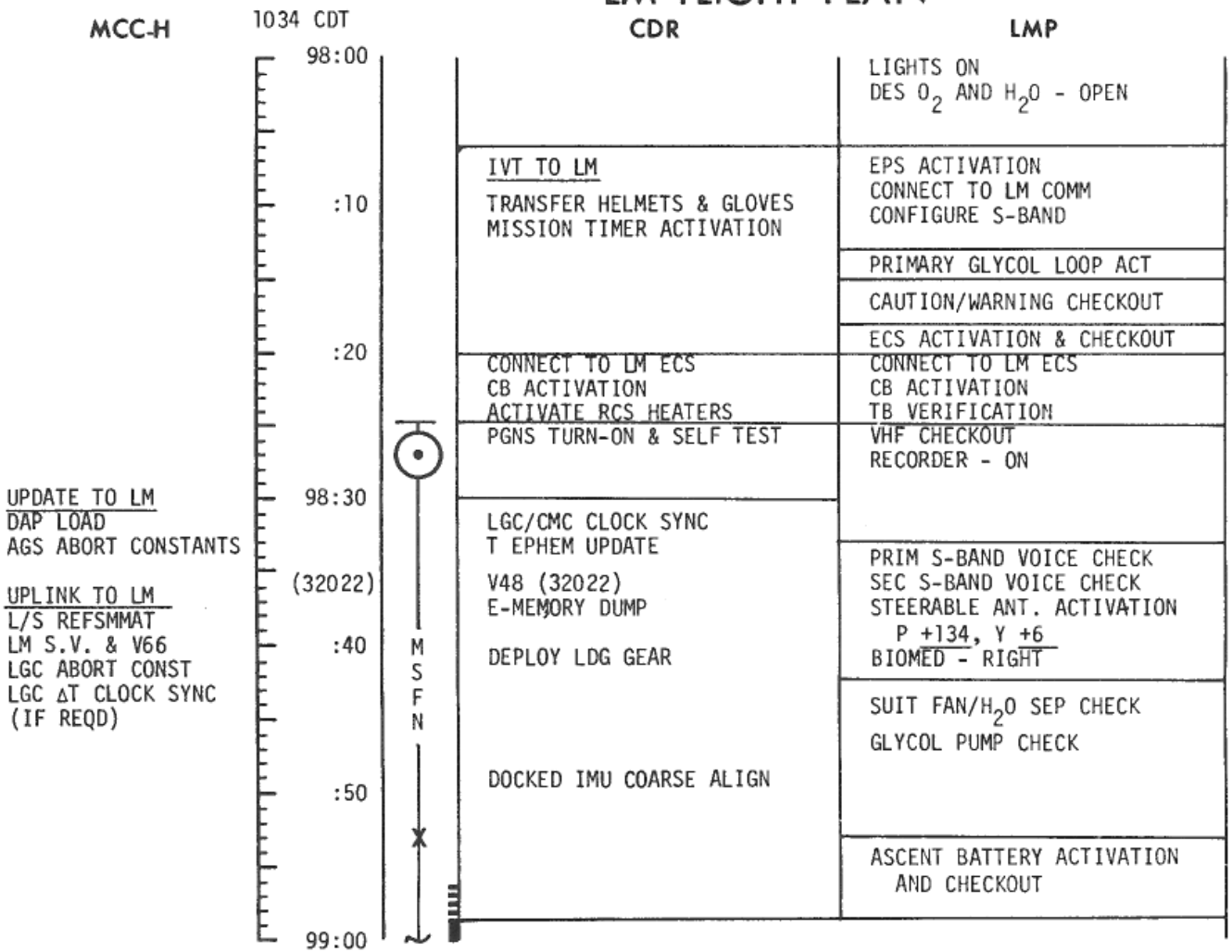
REV 11

AT LMP REQUEST:
LM PWR - RESET/OFF GET _____:_____:_____(RECORD)
SYS TEST - 7D
SYS TEST ind - 0 volts

98:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-107

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	98:00 - 99:00	5/11	3-108

FLIGHT PLANNING BRANCH

1034 Col

CSM FLIGHT PLAN

98:00
(21111)
(X1111)

CONFIGURE CAMERAS: (UNDOCKING)
CM2/EL/80/CEX (f8,1/250,FOCUS) (10 FR)

MAG (M) _____, FR # _____
CM2/DAC/18/CEX-BRKT,MTR (T8,1/250,7) 12 fps (100% MAG)

MAG (B) _____, MAG % _____
UTILITY PWR - ON

CDR IVT TO LM

LiOH CANISTER CHANGE
(10 INTO B, STOW B IN B6)

98:10

MARK TO LM FOR LM MISSION
TIMER SYNC AT CDR REQUEST

GAMMA RAY*
ALPHA PART*

SWITCH TO CDR COMM UMB

98:20

ACQ MSFN HGA P -57, Y 216
VHF C/O AT LMP REQUEST
VHF ANT - RIGHT
VHF AM B - SIMPLEX FOR VHF B CHECK
VHF AM A - SIMPLEX FOR VHF A CHECK

REPORT: DOCKING TUNNEL INDEX ANGLE AND LM PWR - RESET/OFF

MSFN CMDS:
DSE DUMP

MSFN UPLINK:
CSM S.V. AND V66

98:30

MSFN

98:30
(21111)
(X1111)

MSFN UPDATE:
DAP DATA (99:45)
UNDOCK/SEP PAD COPY AT (99:50)
P24 TRK PAD: (L/S LDMK 15-X)(100:50)

LM CLOCK SYNC:
V16N65E
ON CDR MARK - V06N65E

LM T EPHEM UPDATE:
V05N01E, 1706E

ROLL (8) - OFF UNTIL LM/CM ΔP > 3.5 PSID
REMOVE AND STOW CSM/LM UMBILICAL IN F1 or F2
INSTALL DROGUE AND PROBE (DECAL)

98:40

LM LANDING GEAR DEPLOY

GAMMA RAY*
ALPHA PART*

MAN ATT (3) RATE CMD
ATT DB - MIN
RATE - LOW
SC CONT - SCS
BMAG (3) - ATT 1/RATE 2

98:50

LM DOCKED IMU COARSE ALIGN

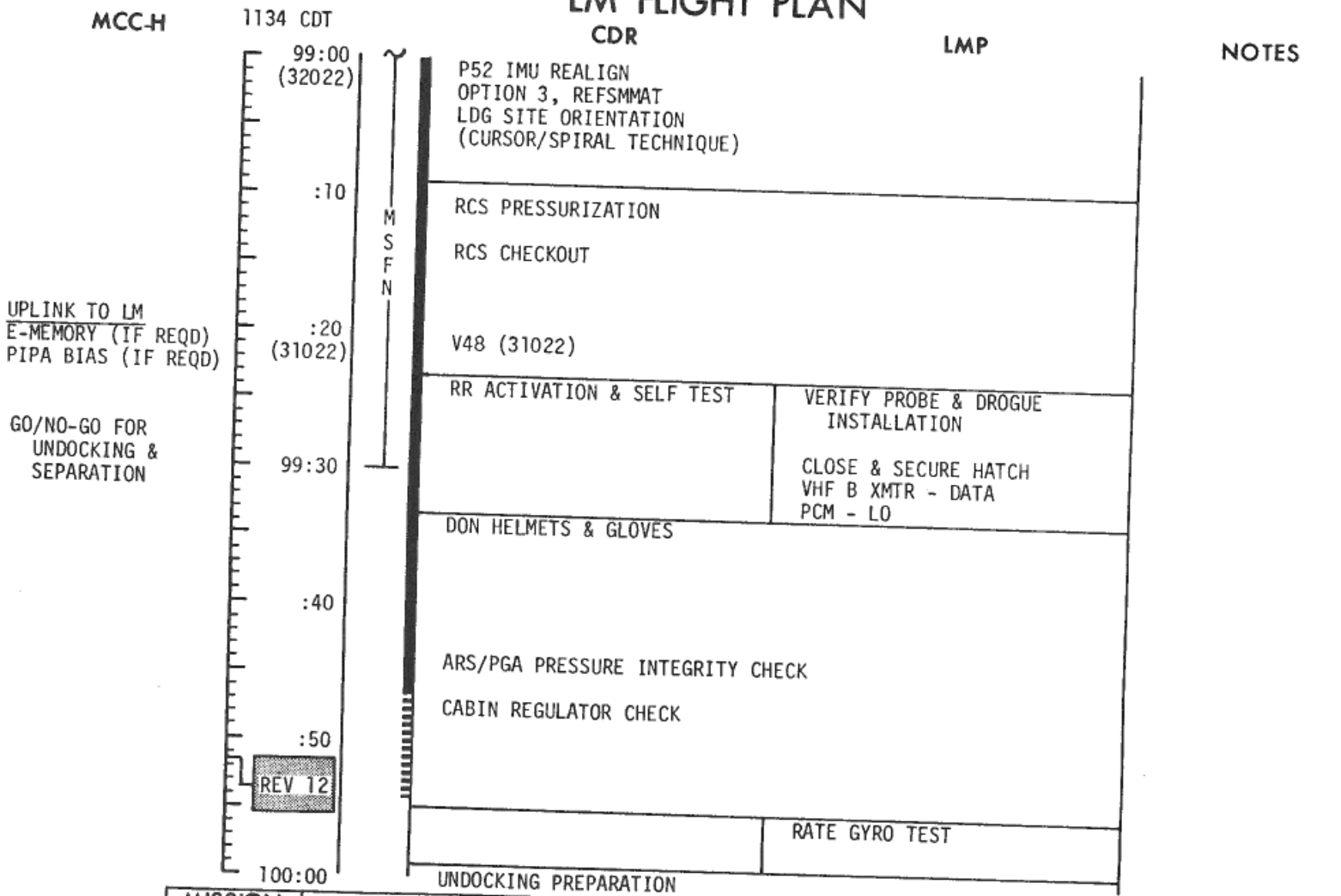
99:00

MSFN

X

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-109

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	99:00 - 100:00	5/11-12	3-110

1134 CDR

CSM FLIGHT PLAN

99:00 (21111) (X1111)

DON HELMET AND GLOVES

SUIT CKT INTEGRITY CHECK (DECAL)

ON LM CUE:
SC CONT - CMC, ATT DB - MAX
BMAG (3) - RATE 2
AT CDR'S REQUEST DURING RCS CHECKOUT
CMC MODE - FREE FOR RCS HOT FIRE

99:10

MSFN

PANEL 10

MODE - VOX
VOX SENS tw - 5
S-BD - OFF
INTERCOM - OFF
VHF AM T/R - T/R (VERIFY)

GAMMA RAY*
ALPHA PART*

AFTER LM RCS CHECKOUT
CMC MODE - AUTO
LM RR SELF-TEST
RNDZ XPNDR - OFF (VERIFY)
AUTO RCS SEL B3 - OFF

99:20

PRE-LOAD PROBE (DECAL)
DOCKING LATCH RELEASE (DECAL)
HATCH INSTALLATION (DECAL)

HATCH INTEGRITY CHECK (DECAL)

MSFN UPDATE:
GO/NO-GO FOR UNDOCK/SEP

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

99:30

99:30 (21111) (X1111)

VHF ANT - RIGHT (VERIFY)
VHF RCV ONLY - B DATA
VHF AM A - SIMPLEX
VHF AM B - OFF

DOFF HELMET, GLOVES

WHEN LM RR SELF - TEST COMPLETE:
AUTO RCS SEL B3 - ON

RR XPNDR ACTIVATION AND SELF-TEST (DECAL)

99:40

VERIFY:
CM2/EL/80/CEX (f8,1/250,FOCUS)
CM2/DAC/18/CEX-BRKT, MIR (T8,1/250,7) 12 fps
UTILITY PWR - ON

GAMMA RAY*
ALPHA PART*

+	3	7	6	7	9	WT	N47
+	0	0	0	6	9	P_{TRIM}	N48
+	0	0	1	0	4	Y_{TRIM}	

read up @ 98:42:43

TUNNEL LIGHTS - OFF
ROLL (4) - ON
CYCLE CMC MODE - FREE/AUTO
V48 (21101) (X1111)
LOAD N47 & N48
V49 TRIM MNVR TO UNDOCK PAD ATT (99:55)

(21101) (X1111)

99:50

REV 12

SET DET COUNTING UP TO UNDOCK/SEP
UNDOCK CUE CARD

P30; LOAD CSM SEP

100:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-111

LM FLIGHT PLAN

MCC-H

1234 CDT

	CDR	LMP	NOTES
100:00 (31022)	CONFIGURE CB'S FOR UNDOCKING	MOUNT DAC ON WINDOW BAR	
	LM TIMELINE BOOK		
:05	V06 N20E VERIFY UNDOCKING ATTITUDE (000,286,060)		
(21012)	V48 (21012), LM WEIGHT		
:10	P47 THRUST MONITOR		
	CSM/LM UNDOCKING & SEP		
100:15	YAW LEFT 60°, PITCH UP 90°	SEPARATION PHOTOGRAPHY LM3/DAC LM3/DC	GET: 100:13:56
	REPORT V06 N20 ANGLES TO MCC-H	STEERABLE P +41, Y -55 BIOMED - LEFT, PCM - HI	
:20	DOFF HELMET & GLOVES (OPT)	DOFF HELMET & GLOVES (OPT)	
:25		CAMERA PREP FOR LANDING SITE OBSERVATIONS	
100:30			

MSFN

UPDATE TO LM
REV 12 TCA (L/S)

UPLINK TO LM
CSM S.V.
PIPA BIAS (IF REQD)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	100:00 - 100:30	5/12	3-112

FLIGHT P NNING BRANCH

1234 CD1

CSM FLIGHT PLAN

100:00
(21101)
(X1111)

LOAD ΔV IN EMS TO -100.0
CHECK NULL BIAS
VERIFY EMS -100.0/ΔV/STBY

GDC ALIGN
VERIFY ORDEAL
ALT SET = 40 NM
V06N20E (AT LM REQUEST)
PERFORM UNDOCKING SWITCH CONFIGURATION

UNDOCKING SWITCH CONFIGURATION
ATT DB - MIN
RATE - LOW
RHC PWR NORM - AC/DC
RHC PWR DIR - MNA/MNB
AUTO RCS (16) - MNA/MNB
CB DOCKING PROBE (2) - CLOSED

P41 (TRIM)

SC CONT - SCS
BMAG (3) - ATT 1/RATE 2

100:10
(11101)
(X1111)

V48 (11101)
(X1111)
RHC & THC - ARMED

UNDOCKING CHECKLIST

108°

UNDOCK/SEPARATION (000,090/106,000)
100 : 13 : 56 . 00
rod up @ 98:41:59

TIG: 100:13:56.1
BT: 3.3 SEC
ΔVT: 1.0 FPS
ULLAGE: N/A
ORBIT: 59.8 x 8.4

ACQ MSFN HGA P -57, Y 218

GAMMA RAY*
ALPHA PART*

MSFN CMDS:
DSE DUMP

100:20

DAC - OFF
V49 MNVR TO LOW ALT LDMK TRK PAD ATT (100:33)
(020,296,000) OMNI C

RECORD MAG % ____, FR # ____
GDC ALIGN
VERIFY ORDEAL
ALT SET = 40 NM

MONITOR S-BAND

CONFIGURE CAMERA: (LDMK TRK)
CM/DAC/SXT/CEX (EXP-PAD) 1 fps (% MAG)

MAG (E) ____, MAG % ____
UTILITY PWR - ON

100:30

MSFN

UNDOCKING CHECKLIST

59:30 EMS MODE - NORM, DAC - ON
THC PWR - ON

00:00 PROBE EXT/REL - EXT/REL (MOM)
VERIFY PROBE EXTENDED, LM ATTACHED
ALLOW MOTION TO DAMP (5 SEC)
PROBE EXT/REL - EXT/REL (HOLD)(< 30 SEC)
AFTER 2 SEC XLATE (4 JET) AFT
FOR ~ 3 SEC (VGX to + 2.0)
AFTER PROBE/DROGUE DISENGAGED,
PROBE EXT/REL - OFF
CB DOCKING PROBE (2) - OPEN
THC & RHC - LOCKED, THC PWR - OFF
P00
SC CONT - CMC, ATT DB - MAX
ΔV CG - CSM
BMAG (3) - RATE 2
RHC PWR DIR - OFF
ROLL (4) - OFF
EMS FUNC - ΔV SET/VHF RNG
EMS MODE - VHF RNG
VHF ANT - LEFT
VHF AM A - OFF
VHF AM B - DUPLEX
VHF RANGING - RANGING
VHF AM RCV ONLY - OFF

P30 MANEUVER

SET STARS	C R	S C	M S	S G	E &	P N	PURPOSE / PROP/GUID
	+			N	/	A	WT N47
R_{ALIGN} ___ ___ ___		0	0	N	/	A	P_{TRIM} N48
P_{ALIGN} ___ ___ ___		0	0	N	/	A	Y_{TRIM}
Y_{ALIGN} ___ ___ ___	+	0	0				HRS GET
	+	0	0	0			MIN N33
	+	0					SEC
ULLAGE ___	+	0	0	0	0	0	ΔV_X N81
___	+	0	0	0	0	0	ΔV_Y
___	-	0	0	0	1	0	ΔV_Z
___	X	X	X				R (000)
	X	X	X				P (106)
	X	X	X				Y (000)

LM FLIGHT PLAN

MCC-H | 1304 CDT | CDR | LMP | NOTES

100:30 (21012)

DPS THROTTLE CHECK

:35

:40

MSFN

100:45

PITCH TO OBSERVE LANDING SITE (100:43), SET ORDEAL
(000,340/350,000)

PHOTOGRAPH LANDING SITE
LM3/DC
LM3/DAC

:50

V49 MNVR TO RR CHECKOUT ATT
(100:50)
(000,344/331,000)
RR & VHF RNG CHECKOUT

STEERABLE P +126, Y -60

:55

P52 IMU REALIGN
OPTION 3, REFSMMAT
(LDG SITE ORIENTATION)

101:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	100:30 - 101:00	5/12	3-114

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

100:30
(11101)
(X1111)

P20 OPT 2 (LOW ALT LDMK TRK)
N78 (+090.00)
(+XXX.XX) LOAD LDMK PAD ROLL ANGLE
N79 (-2.0000)
(+000.50)
N34 (LOAD T2 TIME)
PRO

(P20)
(-2.000)
(0.5°DB)

100:40

MSFN CMDS:
DSE RECORD

P24 (L/S LDMK 15-X)
OPT ZERO - OFF, OPT MODE - CMC
OPT TEL TRUN - SLAVE TO SXT
OPT COUPLING - RSLV, OPT SPEED - HI

GAMMA RAY*
ALPHA PART*

0:00 - T1 (HORIZON) DET - RESET/START, DAC - ON

1:38 - T2 (AUTO PITCH RATE BEGINS) OPT MODE - MAN, TAKE MARKS
2:08 - TCA
2:30 - T3 (LDMK LOSS) DAC - OFF
P00
STOP PITCH RATE AT P 117
VHF RNG - RESET, COMPARE RR AND VHF RANGE
ACQ MSFN HGA P -54, Y 184

(11101)
(X1111)

MSFN CMDS:
DSE DUMP

100:50

RECORD MAG %
REMOVE & STOW DAC

GAMMA RAY: GAINSTEP - SHIELD OFF

P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

P52(IMU REALIGN)

N71: __ __ __ __

N05: __ __ __ • __ __

N93:

X __ __ __ • __ __ __

Y __ __ __ • __ __ __

Z __ __ __ • __ __ __

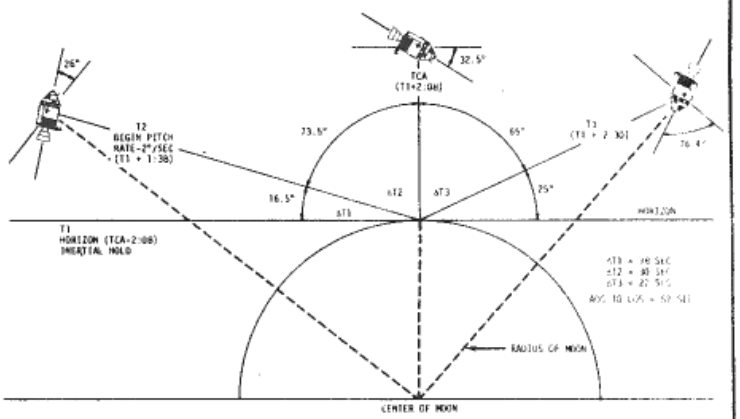
GET __ __ __ • __ __ • __ __

MSFN UPLINK:
CSM S.V.
CIRC TARGET LOAD

GAMMA RAY: GAINSTEP - SHIELD ON (CTR)

101:00

CSM LOW ALTITUDE LANDMARK TRACKING PROFILE



P24 LDMK TRACKING

TGT: ( )

T_1 1 0 0:4 6:2 9

T_2 __ __ __:4 7:0 7

TCA __ __ __:4 7:3 7

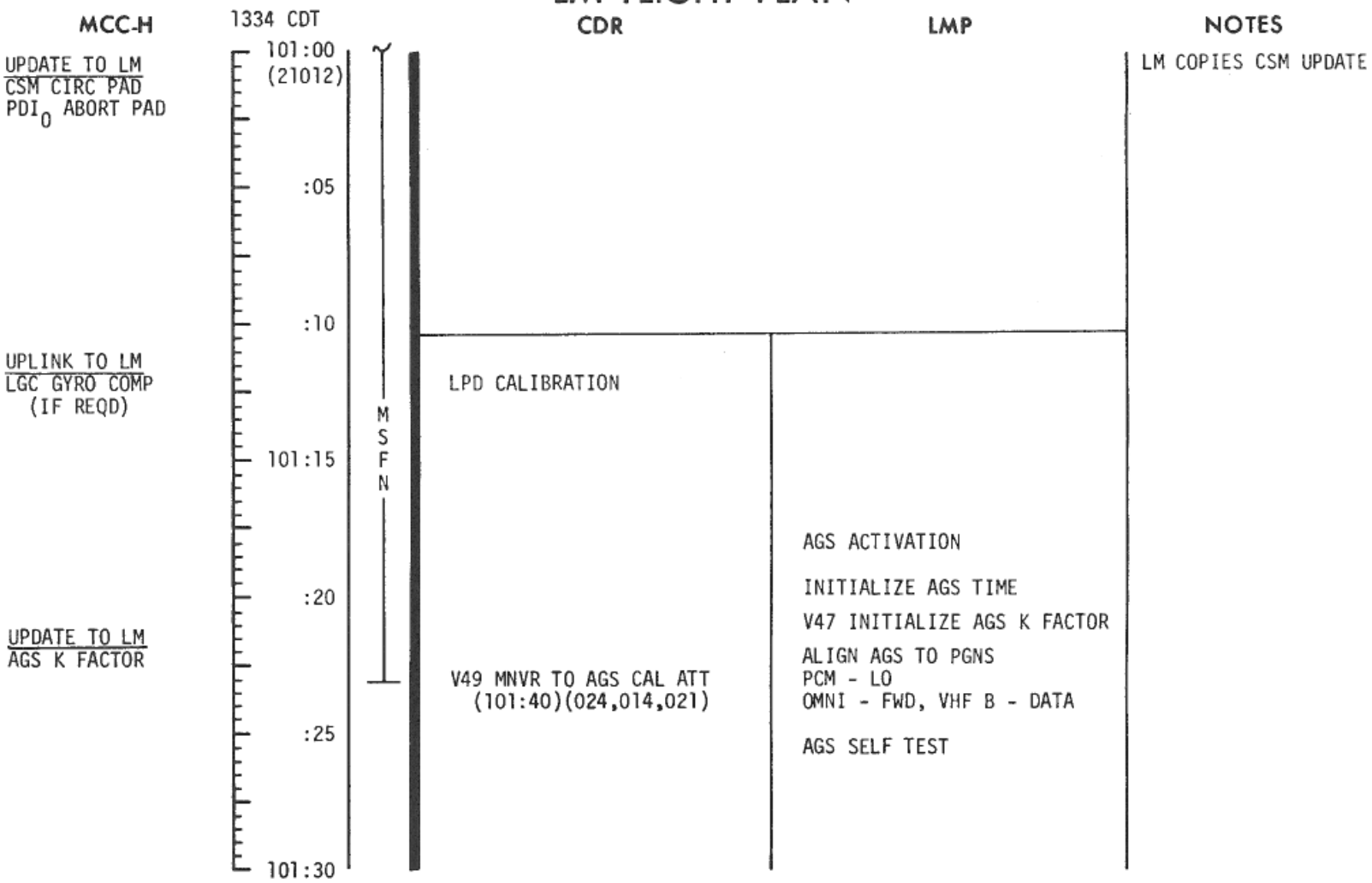
T_3 __ __ __:4 7:5 9

R __ 8 °P 2 9 6 °Y __ 0 °(T2 ACQ)

N or S NM N 3 ° SA __ __ TA __ __ (T2 ACQ)

N89	15-1	15-2	15-3	15-4	15-5	15-6
LAT	+26.065	+25.991	+26.039	+26.352	+25.809	+25.541
LONG/2	+01.836	+01.807	+01.748	+01.662	+01.404	+01.409
ALT	-01.935	-1.744	-01.795	-01.867	-01.854	-01.877

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	101:00 - 101:30	5/12	3-116

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

101:00
(11101)
(X1111)

MSFN UPDATE:
CIRC PAD
PADS A-D COPY AT (102:05)

P30; VERIFY CIRC TIG AND ΔV'S

V49 TRIM TO CIRC BURN PAD ATT

SXT STAR CHECK

(P40)
(0.5°DB)
P40 (TRIM)

GAMMA RAY*
ALPHA PART*

GDC ALIGN
VERIFY ORDEAL
ALT SET = 50 NM

101:10

GAMMA RAY EXP - OFF
X-RAY - OFF
α RAY/X DR - α OFF
MASS SPECT EXP - OFF

RECORD GET _____

PAN CAMERA PWR - BOOST
MAP CAMERA ON - STBY (VERIFY)
MAP CAMERA IMAGE MTN - OFF (VERIFY)

MSFN UPDATE:
GO/NO GO FOR CIRC

SET DET COUNTING UP TO CIRC

101:20

VHF AM B - OFF
VHF AM A - SIMPLEX
VHF RCV ONLY - B DATA
VHF RANGING - OFF

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

101:30

MSFN

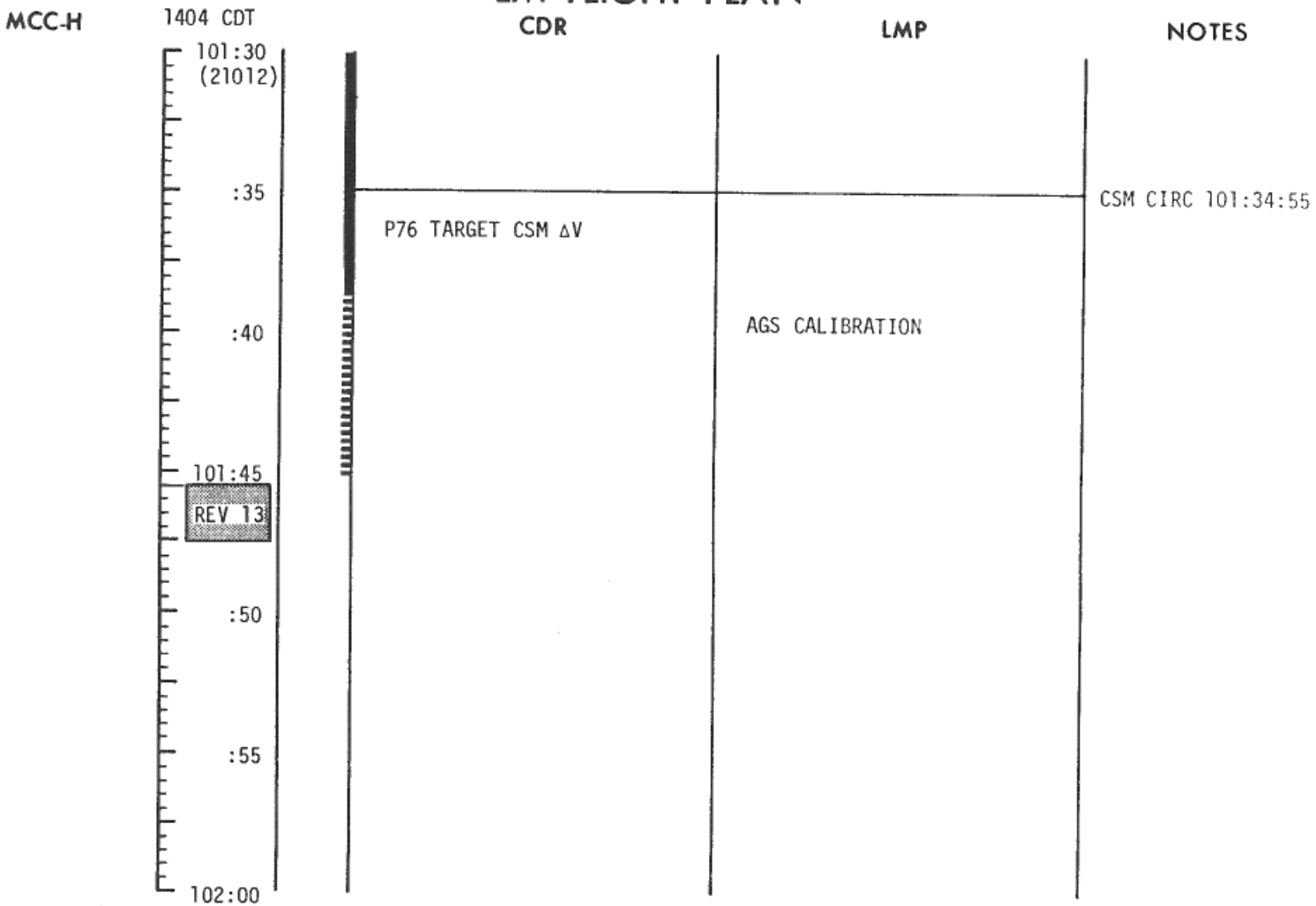
CIRC
BURN TABLE

P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	±10° TERMINATE	BT +1 SEC	TRIM X&Y TO < 0.2 FPS DO NOT TRIM Z

P30 MANEUVER

SET STARS	C/S	I/P	R/S	C/G	&	N	PURPOSE / PROP/GUID
	+						WT N47
R_{ALIGN} ___ ___ ___		O	O				P_{TRIM} N48
P_{ALIGN} ___ ___ ___		O	O				Y_{TRIM}
Y_{ALIGN} ___ ___ ___	+	O	O				HRS GETI
	+	O	O	O			MIN N33
	+	O					SEC
ULLAGE _____							ΔV_X N81
_____							ΔV_Y
_____							ΔV_Z
_____	X	X	X				R (000)
	X	X	X				P (117)
	X	X	X				Y (358)
	+						H_A N44
							H_P
	+						ΔVT
	X	X	X				BT
	X						ΔVC
	X	X	X	X			SXTS
	+					O	SFT
	+				O	O	TRN
	X	X	X				BSS
	X	X					SPA
	X	X	X				SXP

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	101:30 - 102:00	5/12-13	3-118

FLIGHT PLA' 'NG BRANCH

101:30
(P40)
(0.5°DB)
(11101)
(X1111)

CSM CIRCULARIZATION(000,001/117,358)	TIG: 101:34:55.1
101 : 38 : 58 . 19	BT: 3.9 SEC ΔVT: 70.8 FPS ULLAGE: 4 JET, 14 SEC ORBIT: 64.7 x 54.5

(11101)
(X1111)

P00; VOICE P76 BURN DATA TO LM
V82

V49 MNVR TO LDMK TRK ATT EXCEPT IN ROLL (101:52)
(060,279,000)

101:40

DOFF PGA

ZIP SUIT & INSTALL ELECTRICAL COVER PRIOR
TO STOWING (PGA BAG)
STOW COMM CARRIERS & UCTA (PGA BAG)

REV 13

101:50

GAMMA RAY EXP - ON
X-RAY - STBY
α RAY/X DR - α ON
MASS SPECT EXP - STBY

PAN CAMERA PWR - OFF

RECORD GET

(11111)
(X1111)

V48 (11111)
(X1111)

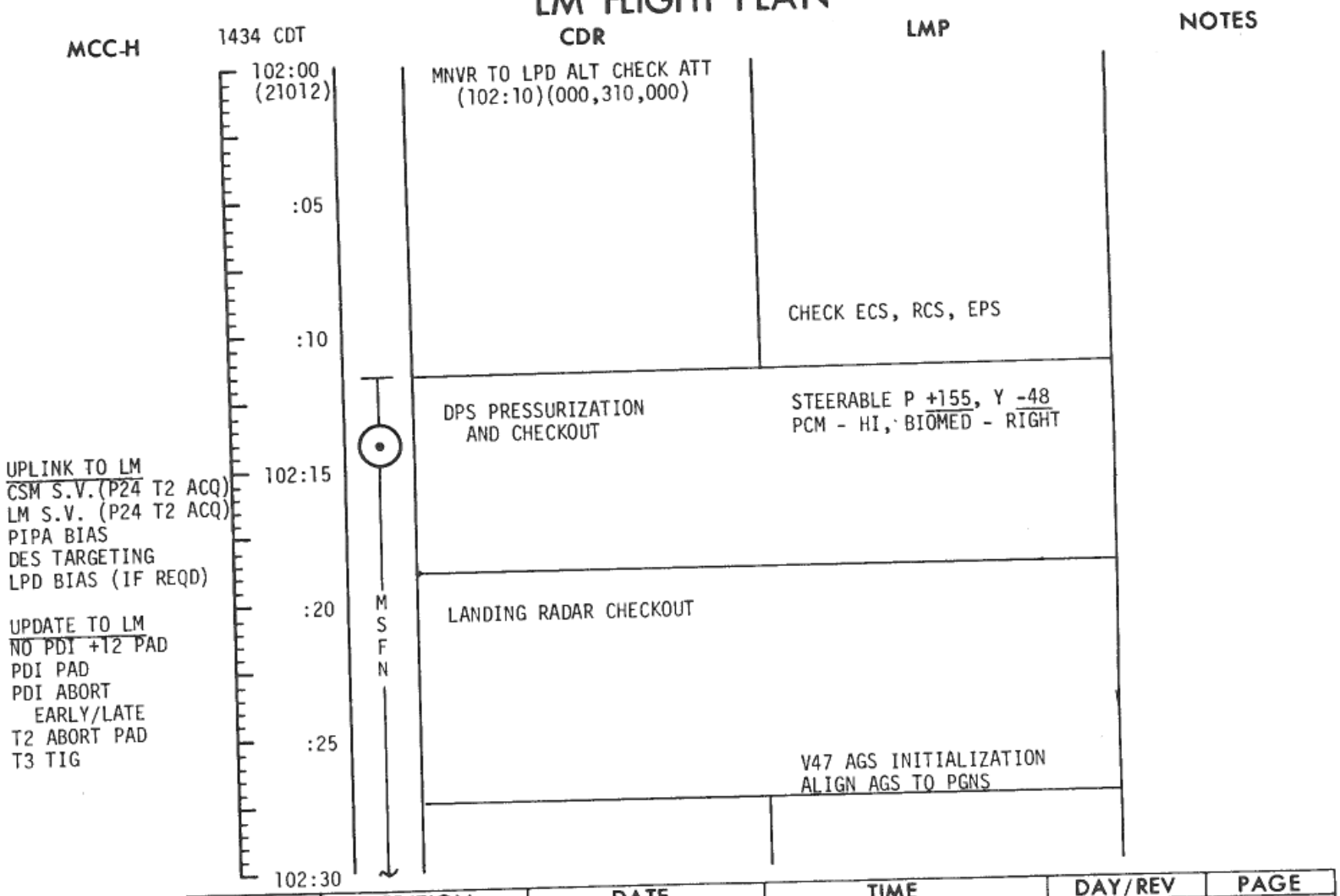
GAMMA RAY*
ALPHA PART*

102:00

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						FUEL
X						OX
X						UNBAL

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	102:00 - 102:30	5/13	3-120

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

102:00
(11111)
(X1111)

CONFIGURE CAMERA: (LDMK TRK)
CM/DAC/SXT/CEX (EXP PAD) 1 fps (3.8% MAG)

MAG (E) ____, MAG % ____
UTILITY POWER - ON

VERIFY ORDEAL
ALT SET = 60 NM

ACQ MSFN HGA P 10, Y 288

MSFN CMDS:
DSE DUMP

102:10

REPORT: BURN STATUS

MSFN UPDATE:
P24 LDMK TRACK (102:50)

MSFN UPLINK:
CSM S.V. (P24 T2 ACQ)
LM S.V. (P24 T2 ACQ)
PIPA BIAS

GAMMA RAY*
ALPHA PART*

102:20

MSFN UPDATE TO LM
WITH CSM COPY:
PADS E-N

CYCLE CMC MODE - FREE/AUTO
P20 OPT 5 (LDMK TRK ATT) (102:33)
N78 (+000.00)
(-068.00)
(+000.00)
N79 (+000.50)
N70 (00050)
(000,338/279,000) OMNI C

(P20)
(0.5°DB)

102:30

MSFN

A

PURPOSE		PDI_0 ABORT PAD					
GETI N33	HRS	+	0	0	1	0	2
	MIN	+	0	0	0	3	9
	SEC	+	0	3	5	.3	5

B

PURPOSE							
N84 LOCAL VERT	ΔVX	+	0	1	0	0	.0
	ΔVY	+	0	0	0	0	.0
	ΔVZ	+	0	0	0	1	.8

C

PURPOSE							
GETI CSI N11	HRS	+	0	0	1	0	3
	MIN	+	0	0	0	4	0
	SEC	+	0	2	4	.0	0

D

PURPOSE							
GETI TPI N37	HRS	+	0	0	1	0	5
	MIN	+	0	0	0	2	2
	SEC	+	0	3	0	.0	0

I

PURPOSE		PDI_1 PAD					
GETI PDI N33	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

J

PURPOSE		PDI_1 ABORT EARLY PAD					
GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

K

PURPOSE		PDI_1 ABORT LATE PAD					
GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

E

PURPOSE		NO PDI_1+12 ABORT					
GETI N33	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

F

PURPOSE							
N84 LOCAL VERT	ΔVX						
	ΔVY						
	ΔVZ						

G

PURPOSE							
GETI CSI N11	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

H

PURPOSE							
GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

L

PURPOSE		T 2-1 ABORT PAD					
GETI T2	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

M

PURPOSE							
GETI TPI N37	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

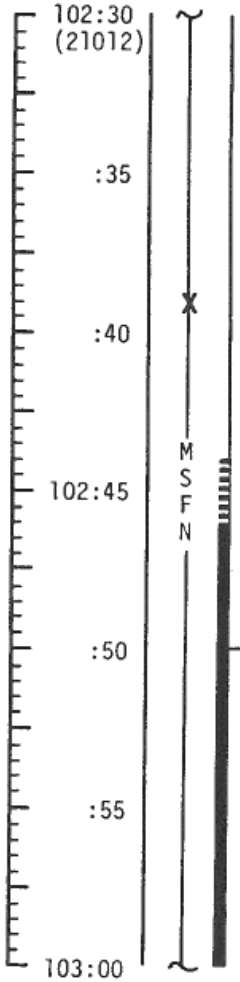
N

PURPOSE		T3 ABORT PAD					
GETI T3	HRS	+	0	0			
	MIN	+	0	0	0		
	SEC	+	0			.	

LM FLIGHT PLAN

MCC-H

1504 CDT



CDR	LMP	NOTES
LPD ALT CHECK		PDI_0
PITCH TO OBSERVE LDG SITE PHOTOGRAPH LANDING SITE LM3/DC LM3/DAC		
	SETUP CAMERA FOR DESCENT	
	ALIGN AGS TO PGNS	
P52 IMU REALIGN OPTION 3 REFSMMAT (LDG SITE ORIENTATION)		

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	102:30 - 103:00	5/13	3-122

FLIGHT PLANNING BRANCH

1504 CDT

CSM FLIGHT PLAN

102:30
(P20)
(0.5°DB)
(11111)
(X1111)

P24 (L/S LDMK 15-1)
OPT ZERO - OFF, OPT MODE - CMC

0:00 - T1 (HORIZON) DET - RESET/START

MSFN CMDS:
DSE RECORD

102:40

3:50 - DAC - ON

4:50 - T2 (LDMK ACQ) OPT MODE - MAN, TAKE MARKS 10 SEC APART

6:30 - TCA
7:18 - T3 (LDMK LOSS) DAC - OFF

GAMMA RAY*
ALPHA PART*

(11111)
(X1111)
(11112)
(X1111)

P00
V48 (11112)
(X1111)
V49 MNVR TO P52 AND COAS CALIB ATT (102:54)
(180,257,012) HGA P -69, Y 114

102:50

MSFN

P52 IMU REALIGN

N71: ___ ___, ___ ___

N05: ___ ___ ___°___ ___

N93:

X ___ ___°___ ___ ___

Y ___ ___°___ ___ ___

Z ___ ___°___ ___ ___

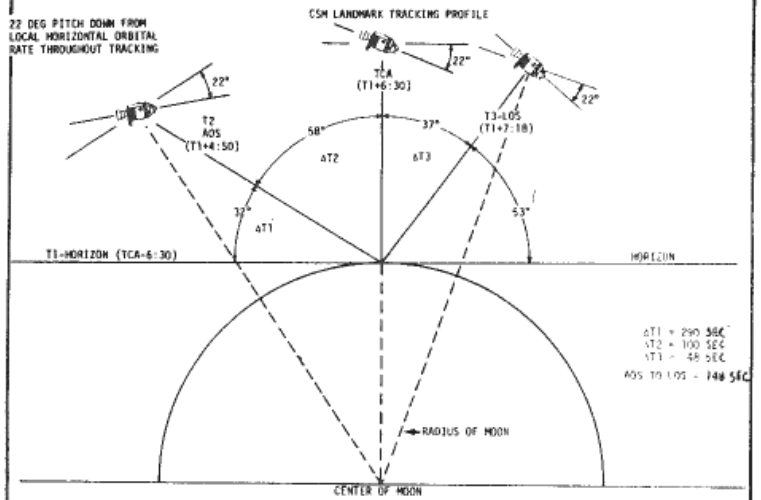
GET ___ ___ ___°___ ___°___ ___

MSFN CMDS:
DSE DUMP

P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

103:00



P24 LDMK TRACKING
TGT: 15-1 ( )

T_1 102:37:27
T_2 102:42:17
TCA 102:43:57
T_3 102:44:45

R ____ °P ____ °Y ____ ° (T2 ACQ)

N or S NM ___ / SA ___ TA ___ (T2 ACQ)

N89
LAT +26.065
LONG/2 +01.836
ALT -01.935

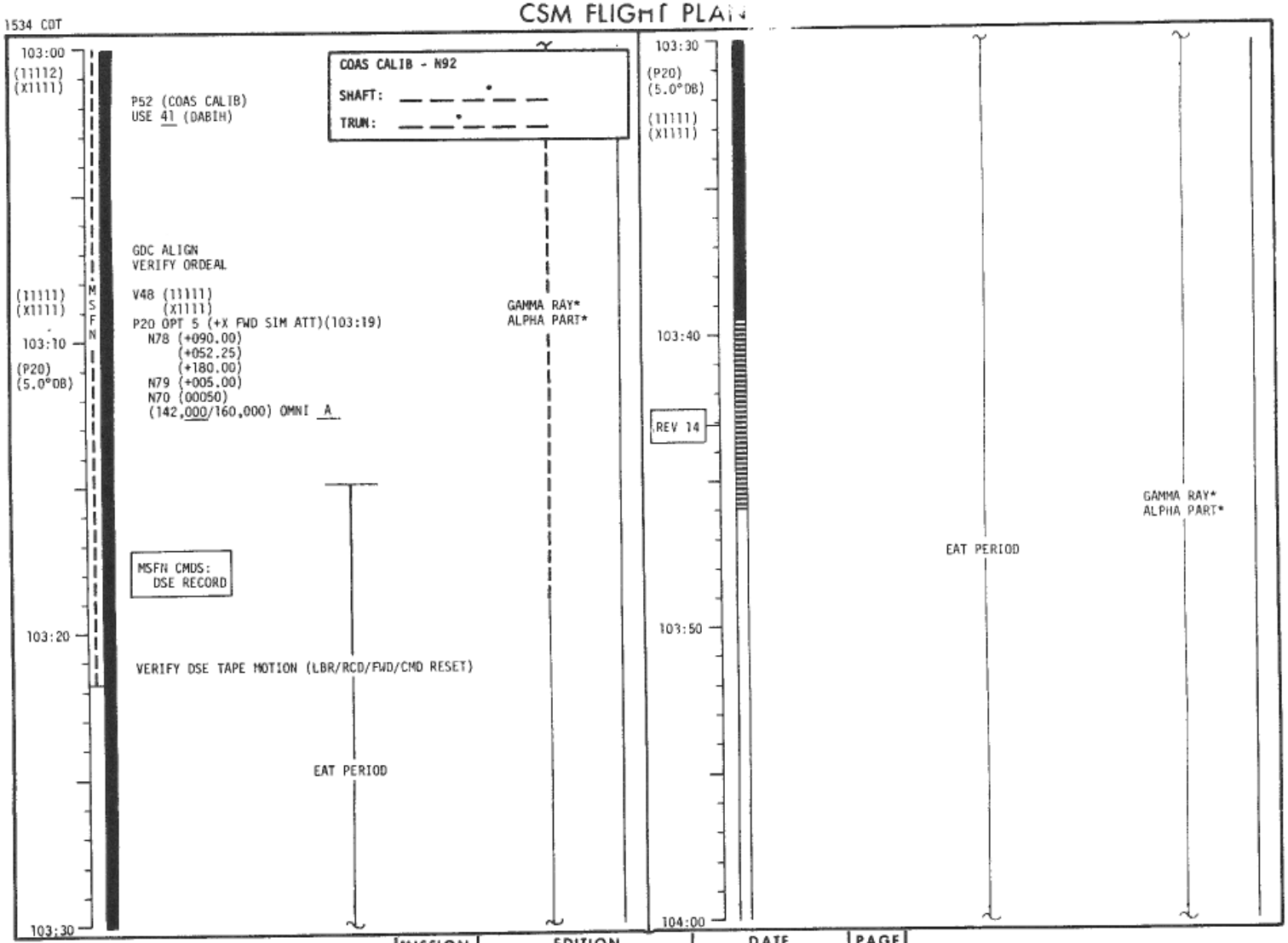
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-123

LM FLIGHT PLAN

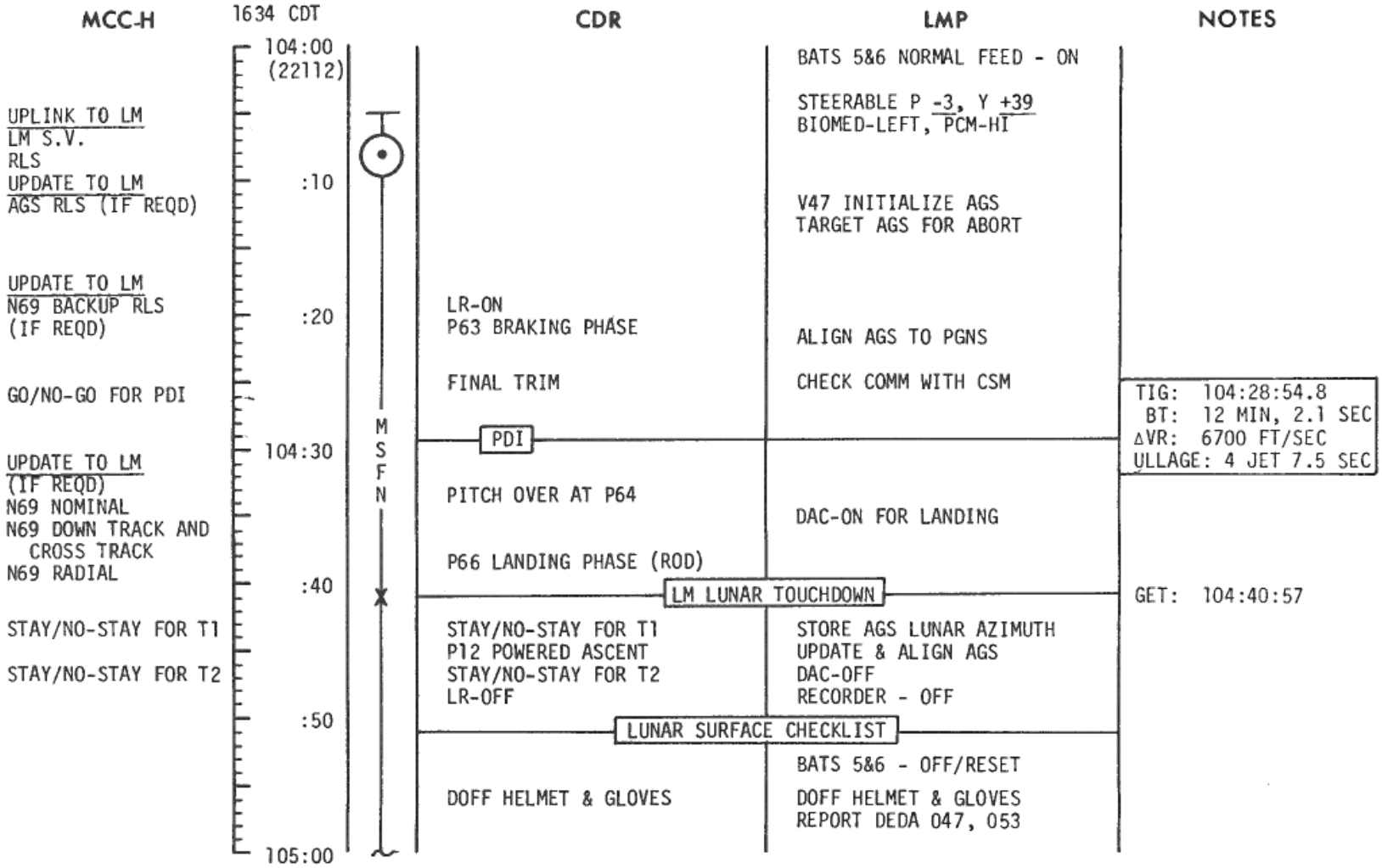
MCC-H	1534 CDT	CDR	LMP	NOTES
	103:00 (21012)			
		COAS CALIBRATION P63 IGNITION ALGORITHM TEST MNVR TO PDI ATT (103:35) (000,111,310)	ALIGN AGS TO PGNS	
	:10			
UPLINK TO LM GYRO DRIFT COMP (IF REQD)	(22112)	V48 (22112)	OMNI-FWD, PCM-LO VHF B-DATA	
	:20	COAS TO OVHD WINDOW	VERIFY LOOSE GEAR STOWED AND RESTRAINTS ATTACHED	
	103:30	DON HELMET & GLOVES	ECS CHECKOUT DON HELMET & GLOVES	
	REV 14		INVERTER-1	
	:40			
		PDI SWITCH CHECK		
	:50			
	104:00			

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	103:00 - 104:00	5/13-14	3-124

FLIGHT P[illegible]NNING BRANCH


1534 CDT
103:00
(11112)
(X1111)
(11111)
(X1111)
103:10
(P20)
(5.0°DB)
103:20
103:30
MSFN
P52 (COAS CALIB)
USE 41 (DABIH)
COAS CALIB - N92
SHAFT:
TRUN:
GDC ALIGN
VERIFY ORDEAL
V48 (11111)
(X1111)
P20 OPT 5 (+X FWD SIM ATT)(103:19)
N78 (+090.00)
(+052.25)
(+180.00)
N79 (+005.00)
N70 (00050)
(142,000/160,000) OMNI A
MSFN CMDS:
DSE RECORD
VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)
EAT PERIOD
GAMMA RAY*
ALPHA PART*
103:30
(P20)
(5.0°DB)
(11111)
(X1111)
103:40
REV 14
103:50
104:00
EAT PERIOD
GAMMA RAY*
ALPHA PART*

LM FLIGHT PLAN

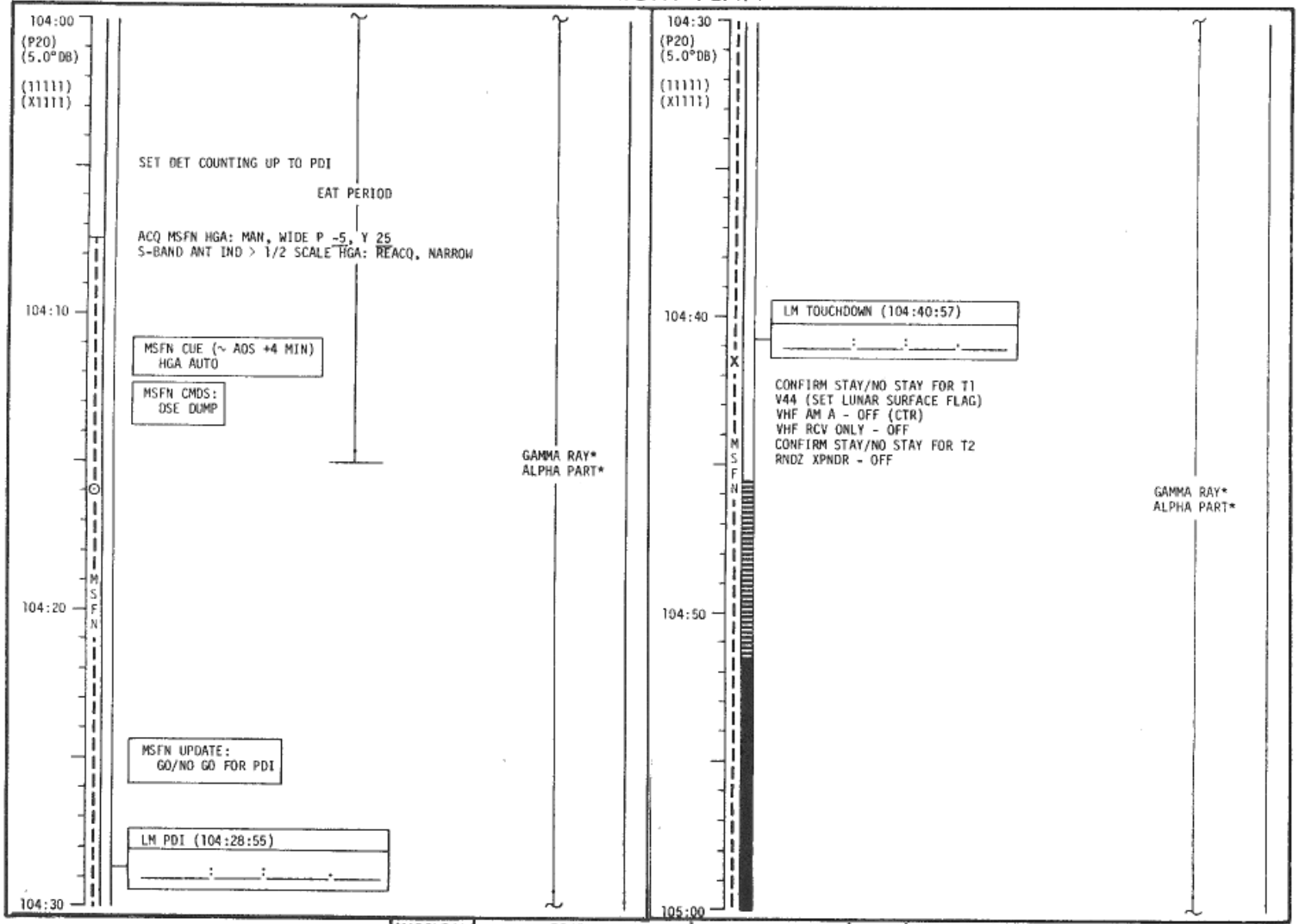


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	104:00 - 105:00	5/14	3-126

FLIGHT PLANNING BRANCH

1634 ω

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-127

LM FLIGHT PLAN

MCC-H

1734 CDT

	CDR	LMP	NOTES
105:00 (22112)	P57 LUNAR SURFACE ALIGN OPTION 3 REFSMMAT A/T-1 GRAVITY & LM Z-AXIS (LANDING SITE ORIENT)	AGS LUNAR SURFACE GYRO CALIBRATION	
	INSTALL WINDOW SHADES	STEERABLE P +73, Y -62	
:10	PARTIAL POWER DOWN		
:20	P57 LUNAR SURFACE ALIGN OPTION 3, REFSMMAT A/T-2, TWO CELESTIAL BODIES (LANDING SITE ORIENT)		
STAY/NO-STAY FOR T3	P57 LUNAR SURFACE ALIGN OPTION 3, REFSMMAT A/T-2, TWO CELESTIAL BODIES (LANDING SITE ORIENT)		
105:30	E-MEMORY DUMP, POO	AGS/PGNS ALIGN AGS STANDBY	
UPDATE TO LM LIFT-OFF TIMES FOR REVS 16 THRU 20	CONFIGURE TO POWER DOWN	BATS 3&4 - OFF/RESET LUNAR BAT (CDR) - ON. CHECK BUS VOLTS	
:40	LGC TO STANDBY, IMU PWR DN		CSM REV 15
	SEVA PREP EQUIPMENT PREP FOR SEVA		
:50	HELMET/GLOVE DONNING		
106:00	PRESSURE INTEGRITY CHECK		

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	105:00 - 106:00	5/14-15	3-128

FLIGHT [illegible]NNING BRANCH

CSM FLIGHT PLAN

1734 GET

105:00 (P20) (5.0°DB) (11111) (X1111)

CMC MODE - FREE
P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

P20, CMC MODE - AUTO
GDC ALIGN
VERIFY ORDEAL

MSFN UPDATE:
MAP CAMERA PHOTO PADS (105:30 AND 106:50)
PAN CAMERA PHOTO PAD (105:35)

MSFN

105:10

MSFN UPLINK:
CSM S.V.

P52 IMU REALIGN

N71: ___ ___,___ ___

N05: ___ ___ ___•___ ___

N93:

X ___ ___•___ ___ ___

Y ___ ___•___ ___ ___

Z ___ ___•___ ___ ___

GET ___ ___ ___•___ ___•___ ___

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

105:20

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

GAMMA RAY*
ALPHA PART*

CONFIGURE CAMERA: (ORBITAL SCIENCE)
CM/EL/250/CEX (5.6,1/250,∞) (64 FR)

MAG (O) ____, FR # ____

105:30

105:30 (P20) (5.0°DB) (11111) (X1111)

(P20) (0.5°DB)

105:40

REV 15

105:50

106:00

MAP CAMERA PHOTO PAD
T-START: ___ ___ ___:___ ___:___ ___
T-STOP: ___ ___ ___:___ ___:___ ___

PAN CAMERA PHOTO PAD
T-START: ___ ___ ___:___ ___:___ ___
T-STOP: ___ ___ ___:___ ___:___ ___

S-BD AUX TV - SCI
DATA SYS ON - ON

CMC MODE - FREE
V22N79 (+000.50)
CMC MODE - AUTO
SIM EXPERIMENT PREP (CUE CARD)

INHIBIT ALL JETS EXCEPT A1 & C2 OR D1 & B2, A3,C4,B3,D4

LOGIC POWER (2) - DPLY/RETR
MAP CAMR/LASER EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)
MAP CAMERA TRACK - EXTEND tb-BP (~4 MIN)/GRAY

PAN CAMERA: MODE - STBY, PWR - ON tb-BP (2 SEC)/GRAY,
STEREO, EXPOSURE - NORMAL (CTR)
PCM BIT RATE HIGH/CMD RESET

LASER ALTM - ON

RECORD GET ____

ORBITAL SCIENCE PHOTOS

PHOTO TGT 2 (GAGARIN) (A3-P2)
CM3 (f5.6,1/250,∞) 36 FR AT 5 SEC INTERVALS

MAP CAMERA IMAGE MTN - ON (tb-BP IN 3-5 SEC then GRAY)
MAP CAMERA ON - ON (T START)
PAN CAMERA MODE - OPR tb-BP (2 SEC)/GRAY (T START)
MAP CAMERA IMAGE MTN - INCR (tb-BP +4 STEPS)/ON

GAMMA RAY*
ALPHA PART*
MAP CAMERA
PAN CAMERA
LASER ALTM

REMOVE CM5 WINDOW COVER

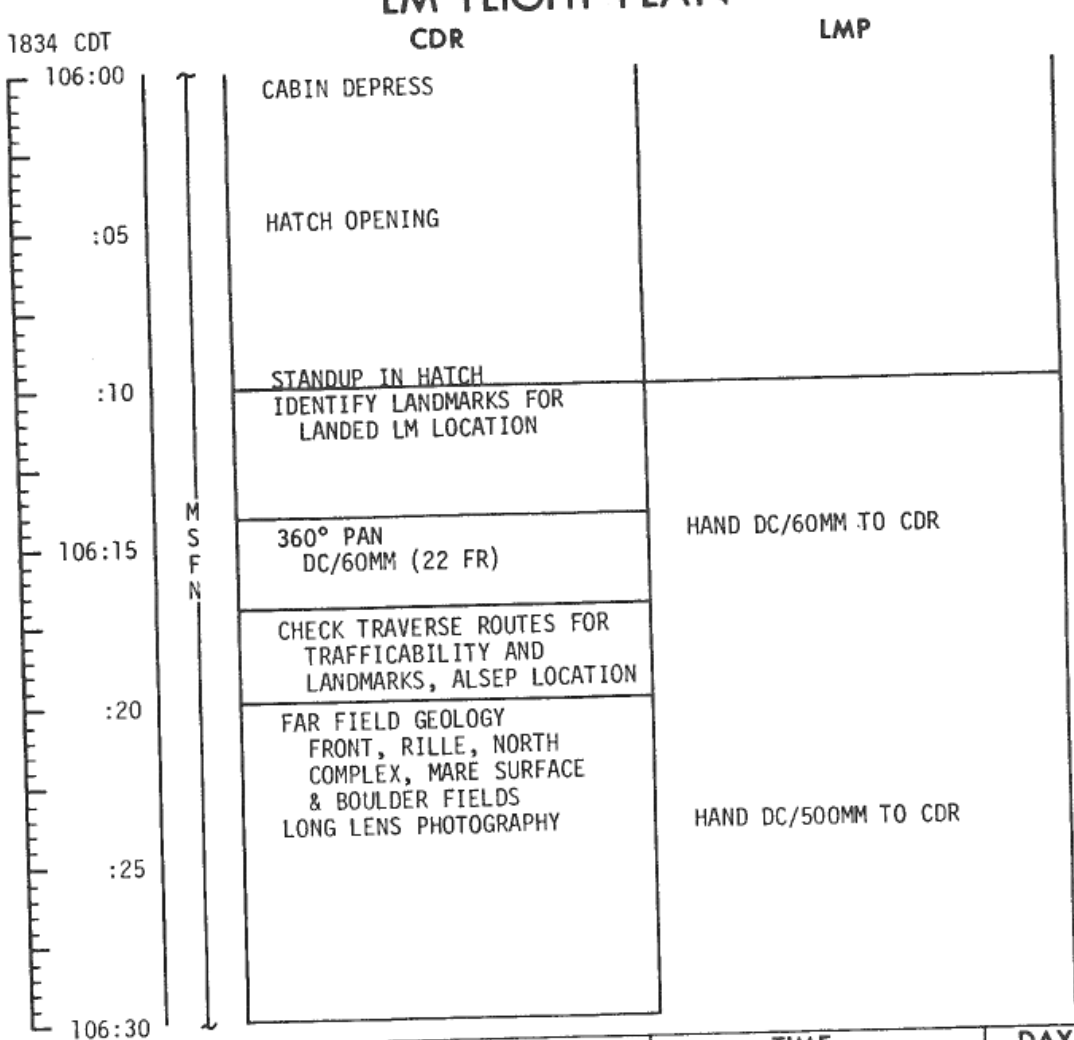
PHOTO TGT 6 (N.W. TSIOLKOVSKY) (A4,A5-P6)
CM5 (f11,1/250,∞) 28 FR AT 5 SEC INTERVALS

REPLACE CM5 WINDOW COVER
RECORD FR # ____

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-129

LM FLIGHT PLAN

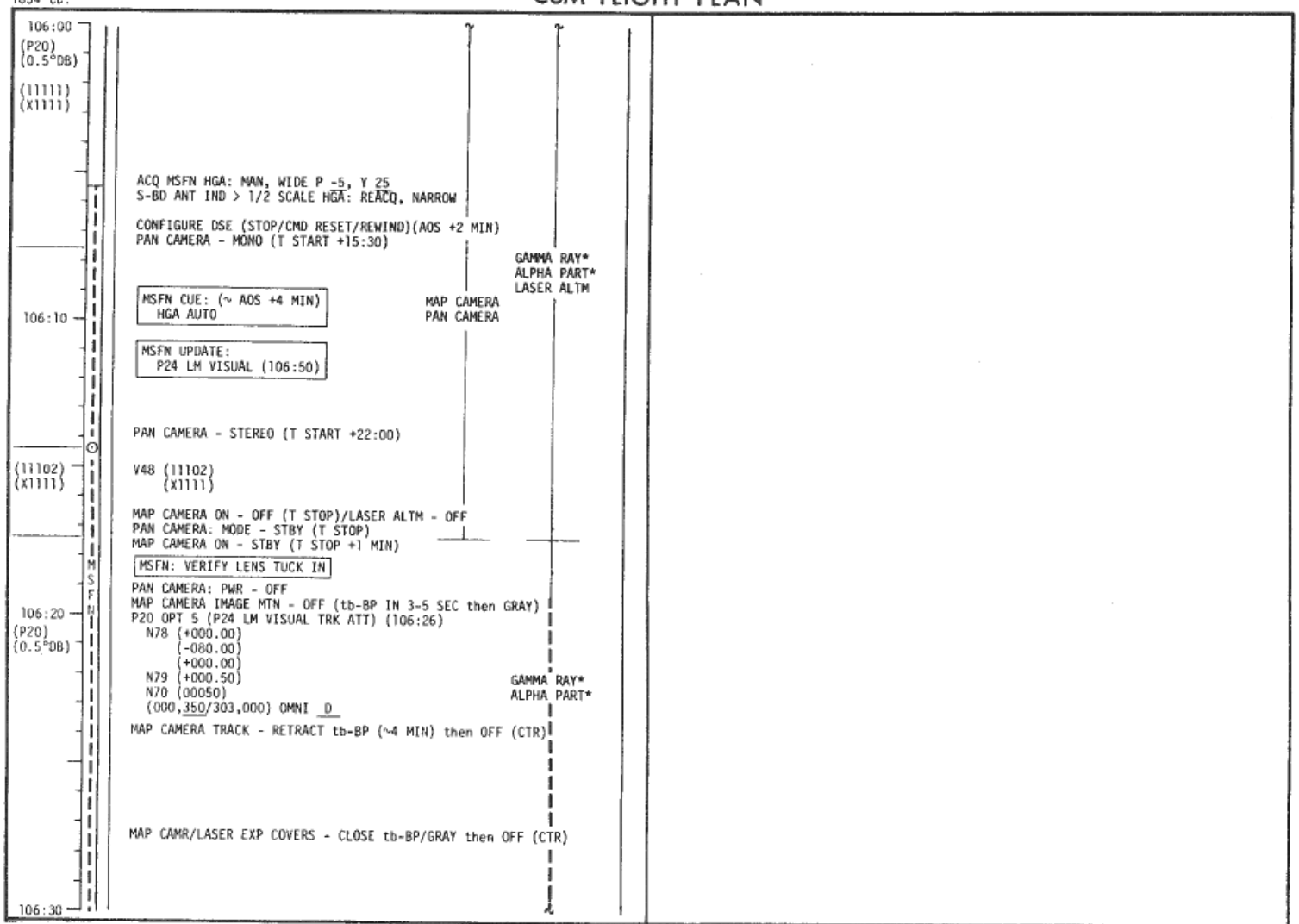
MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	106:00 - 106:30	5/15	3-130

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



LM FLIGHT PLAN

MCC-H | 1904 CDT | CDR | LMP | NOTES

106:30 — NEAR FIELD GEOLOGY
- EFFECTS OF DESCENT ENGINE FRAGMENT DISTRIBUTION
- CRATERS, BOULDERS, & SOIL

:35

CONFIRM BEST ALSEP LOCATION

:40 — INGRESS CABIN; INSTALL DROGUE — 0:20; 0:30/END SEVA

MSFN

106:45 — CLOSE HATCH

REPRESS CABIN

:50 — POST-SEVA SYSTEMS CONFIGURATION

:55

107:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	106:30 - 107:00	5/15	3-132

FLIGHT PLANNING BRANCH

1904 CDT

CSM FLIGHT PLAN

106:30
(P20)
(0.5°DB)
(11102)
(X1111)

P24 (LM VISUAL TRACK)
OPT ZERO - OFF, OPT MODE - CMC

0:00 - T1 (HORIZON) DET - RESET/START

MSFN CMDS:
DSE RECORD

4:07 - T2 (LM ACQ) OPT MODE - MAN, TAKE MARKS 10 SEC APART

6:30 - TCA
6:58 - T3 (LM LOSS)

106:40

P20 OPT 5 (+X FWD SIM ATT)(106:49)
V25N78 (+090.00)
(+052.25)
(+180.00)
(142,000/243,000) HGA P -64, Y 222

(P20)
(0.5°DB)

M S F N

GAMMA RAY: GAINSTEP - ~~SHIELD OFF~~ INCREASE ONE STEP GAMMA RAY* ALPHA PART*

change at 106:10:30

MAP CAMR/LASER EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)
MAP CAMERA TRACK - EXTEND tb-BP (~4 MIN)/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY tb-BP(~2:45)/GRAY then OFF (CTR)

RECORD & REPORT DEPLOY TIME _____ (ΔT IN BP)

106:50

MSFN CMDS:
DSE DUMP

X-RAY - ON
LASER ALTM - ON

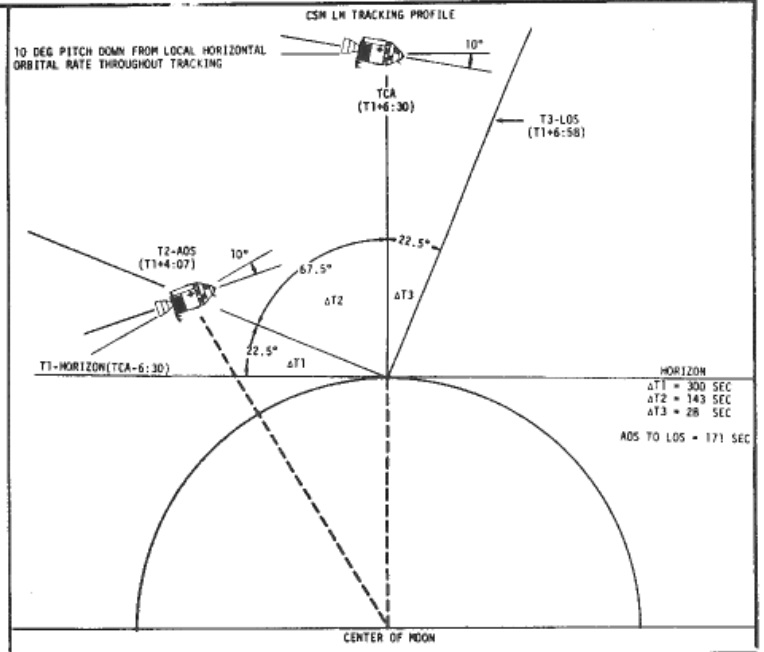
RECORD GET _____

changed at 106:10:53

GAMMA RAY: ~~GAINSTEP - SHIELD ON~~ (CTR)
MAP CAMERA IMAGE MTN - ON (tb-BP IN 3-5 SEC then GRAY)
MAP CAMERA ON - ON (T START)
MAP CAMERA IMAGE MTN - INCR (tb-BP)/ON

MAP CAMERA

107:00



MAP CAMERA PHOTO PAD

T-START: ___ ___ ___:___ ___:___ ___

T-STOP: ___ ___ ___:___ ___:___ ___

P24 LOMK TRACKING

TGT: LM VISUAL ( )

T_1 106:33:59

T_2 106:38:06

TCA 106:40:29

T_3 106:40:57

R ____ °P ____ °Y ____ °(T2 ACQ)

W or S NM 03 / SA ___ TA ___ (T2 ACQ)

N89

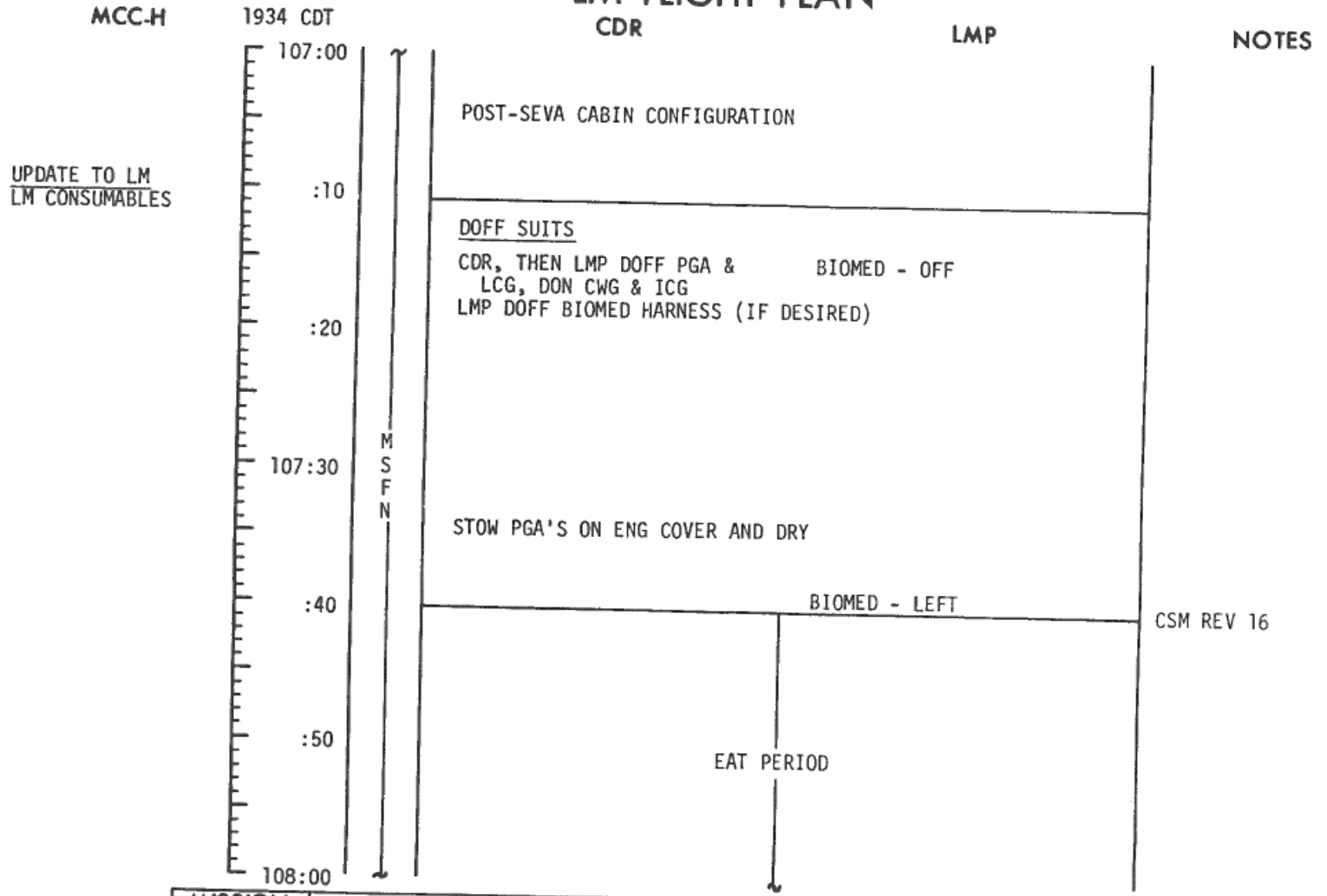
LAT +26.074

LONG/2 +01.827

ALT -01.917

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-133

LM FLIGHT PLAN

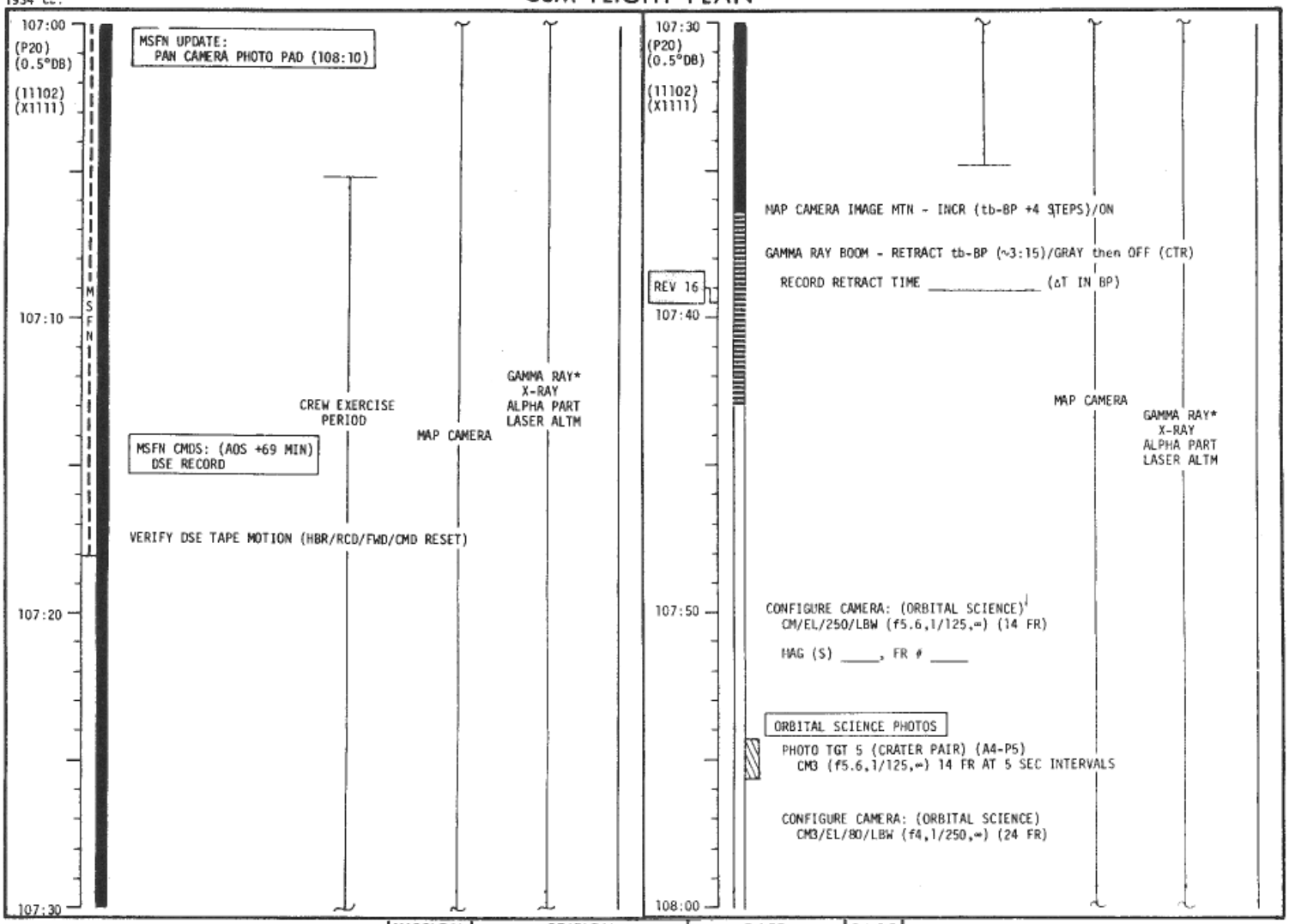


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	107:00 - 108:00	5/15-16	3-134

FLIGHT NNING BRANCH

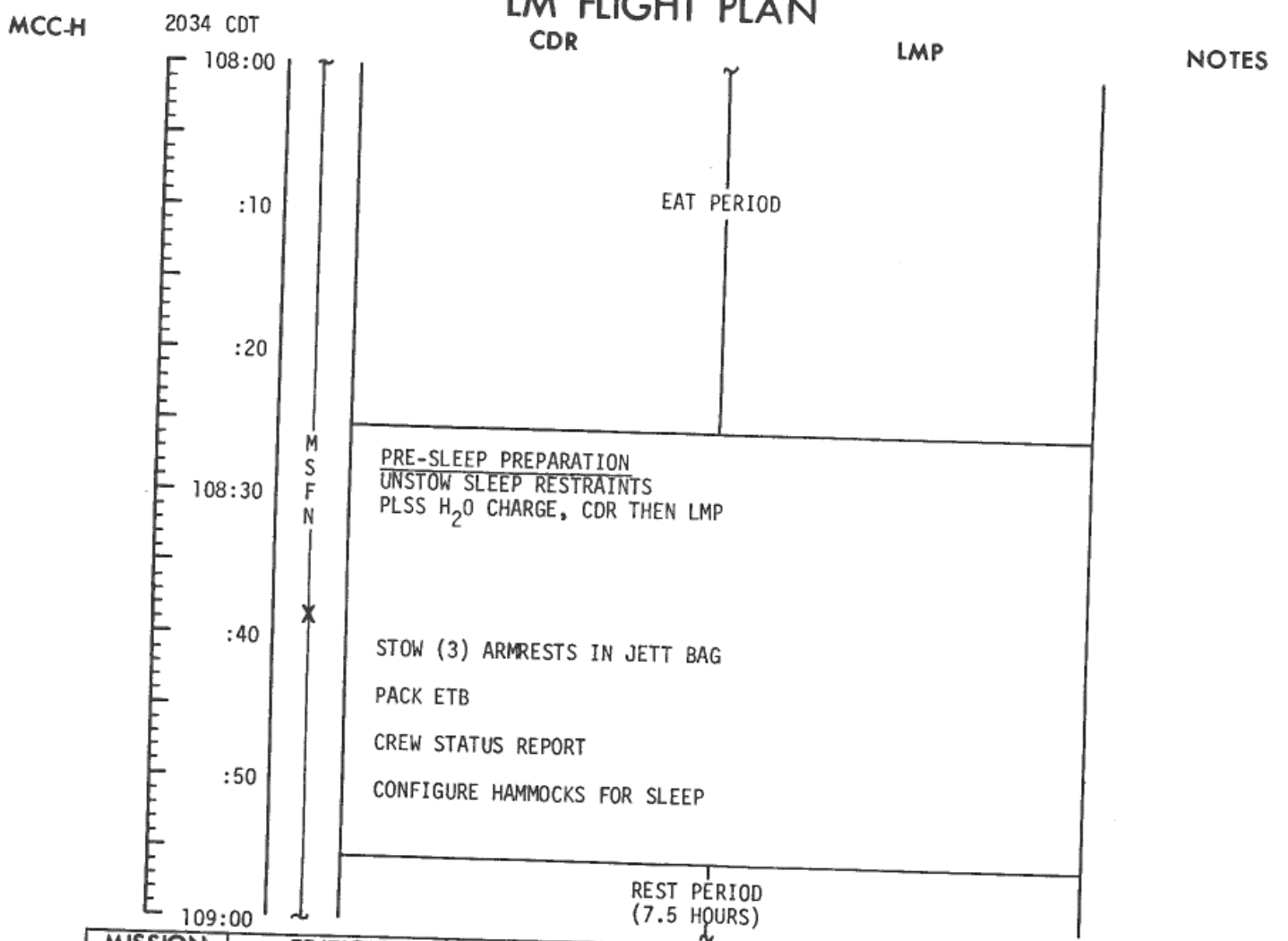
1934 G.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-135

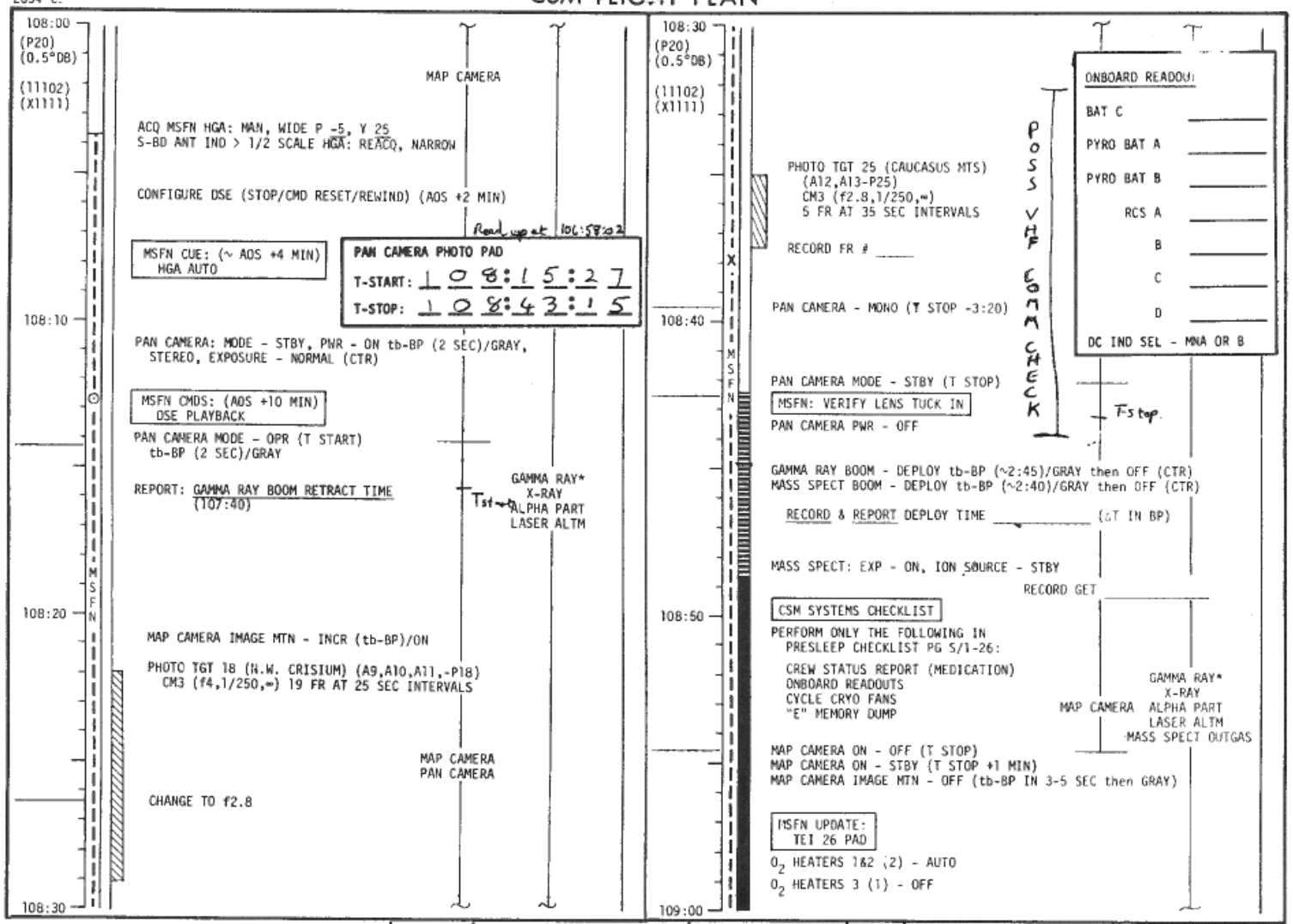
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	108:00 - 109:00	5/16	3-136

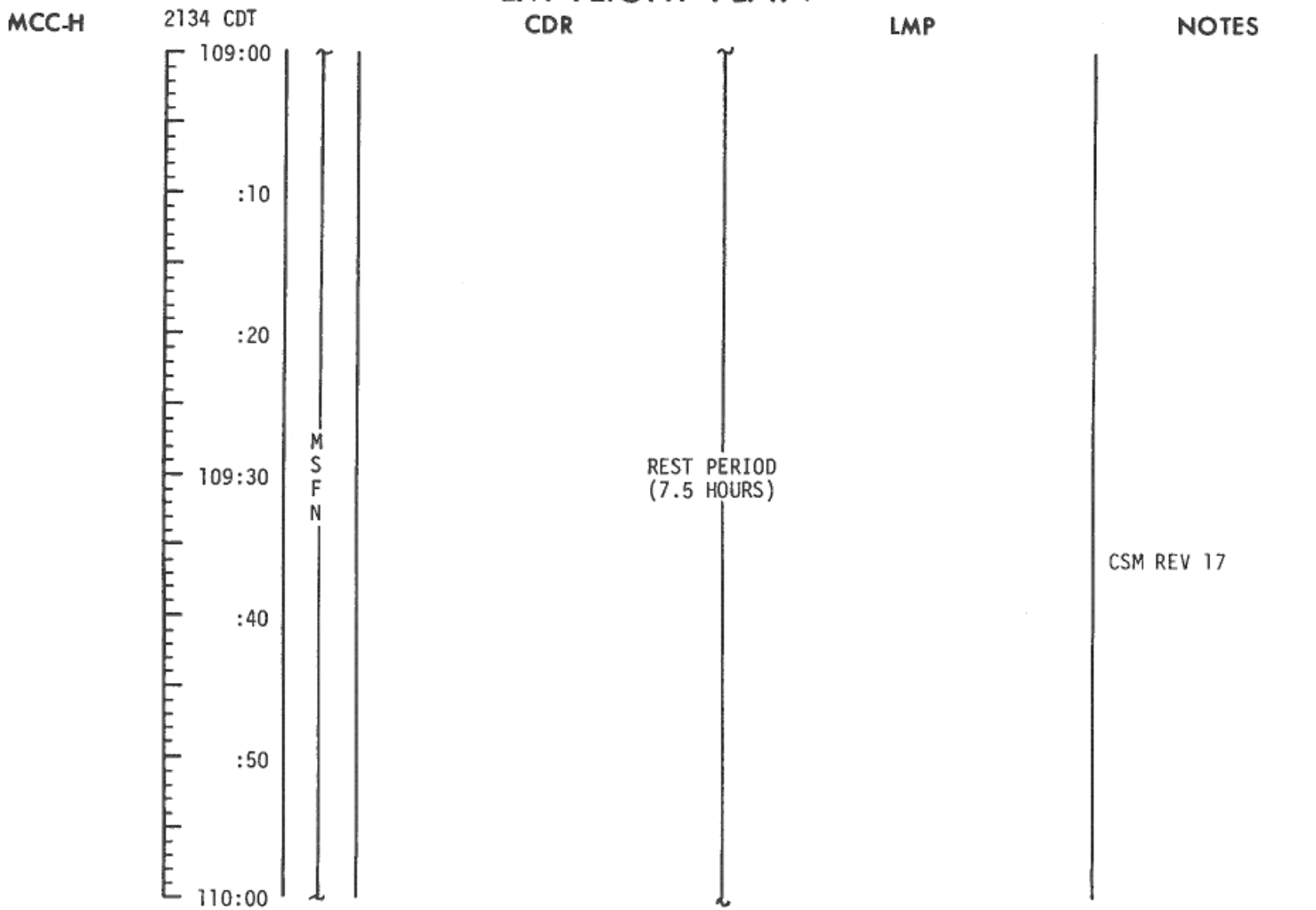
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-137

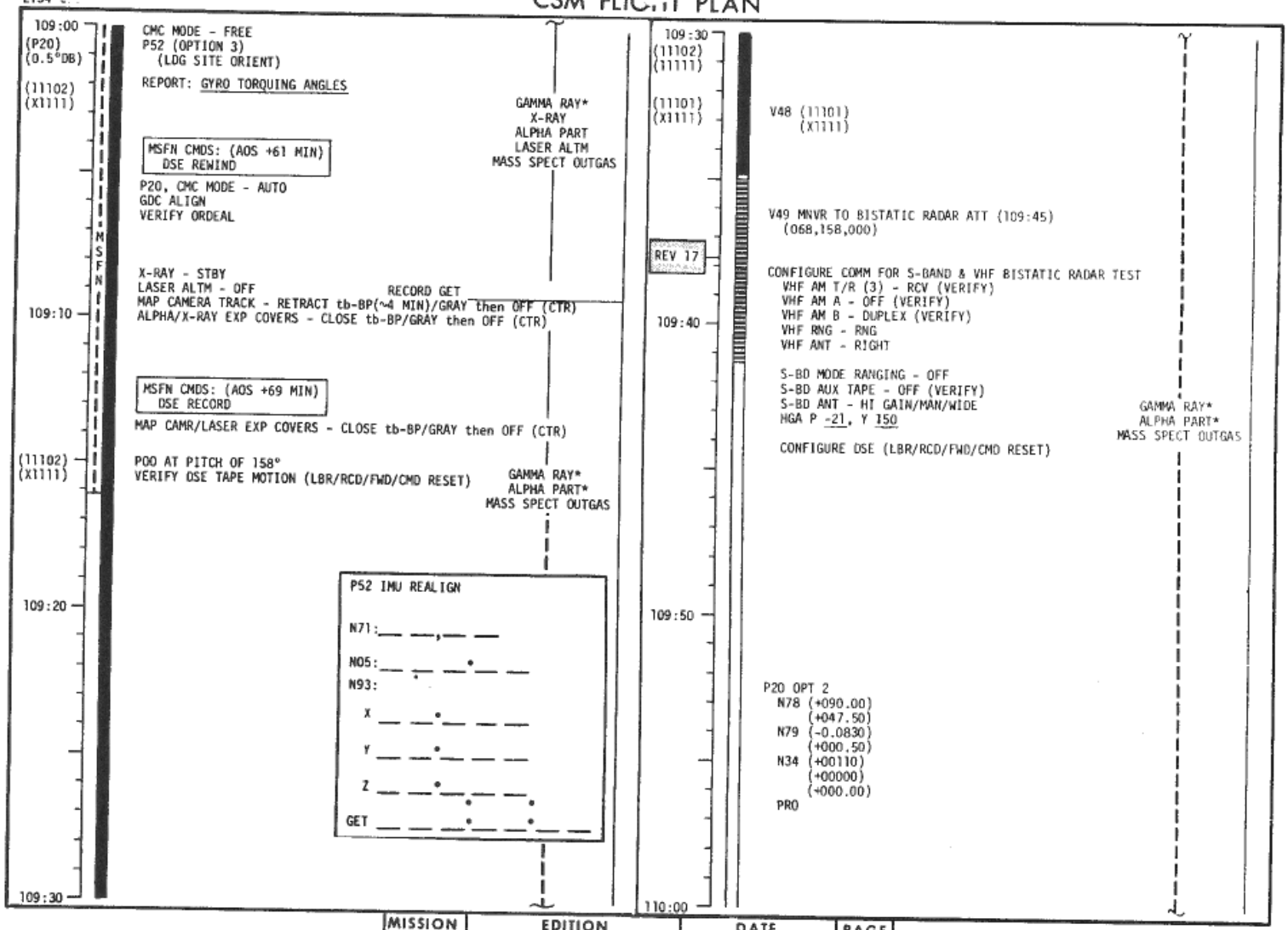
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	109:00 - 110:00	5/16-17	3-138

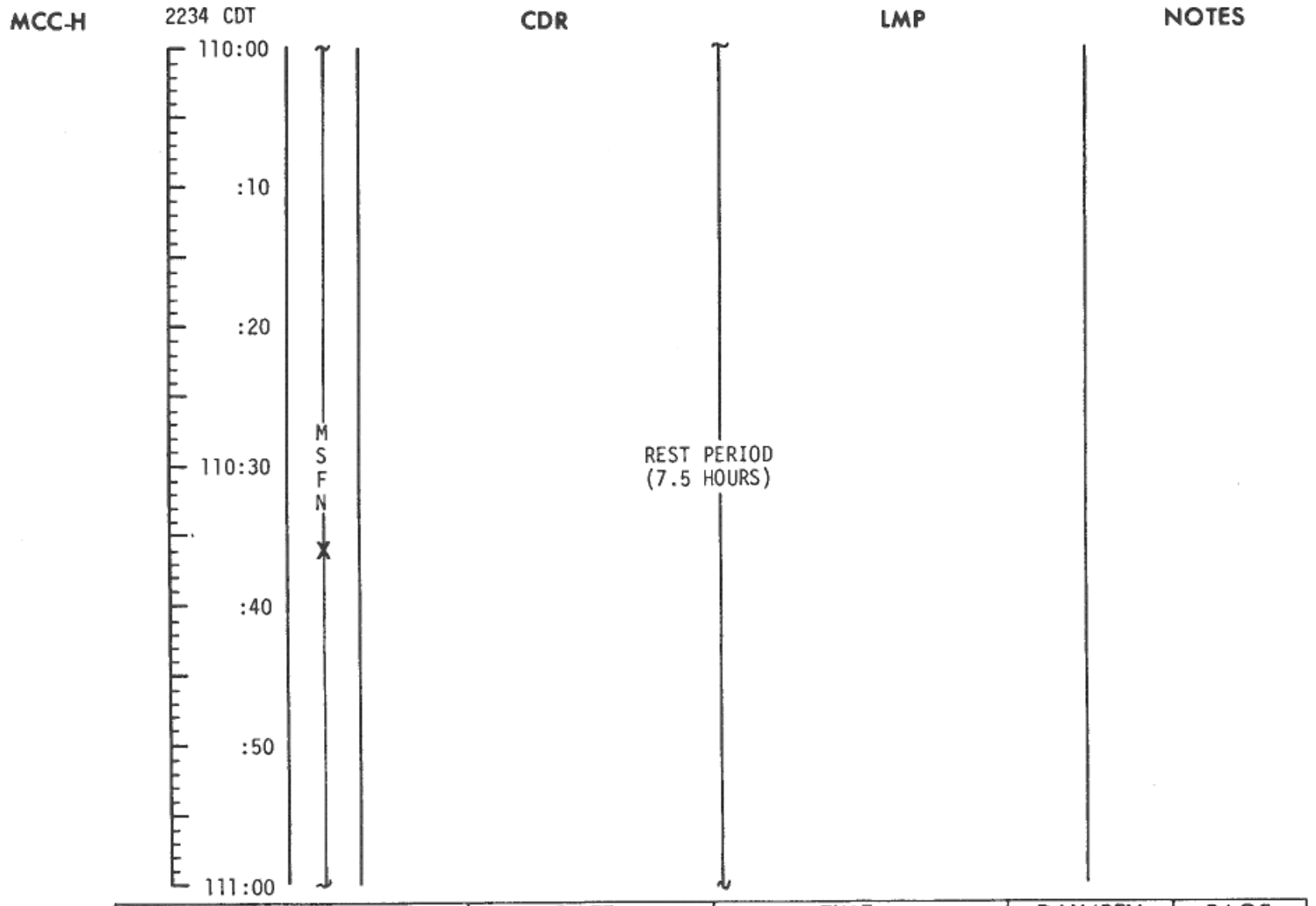
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-139

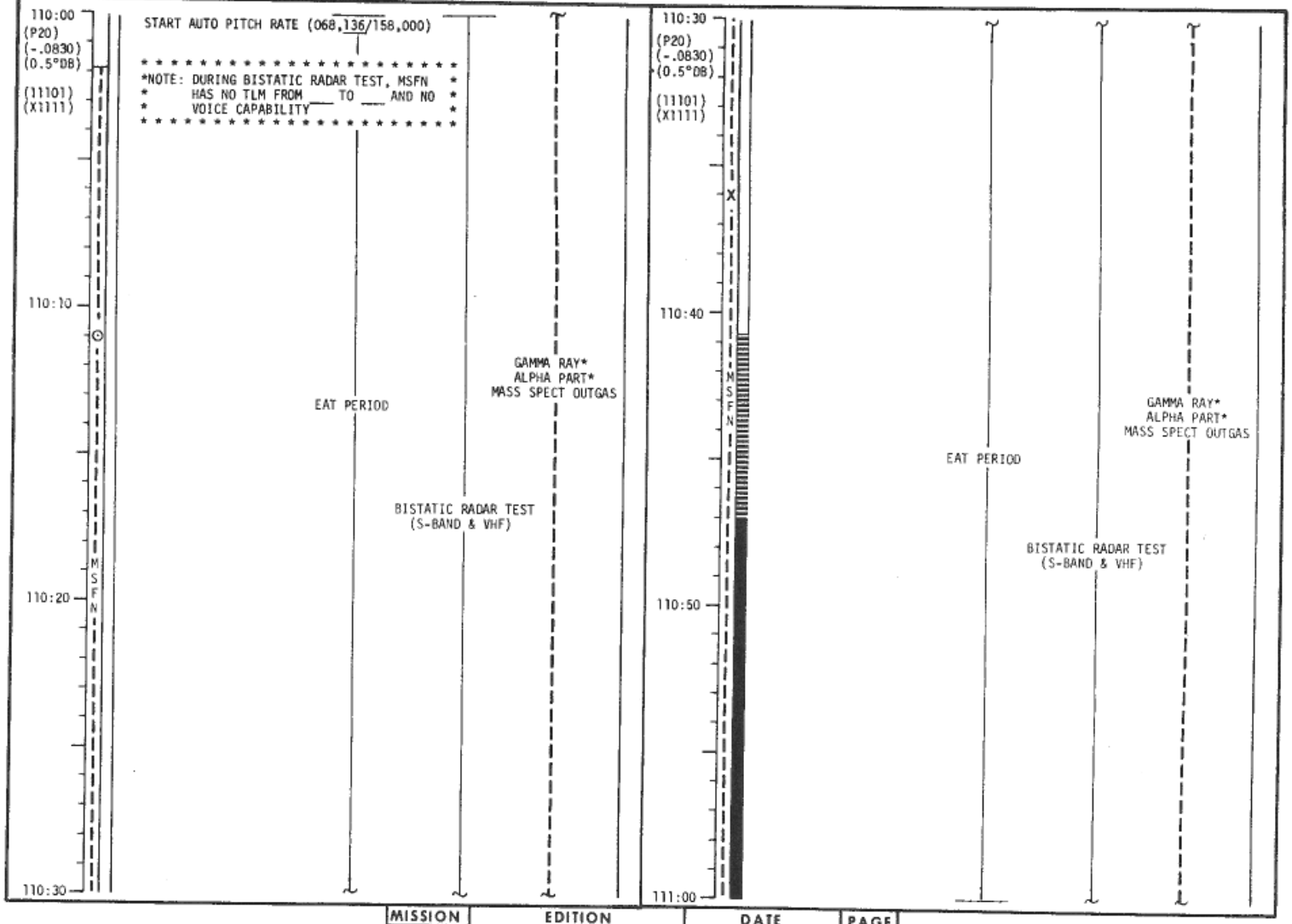
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	110:00 - 111:00	5/17	3-140

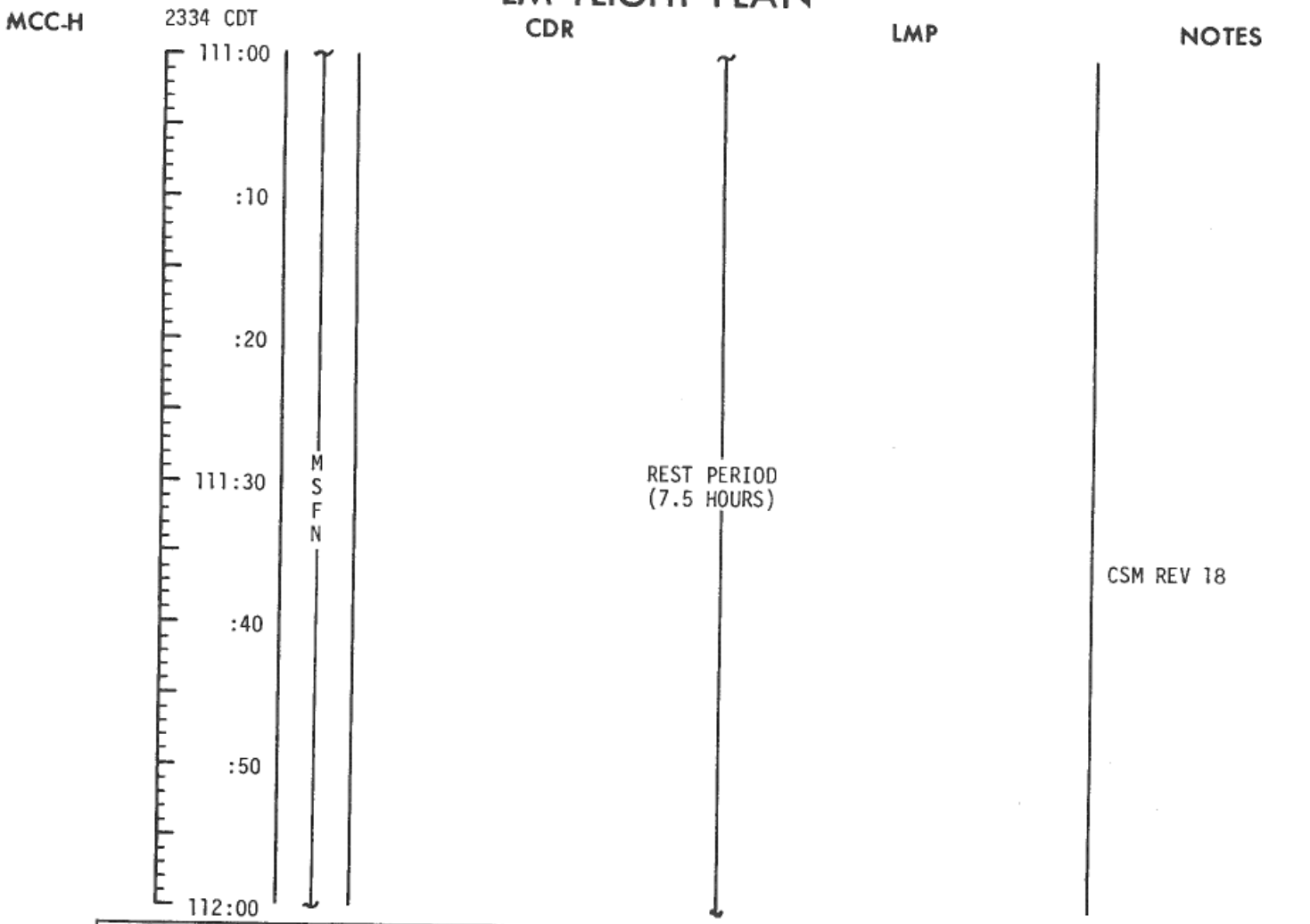
FLIGHT PLA NG BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-141

LM FLIGHT PLAN

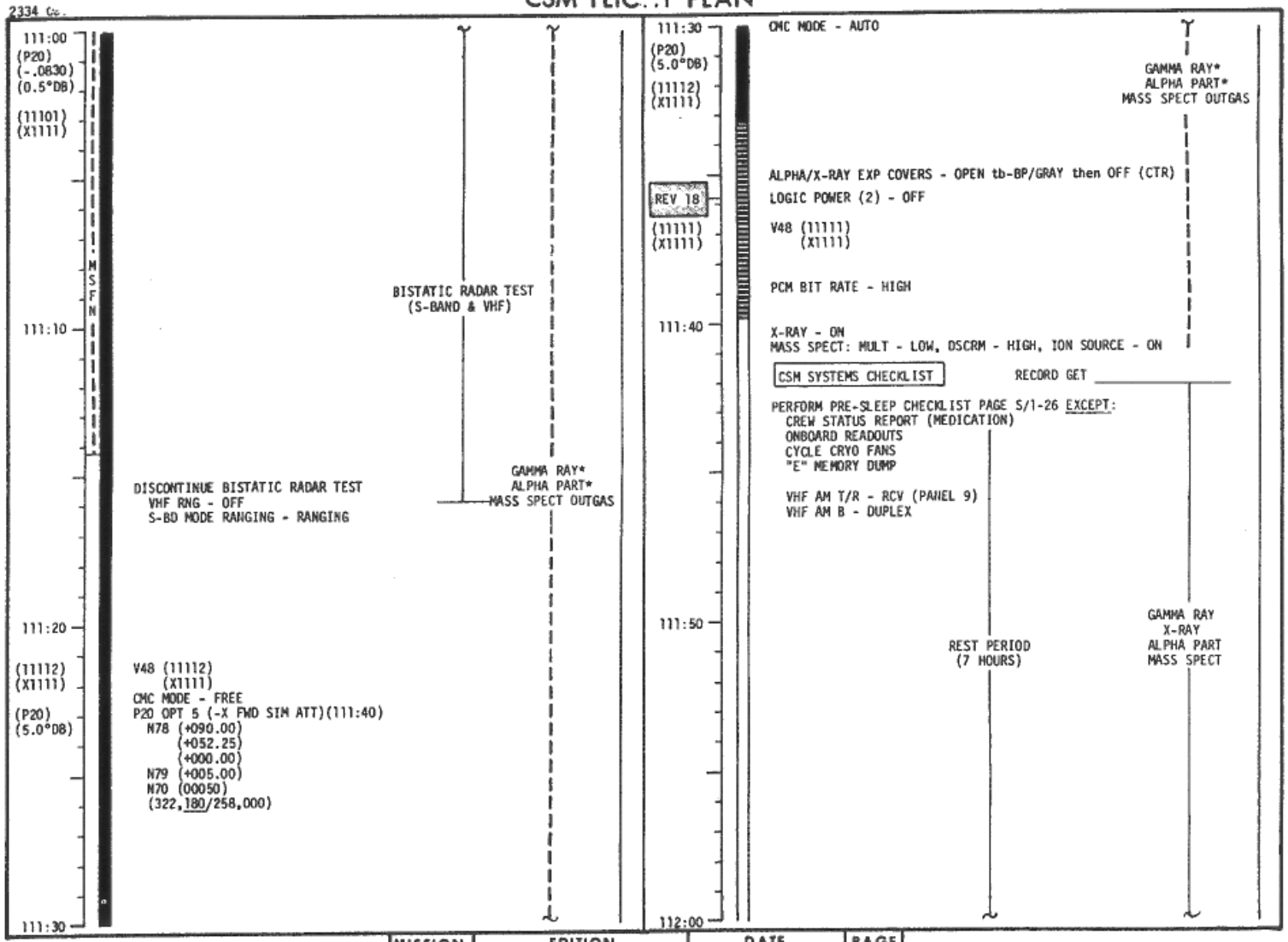


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	111:00 - 112:00	5/17-18	3-142

FLIGHT PLANNING BRANCH

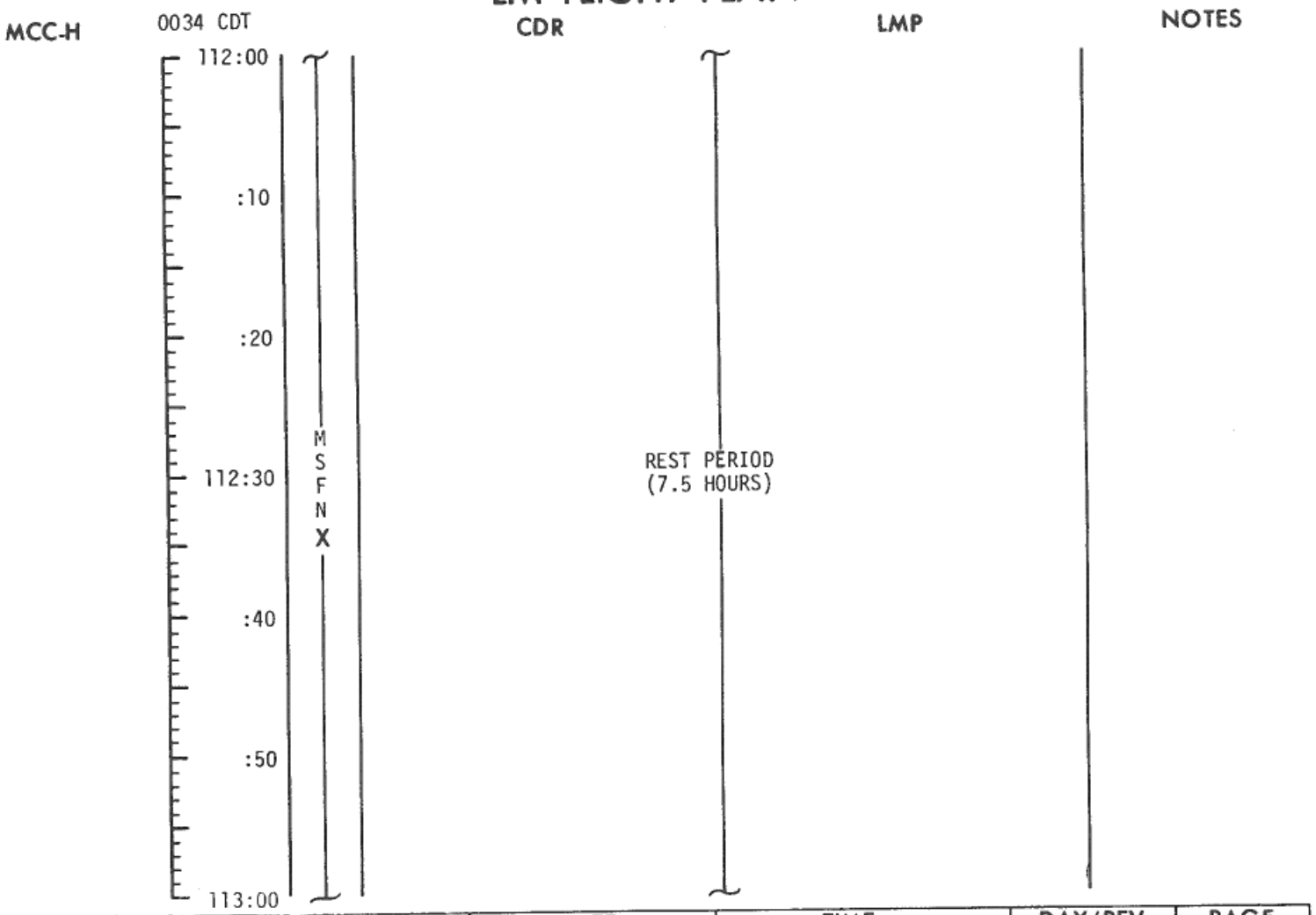
CSM FLIGHT PLAN

2334 Cc.



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-143

LM FLIGHT PLAN

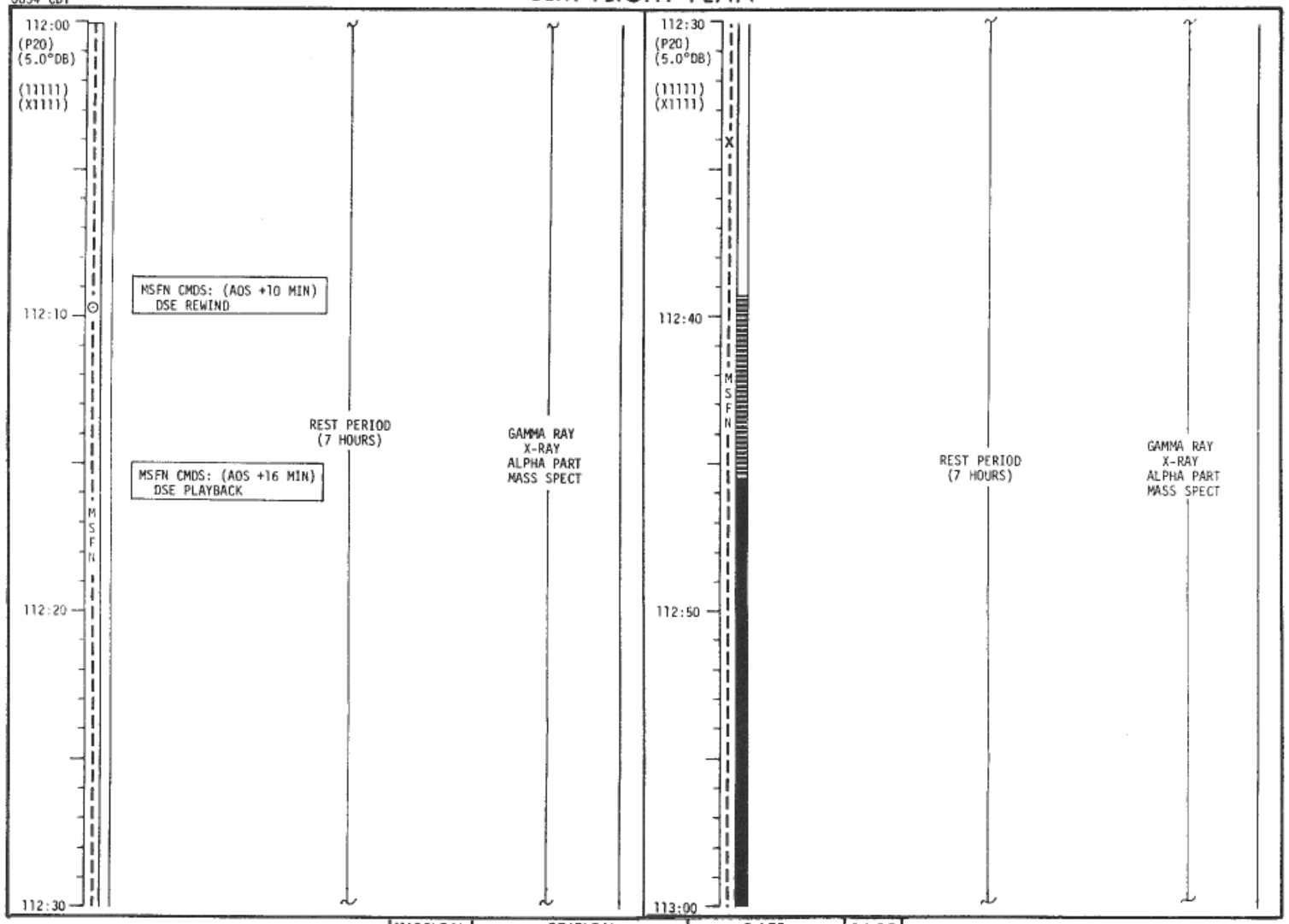


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	112:00 - 113:00	5/18	3-144

FLIGHT PLA NG BRANCH

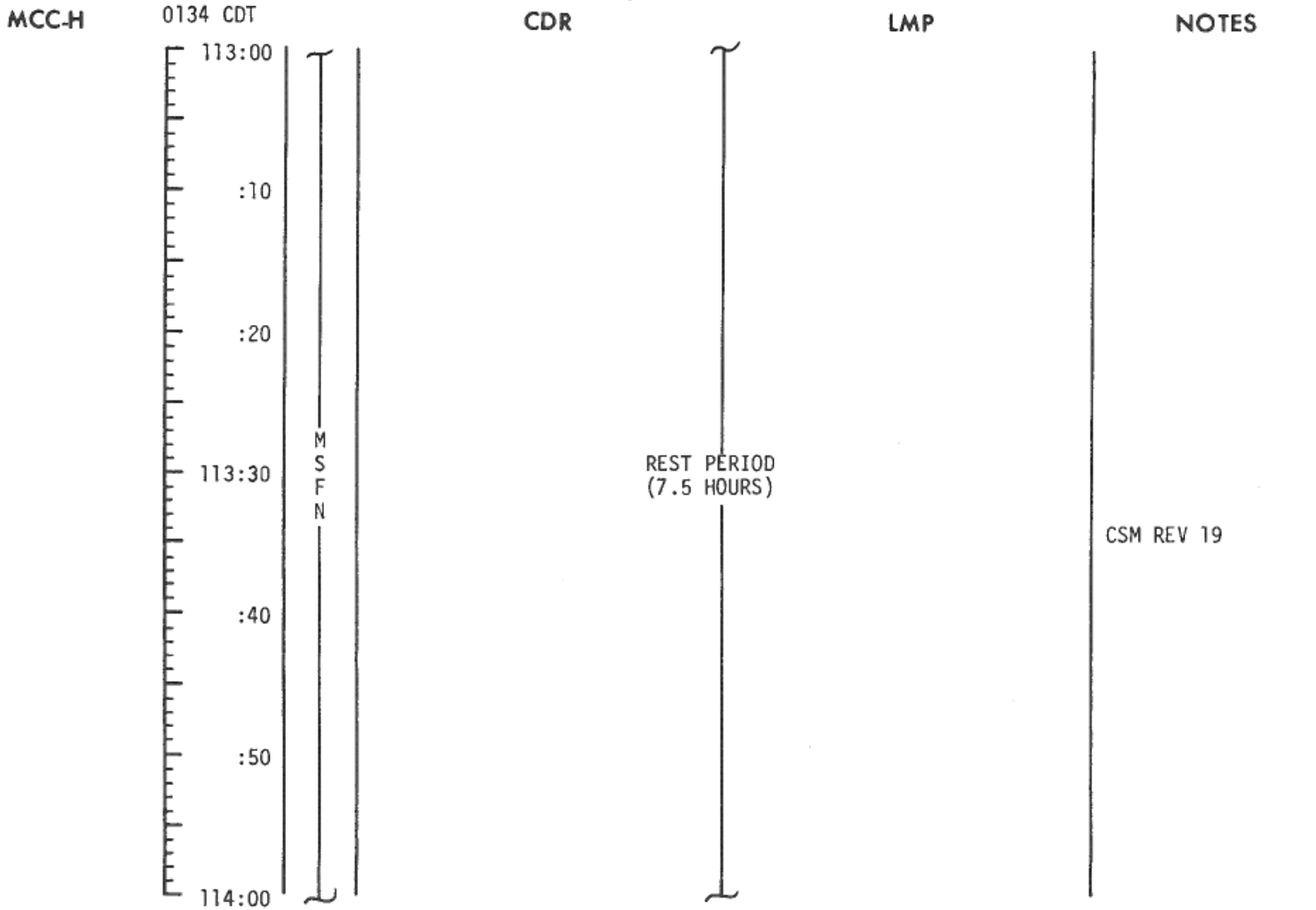
0034 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-145

LM FLIGHT PLAN

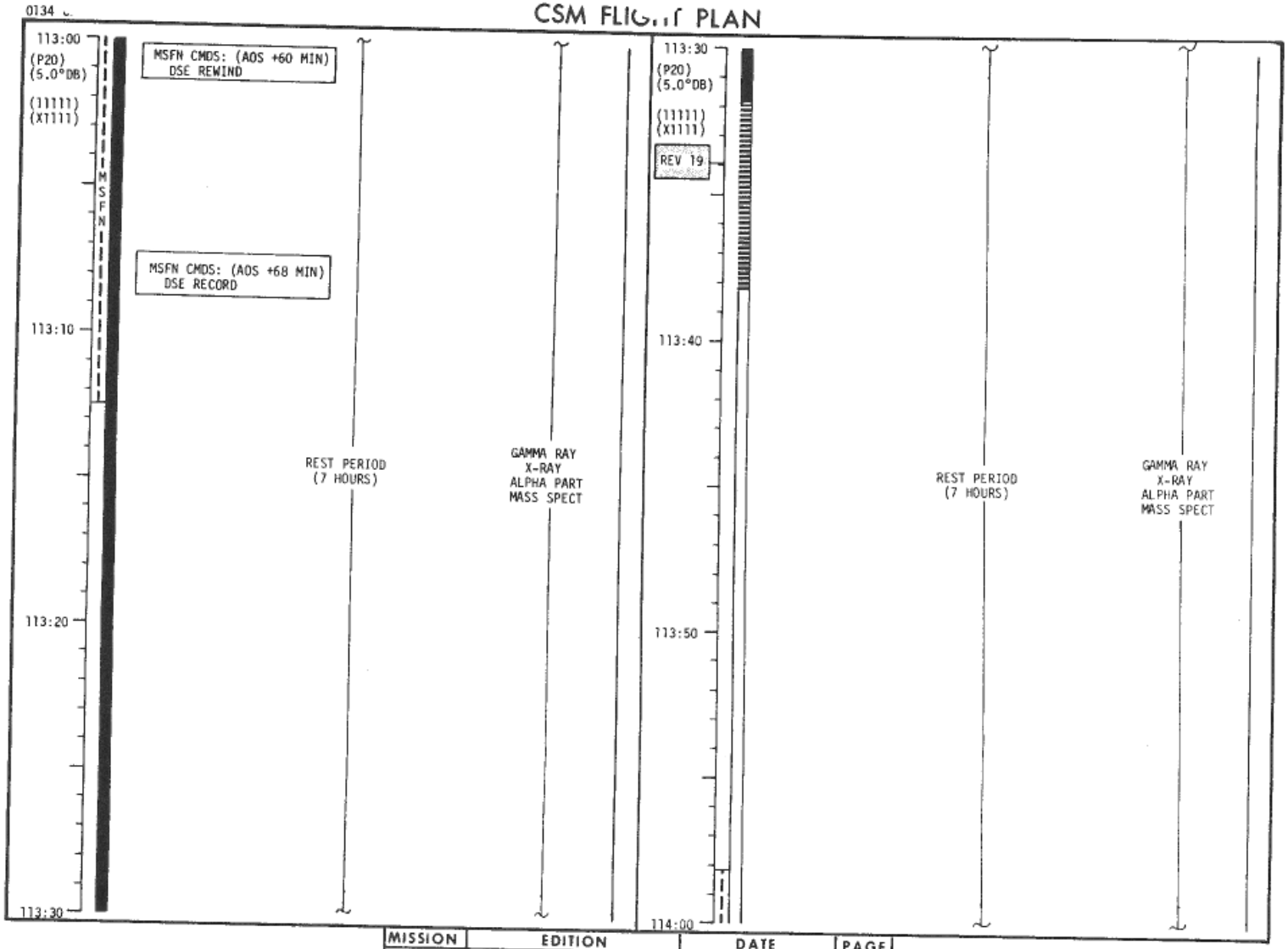


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	113:00 - 114:00	5/18-19	3-146

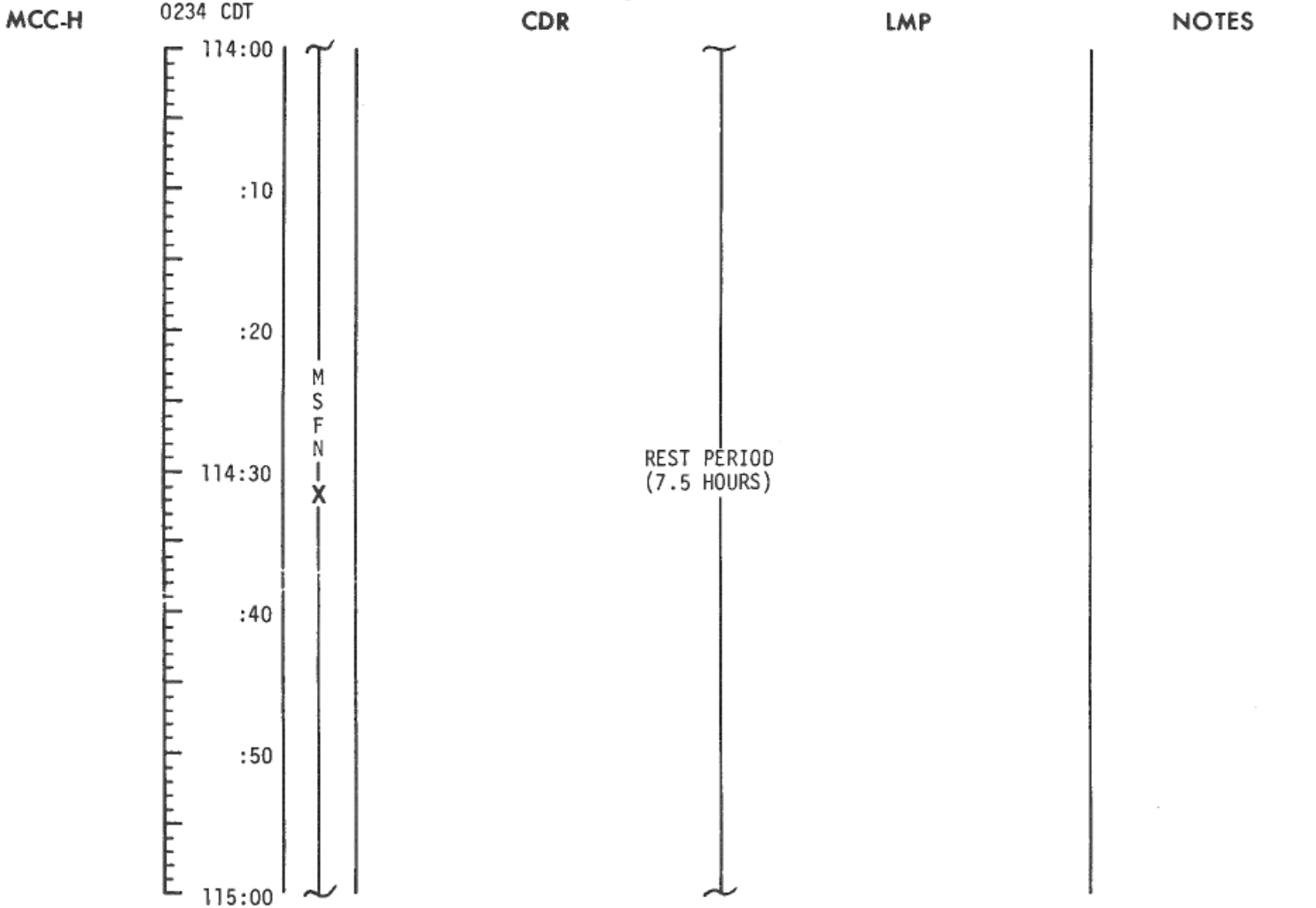
FLIGHT PLANNING BRANCH

0134

CSM FLIGHT PLAN



LM FLIGHT PLAN

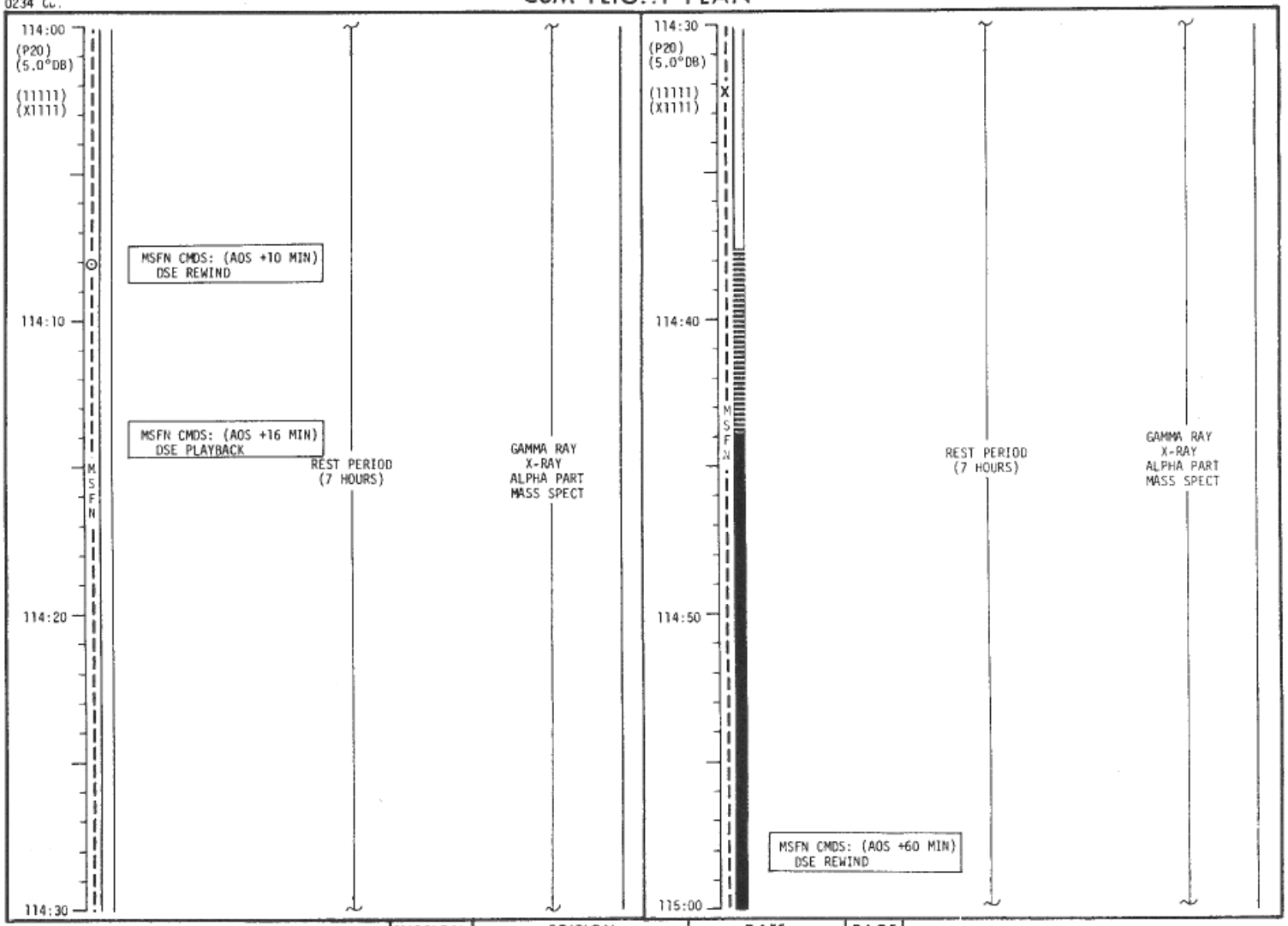


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	114:00 - 115:00	5/19	3-148

FLIGHT PLANNING BRANCH

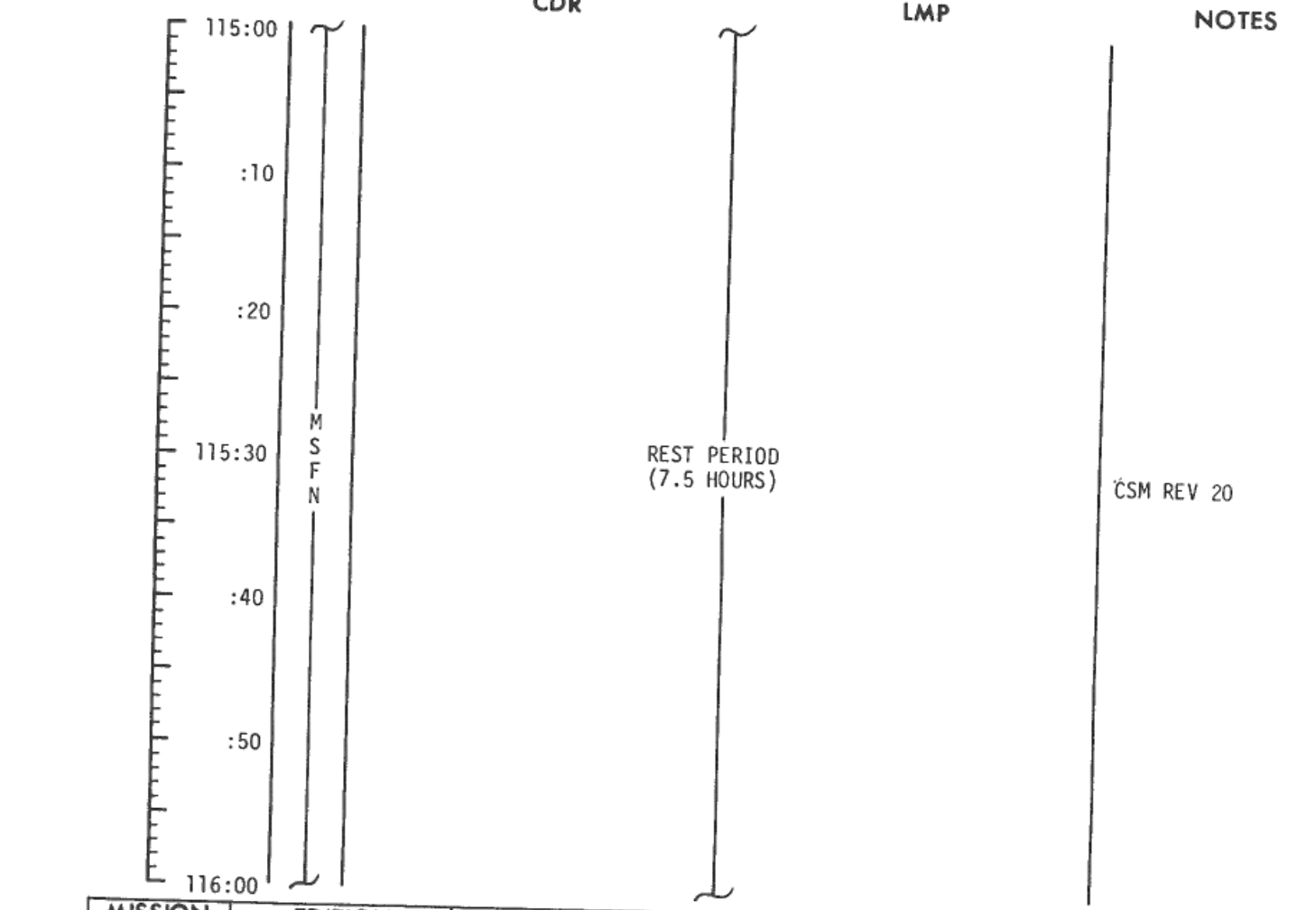
0234 Cc.

CSM FLIG... PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-149

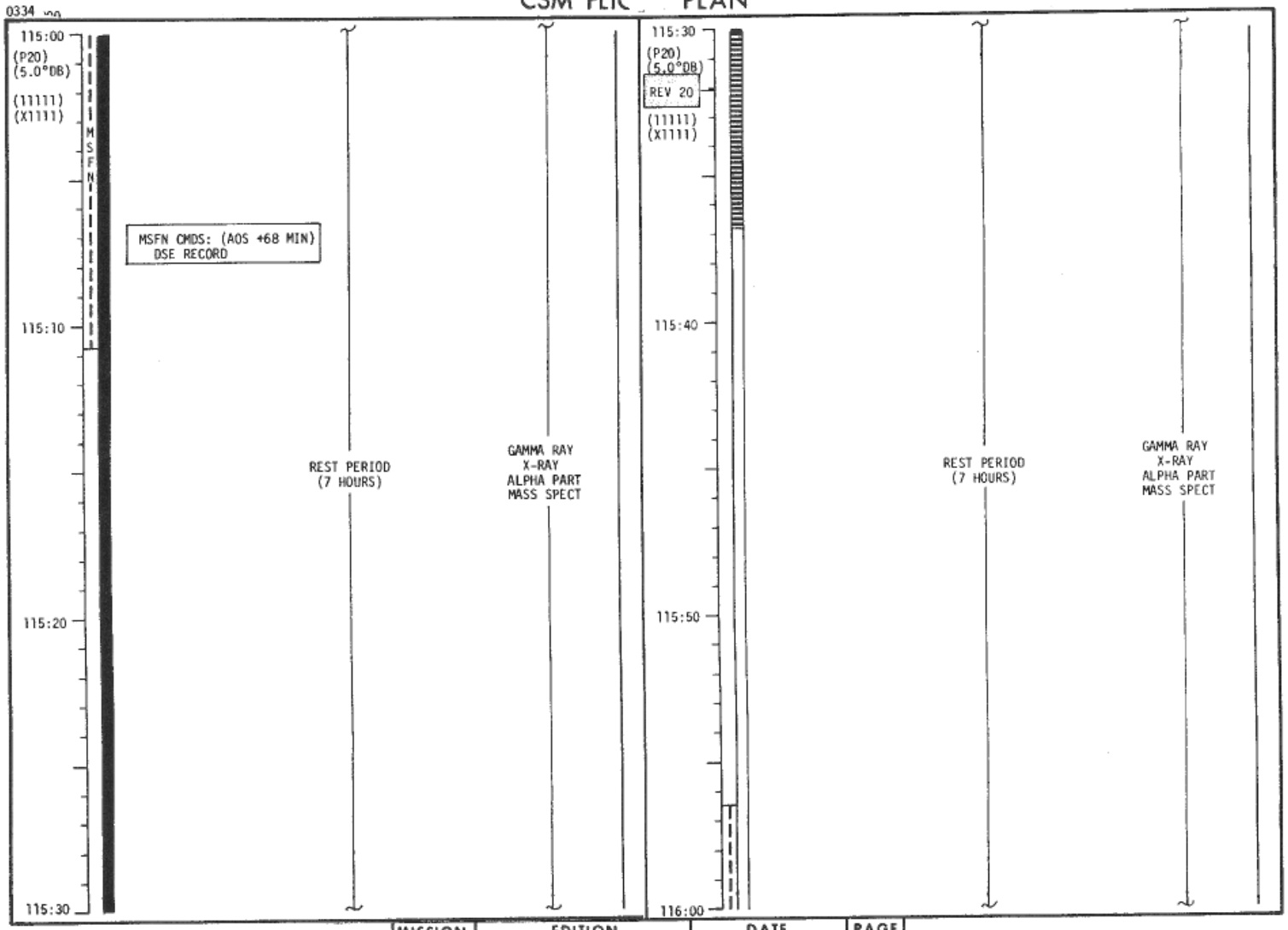
LM FLIGHT PLAN



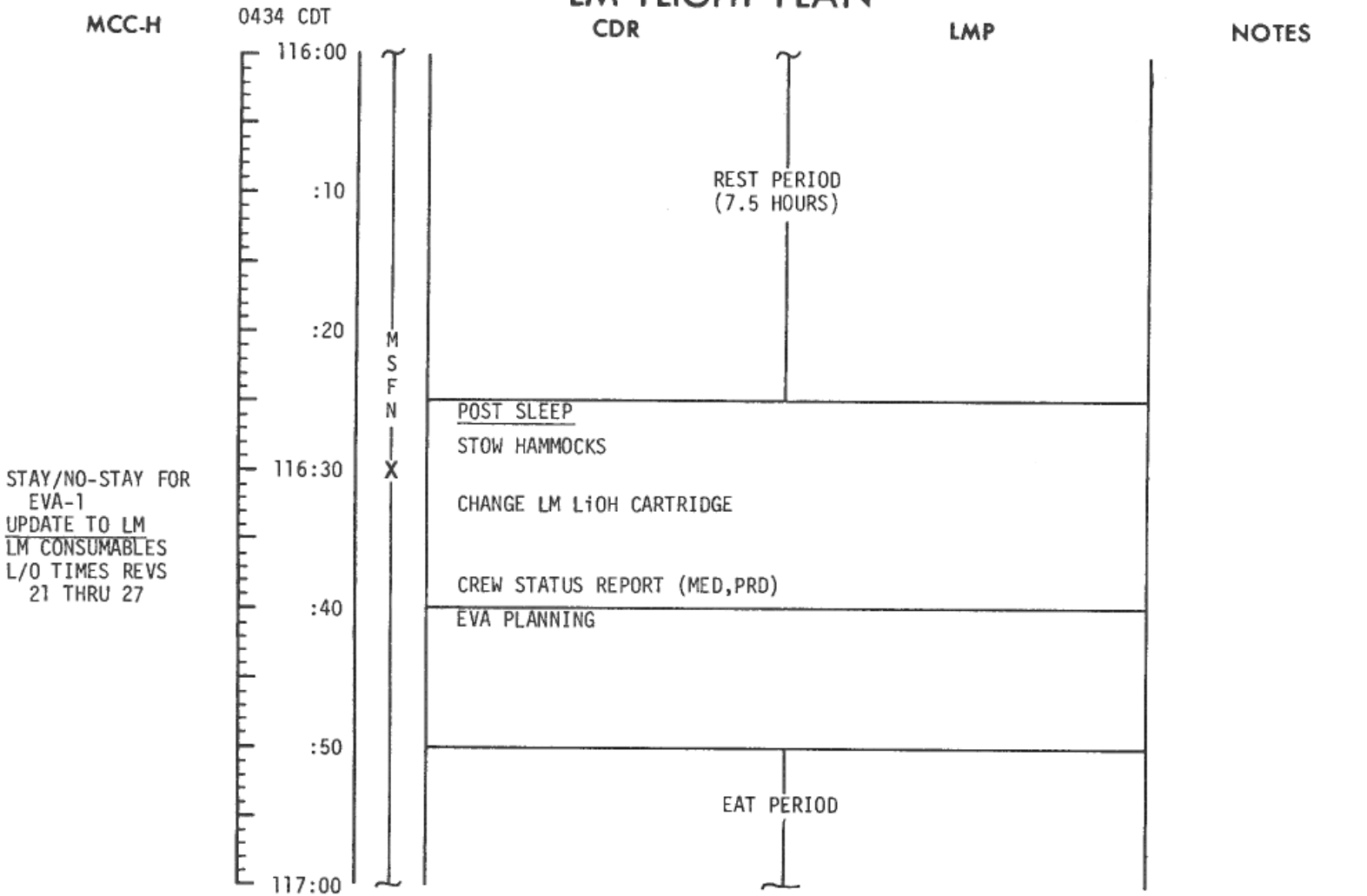
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	115:00 - 116:00	5/19-20	3-150

FLIGHT PLA NG BRANCH

CSM FLI[illegible] PLAN


115:00
(P20)
(5.0°DB)
(11111)
(X1111)
MSFN INITIATE
MSFN CMDS: (AOS +68 MIN)
DSE RECORD
115:10
115:20
115:30
REST PERIOD
(7 HOURS)
GAMMA RAY
X-RAY
ALPHA PART
MASS SPECT
115:30
(P20)
(5.0°DB)
REV 20
(11111)
(X1111)
115:40
115:50
116:00
REST PERIOD
(7 HOURS)
GAMMA RAY
X-RAY
ALPHA PART
MASS SPECT

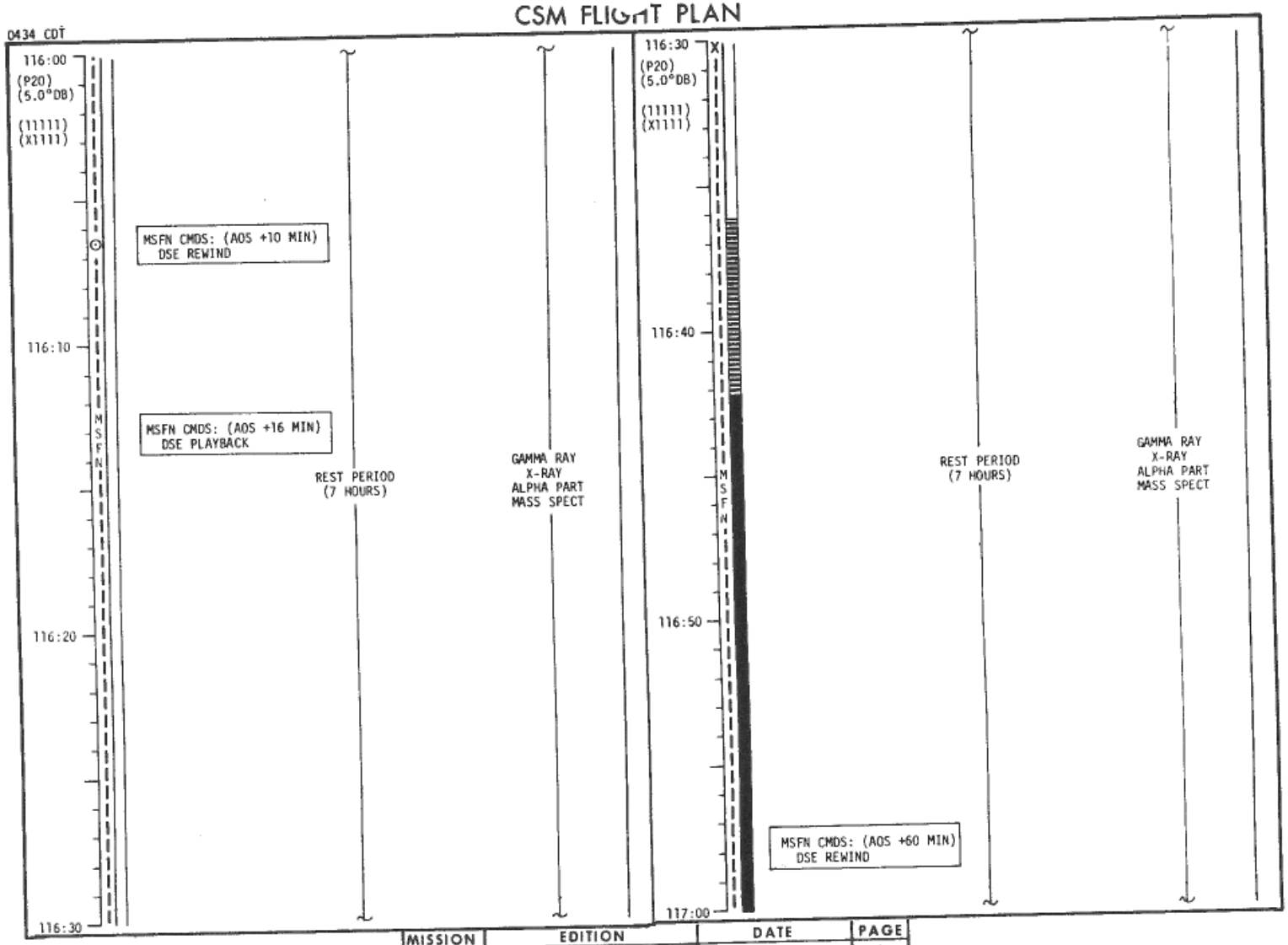
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	116:00 - 117:00	6/20	3-152

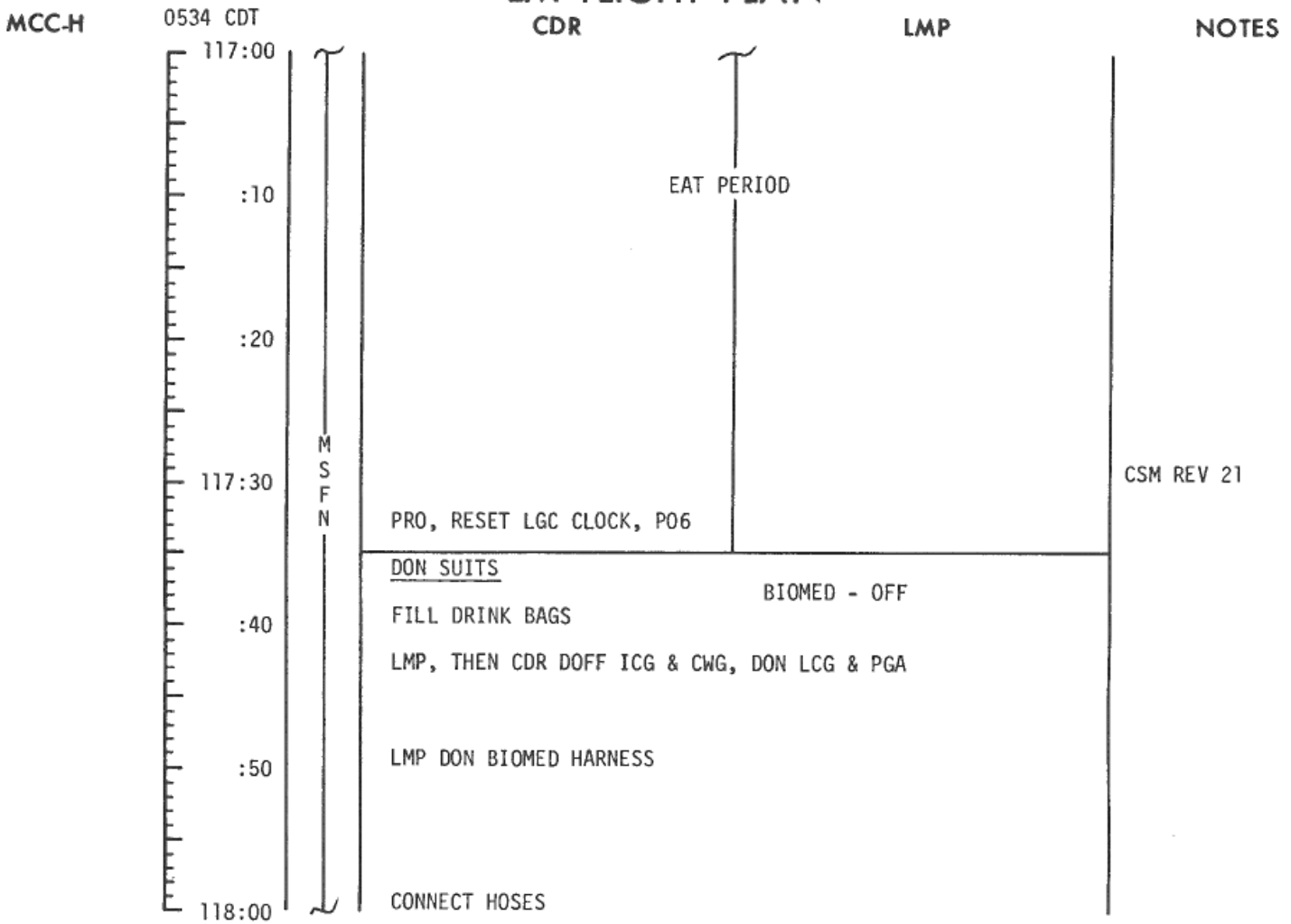
FLIGHT NNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-153

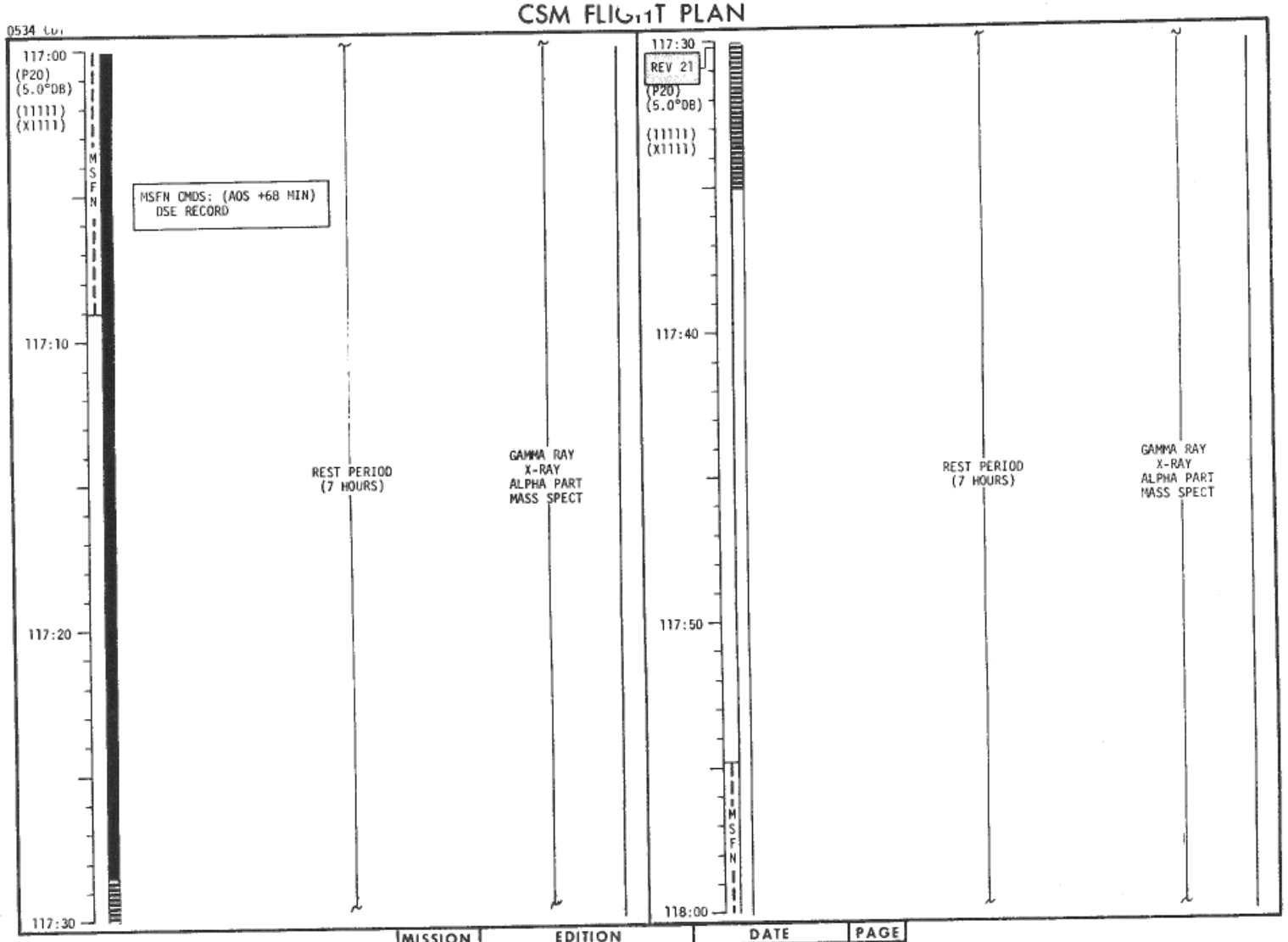
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	117:00 - 118:00	6/20-21	3-154

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-155

LM FLIGHT PLAN

MCC-H

0634 CDT

	CDR	LMP	NOTES
118:00	VERIFY COMM	BIOMED - RIGHT	
:10	CABIN PREP FOR EVA-1 STOW ALL LOOSE ITEMS NOT REQUIRED FOR EVA UNSTOW EVA-1 PREP & POST CARD STOW LUNAR SURFACE CHECKLIST	BATS 3,4 AND LUNAR (LMP)-ON BATS 1,2 AND LUNAR (CDR)- OFF/RESET CHECK BUS VOLTS	
:20	EQUIPMENT PREP FOR EVA-1 CDR, THEN LMP DON BOOTS CHECK & RESTOW OPS		-1:30
118:30	CHECK & RESTOW RCU'S, HELMETS, GLOVES STOW PALLETS IN JETT BAG, TIE & STOW BAG UNLOCK FWD HATCH HANDLE		-1:20
:40			-1:10
:50	PLSS DONNING CONFIGURE LMP PLSS ATTACH PLSS TO OPS LMP DON PLSS/OPS CONNECT RCU TO PGA & PLSS		-1:00
119:00			- :50

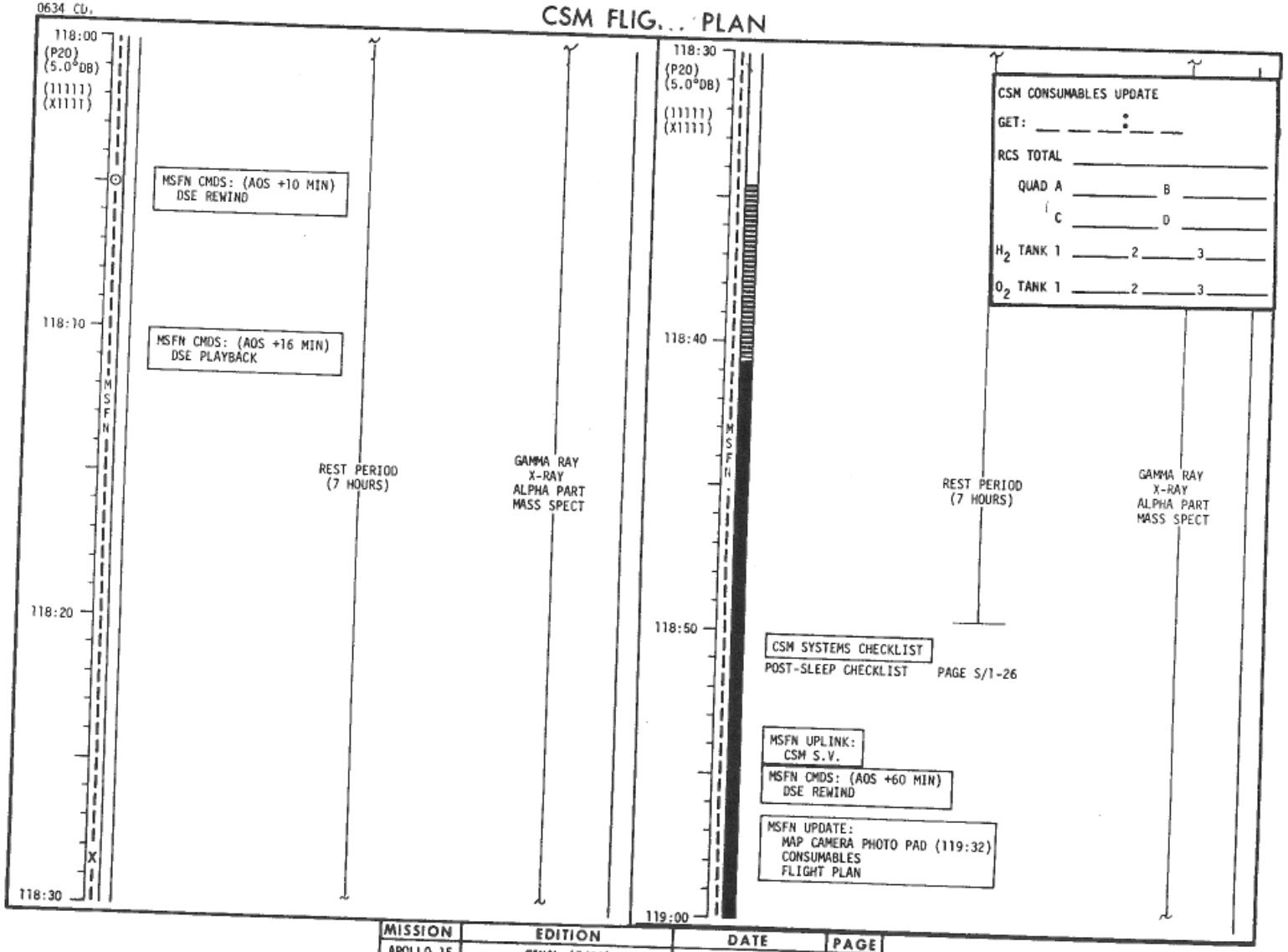
M S F N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	118:00 - 119:00	6/21	3-156

FLIGHT PLANNING BRANCH

0634 CD.

CSM FLIG... PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-157

LM FLIGHT PLAN

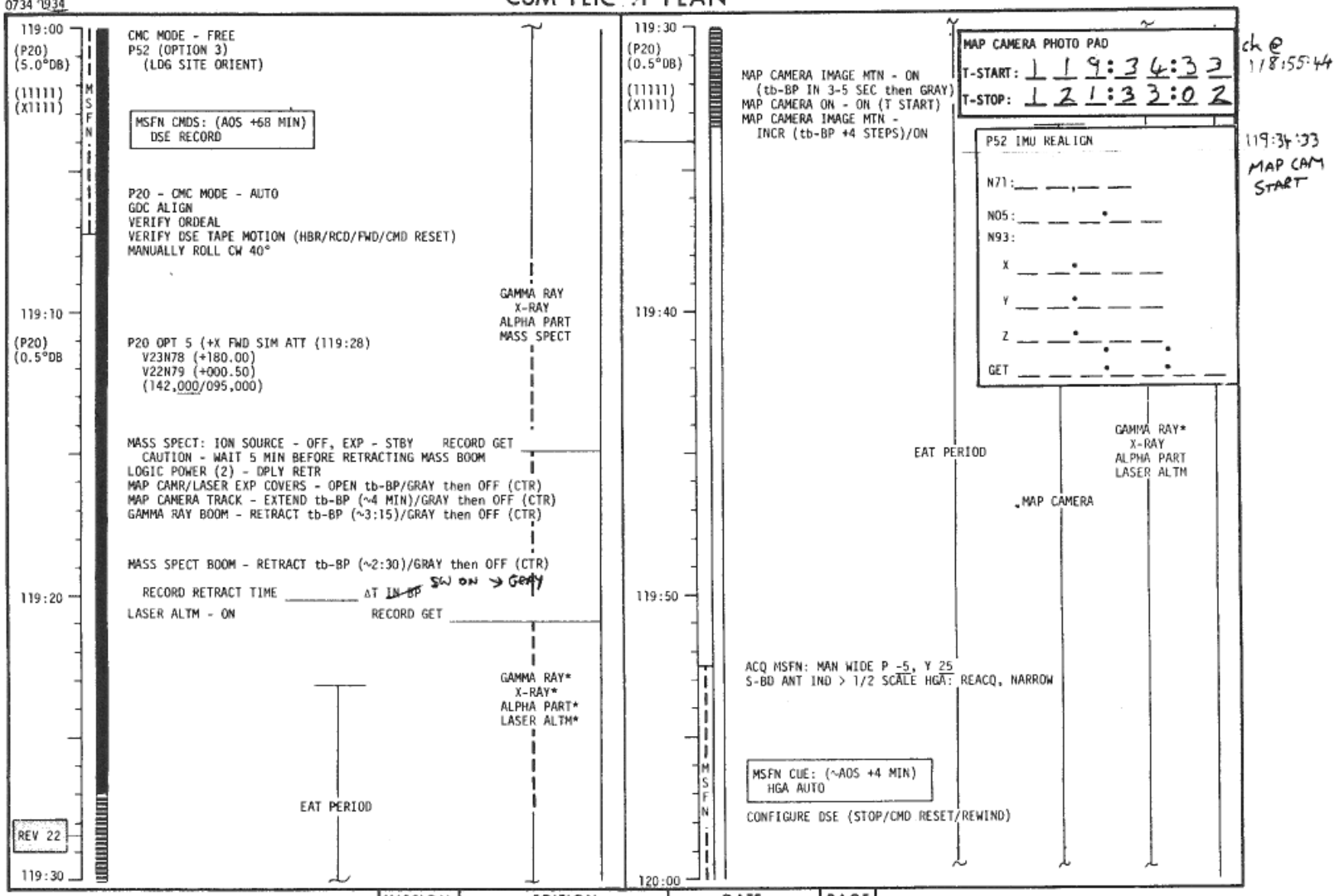
MCC-H	0734 CDT		CDR	LMP	NOTES
	119:00		CDR REPEAT PLSS DONNING		-:50
	:10		PLSS COMM CHECK VERIFY POWERDOWN CB CONFIGURATION CONFIGURE COMM FOR EVA, BIOMED - OFF COMM & TM CHECK, REPORT PLSS O_2 QUANTITIES TO MCC-H FINAL SYSTEMS PREP	RECORDER - ON	-:40
	:20		OPS CONNECT LMP CONNECT OPS HOSES TO PGA CDR REPEAT OPS CONNECT		-:30 CSM REV 22
	119:30	MSFN	HELMET/GLOVE DONNING PLSS FANS - ON DON HELMETS & LEVA'S VERIFY PGA CONFIGURATION, VERIFY CB CONFIGURATION DON GLOVES		-:20
	:40		PRESSURE INTEGRITY CHECK		-:10
GO/NO-GO FOR CABIN DEPRESS	:50		CABIN DEPRESS START WRIST WATCHES AT 3.5 PSIA PARTIALLY OPEN FWD HATCH		0:00 START EVA-1
	120:00		FINAL PREP FOR EGRESS OPEN FWD HATCH REST UNTIL COOLING SUFFICIENT RECORDER - OFF		+:10

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	119:00 - 120:00	6/21-22	3-158

FLIGHT P NNING BRANCH

0734 0934

CSM FLIGHT PLAN

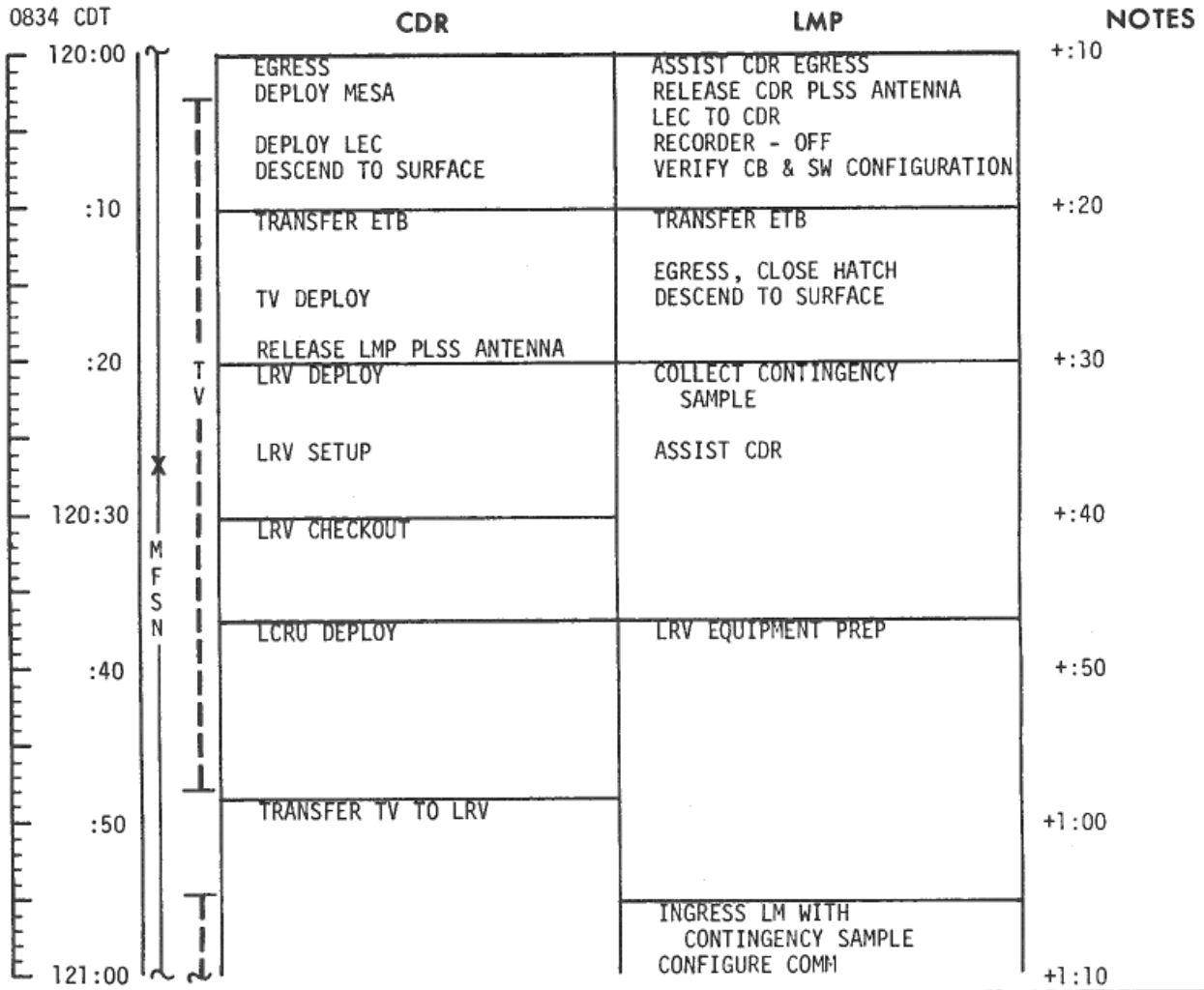


FROM 118:56:27

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-159

LM FLIGHT PLAN

MCC-H

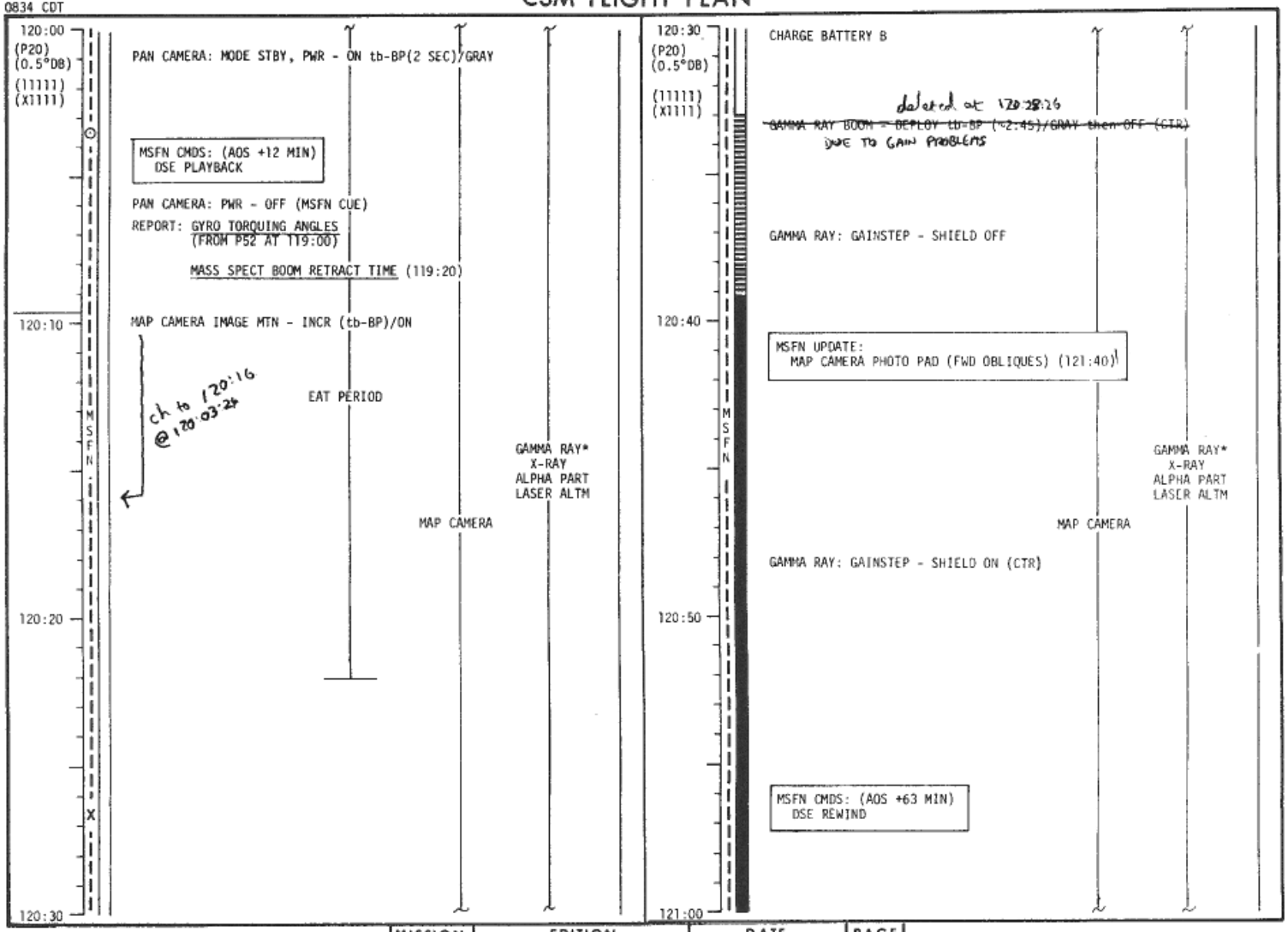


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	120:00 - 121:00	6/22	3-160

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

0834 CDT

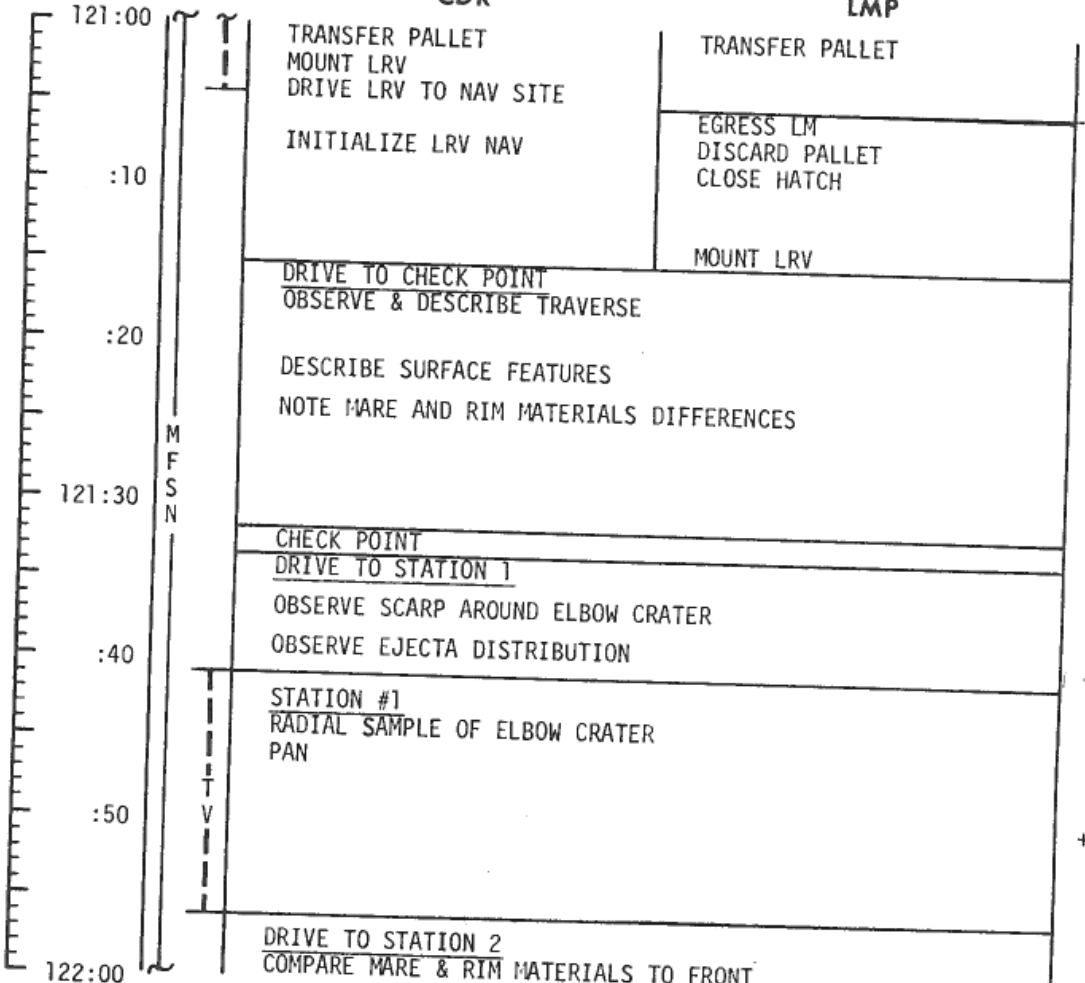


MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-16!

LM FLIGHT PLAN

MCC-H

0934 CDT



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	121:00 - 122:00	6/22-23	3-162

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

0934 Lv.

121:00
(P20)
(0.5°DB)
(11111)
(X1111)
MSFN
121:10
121:20
REV 23
121:30

CONFIGURE DSE (HBR/RCD/FWD/CMD RESET)(AOS +71 MIN)

MAP CAMERA

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

~~GAMMA RAY BOOM - RETRACT tb-BP (~3:15)/GRAY then OFF (CTR)~~
DELETED AT 120:31:09
DUE TO GAIN PROBLEMS

121:30
(P20)
(0.5°DB)
(11111)
(X1111)
(P20)
(0.5°DB)
T-START
121:40
121:50
MSFN
122:00

MAP CAMERA ON - OFF (T STOP)
MAP CAMERA ON - STBY (T STOP +1 MIN)
MAP CAMERA IMAGE MTN - OFF (tb-BP IN ~~3-5 SEC then GRAY~~)

121:33:02
MAP CAM STOP

P20 OPT 5 (25° FORWARD OBLIQUE PHOTO ATT)(121:38)
V24N78 (+126.30)
(+045.77)
(~~000~~,025/085,000) 142 (NEW VALUE FOR REL GIVEN AT 120:32:20)

MAP CAMERA IMAGE MTN - ON (tb-BP IN 3-5 SEC then GRAY)
MAP CAMERA ON - ON (T START)
MAP CAMERA IMAGE MTN - INCR (tb-BP +3 STEPS)/ON

MAP CAMERA PHOTO PAD
T-START: 121:39:34
T-STOP: 122:32:43

GAMMA RAY*
X-RAY*
ALPHA PART*
LASER ALTM*

MAP CAMERA
(FORWARD OBLIQUES)

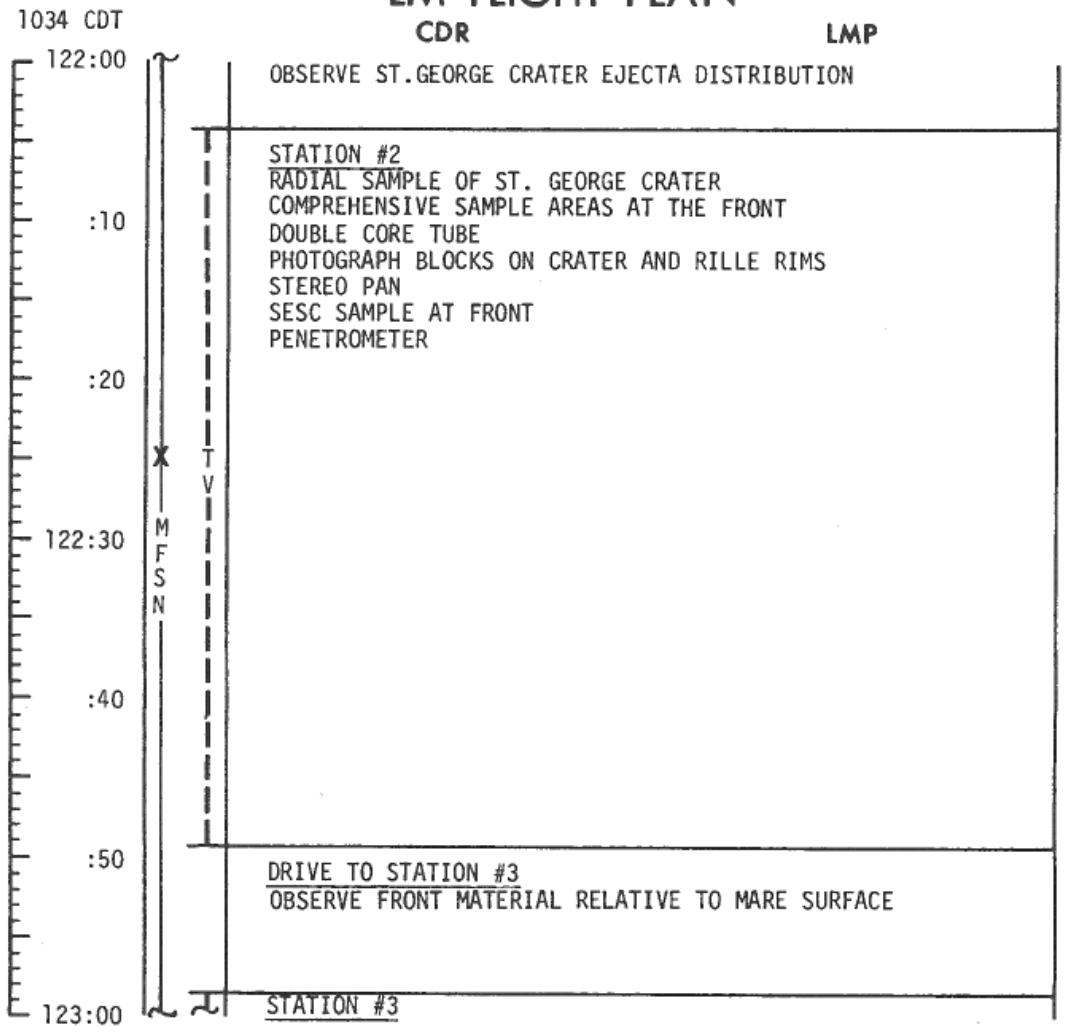
ACQ MSFN OMNI D

ACQ MSFN HGA: MAN, WIDE P -5, Y 25
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW (~AOS +8 MIN)

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-163

LM FLIGHT PLAN

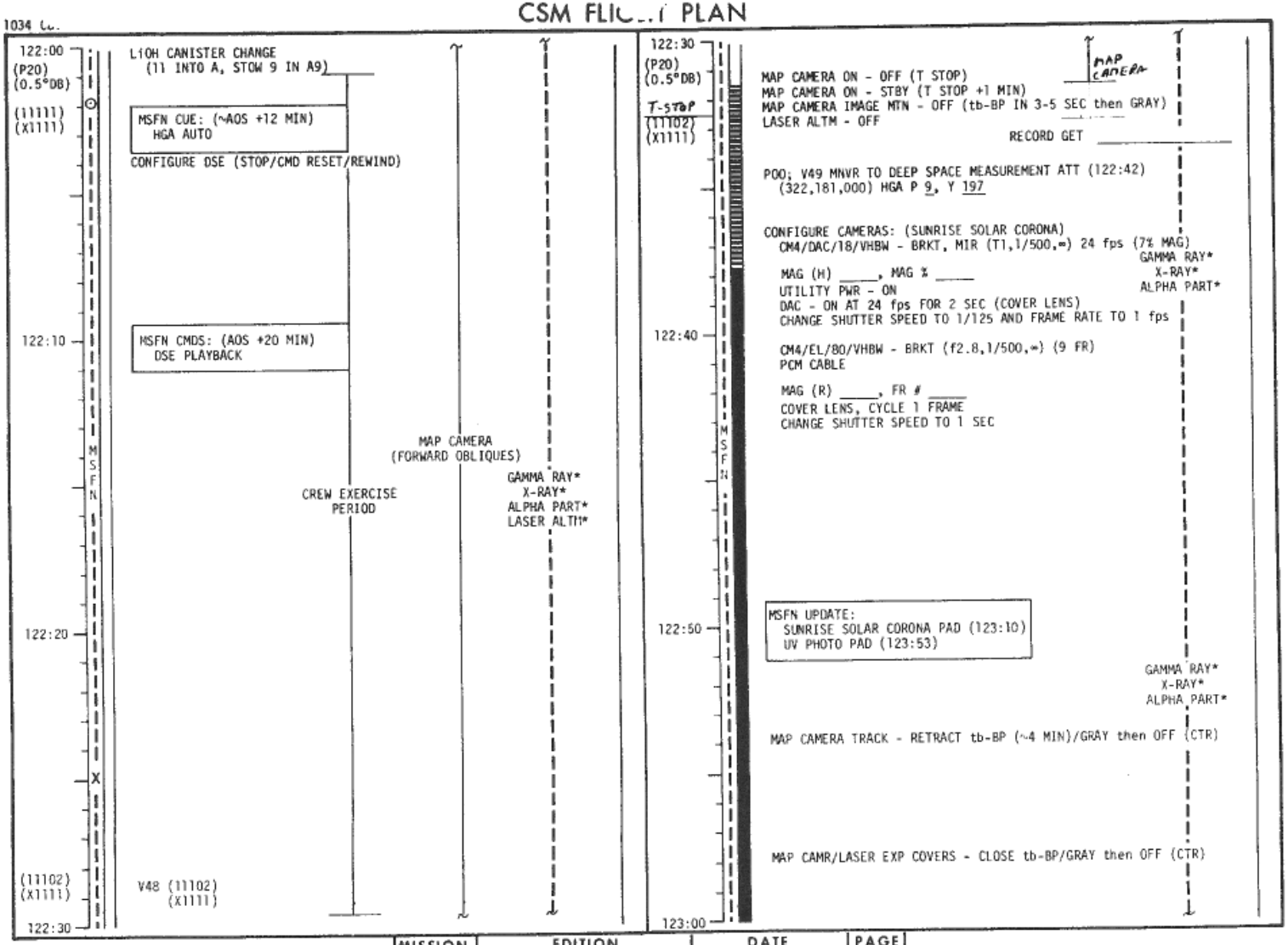
MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	122:00 - 123:00	6/23	3-164

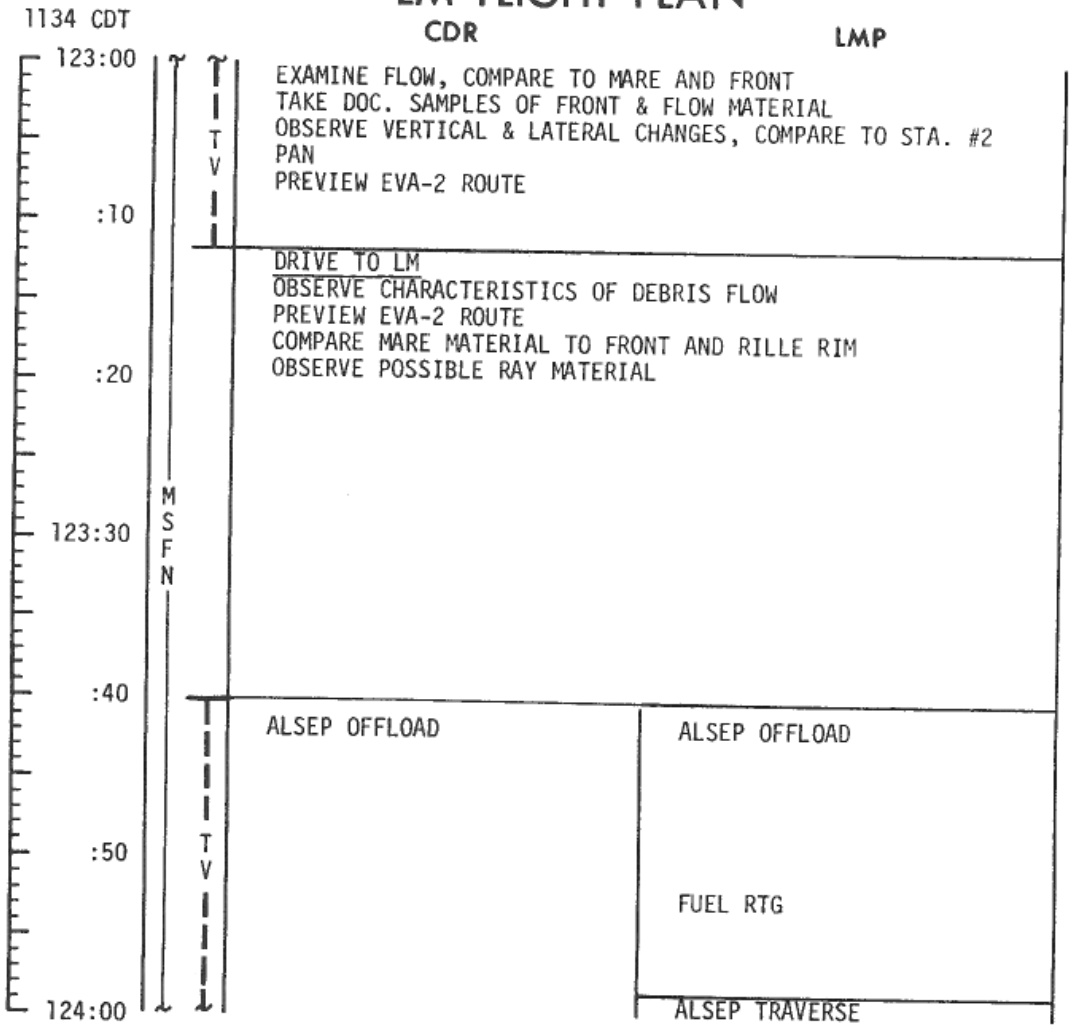
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



LM FLIGHT PLAN

MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	123:00 - 124:00	6/23-24	3-166

FLIGHT PLA[illegible]NG BRANCH

CSM FLIGHT PLAN

1134 GMT

123:00 (11102) (X1111)

MSFN

ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

MSFN CMDS: (AOS +71 MIN)
DSE REWIND

(P20) (5.0°DB)

P20 OPT 5 (SR SOLAR CORONA ATT)(123:12)
N78 (+000.00)
(-082.00)
(+000.00)
N79 (+005.00)
N70 (00050)
(000,352,/127,000)

CONFIGURE DSE (LBR/RCD/FWD/CMD RESET) (AOS +79 MIN)

123:10

SOLAR CORONA PHOTO PAD (SR)
T-START: 1 2 3 : 1 6 : 5 0
START MISSION TIMER AT SUNRISE -8 MIN

SR SOLAR CORONA

INHIBIT ALL JETS EXCEPT - A1&C2 OR D1&B2,A4,C3,B4,D3

0:00 - MISSION TIMER: RESET/START (T START)(SR -8 MIN)
PCM BIT RATE - HIGH
DIM INTERIOR LIGHTS

123:16:50

GAMMA RAY*
ALPHA PART*
X-RAY*

5:00 - DAC - ON
6:40 - CHANGE DAC SHUTTER TO 1/500
6:50 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/4
7:00 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/8
7:10 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/15
7:20 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/30
7:30 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/60
7:40 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/125
7:50 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/500
8:00 - DAC OFF

123:20

REV 24

REMOVE EL FROM WINDOW, COVER LENS AND CYCLE 1 FRAME
REMOVE DAC FROM WINDOW, COVER LENS, AND RUN AT 24 fps
AND SHUTTER SPEED 1/500 FOR 2 SEC
LIGHTS UP
RECORD MAG & _____, FR # _____
PCM BIT RATE - LOW

123:30

123:30 (11102) (X1111)

CMC MODE - FREE
P00; V49 MNVR TO UV PHOTO ATT (123:38)
(142,057,000) OMNI D
CMC MODE - AUTO
RESET MISSION TIMER

CONFIGURE CAMERA: (UV PHOTOS OF LUNAR HORIZON/EARTH)
CM5/EL/105/UV - BRKT, CONT (f4.3,1/500,∞)(16 FR)
RINGSLIDE

MAG (N) _____, FR # _____
REMOVE R12 FLIGHT DATA FILE STOWAGE BOX

UV PHOTOS OF LUNAR HORIZON/EARTH

DAMP RATES
VERIFY FDAI SCALE 5/1
WAIT 5 MINUTES FOR RATES TO DAMP

123:40

VERIFY RATES <0.2°/SEC (ALL AXES)

GAMMA RAY*
ALPHA PART*
X-RAY*

REMOVE CM5 WINDOW COVER AND MOUNT UV CARDBOARD SHADE AND CAMERA

2 FRAMES, FILTER 1, CHANGE SHUTTER TO B (T START)
1 FRAMES, FILTER 2, EXP TIME 20 SEC and 1@2sec exp
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4, CHANGE SHUTTER TO 1/60

ch @ 11:40,03

123:50

UV PHOTO PAD
T-START: 1 2 3 : 4 9 : 4 9

2 FRAMES, FILTER 1, CHANGE SHUTTER TO B (T START +7 MIN)
1 FRAMES, FILTER 2, EXP TIME 20 SEC 56:49
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4

and 1@2sec exp.

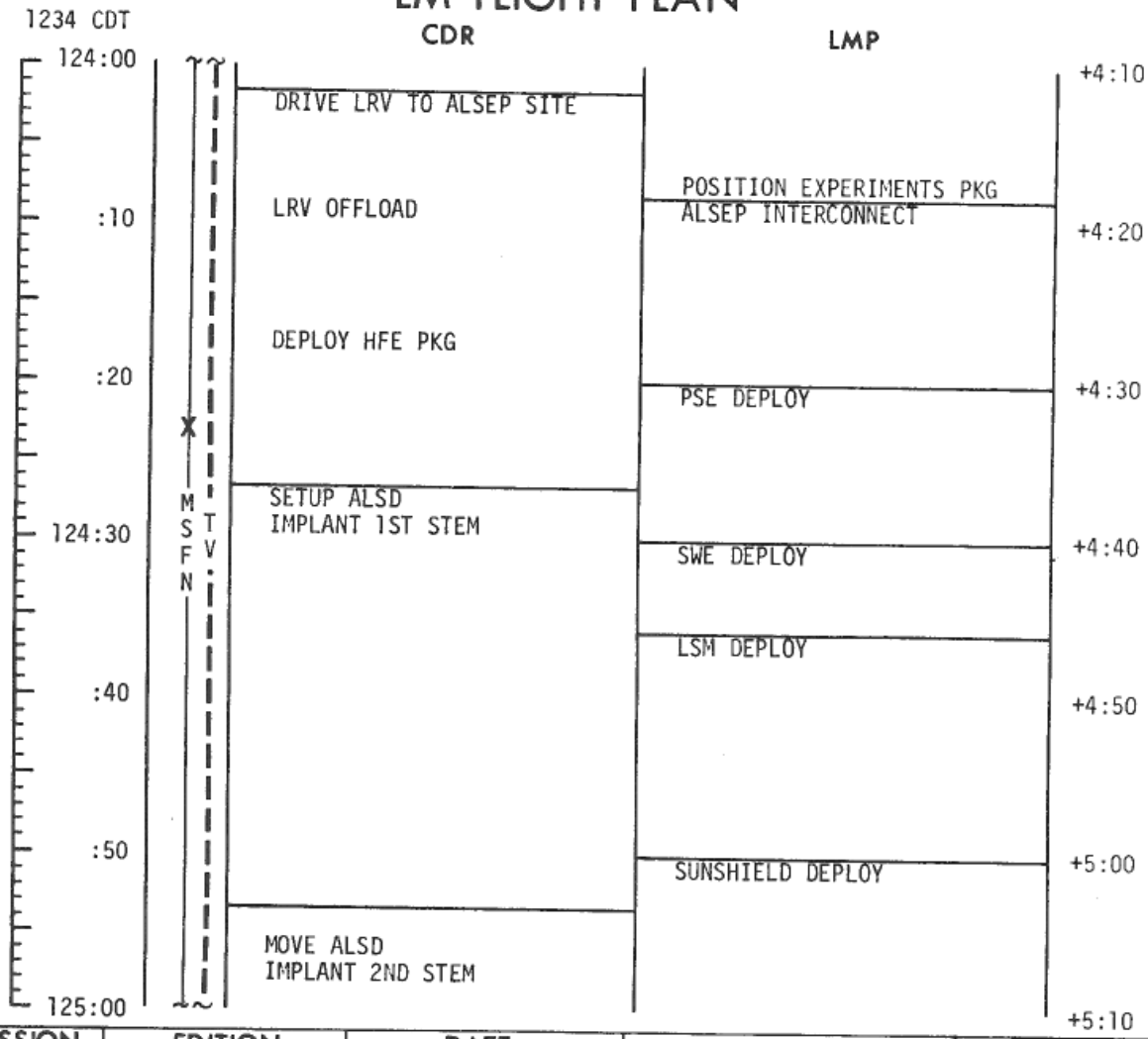
RECORD FR # _____

124:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-167

LM FLIGHT PLAN

MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	124:00 - 125:00	6/24	3-168

FLIGHT PLA 'NG BRANCH

CSM FLIGHT PLAN

1234 CDT

124:00
(11102)
(X1111)

CONFIGURE CAMERA (UV COLOR PHOTOS OF EARTH)
CM5/EL/105/CEX-BRKT, CONT (f8,1/250,∞) (1 FR)
RINGSLIDE

MAG (M) _____, FR # _____
1 FRAME, FILTER 4
REMOVE CAMERA & UV CARDBOARD SHADE, NOTE COMMENTS AS TO CONDITION OF CM5, REPLACE WINDOW COVER

RECORD FR # _____

(P20)
(5.0°DB)

P20 OPT 5 (SS SOLAR CORONA ATT)(124:12)
N78 (+000.00)
(+090.00)
(+000.00)
N79 (+005.00)
N70 (00050)
(000,180/133,000) HGA P -45, Y 208

124:10

MSFN CMDS:
DSE DUMP

MSFN UPDATE:
SUNSET SOLAR CORONA PAD (124:35)

GAMMA RAY*
ALPHA PART*
X-RAY*

CONFIGURE CAMERAS: (SUNSET SOLAR CORONA)
CM4/DAC/18/VHBW - BRKT, MIR (T1,1/500,∞) 24 fps (7% MAG)

MAG (H) _____, MAG % _____

124:20

UTILITY PWR - ON
DAC - ON AT 24 fps FOR 2 SEC (COVER LENS)
CHANGE FRAME RATE TO 1 fps

CM4/EL/80/VHBW - BRKT (f2.8,1/500,∞)(9 FR)
PCM CABLE

MAG (R) _____, FR # _____
COVER LENS, CYCLE 1 FRAME
CHANGE SHUTTER TO 1/125

124:30

MSFN

124:30
(P20)
(5.0°DB)
(11102)
(X1111)

SUNSET SOLAR CORONA

0:00 - MISSION TIMER: RESET/START/(T START)(SS -5 MIN)

VERIFY PCM BIT RATE HIGH 124:32:22 T-start
DIM INTERIOR LIGHTS

SOLAR CORONA PHOTO PAD (SS)
T-START: 124:32:22
START MISSION TIMER AT SUNSET -5 MIN

5:00 - DAC - ON
5:10 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/60
5:20 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/30
5:30 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/15
5:40 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/8
5:50 - 1 FRAME EL, CHANGE EL SHUTTER TO 1/4
6:00 - 1 FRAME EL, CHANGE EL SHUTTER TO 1.0
6:10 - 1 FRAME EL
6:20 - CHANGE DAC SHUTTER TO 1/125
8:00 - DAC - OFF, CHANGE EL SHUTTER TO 1/500

124:40

REMOVE EL FROM WINDOW, COVER LENS, AND CYCLE 1 FRAME
REMOVE DAC FROM WINDOW, COVER LENS, AND RUN AT 24 fps, AND SHUTTER SPEED 1/500 FOR 2 SEC

LIGHTS - UP

RECORD MAG % _____, FR # _____

GAMMA RAY*
ALPHA PART*
X-RAY*

(11101)
(X1111)

V48 (11101)
(X1111)

RESET MISSION TIMER
CONFIGURE FOR URINE DUMP

124:50

CMC MODE - FREE
POO; V49 MNVR TO L4 PHOTO ATT (125:00)
(328,293,354) OMNI D
CMC MODE - AUTO

H_2 PURGE LINE HEATERS - ON

CONFIGURE CAMERA: (LUNAR LIBRATION)
INSTALL CAMERA SHIELD
CM4/NK/55/VHBW - BRKT, (f1.2,1/500,∞) (6 FR)

MAG ( ) _____, FR # _____

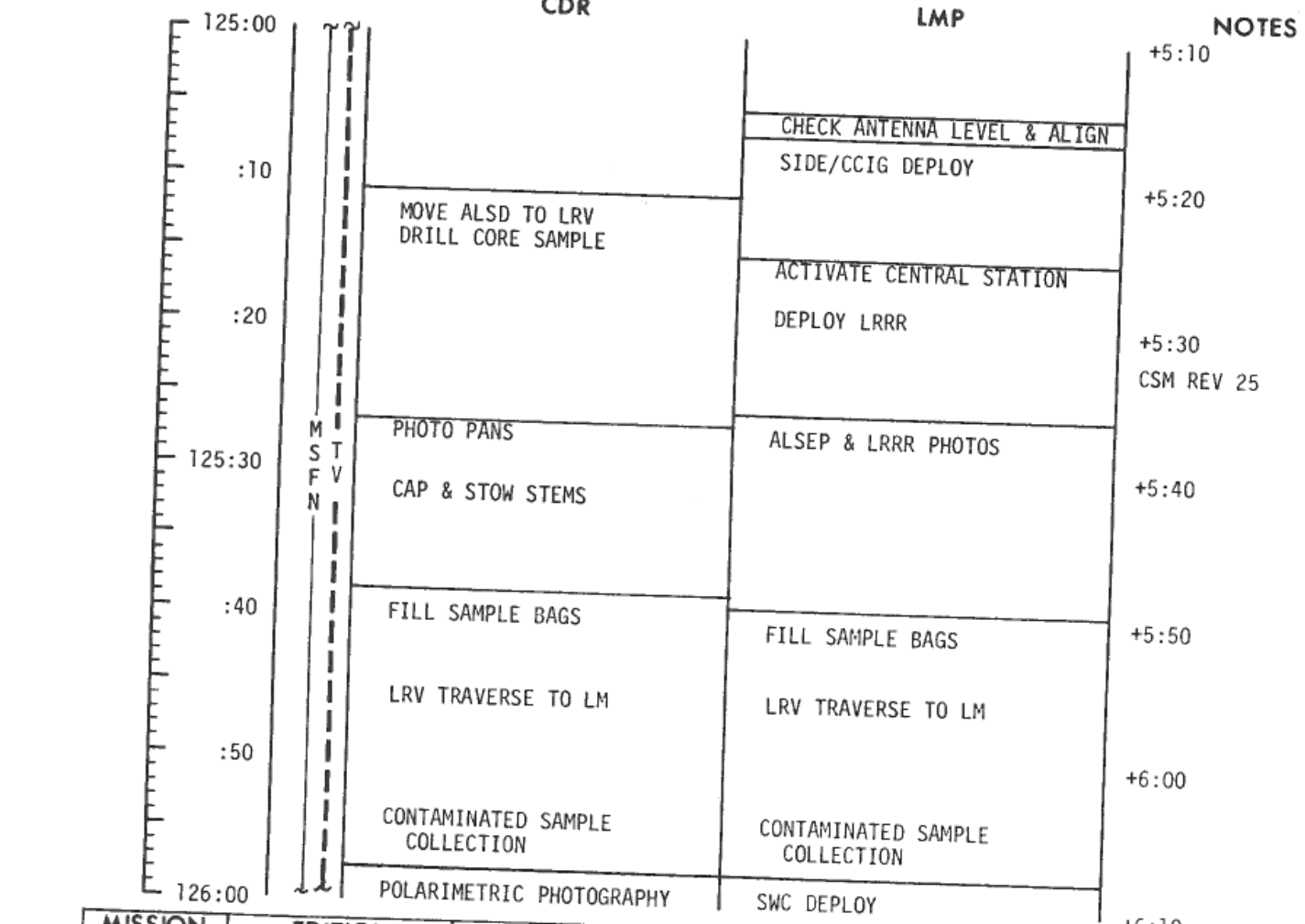
(11101)
(X1111)

125:00

X-RAY EXP - STBY

RECORD GET _____

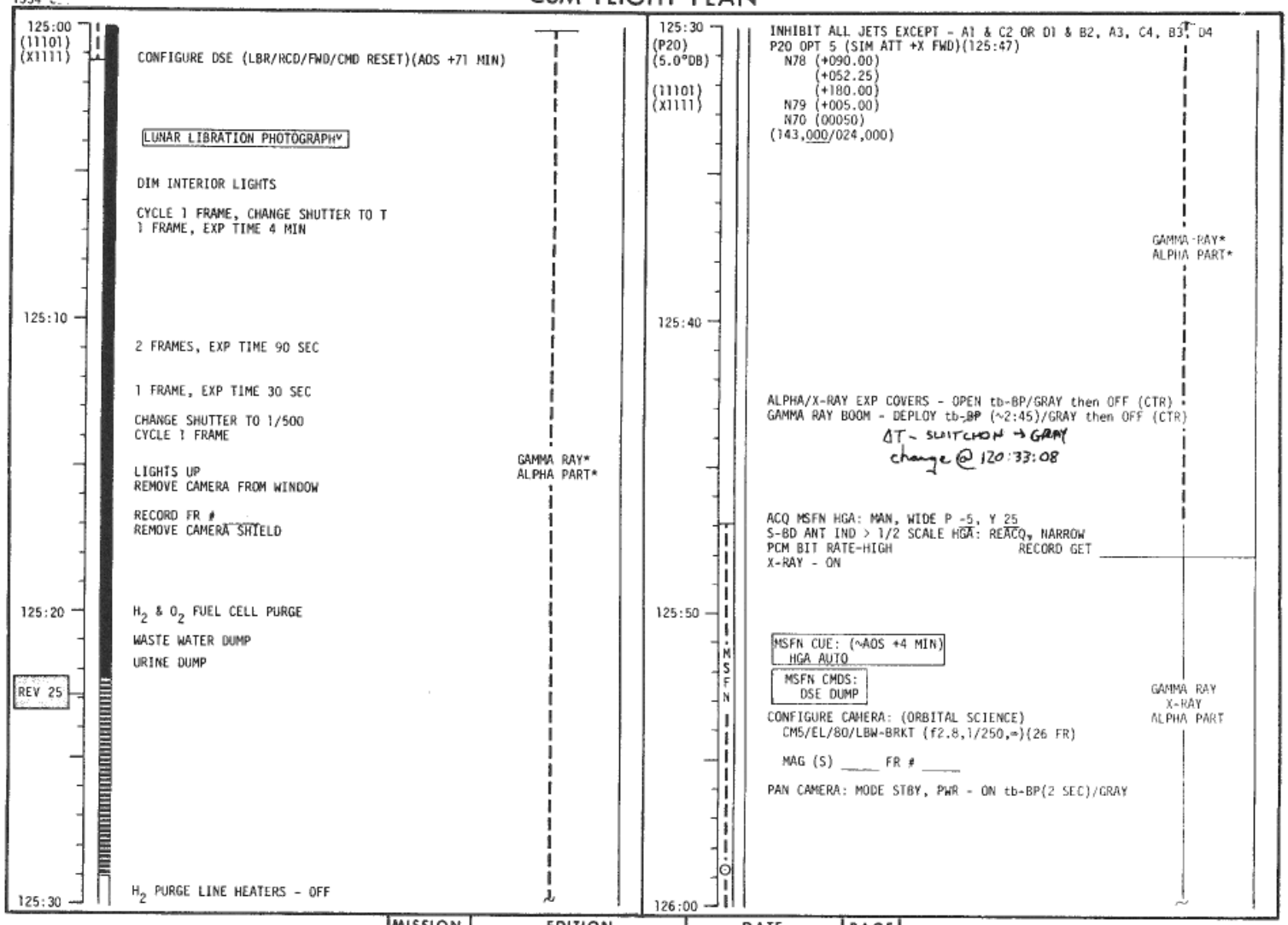
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	125:00 - 126:00	6/24-25	3-170

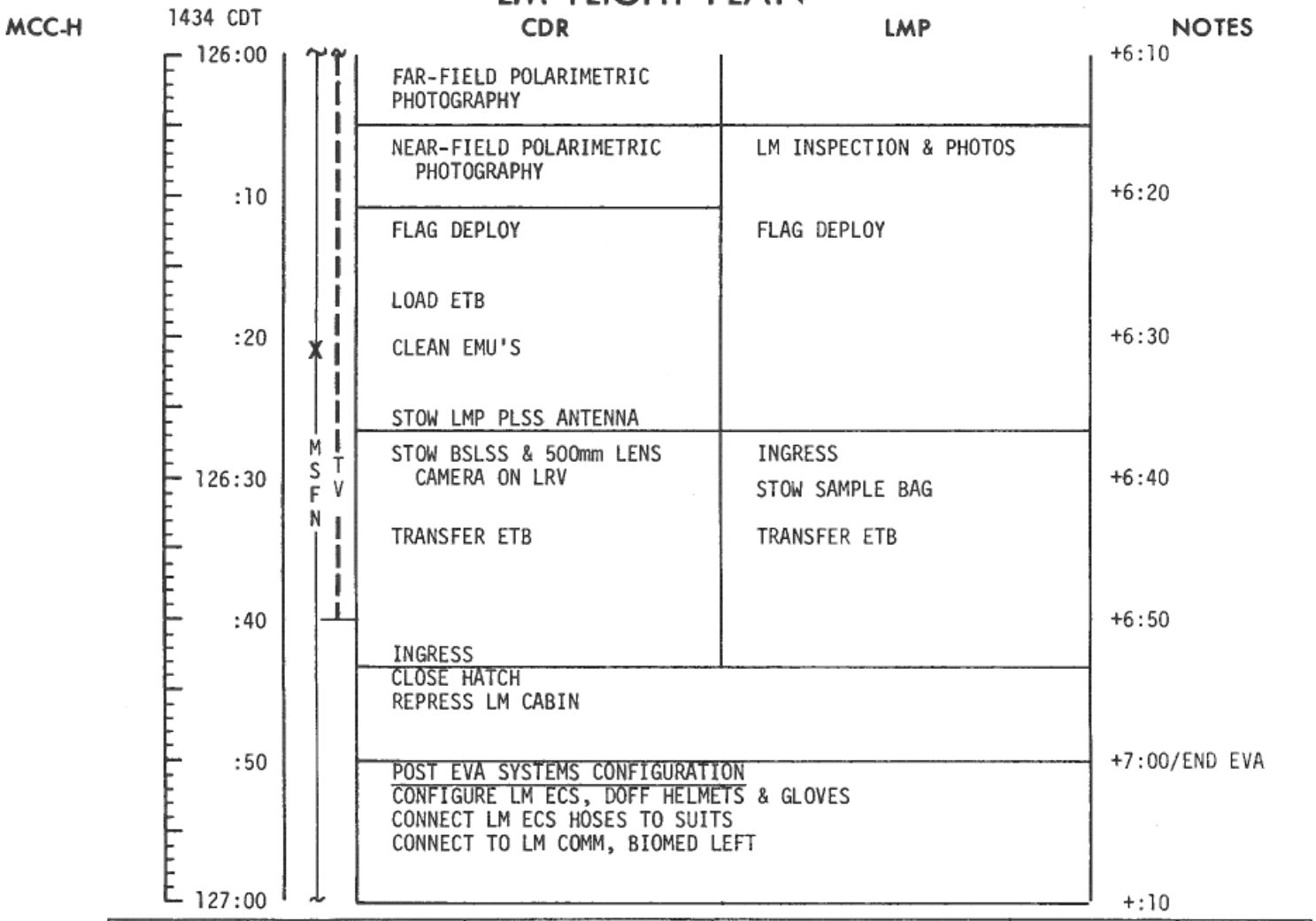
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-171

LM FLIGHT PLAN

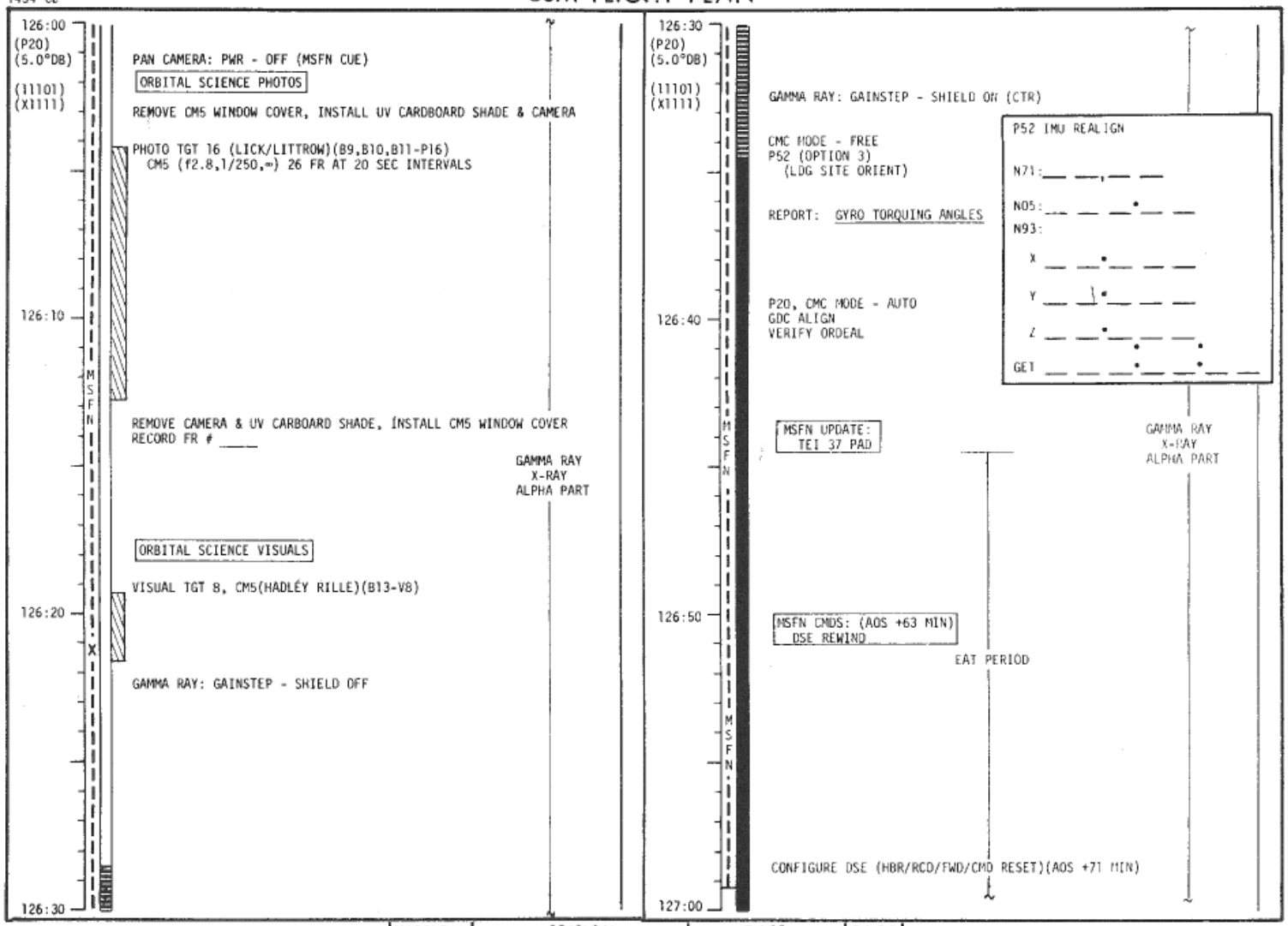


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	126:00 - 127:00	6/25	3-172

FLIGHT PLANNING BRANCH

1434 Le

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-173

LM FLIGHT PLAN

MCC-H

1534 CDT

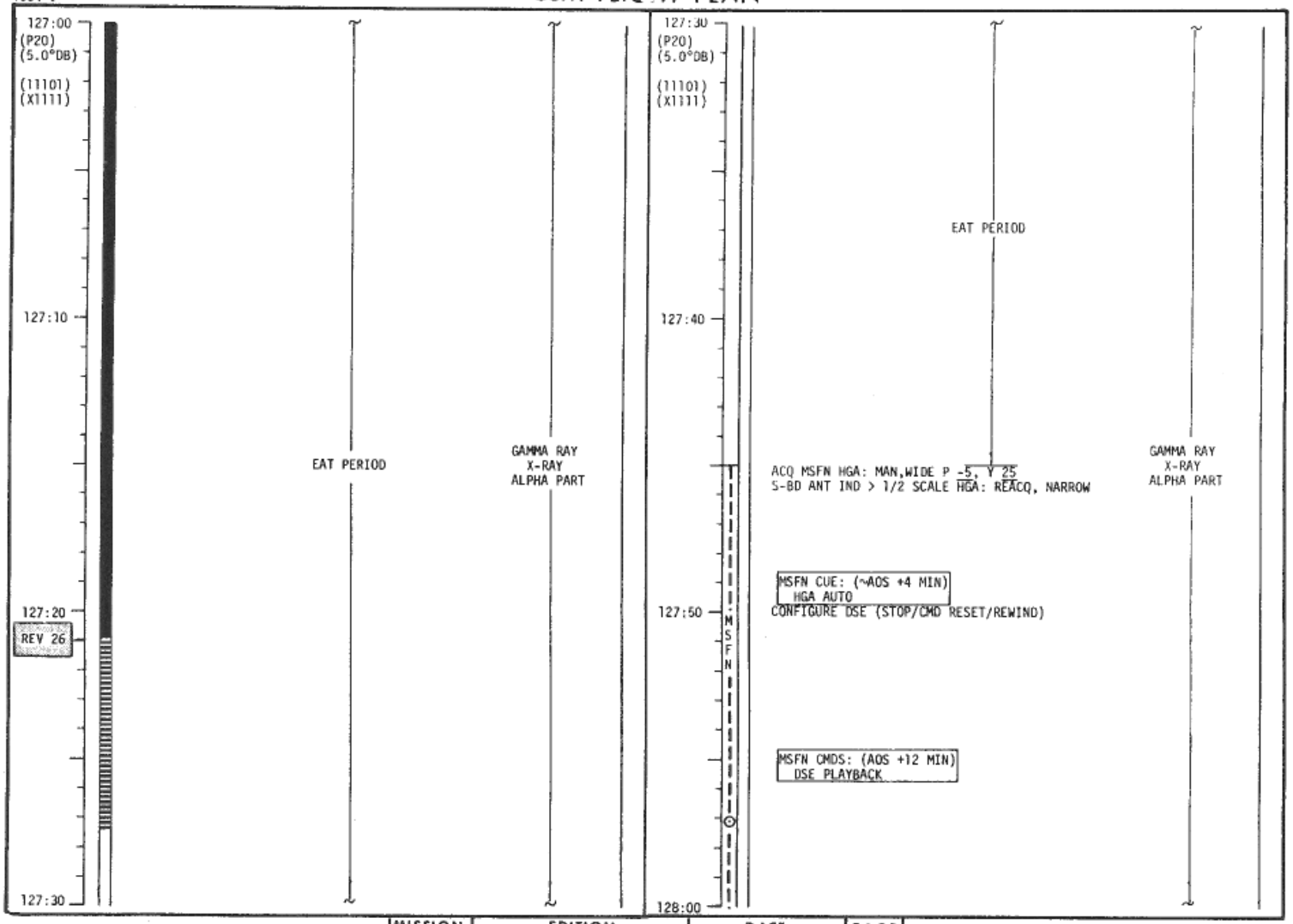
	CDR	LMP	NOTES
127:00	PLSS O_2 INITIAL RECHARGE		+:10
:10	PLSS/OPS DOFFING DISCONNECT OPS & RCU FROM PLSS LMP, THEN CDR DOFF PLSS/OPS		+:20
:20	CHANGE PLSS LiOH CARTRIDGES & BATTERIES STOW OPS'S & PLSS'S		+:30 CSM REV 26
127:30	POST EVA CABIN CONFIGURATION UNSTOW LUNAR SURFACE CHECKLIST STOW EVA-1 PREP AND POST CARD STOW ETB	BATS 1&2 - ON LUNAR BAT (LMP)-OFF/RESET CHECK BUS VOLTS	+:40
:40	WEIGH SRC & COLLECTION BAG, REPORT WEIGHTS TO MCC-H STOW SRC & COLLECTION BAG		+:50
:50	DOFF SUITS CDR, THEN LMP DOFF PGA & LCG, DON CWG & ICG CDR DOFF BIOMED HARNESS (IF DESIRED)	BIOMED - OFF	+1:00
128:00			+1:10

M S F N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	127:00 - 128:00	6/25-26	3-174

FLIGHT PLA[illegible]NG BRANCH

CSM FLIGHT PLAN



LM FLIGHT PLAN

MCC-H

1634 CDT

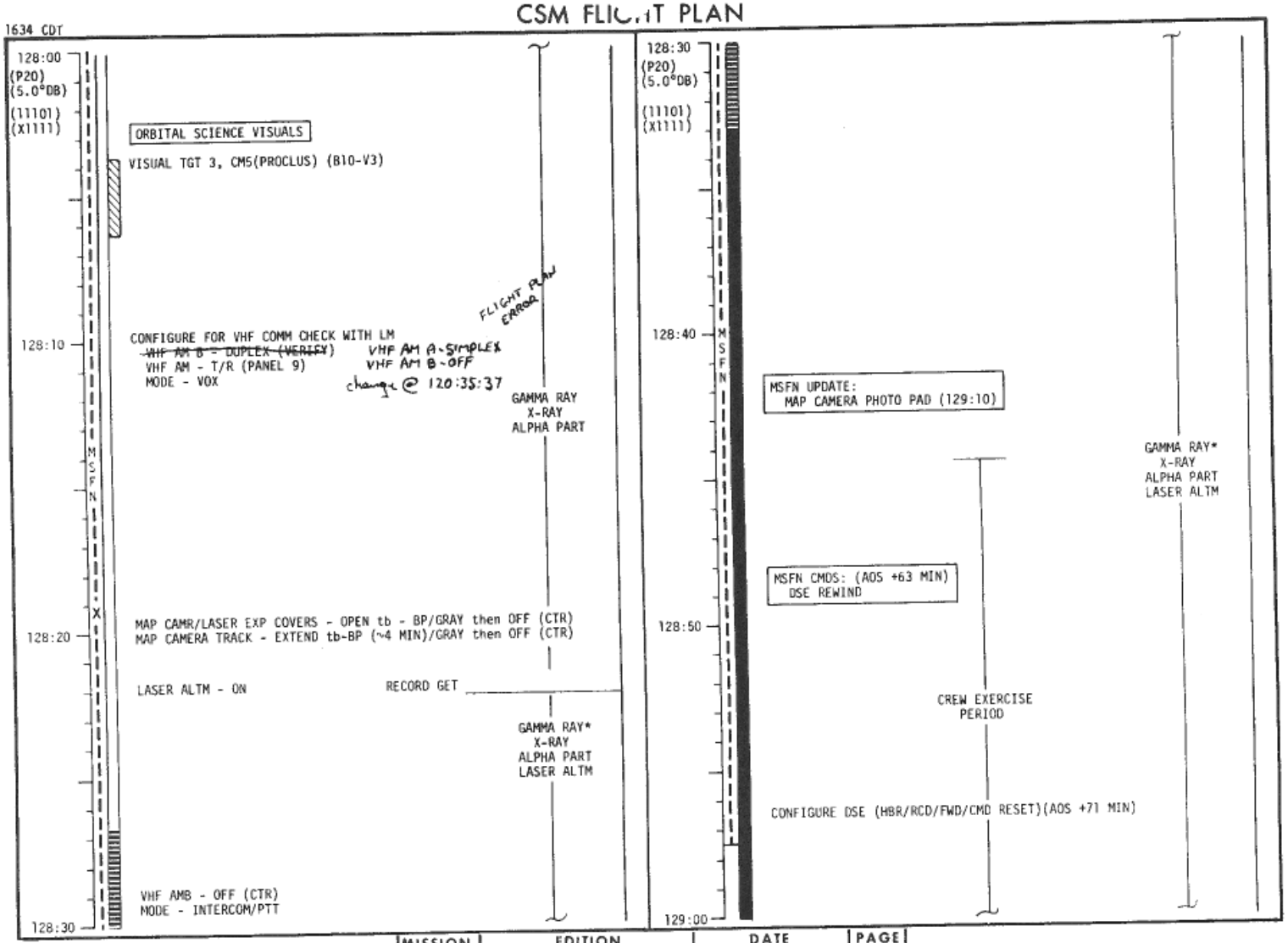
128:00	CDR	LMP	NOTES
			+1:10
:10	STOW PGA'S ON AFT ENGINE COVER AND DRY		+1:20
	VHF VOICE CHECK		
		BIOMED - RIGHT	
:20			+1:30
	PLSS O_2 & H_2O RECHARGE		
	CONNECT LM O_2 SUPPLY TO CDR PLSS AND FILL (10 MIN)		
128:30			
	CONNECT LM H_2O SUPPLY TO CDR PLSS AND FILL (3 MIN)		
	CONNECT LM O_2 SUPPLY TO LMP PLSS AND FILL (10 MIN)		
:40			
	CONNECT LM H_2O SUPPLY TO LMP PLSS AND FILL (3 MIN)		
:50			
	DEBRIEF		
	REPORT PLSS RECHARGE STATUS		
	CREW STATUS REPORT (MED, PRD)		
129:00			

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	128:00 - 129:00	6/26	3-176

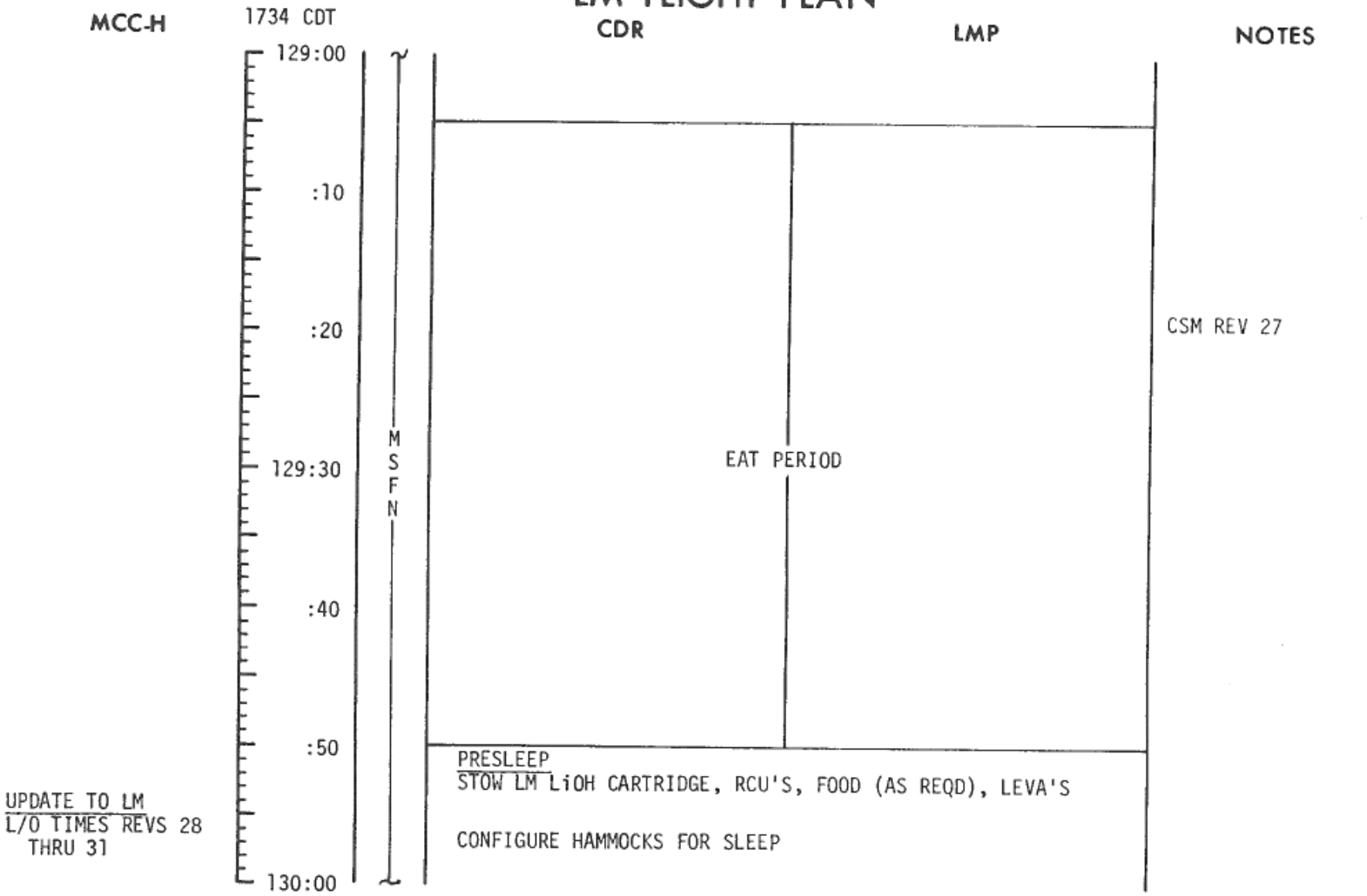
FLIGHT PLA ING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-177

LM FLIGHT PLAN

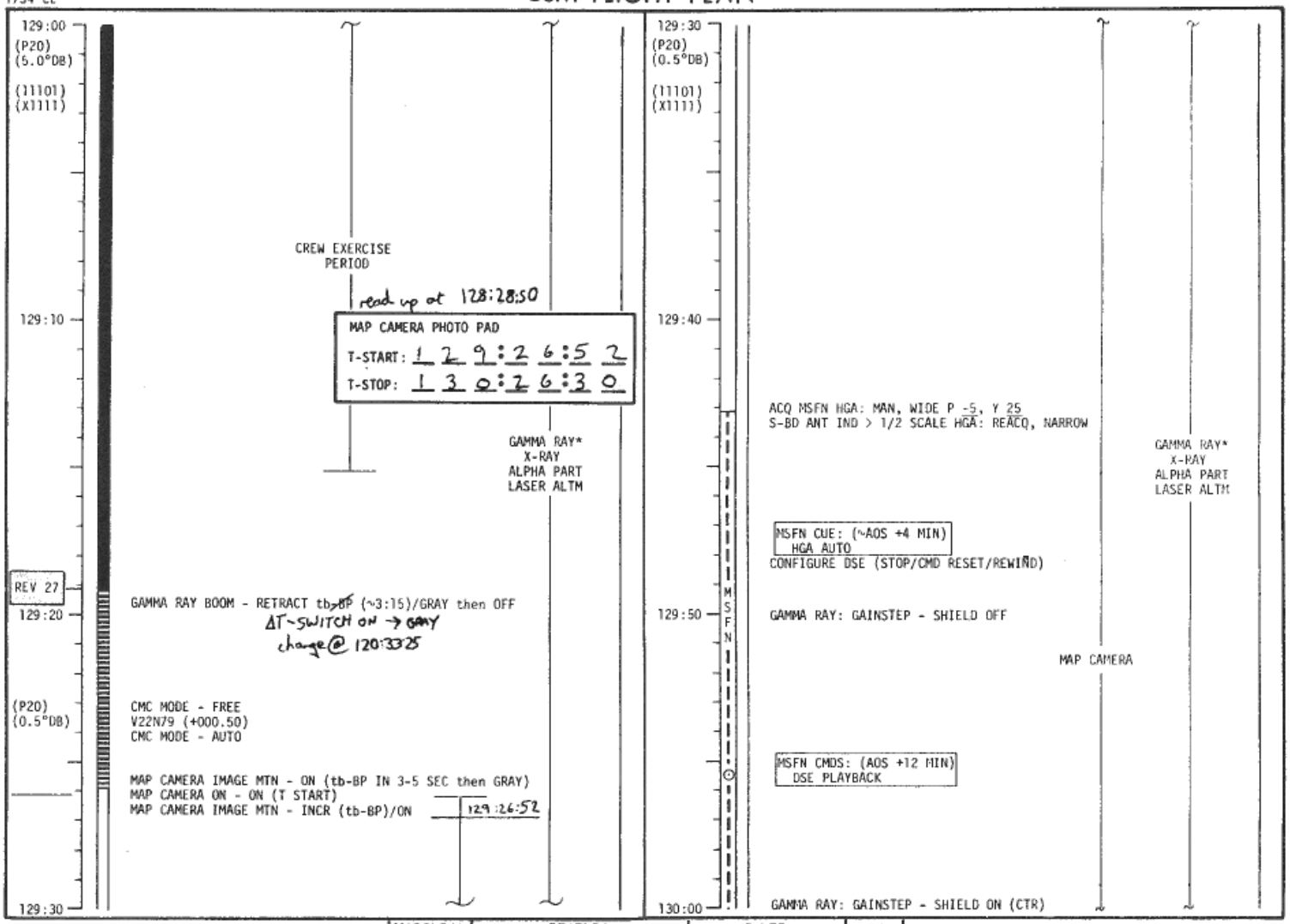


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	129:00 - 130:00	6/26-27	3-178

FLIGHT PLANNING BRANCH

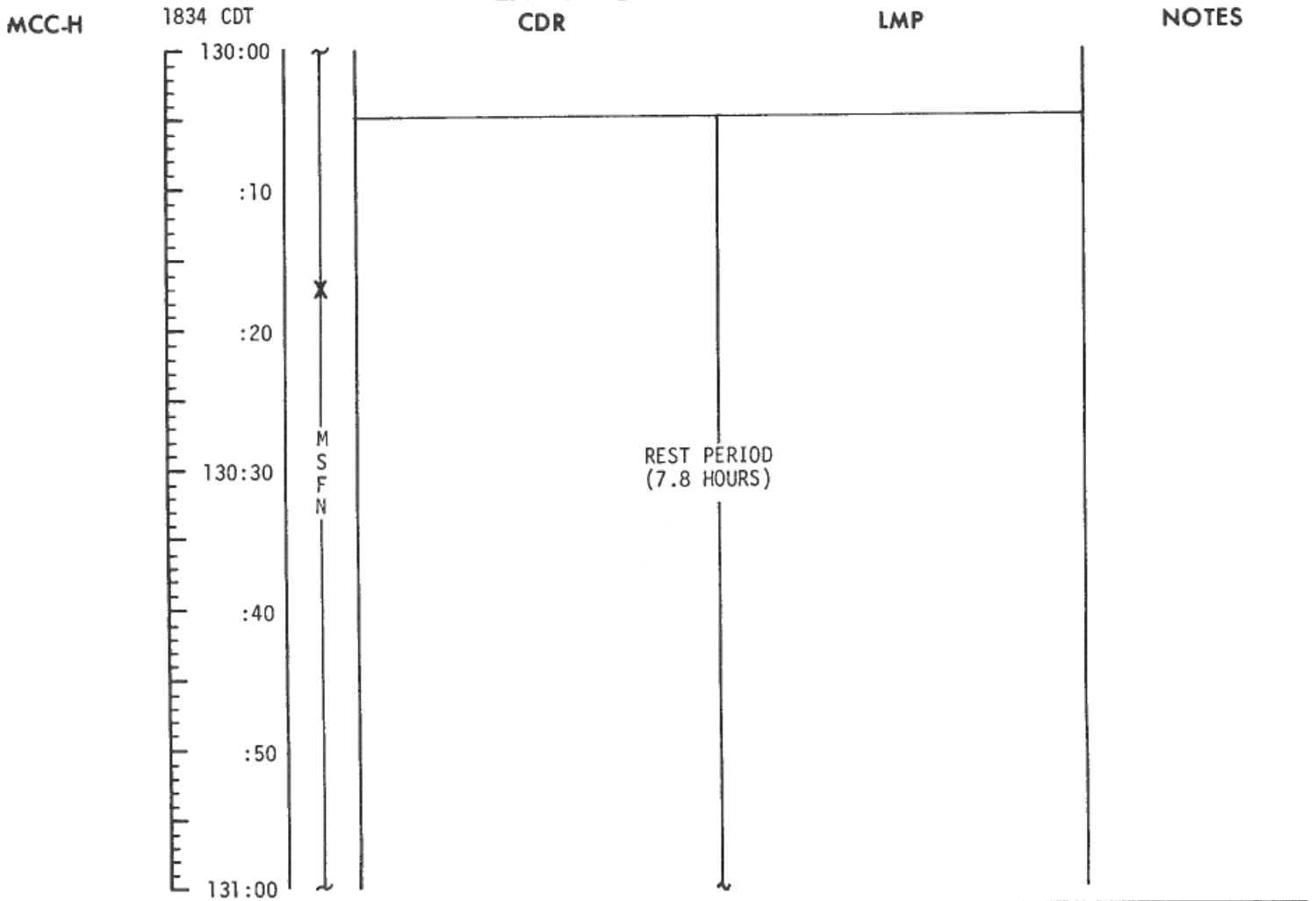
1734 CL

CSM FLIG..T PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-179

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	130:00 - 131:00	6/27	3-180

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

130:00 (P20) (0.5°DB) (11101) (X1111)

MSFN: X

CSM SYSTEMS CHECKLIST

PERFORM ONLY THE FOLLOWING IN PRESLEEP CHECKLIST PAGE S/1-26
- CREW STATUS REPORT
- ONBOARD READOUTS
- CYCLE CRYO FANS
- "E" MEMORY DUMP

MSFN UPDATE:
PAN CAMERA PHOTO PAD

PAN CAMERA PHOTO PAD
T-START: 130:18:05
T-STOP: 130:19:16

ONBOARD READOUT

BAT C	
PYRO BAT A	
PYRO BAT B	
RCS A	
B	
C	
D	

DC IND SEL - MNA OR B

130:10

PAN CAMERA: MODE-STBY, PWR-ON tb-BP (2 SEC)/GRAY, STEREO, EXPOSURE - NORMAL (CTR)

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

PAN CAMERA MODE - OPR tb-BP (2 SEC)/GRAY (T START)

PAN CAMERA

PAN CAMERA MODE - STBY (T STOP)

PAN

MSFN: VERIFY LENS TUCK IN
PAN CAMERA: PWR - OFF

130:20

MAP CAMERA

MAP CAMERA ON - OFF (T STOP)
MAP CAMERA ON - STBY (T STOP +1 MIN)
MAP CAMERA IMAGE MTN - OFF (tb-BP IN 3-5 SEC then GRAY)

∞ read up

MASS SPECT BOOM - DEPLOY tb - BP (~2:40)/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY tb-BP (~2:45)/GRAY then OFF (CTR)
RECORD GET

MASS SPECT: EXP - ON, ION SOURCE - STBY

130:30

130:30 (P20) (0.5°DB) (11101) (X1111)

CMC MODE - FREE
P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

P20, CMC MODE - AUTO
GDC ALIGN
VERIFY ORDEAL

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM
MASS SPECT OUTGAS

P52 IMU REALIGN

N71: ___ ___, ___ ___
N05: ___ ___ ___.___ ___
N93:
X ___ ___.___ ___ ___
Y ___ ___.___ ___ ___
Z ___ ___.___ ___ ___.___
GET ___ ___ ___.___ ___.___

MSFN: X

130:40

X-RAY - STBY
LASER ALTM - OFF
RECORD GET
MAP CAMERA TRACK - RETRACT tb-BP (4 MIN)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

MSFN CMDS: (AOS +63 MIN)
DSE REWIND

130.50

MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

POO AT PITCH OF 177°
RCHG 129:51:39

~~POO AT PITCH OF 171°~~

GAMMA RAY
ALPHA PART
MASS SPECT OUTGAS

(11101) (X1111)

CONFIGURE DSE (LBR/RCD/FWD/CMD RESET)(AOS +71 MIN)

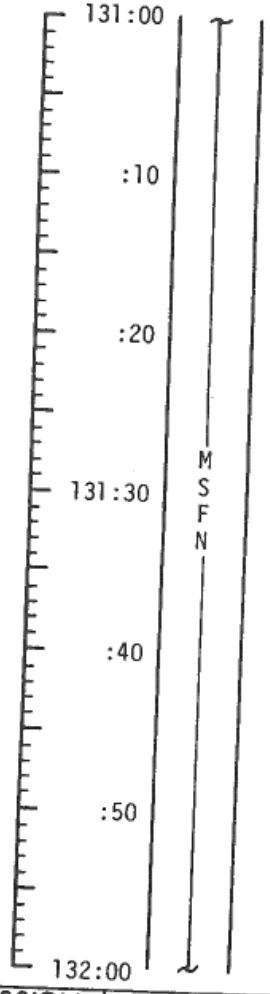
131:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-181

LM FLIGHT PLAN

MCC-H

1934 CDT



CDR

REST PERIOD
(7.8 HOURS)

LMP

NOTES

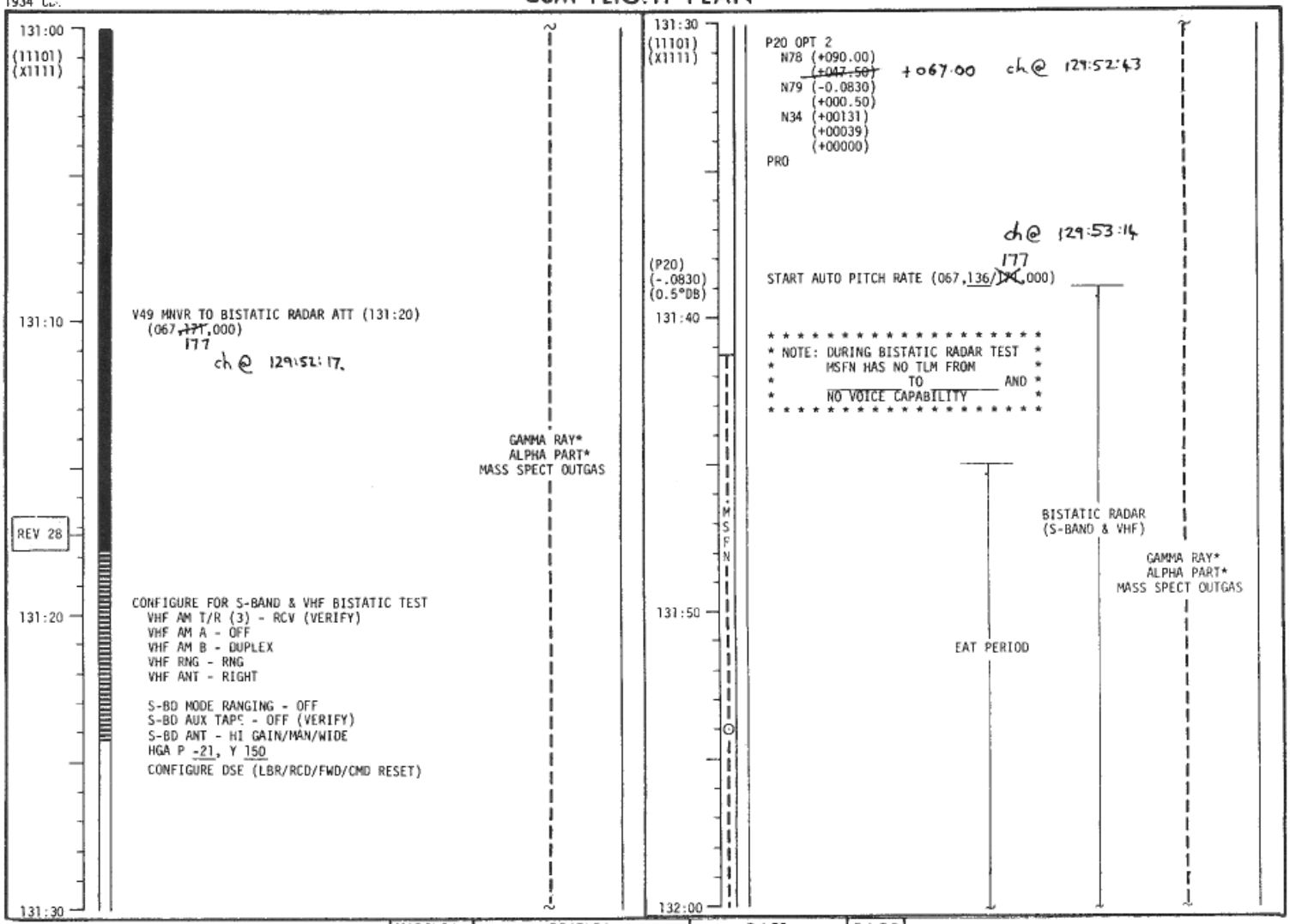
CSM REV 28

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	131:00 - 132:00	6/27-28	3-182

FLIGHT PLA' 'NG BRANCH

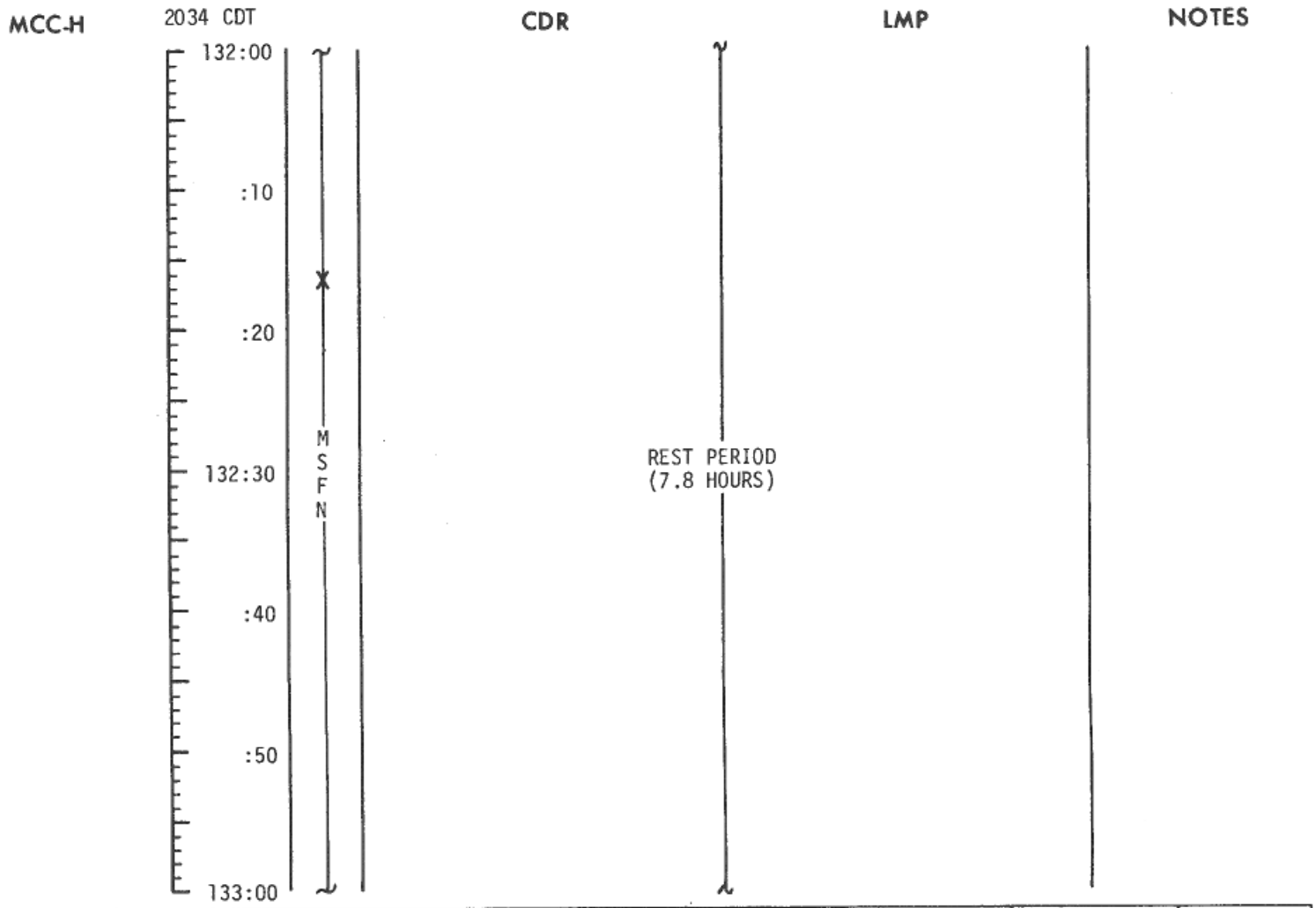
1934 GET

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-183

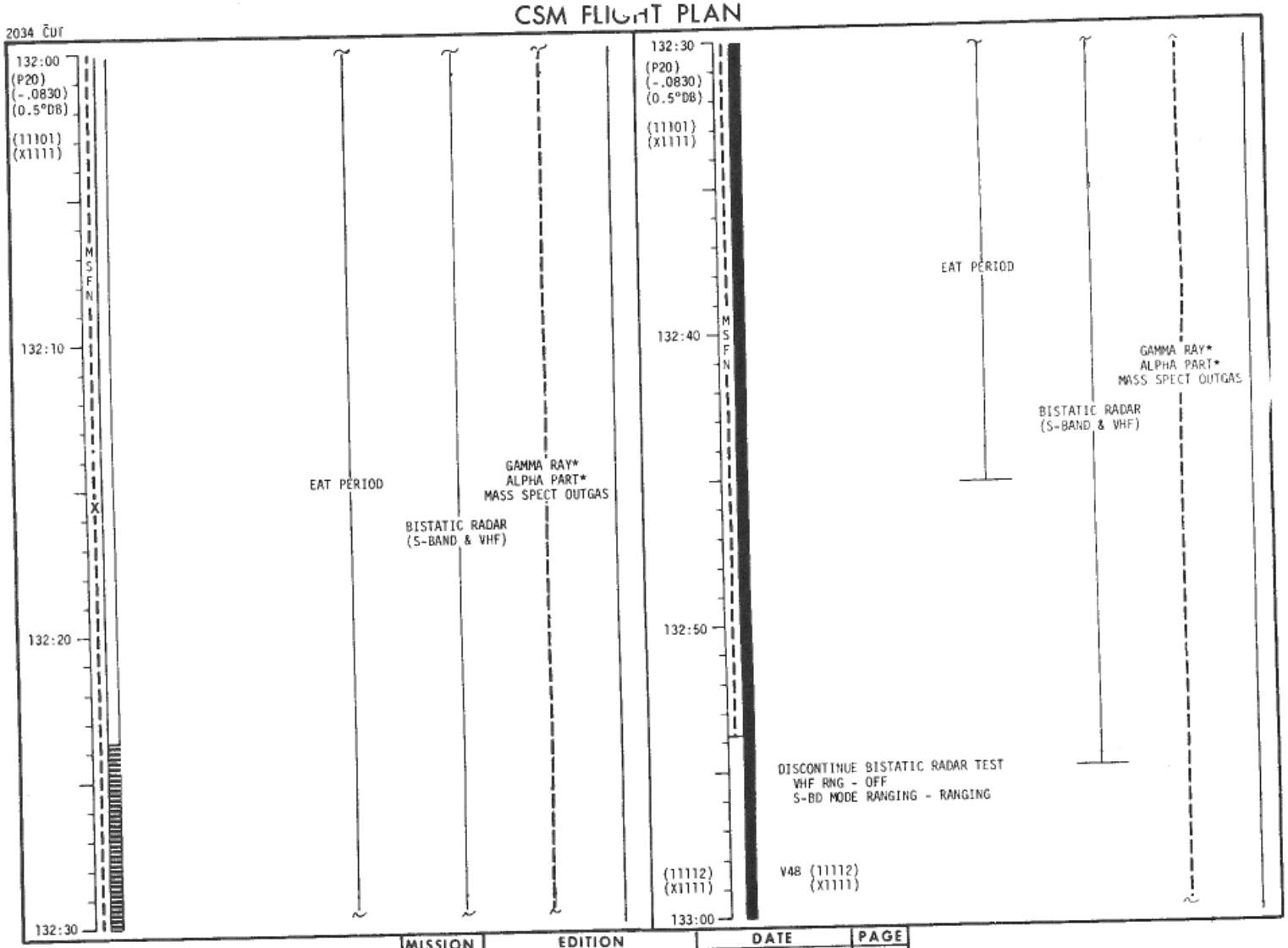
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	132:00 - 133:00	6/28	3-184

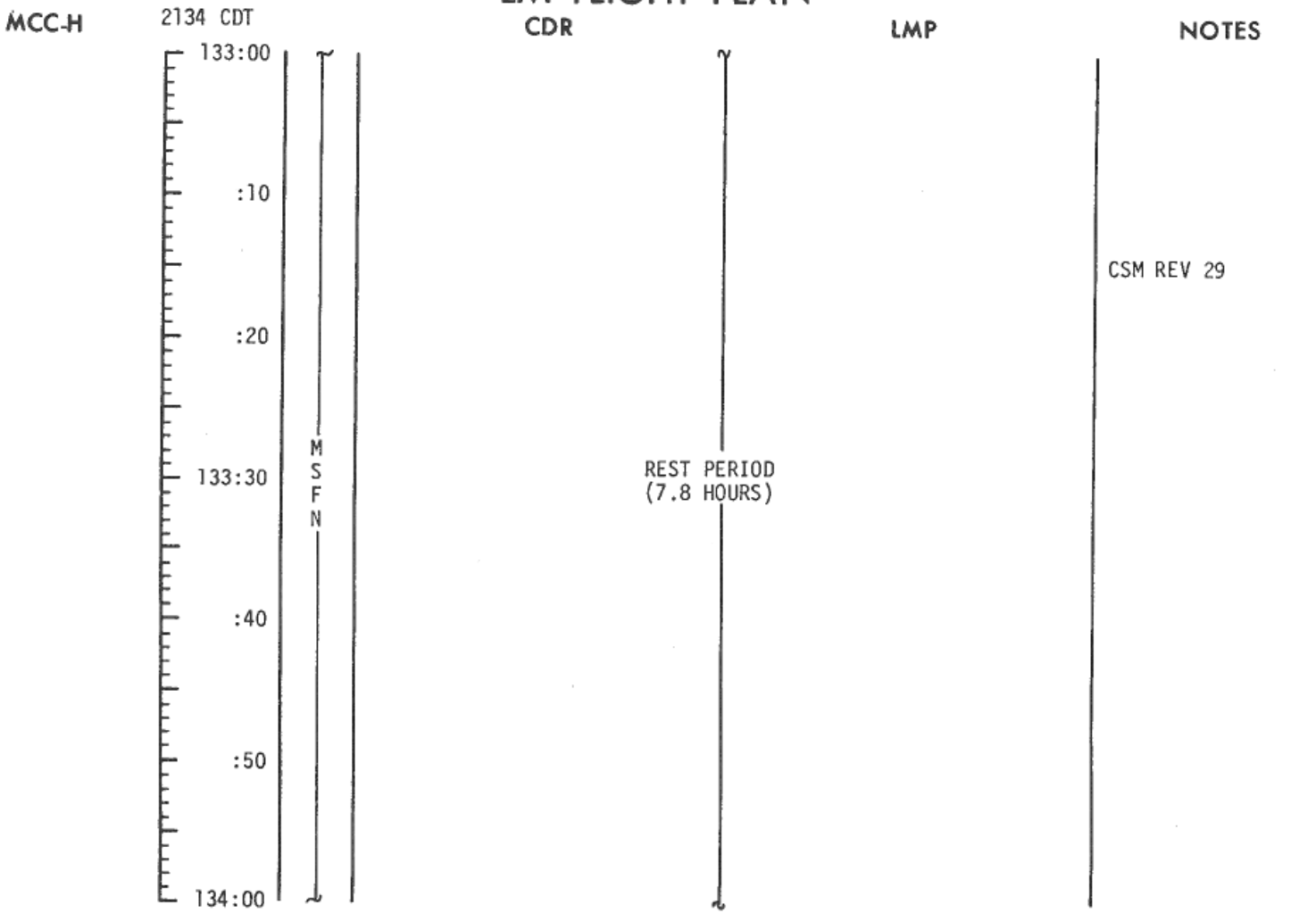
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-185

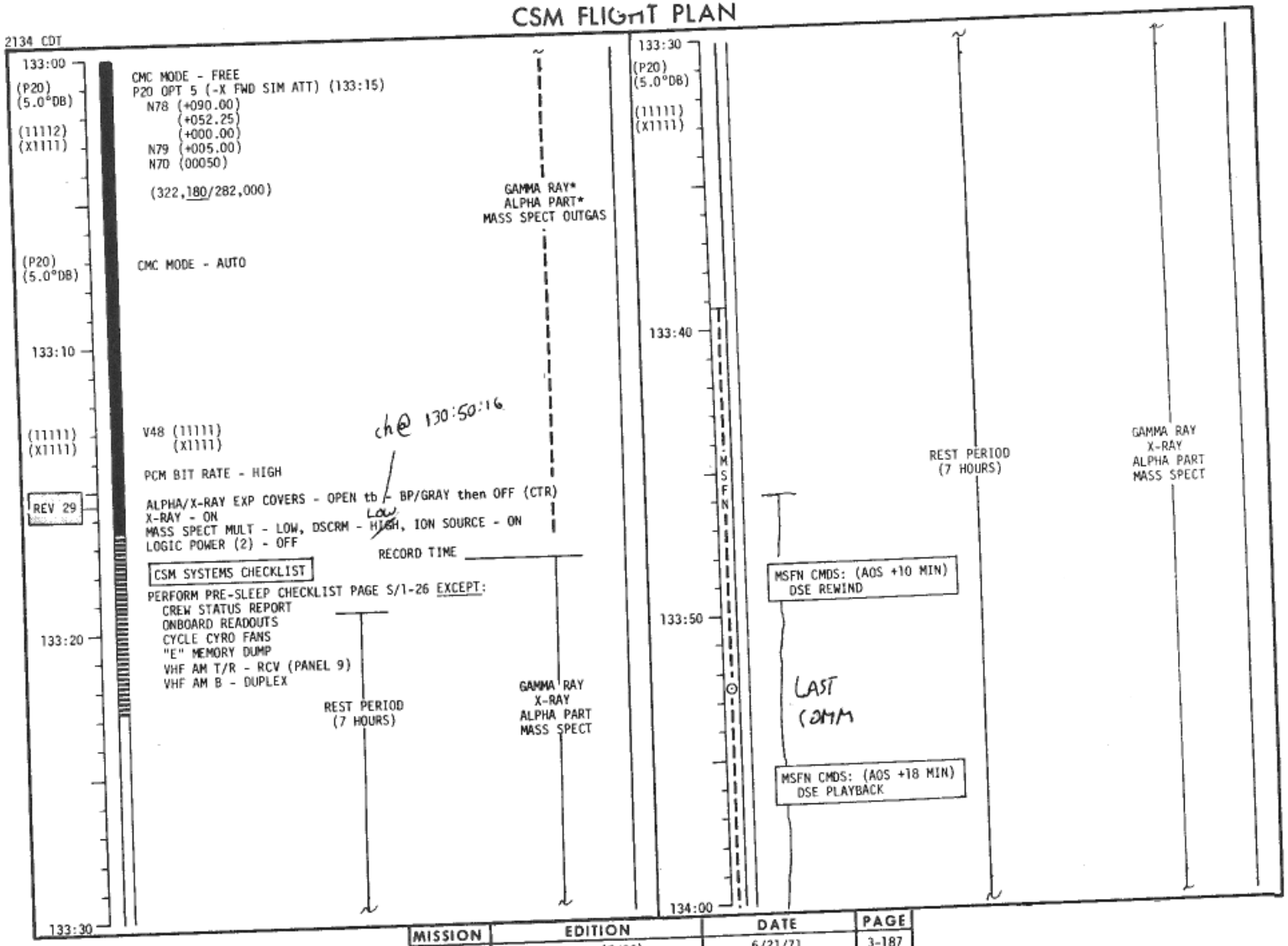
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	133:00 - 134:00	6/28-29	3-186

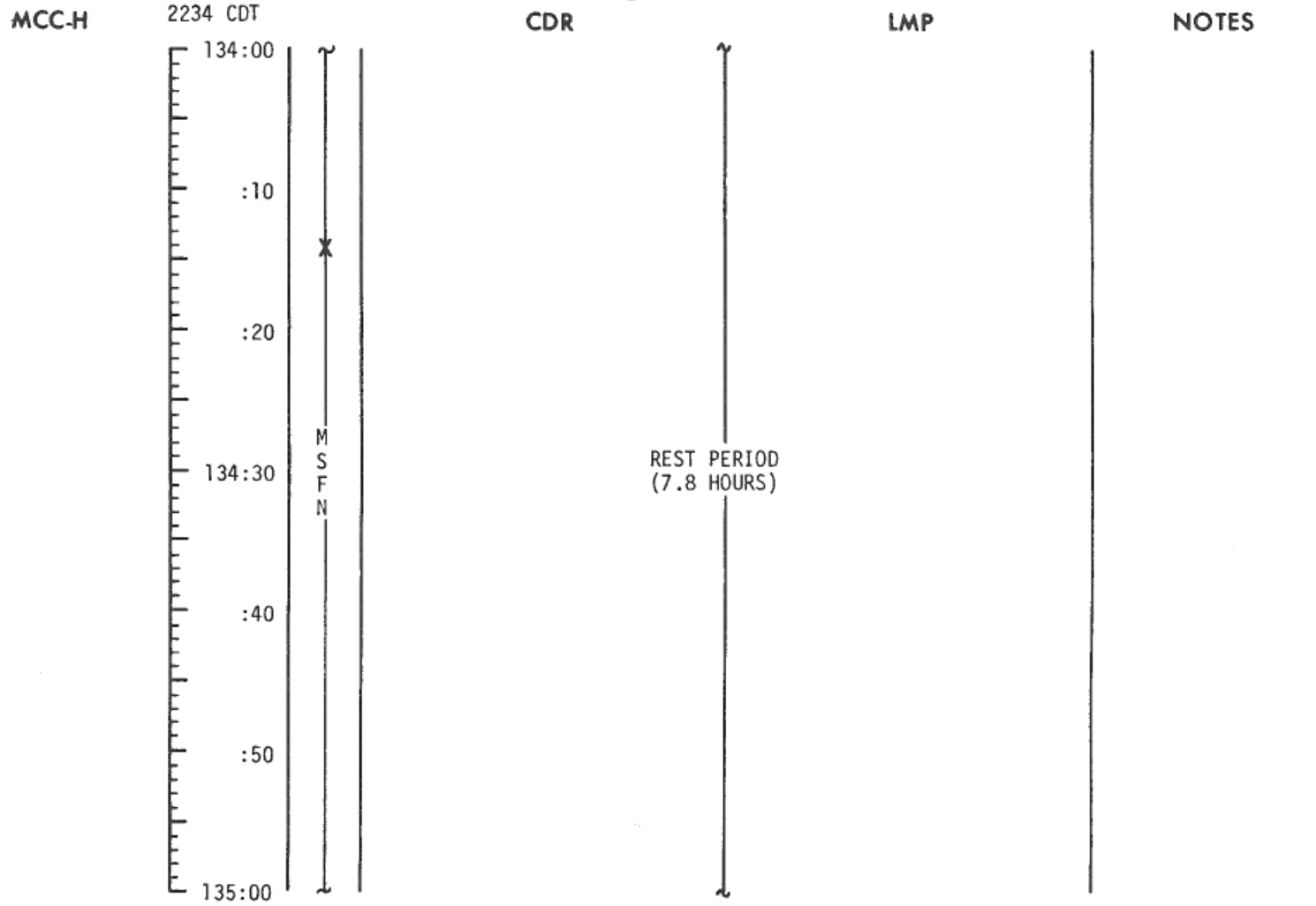
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-187

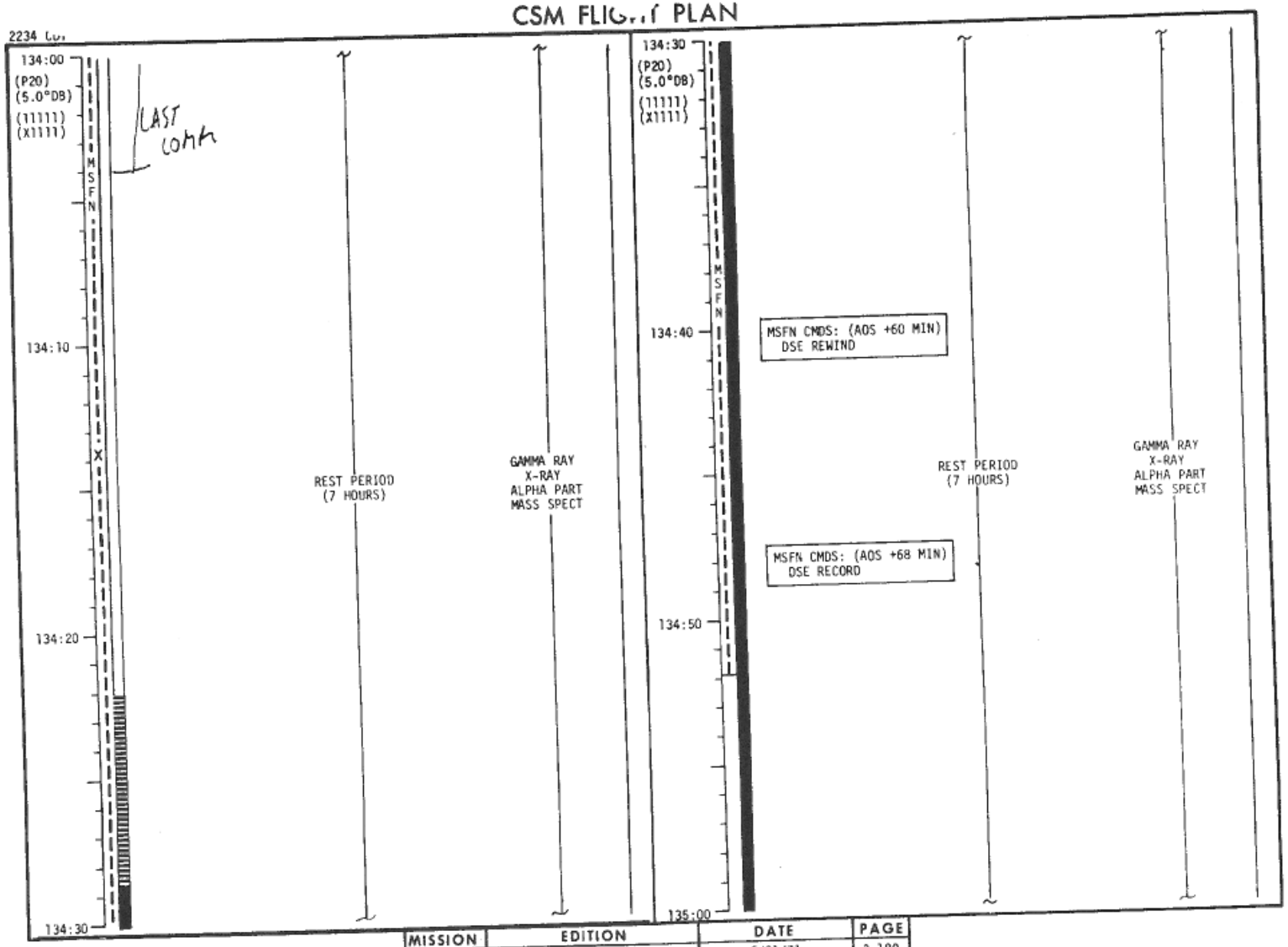
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	134:00 - 135:00	6/29	3-188

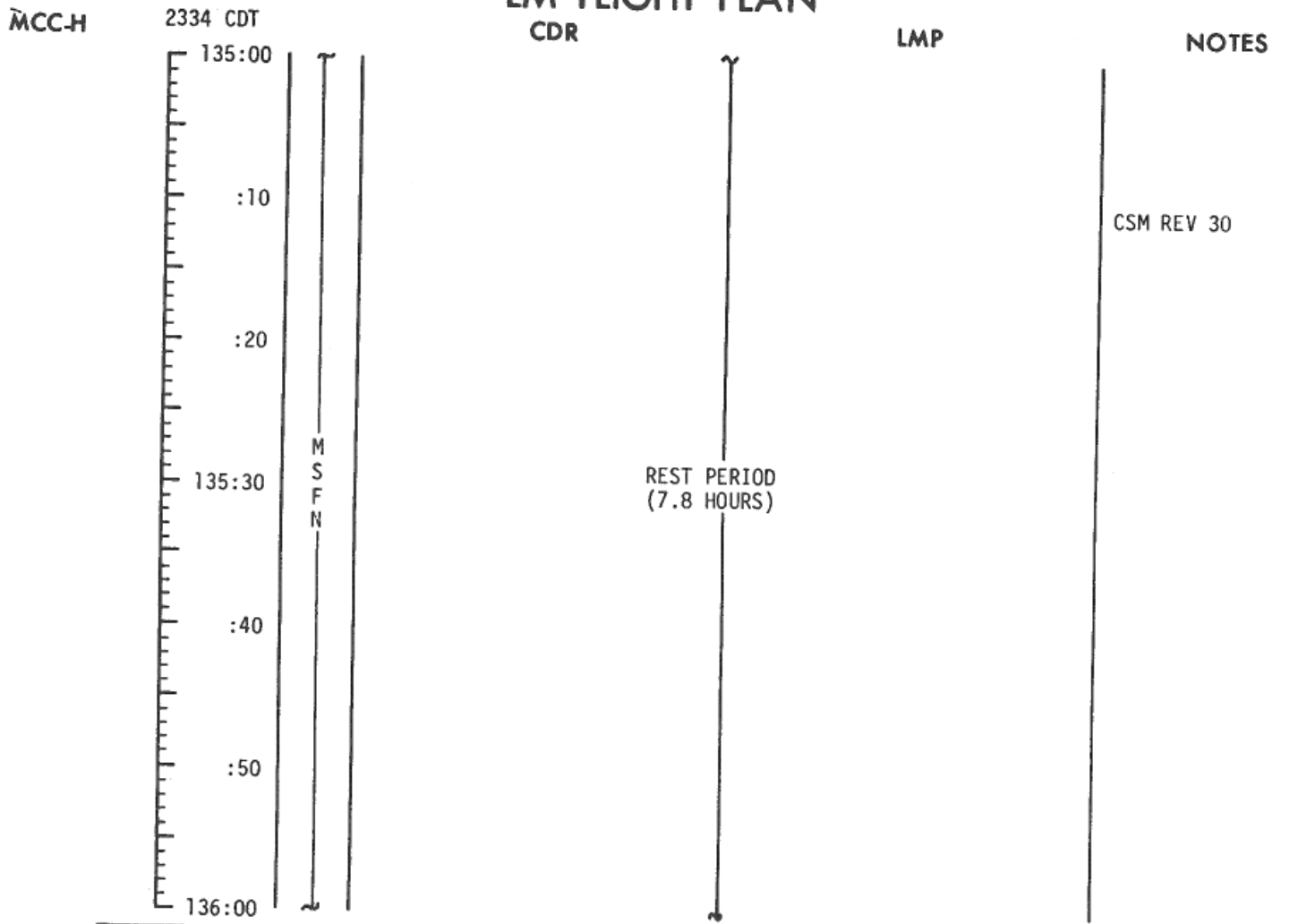
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-189

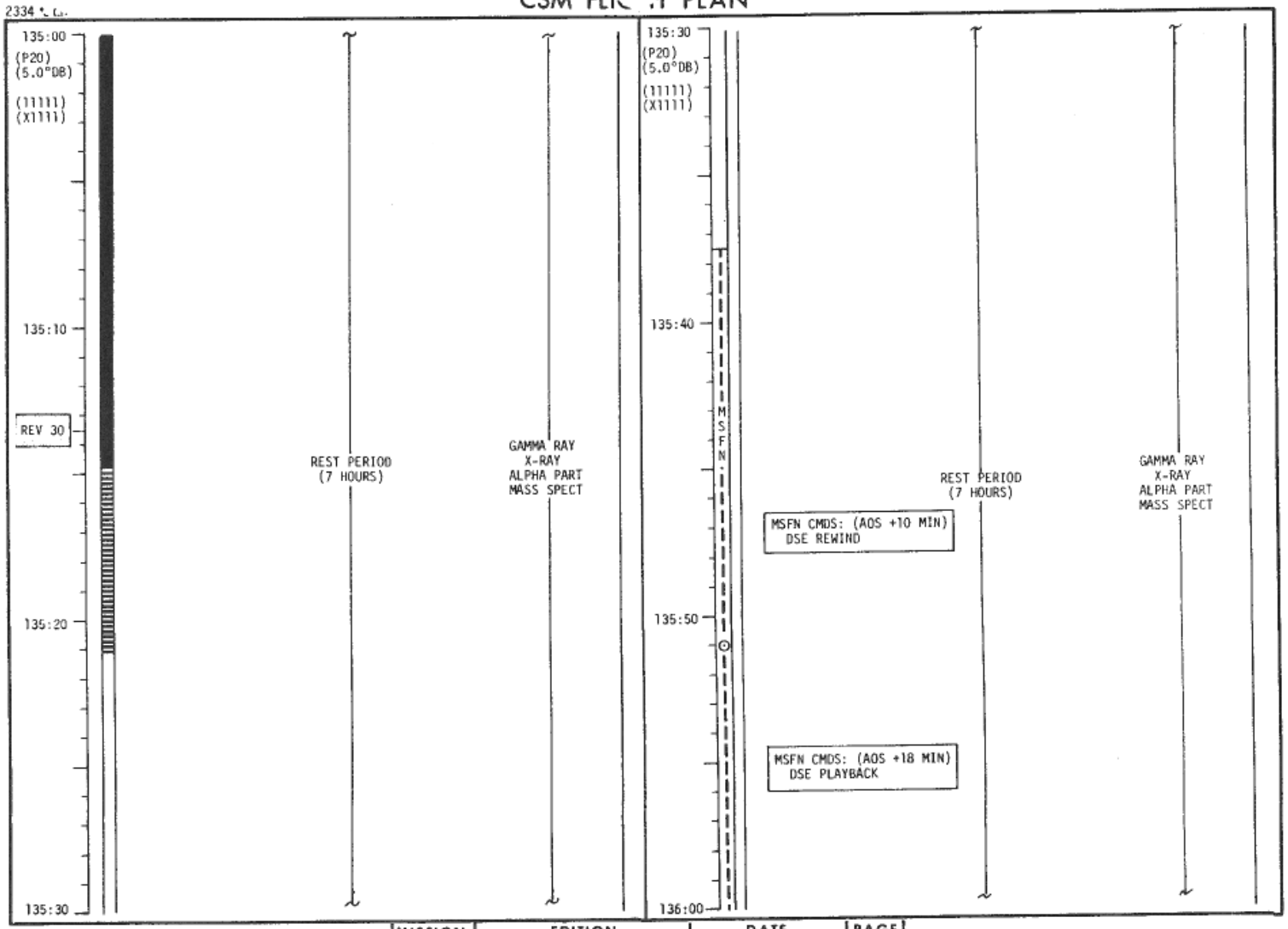
LM FLIGHT PLAN



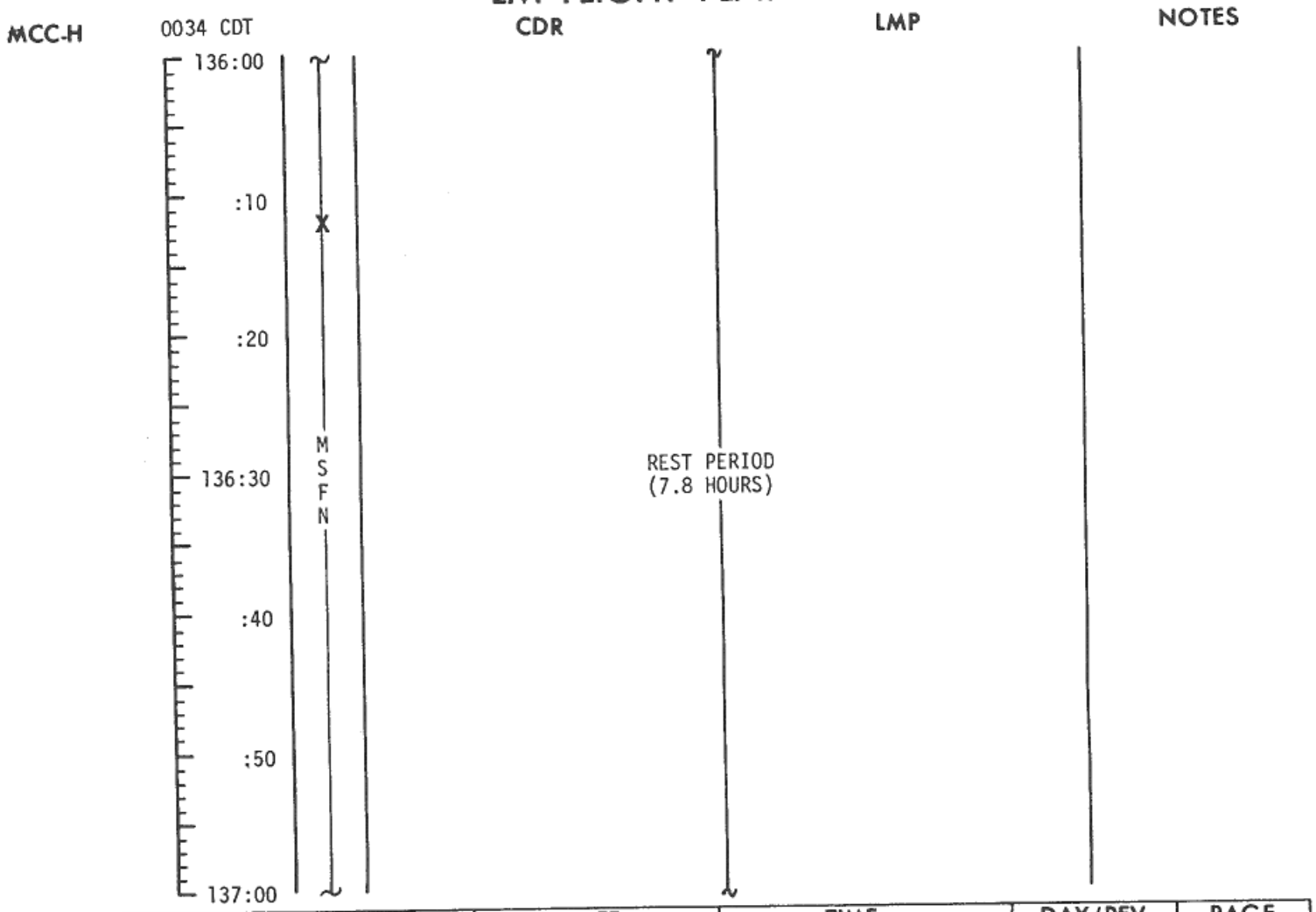
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	135:00 - 136:00	6/29-30	3-190

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



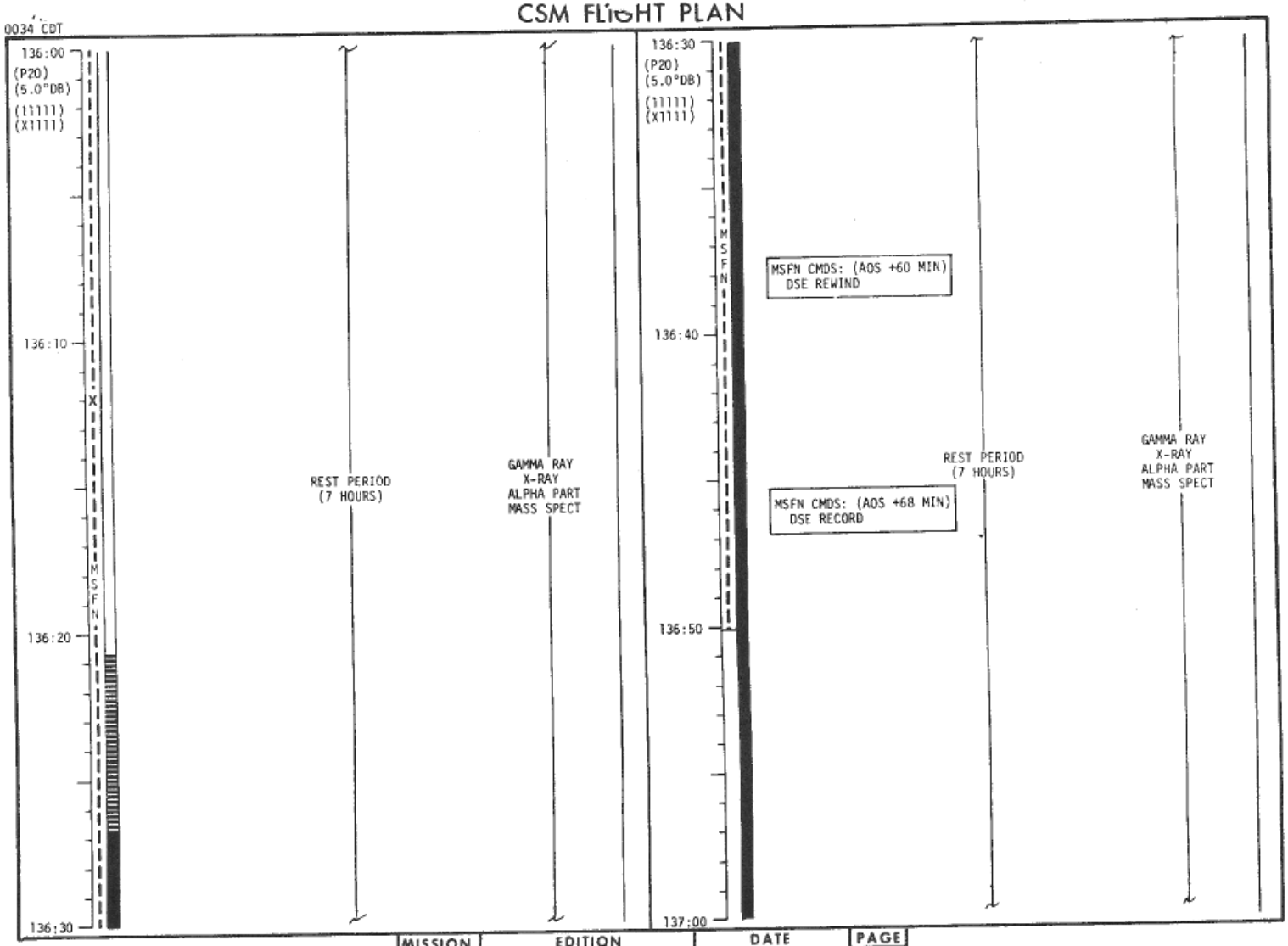
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	136:00 - 137:00	6/30	3-192

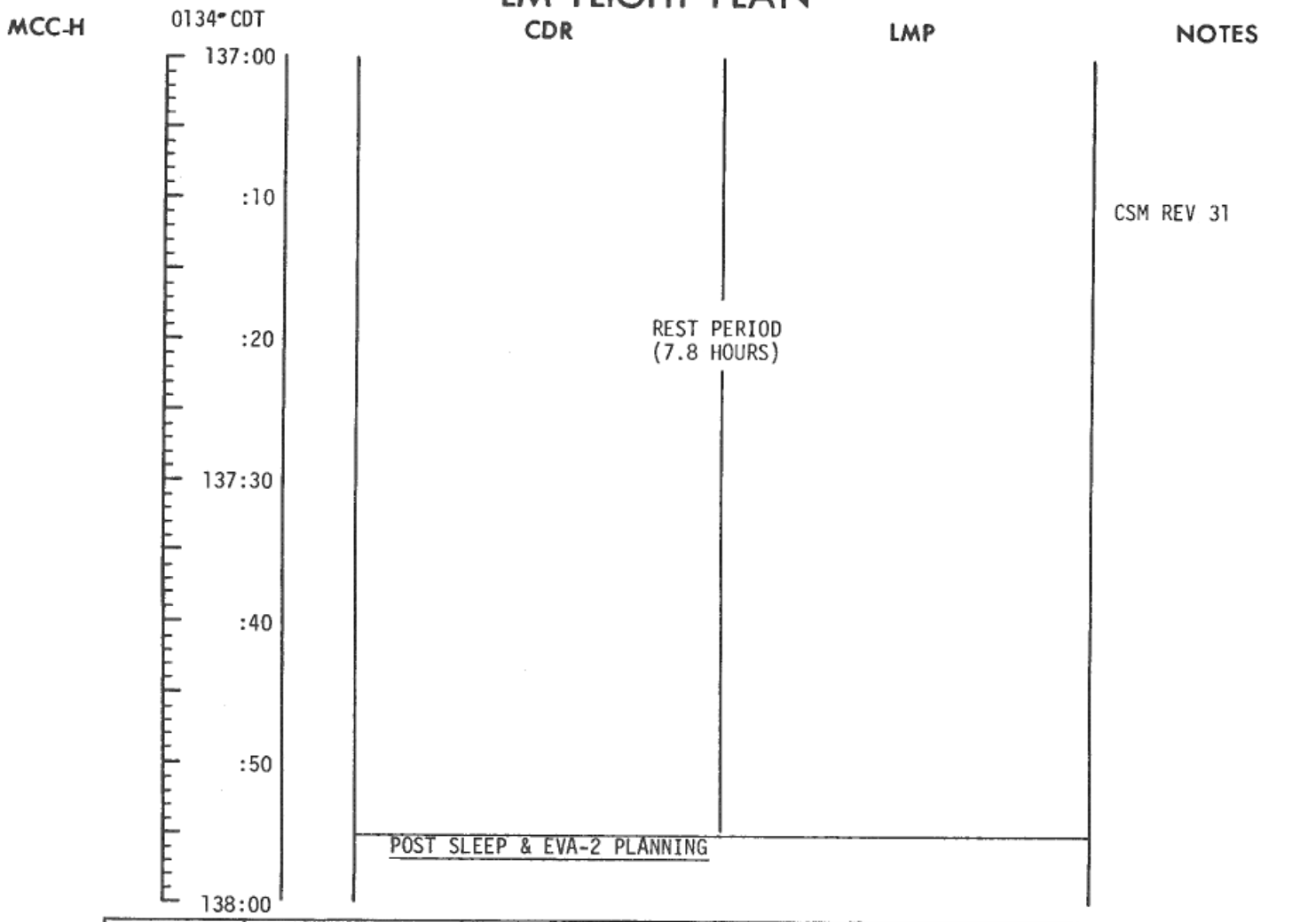
FLIGHT PLA NING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-193

LM FLIGHT PLAN

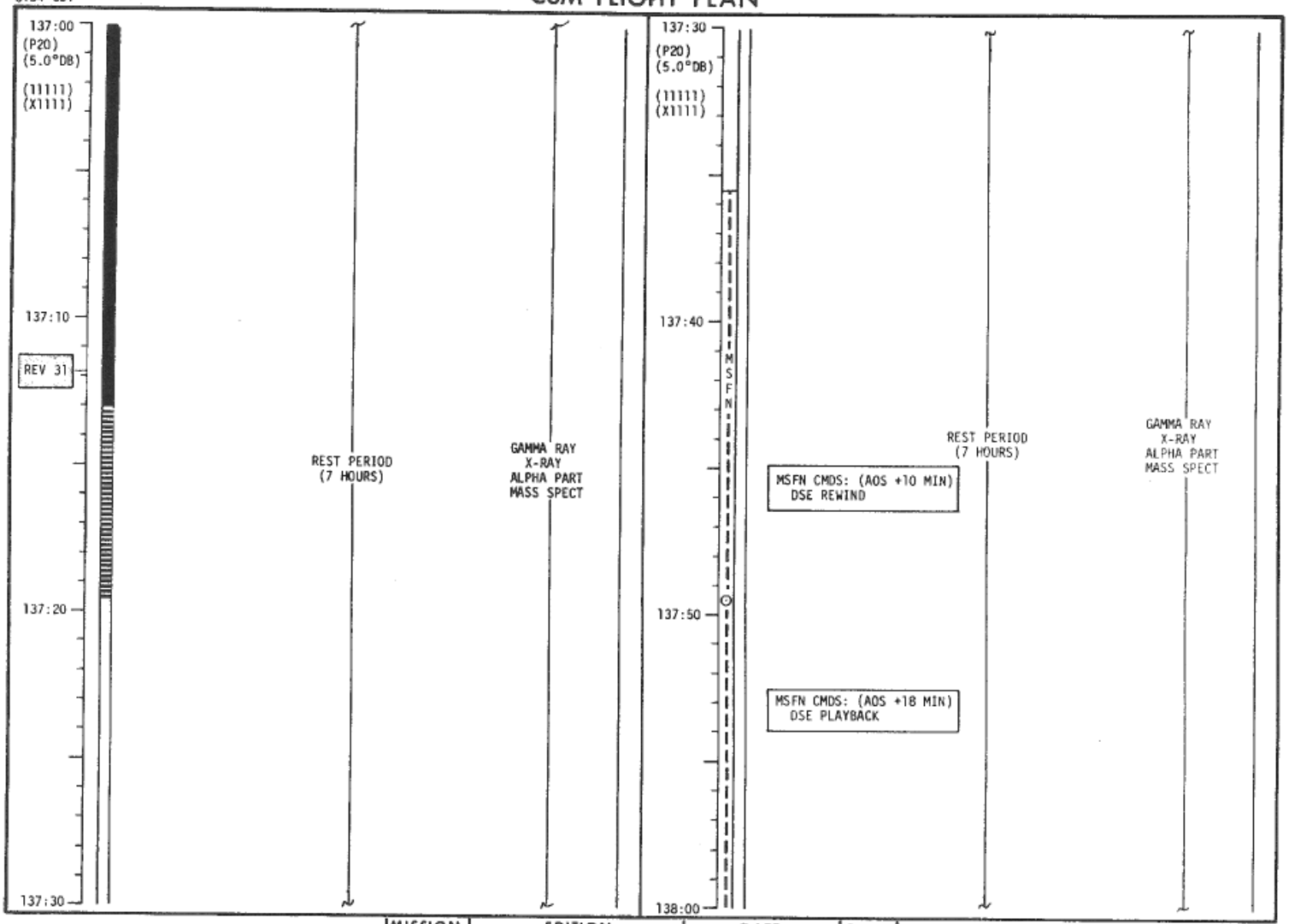


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	137:00 - 138:00	7/30-31	3-194

FLIGHT PLANNING BRANCH

0134 CSM

CSM FLIGHT PLAN



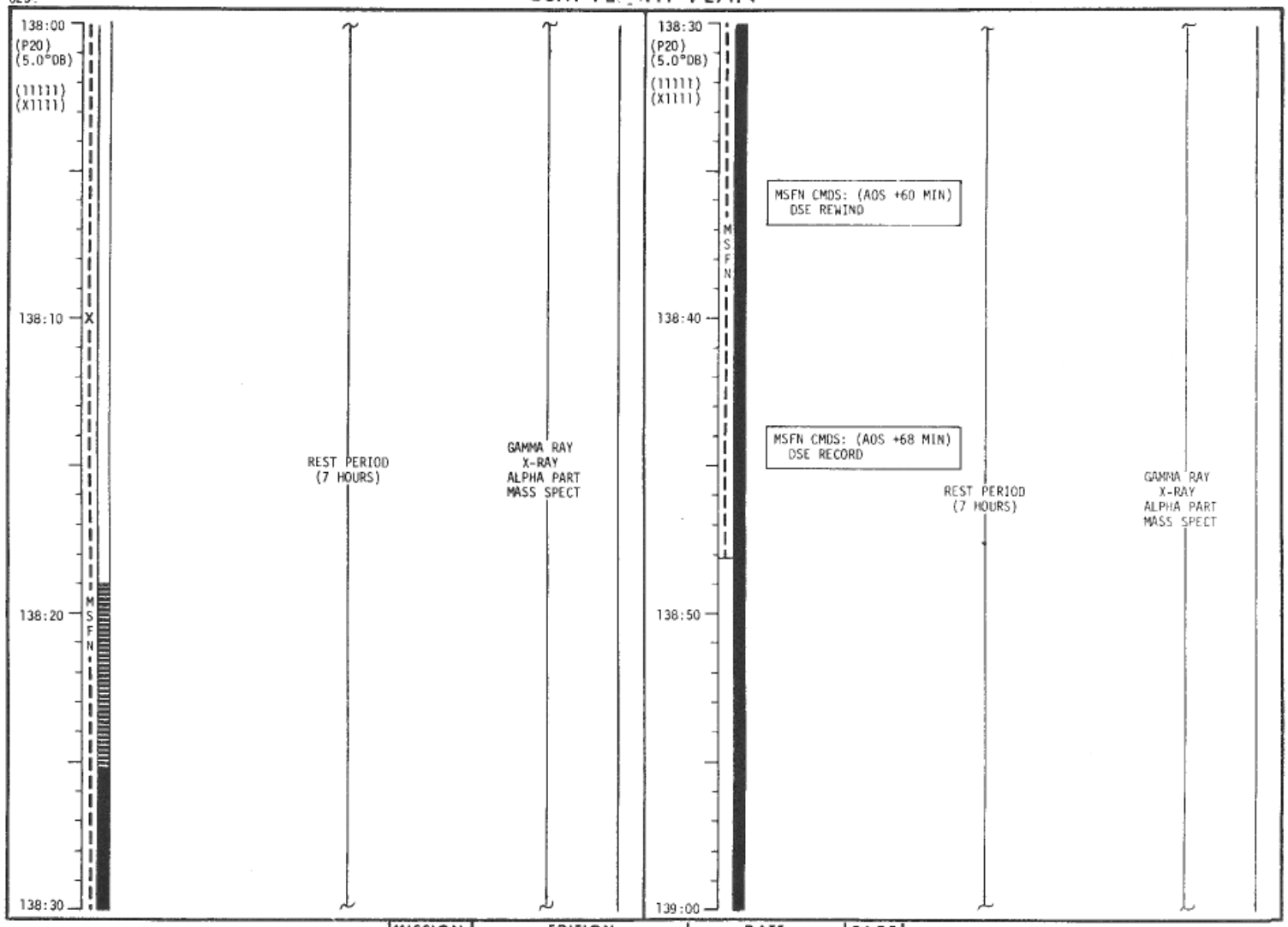
LM FLIGHT PLAN

MCC-H	0234 CDT		CDR	LMP	NOTES
UPDATE TO LM LM CONSUMABLES TIME OF LIFT-OFF FOR REVS 32 THROUGH 37	138:00	MSFN	POST SLEEP AND EVA-2 PLANNING CREW STATUS (RADIATION, MEDICATION) PRO, RESET LGC CLOCK, P06		
	:10				
	:20				
	138:30		EAT PERIOD		
	:40				
	:50				
	139:00		DON SUITS	BIOMED - OFF	

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	138:00 - 139:00	7/31	3-196

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-197

LM FLIGHT PLAN

MCC-H

0334 CDT

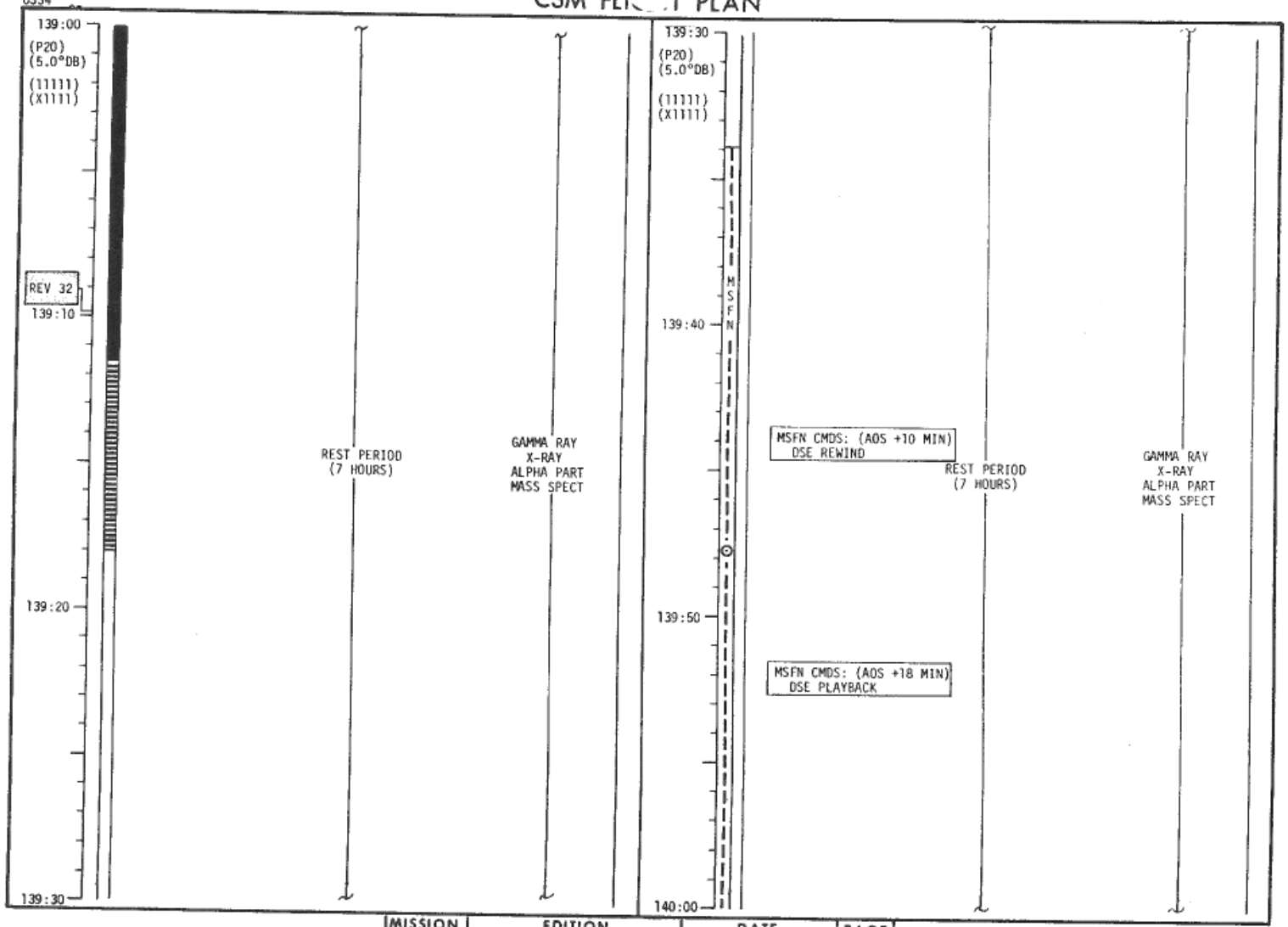
	CDR	LMP	NOTES
139:00	LMP, THEN CDR CLEAN & LUB PGA'S DOFF ICG & CWG, DON LCG & PGA CONNECT HOSES		
:10			CSM REV 32
:20	CDR DON BIOMED HARNESS		
139:30			
:40	VERIFY COMM	BIOMED - LEFT	
	EVA-2 PREP STOW ALL LOOSE ITEMS NOT REQD FOR EVA		-1:30
:50			-1:20
	UNSTOW EVA-2 PREP & POST CARD STOW LUNAR SURFACE CHECKLIST		
140:00	UNSTOW AND CHECK BOTH OPS		-1:10

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	139:00 - 140:00	7/31-32	3-198

FLIGHT PLA' 'NG BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-199

LM FLIGHT PLAN

MCC-H

0434 CDT

	CDR	LMP	NOTES
140:00	PREPARE VISORS & HELMETS FOR EVA UNLOCK FORWARD HATCH HANDLE		-1:10
:10	PLSS DONNING CONFIGURE LMP PLSS ATTACH OPS TO PLSS LMP DON PLSS/OPS CONNECT RCU TO PGA AND PLSS UNSTOW LMP OPS 02 ACTUATOR AND CONNECT TO RCU CDR REPEAT PLSS DONNING		-1:00
:20			-:50
140:30	PLSS COMM CHECK VERIFY POWERDOWN CB CONFIGURATION, RECORDER - ON CONFIGURE FOR EVA COMM, BIOMED - OFF VERIFY PLSS COMM & TM REPORT PLSS 02 QUANTITIES TO MCC-H FINAL SYSTEM PREP		-:40
:40	OPS CONNECT CONNECT OPS 02 HOSE TO PGA CDR REPEAT OPS CONNECT		-:30
:50	HELMET/GLOVE DONNING PLSS FAN - ON DON HELMETS AND LEVA'S VERIFY PGA CONFIGURATION VERIFY CB CONFIGURATION DON GLOVES		-:20
141:00			-:10

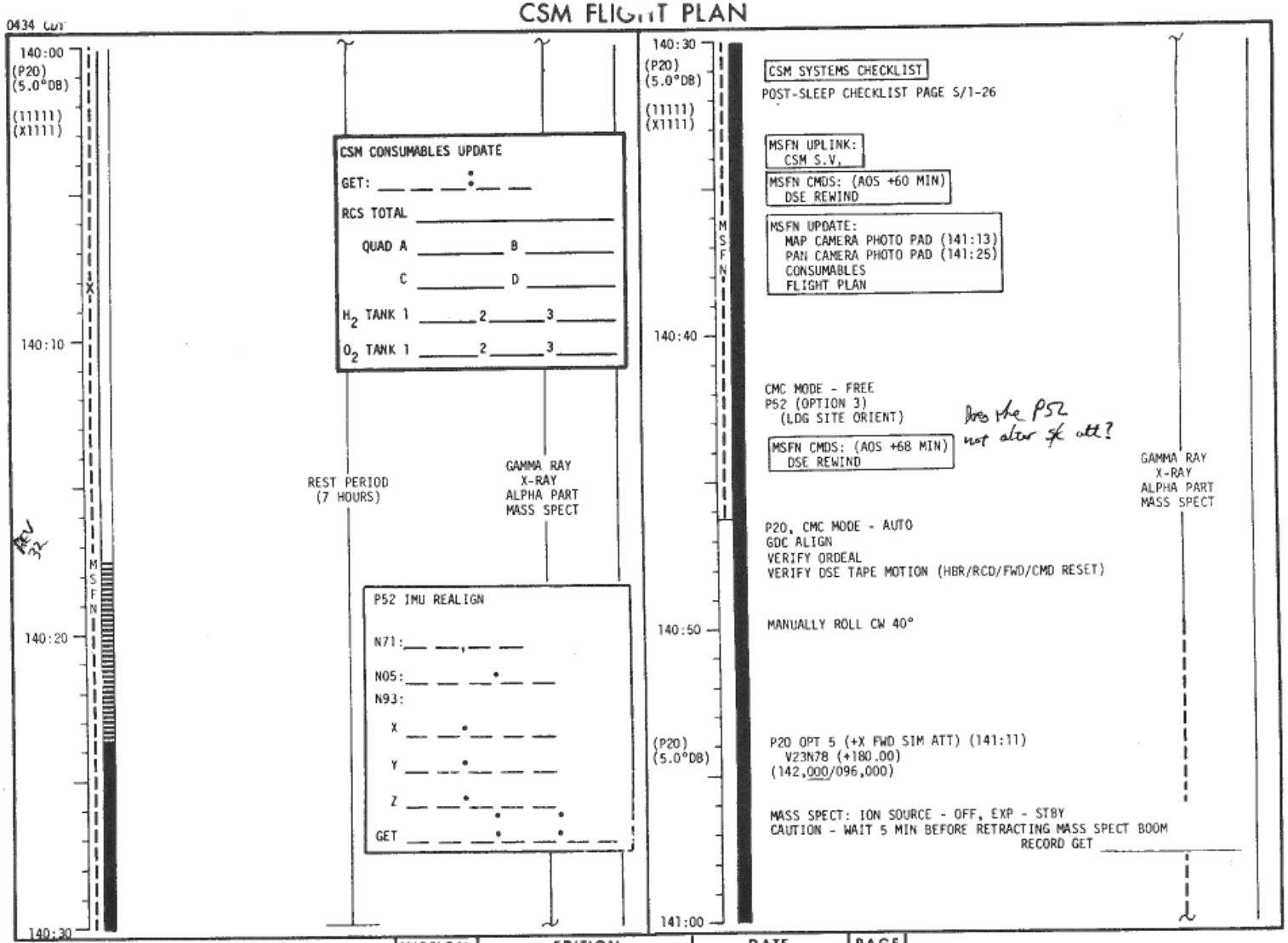
M S F N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	140:00 - 141:00	7/32	3-200

FLIGHT PLA[illegible]NG BRANCH

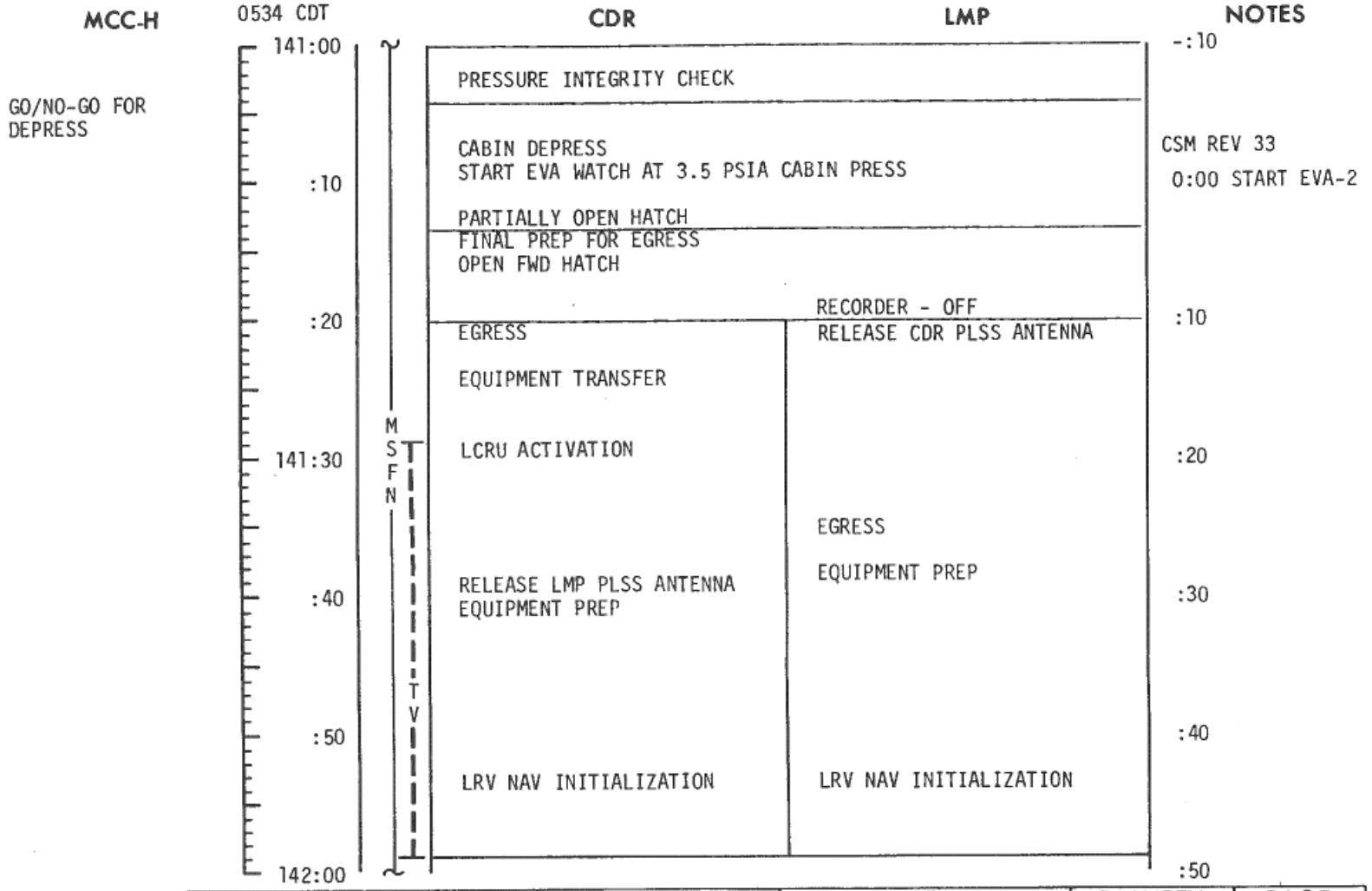
CSM FLIGHT PLAN

0434 GDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-201

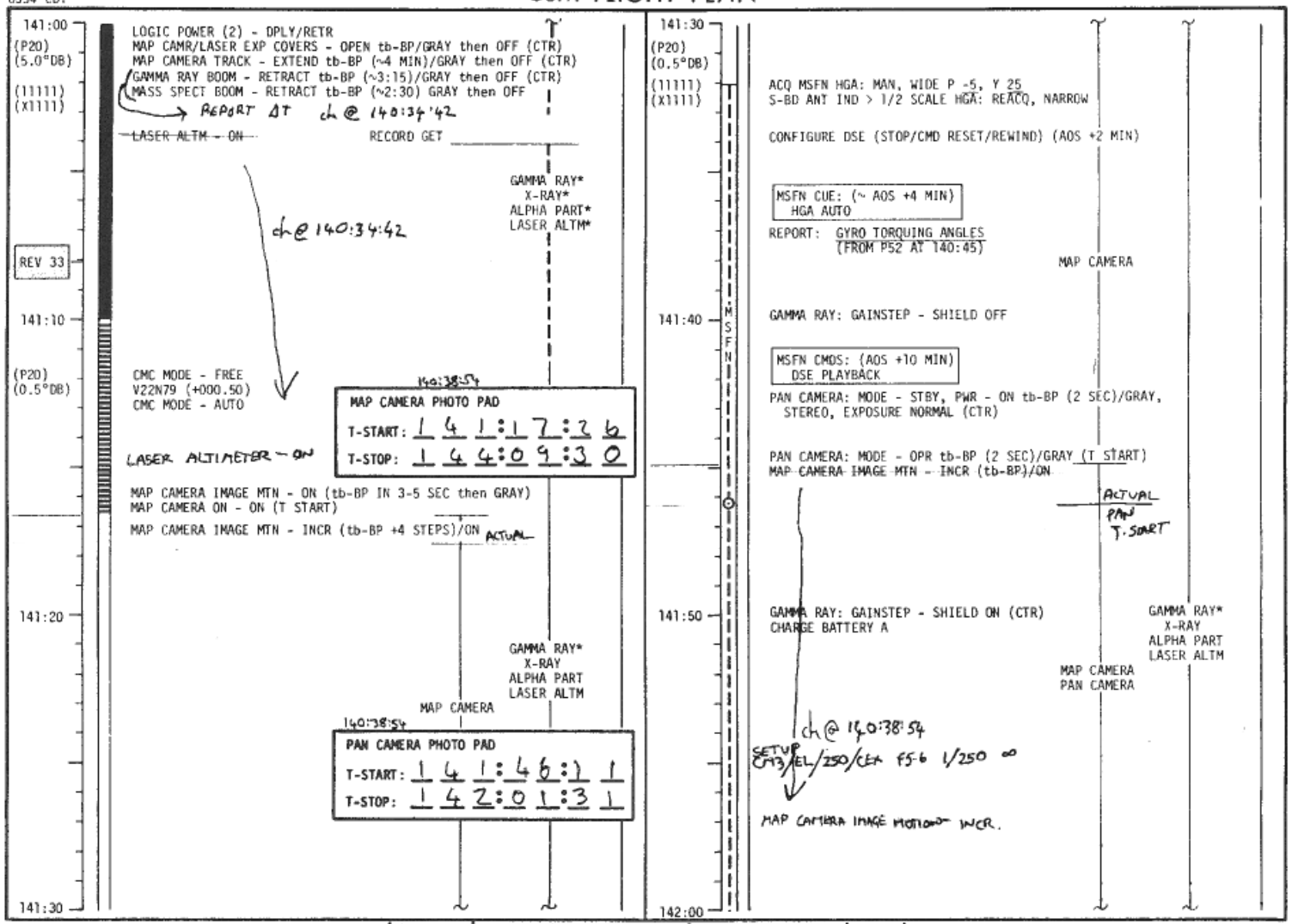
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	141:00 - 142:00	7/32-33	3-202

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-203

LM FLIGHT PLAN

MCC-H

0634 CDT

142:00	CDR	LMP	NOTES
	DRIVE TO STATION #4		:50
	OBSERVE SMOOTH MARE & SECONDARY CRATER CLUSTER CHARACTERISTICS PHOTOGRAPHY AS APPROPRIATE		
:10	CHECK POINT (2 MIN)		1:00
:20			1:10
142:30	STATION #4 SOIL/RAKE SAMPLE DOCUMENTED SAMPLES PAN 500mm PHOTOGRAPHY OF FRONT EXPLORATORY TRENCH		1:20
:40	OBSERVE CRATER INTERIOR & EJECTA COMPARE SECONDARY CRATER MATERIAL TO OTHER TERRAIN GEOLOGIC UNITS POSSIBLE CORE TUBE THROUGH SECONDARY EJECTA		1:30
:50	DRIVE TO FRONT OBSERVE SMOOTH MARE & SECONDARY CRATER CLUSTER CHARACTERISTICS		1:40
143:00	CHECK POINT (FRONT)		1:50

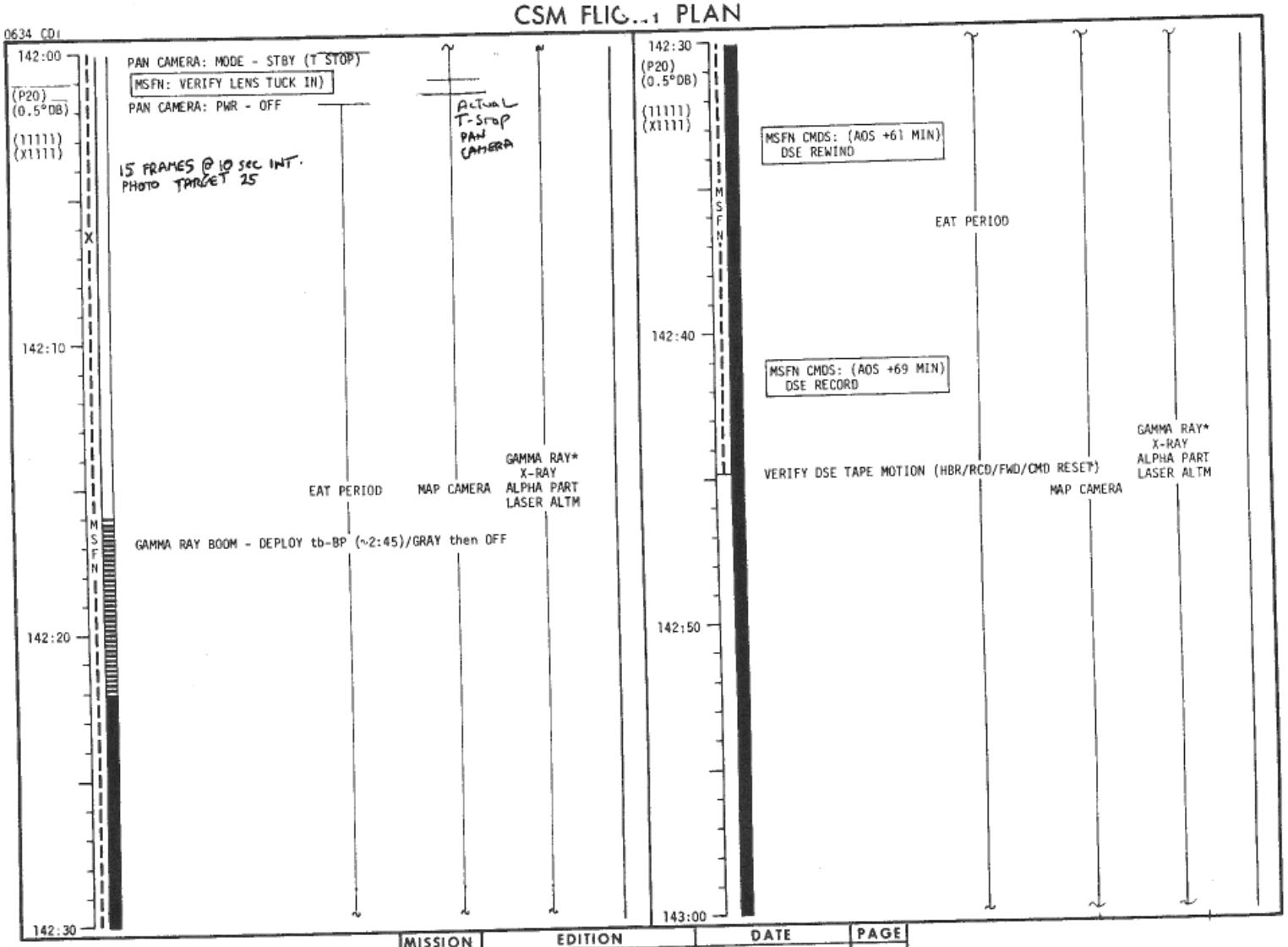
MSFN: X

TV

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	142:00 - 143:00	7/33	3-204

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-205

LM FLIGHT PLAN

MCC-H

0734 CDT

143:00	CDR	LMP	NOTES
	DRIVE TO STATION #5		1:50
	DETERMINE POSITION OF BASE OF FRONT AND SEARCH FOR OPTIMUM SAMPLING AREAS FOR STOPS ON RETURN		CSM REV 34
:10	PHOTOGRAPHY AS APPROPRIATE OBSERVE POSSIBLE DEBRIS FLOWS, DOWNSLOPE MOVEMENT, AND LOOK FOR SOURCE CHECK POINT (4 MIN)		2:00
:20	CHECK POINT (4 MIN)		2:10
143:30			2:20
:40	STATION #5 DOCUMENTED SAMPLES FROM UPSLOPE SIDE AND NORTHERN RIM OF FRONT CRATER STEREO PAN EXPLORATORY TRENCH UPSLOPE OF FRONT CRATER 500MM PHOTOGRAPHY OF TARGETS OF OPPORTUNITY DC STEREO PAIRS UPSLOPE AT TARGETS OF OPPORTUNITY		2:30
:50			2:40
144:00			2:50

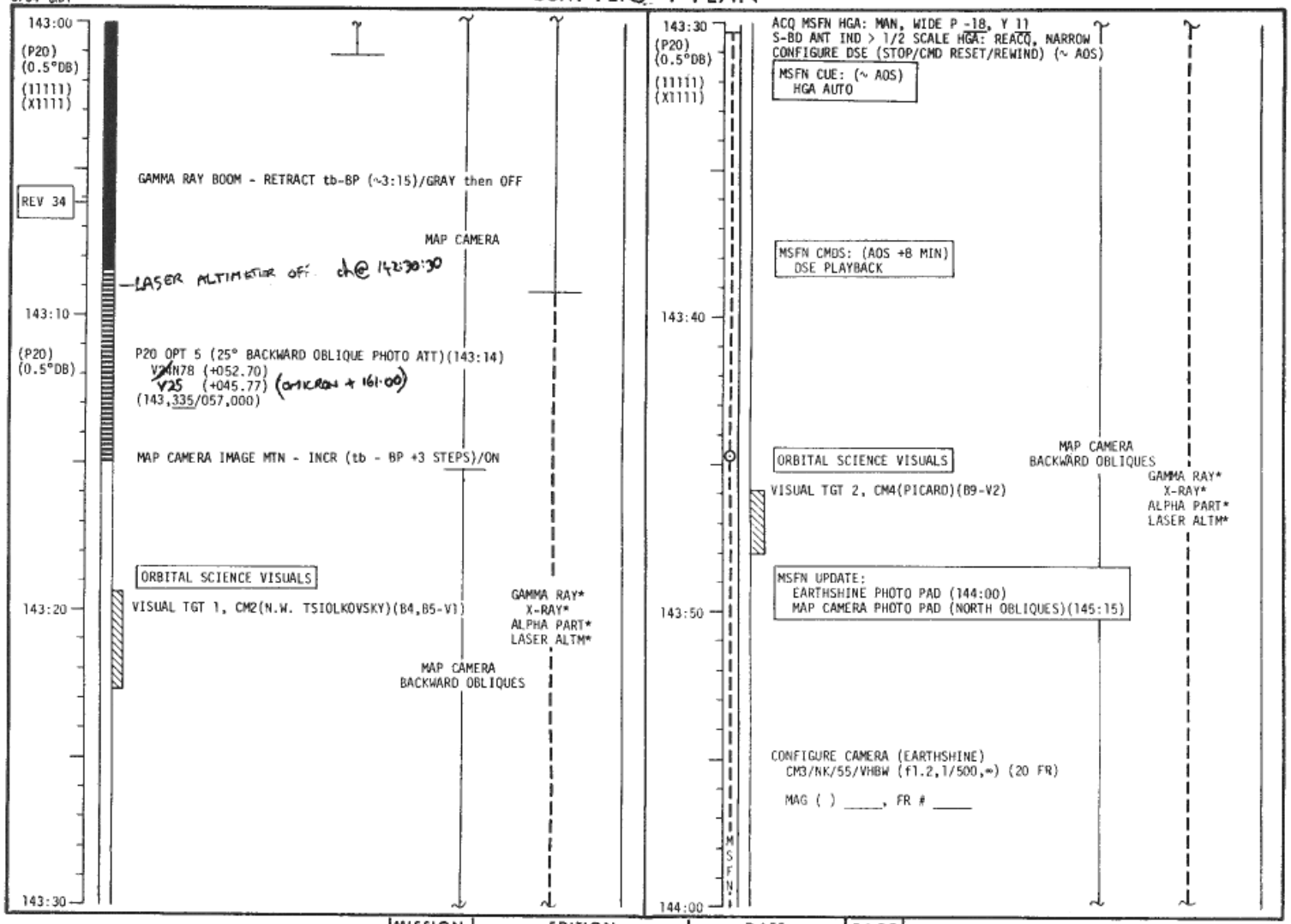
MSFN

TV

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	143:00 - 144:00	7/33-34	3-206

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



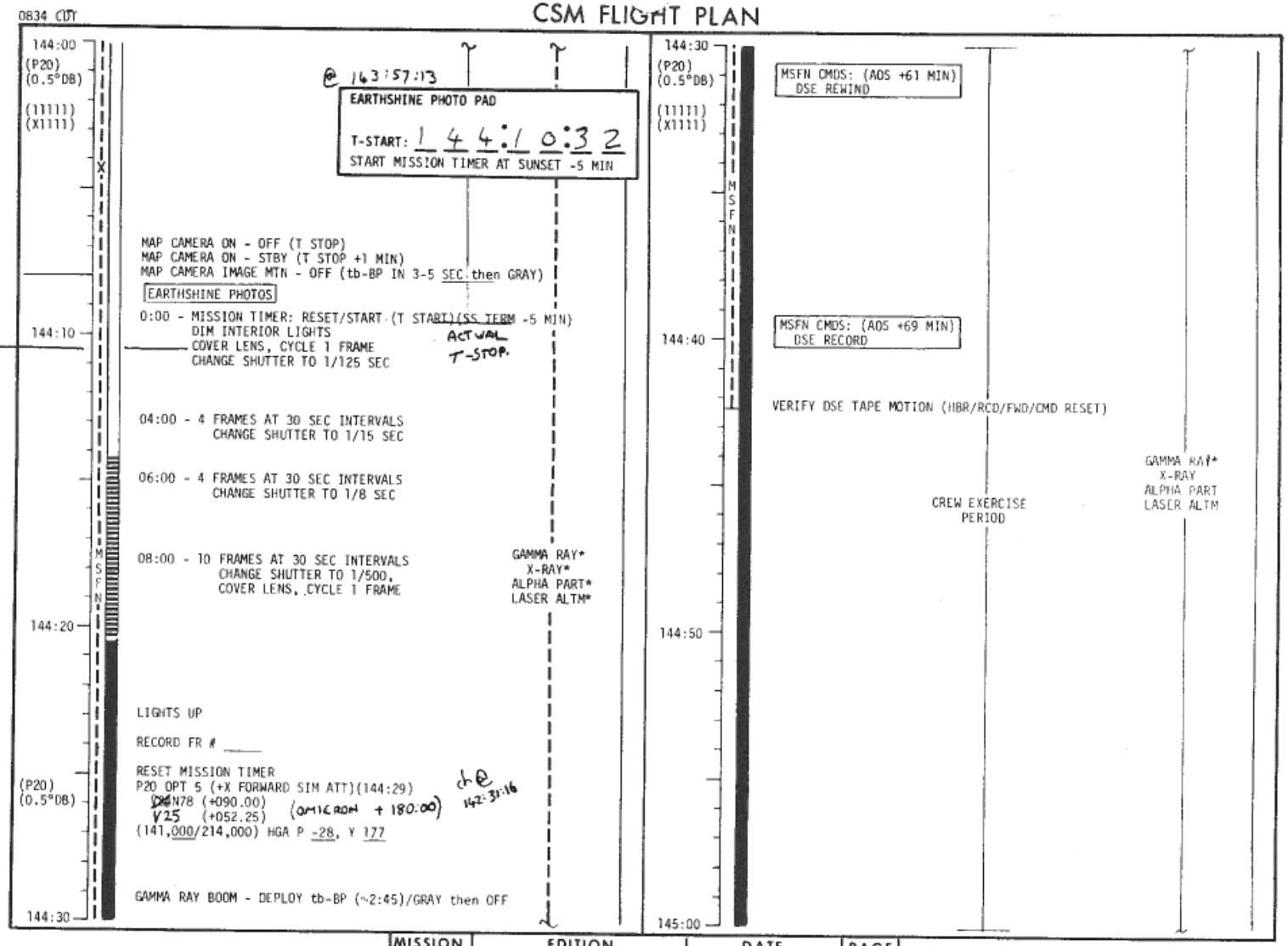
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-207

LM FLIGHT PLAN

0834 CDT

GET		CDR / LMP	NOTES
144:00	X		2:50
:10	TV		3:00
:20			3:10
	MSFN	**DRIVE TO STATION #6** OBSERVE LATERAL VARIATIONS IN MATERIAL & SURFACE TEXTURES SEARCH FOR BLOCKY AREAS ALONG FRONT WHICH ARE SUITABLE FOR SAMPLING PHOTOGRAPHY AS APPROPRIATE	
144:30			3:20
:40			3:30
		STATION #6 DOCUMENTED SAMPLES OF FRONT MATERIAL PAN EXPLORATORY TRENCH 500MM PHOTOGRAPHY OF BLOCKS, OUTCROPS, ETC. DC STEREO PAIRS OF TARGETS OF OPPORTUNITY DESCRIPTION OF FRONT COMPARISON OF FRONT AND MATERIAL TO OTHER SURFACE UNITS POSSIBLE CORE TUBE	
:50	TV		3:40
145:00			3:50

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-209

LM FLIGHT PLAN

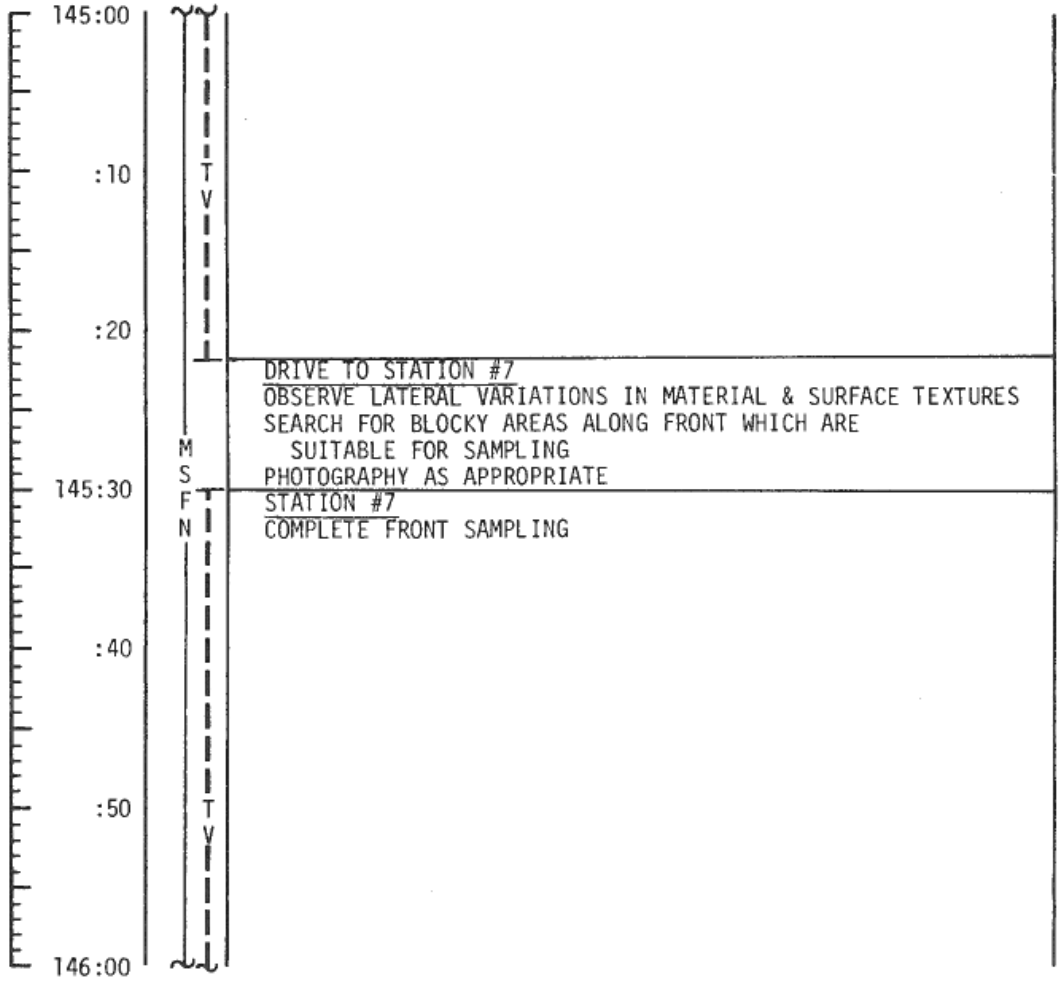
MCC-H

0934 CDT

CDR

LMP

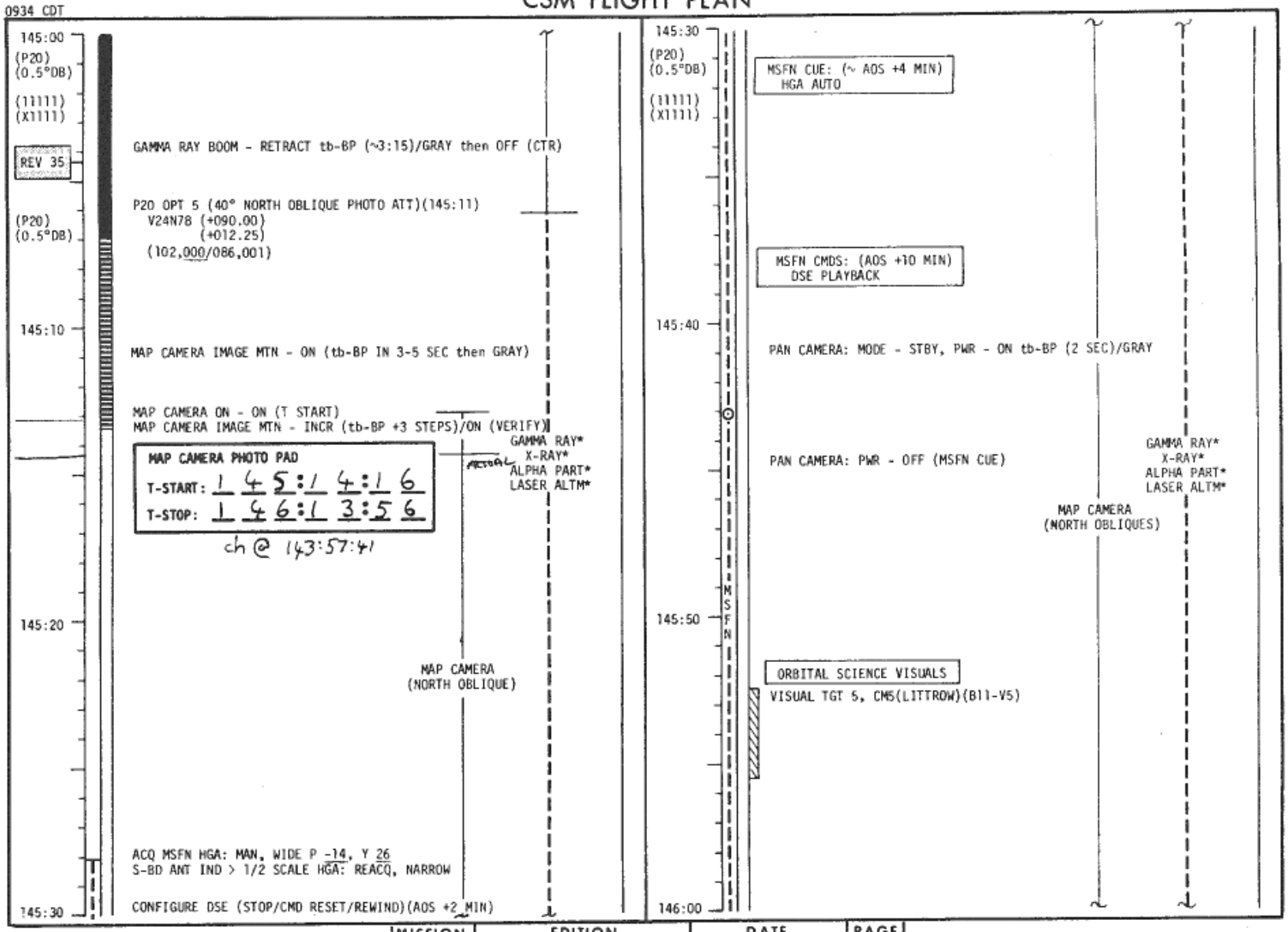
NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	145:00 - 146:00	7/34-35	3-210

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-211

LM FLIGHT PLAN

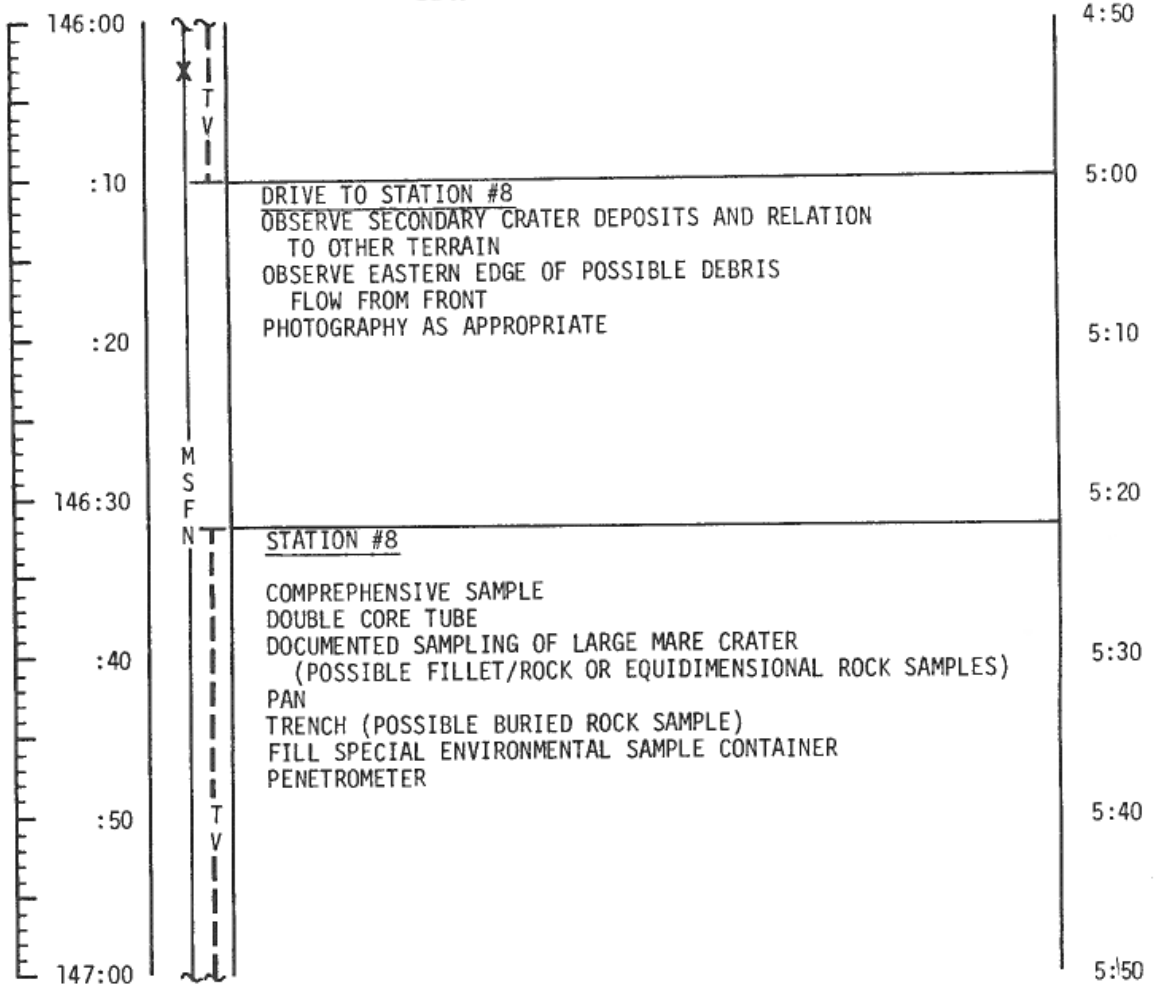
MCC-H

1034 CDT

CDR

LMP

NOTES



DRIVE TO STATION #8
OBSERVE SECONDARY CRATER DEPOSITS AND RELATION
TO OTHER TERRAIN
OBSERVE EASTERN EDGE OF POSSIBLE DEBRIS
FLOW FROM FRONT
PHOTOGRAPHY AS APPROPRIATE

STATION #8

COMPREPHENSIVE SAMPLE
DOUBLE CORE TUBE
DOCUMENTED SAMPLING OF LARGE MARE CRATER
(POSSIBLE FILLET/ROCK OR EQUIDIMENSIONAL ROCK SAMPLES)
PAN
TRENCH (POSSIBLE BURIED ROCK SAMPLE)
FILL SPECIAL ENVIRONMENTAL SAMPLE CONTAINER
PENETROMETER

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	146:00 - 147:00	7/35	3-212

FLIGHT PLA[illegible]NG BRANCH

CSM FLIGHT PLAN

1034 CD

146:00
(P20)
(0.5°DB)
(11111)
(X1111)

L10H CANISTER CHANGE
(12 INTO B, STOW 10 IN A9)

GAMMA RAY*
X-RAY*
ALPHA PART*
LASER ALTM*

MAP CAMERA
(NORTH OBLIQUE)

146:10

MAP CAMERA ON - OFF (T STOP)
MAP CAMERA ON - STBY (T STOP +1 MIN)
MAP CAMERA IMAGE MTN - OFF (tb-BP IN 3-5 SEC then GRAY)
RECORD GET _____
~~LASER ALTM - OFF~~ ch@ 142:31:52
ACTUAL

(11111)
(X1111)
(11102)
(X1111)

CMC MODE - FREE
P00
V48 (11102)
(X1111)
CMC MODE - AUTO

V49 MNVR TO DEEP SPACE MEAS./GEGENSCHEIN CAL (146:24)
(306,214,052) HGA P -12, Y 145

146:20

CONFIGURE CAMERA: (GEGENSCHEIN CALIBRATION)
CM5/NK/55/VHBW (f1.2,1/500,∞)(4 FR)

MAG ( ) _____, FR # _____

GAMMA RAY: GAINSTEP - SHIELD OFF

CONFIGURE FOR URINE DUMP

DUMP DOWN TO
10 PERCENT
ch@ 146:18:24

GAMMA RAY*
X-RAY*
ALPHA PART*

146:30

MSFN

146:30
(11102)
(X1111)

MSFN CMDS: (AOS +61 MIN)
DSE REWIND

GAMMA RAY: GAINSTEP - SHIELD ON (CTR)

GEGENSCHEIN CALIBRATION

DAMP RATES
VERIFY FDAI SCALE 5/1
WAIT 5 MIN FOR RATES TO DAMP

REMOVE CM5 WINDOW COVER

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

GAMMA RAY*
X-RAY*
ALPHA PART*

146:40

VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)

VERIFY RATES ARE <0.2°/SEC IN ALL AXES
CMC MODE - FREE
DIM INTERIOR LIGHTS
CYCLE 1 FRAME, CHANGE SHUTTER TO T
1 FRAME, EXP TIME 1 MIN
1 FRAME, EXP TIME 3 MIN

CHANGE SHUTTER TO 1/500
CYCLE 1 FRAME, LIGHTS UP
CMC MODE - AUTO

RECORD FR #
REPLACE CM5 WINDOW COVER

RECORD GET _____

X-RAY - STBY

PCM BIT RATE - LOW/CMD RESET

146:50

MAP CAMERA TRACK - RETRACT tb-BP (~4 MIN)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

GAMMA RAY*
ALPHA PART*

MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

O_2 FUEL CELL PURGE
WASTE WATER DUMP
URINE DUMP

147:00

LM FLIGHT PLAN

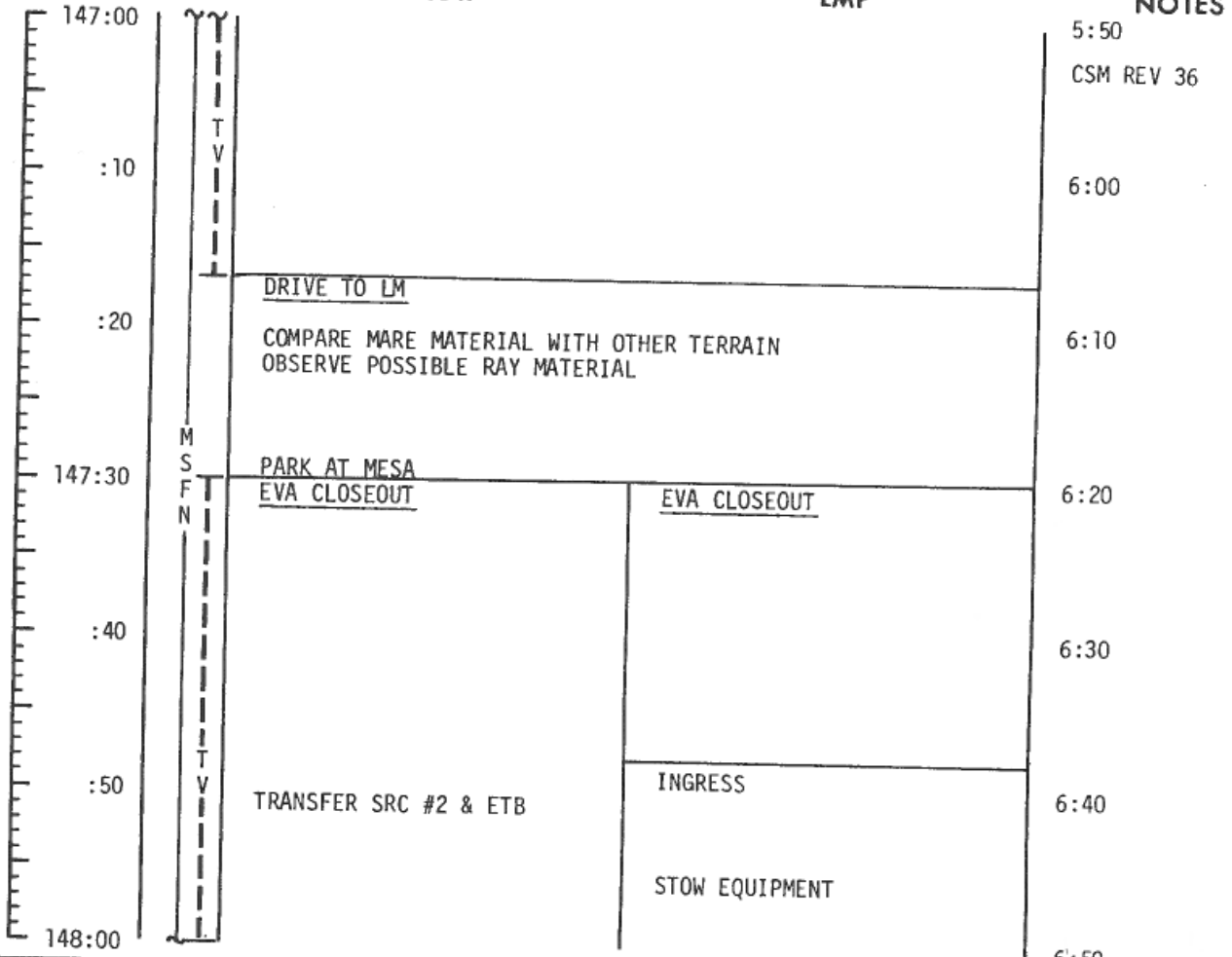
MCC-H

1134 CDT

CDR

LMP

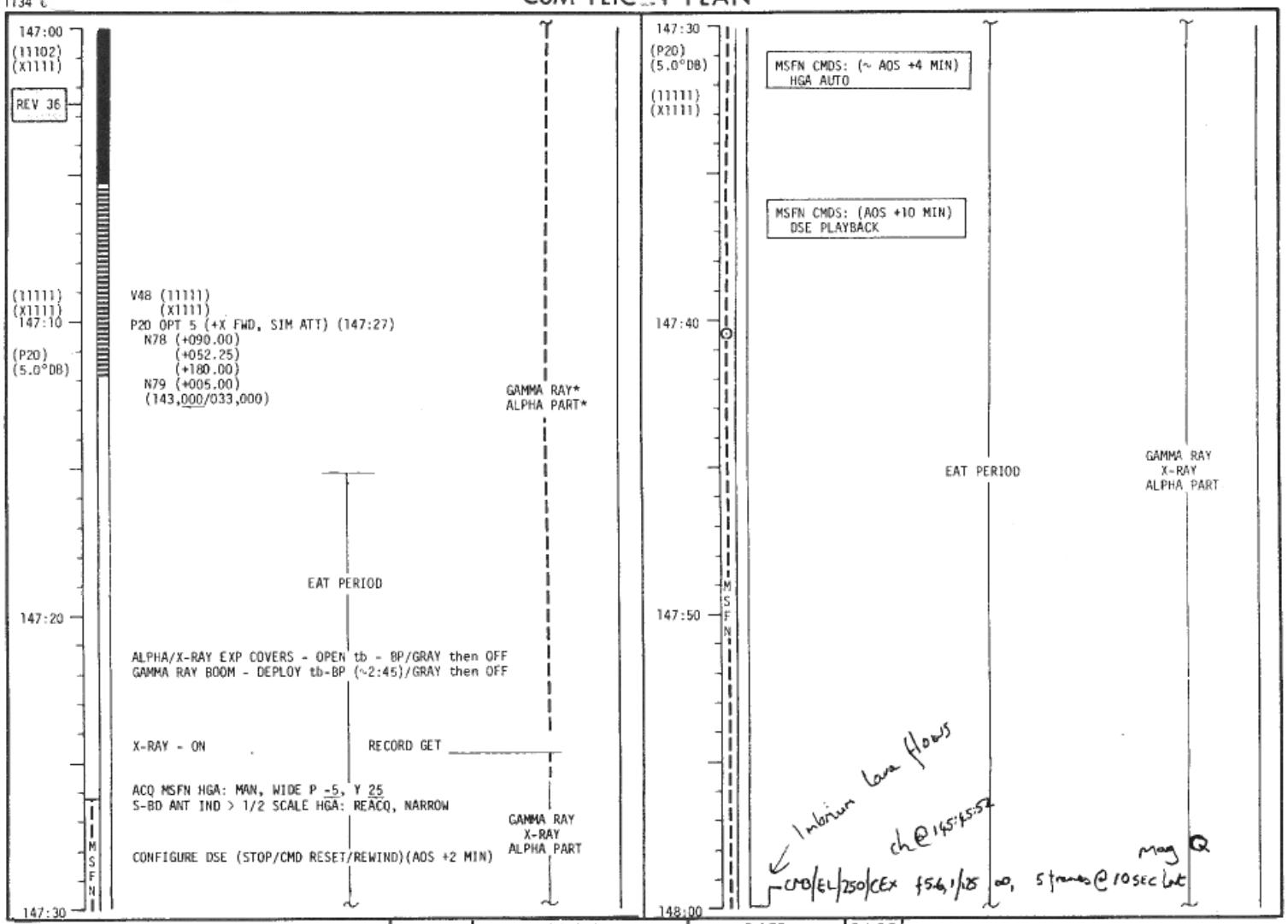
NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	147:00 - 148:00	7/35-36	3-214

FLIGHT PLA[illegible]NG BRANCH

CSM FLI..t PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-215

LM FLIGHT PLAN

MCC-H

1234 CDT

148:00	CDR	LMP	NOTES
			6:50
	INGRESS LM REPRESSURIZE CABIN	CLOSE HATCH	
:10	POST EVA SYSTEMS CONFIGURATION CONFIGURE LM ECS DOFF HELMETS AND GLOVES CONNECT LM ECS HOSES TO SUIT CONNECT TO LM COMM BIOMED - RIGHT		7:00 END EVA-2
:20	PLSS O_2 INITIAL RECHARGE		+:10
148:30	PLSS/OPS DOFFING DISCONNECT OPS & RCU FROM PLSS LMP, THEN CDR DOFF PLSS/OPS REPLACE PLSS BATTERIES AND LiOH CARTRIDGES		+:20
:40	STOW OPS'S, PLSS'S & RCU'S		+:30
:50	POST EVA CABIN CONFIGURATION BATS 1,2 - OFF/RESET, LUNAR BAT (LMP) - ON CHECK BUS VOLTS UNSTOW LUNAR SURFACE CHECKLIST, STOW EVA-2 PREP & POST CARD		+:40
149:00	UNSTOW SCALE		+:50

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	148:00 - 149:00	7/36	3-216

FLIGHT PLA' 'NG BRANCH

CSM FLIGHT PLAN

1234 CDT

148:00
(P20)
(5.0°DB)
(11111)
(X1111)

148:10

148:20

148:30

EAT PERIOD

P52 IMU REALIGN

N71: ___ ___, ___ ___

N05: ___ ___ ___.___ ___

N93:

X ___ ___.___ ___ ___

Y ___ ___.___ ___ ___

Z ___ ___.___ ___ ___.

GET ___ ___ ___.___ ___.___ ___

MSFN UPDATE:
ZODIACAL LIGHT PHOTO PAD (148:33)

GAMMA RAY
X-RAY
ALPHA PART

CMC MODE ~~FREE~~
P52 (OPTION 3)
(LDG SITE ORIENT)

P52 deleted @ 145:45:57
platform was good

REPORT: GYRO TORQUING ANGLES

P20, CMC MODE - AUTO
GDC ALIGN
VERIFY ORDEAL

CONFIGURE CAMERA: (ZODIACAL LIGHT)
INSTALL CAMERA SHIELD
CM4/NK/55/VHBW-BRKT (f1.2,1/500,∞)(27 FR)

MAG( ) ____, FR # ____

MSFN CMDS: (AOS +61 MIN)
DSE REWIND

148:30
(P20)
(5.0°DB)
(11111)
(X1111)

148:40

148:50

149:00

ZODIACAL LIGHT PHOTOS

sent @ 148:14:14

ZODIACAL LIGHT PHOTO PAD

T-START: 148:36:26
START MISSION TIMER AT SUNRISE -30 MIN

0:00 - MISSION TIMER: RESET/START (T START)(SR -30 MIN)
DIM INTERIOR LIGHTS

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)

CMC MODE - FREE
CYCLE 1 FRAME, CHANGE SHUTTER TO T
5:00 - 1 FRAME, EXP TIME 2 MIN (SR -25 MIN)

1 FRAME, EXP TIME 30 SEC

8:20 - 1 FRAME, EXP TIME 2 MIN (SR -21:40)

1 FRAME, EXP TIME 30 SEC
11:40 - 1 FRAME, EXP TIME 90 SEC (SR -18:20)
1 FRAME, EXP TIME 30 SEC
1 FRAME, EXP TIME 10 SEC

GAMMA RAY
X-RAY
ALPHA PART

15:00 - 1 FRAME, EXP TIME 90 SEC (SR -15 MIN)
1 FRAME, EXP TIME 30 SEC
1 FRAME, EXP TIME 10 SEC
CHANGE SHUTTER TO 1/500, CYCLE 1 FRAME
CMC MODE - AUTO
IF RATES HAVE NOT SETTLED BY 18:20, DELETE THAT SEQUENCE
CMC MODE - FREE
CYCLE 1 FRAME, CHANGE SHUTTER TO T
18:20 - 1 FRAME, EXP TIME 60 SEC
1 FRAME, EXP TIME 20 SEC
1 FRAME, EXP TIME 8 SEC

21:40 - 1 FRAME, EXP TIME 60 SEC
1 FRAME, EXP TIME 20 SEC
1 FRAME, EXP TIME 8 SEC

25:00 - 1 FRAME, EXP TIME 30 SEC
1 FRAME, EXP TIME 10 SEC
1 FRAME, EXP TIME 4 SEC

LM FLIGHT PLAN

MCC-H

1334 CDT

149:00	CDR	LMP	NOTES
	WEIGH SRC & COLLECTION BAGS, REPORT WEIGHTS TO MCC-H		+:50 CSM REV 37
	STOW SCALE, SRC & COLLECTION BAG		
:10	DOFF SUITS	BIOMED - OFF	+1:00
	CDR, THEN LMP DOFF PGA & LCG, DON CWG & ICG		
	STOW PGA ON AFT ENGINE COVER AND DRY		
:20			+1:10
149:30	LMP DOFF BIOMED HARNESS (IF DESIRED)		+1:20
:40		BIOMED - LEFT	
	PLSS O_2 & H_2O RECHARGE		+1:30
	CONNECT LM O_2 SUPPLY TO CDR PLSS AND FILL (10 MIN)		
:50			
	VHF VOICE CHECK		
	CONNECT LM H_2O SUPPLY TO CDR PLSS AND FILL (3 MIN)		
	CONNECT LM O_2 SUPPLY TO LMP PLSS AND FILL (10 MIN)		
150:00			

M S F N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	149:00 - 150:00	7/36-37	3-218

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

1334 GET

149:00
REV 37
(P20)
(5.0°DB)
(11111)
(X1111)

29:00 - 1 FRAME, EXP TIME 1/8
29:15 - 1 FRAME, EXP TIME 1/15
29:30 - 1 FRAME, EXP TIME 1/30
29:45 - 1 FRAME, EXP TIME 1/60

CHANGE SHUTTER TO 1/500
CYCLE 1 FRAME
LIGHTS UP
CMC MODE - AUTO

RECORD FR # _____
REMOVE CAMERA SHIELD

RESET MISSION TIMER

149:10

GAMMA RAY
X-RAY
ALPHA PART

CONFIGURE CAMERA: (ORBITAL SCIENCE)
CM/EL/250/LBW (f5.6,1/125,∞) (19 FR)

MAG (S) _____, FR # _____

ORBITAL SCIENCE PHOTOS

149:20

PHOTO TGT 9 (MEITNER)(C5,C6-P9)
CM3 (f5.6,1/125,∞) 19 FR AT 10 SEC INTERVALS

ACQ MSFN HGA: MAN, WIDE P -5, Y 25
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW

CONFIGURE DSE (STOP/CMD RESET/REWIND)(AOS +2 MIN)

MSFN CUE: (AOS +4 MIN)
HGA AUTO

149:30

149:30
(P20)
(5.0°DB)
(11111)
(X1111)

CONFIGURE CAMERA: (ORBITAL SCIENCE)
CM/EL/80/LBW (f4,1/250,∞)(15 FR)

MAG (S) _____, FR # _____

MSFN CMDS: (AOS +10 MIN)
DSE PLAYBACK

CONFIGURE FOR VHF COMM CHECK WITH LM
~~VHF AM B - DUPLEX (VERIFY)~~
~~VHF AM - T/R (PANEL 9)~~
VHF AM A ~~SIMPLEX~~
VHF AM B - OFF
~~change~~ @120:36:10
CANCELLED @149:34:16

MODE - VOX

149:40

PHOTO TGT 17 (W. CRISIUM)(C10,C11-P17)
CM3 (f4,1/250,∞) 15 FR AT 35 SEC INTERVALS

GAMMA RAY
X-RAY
ALPHA PART

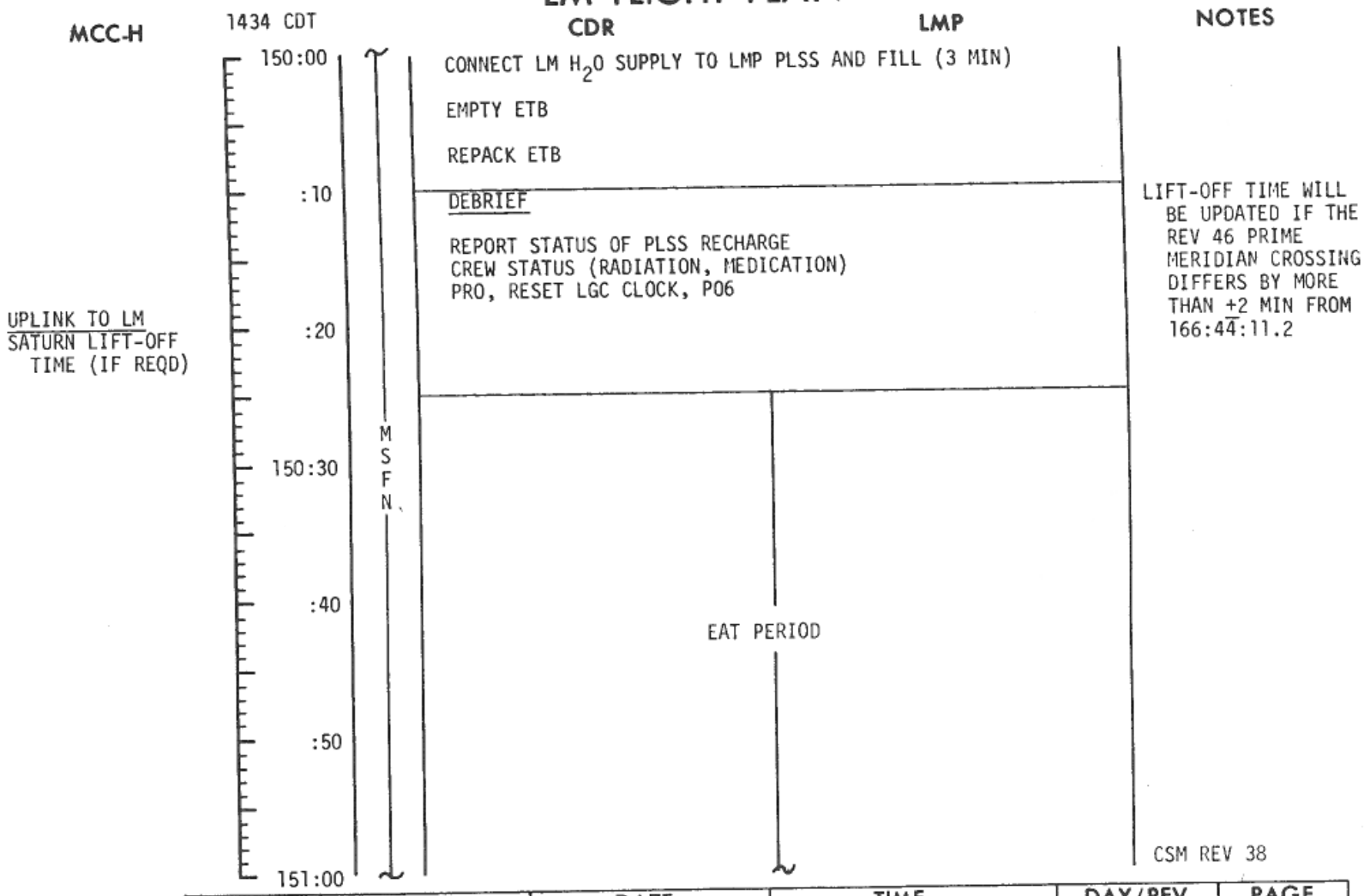
149:50

RECORD FR # _____

150:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-219

LM FLIGHT PLAN

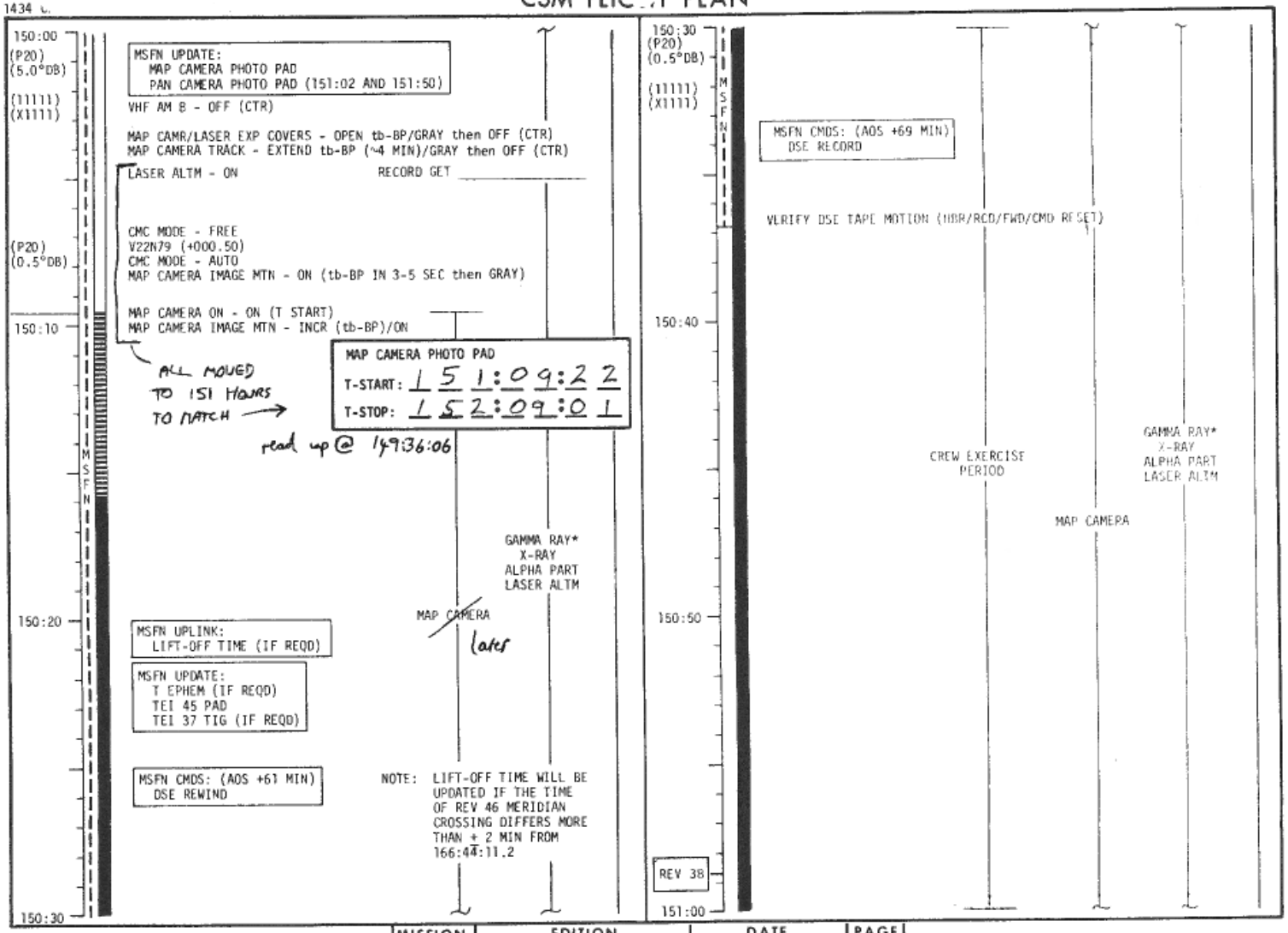


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	150:00 - 151:00	7/37-38	3-220

FLIGHT P' NNING BRANCH

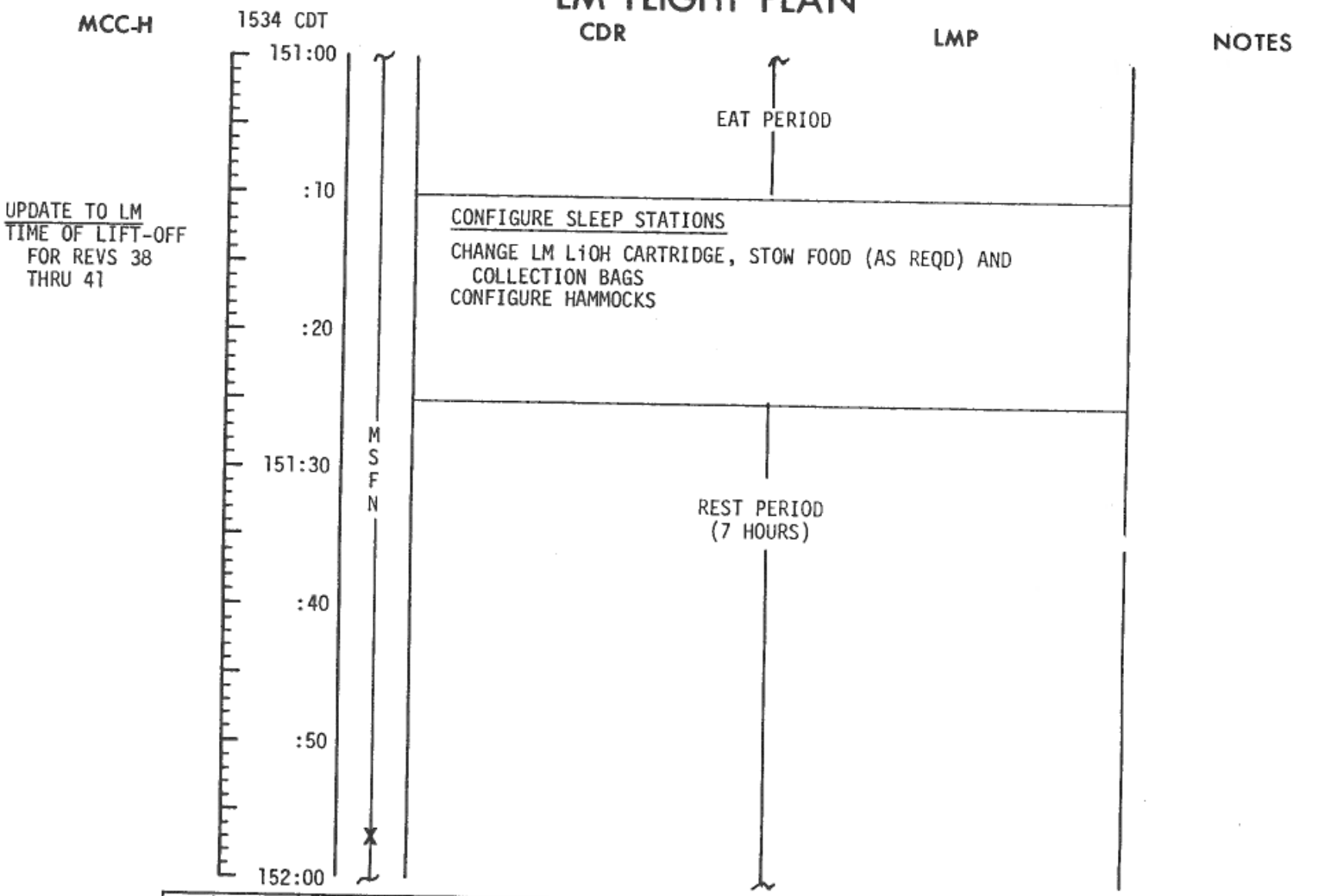
1434 c.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-221

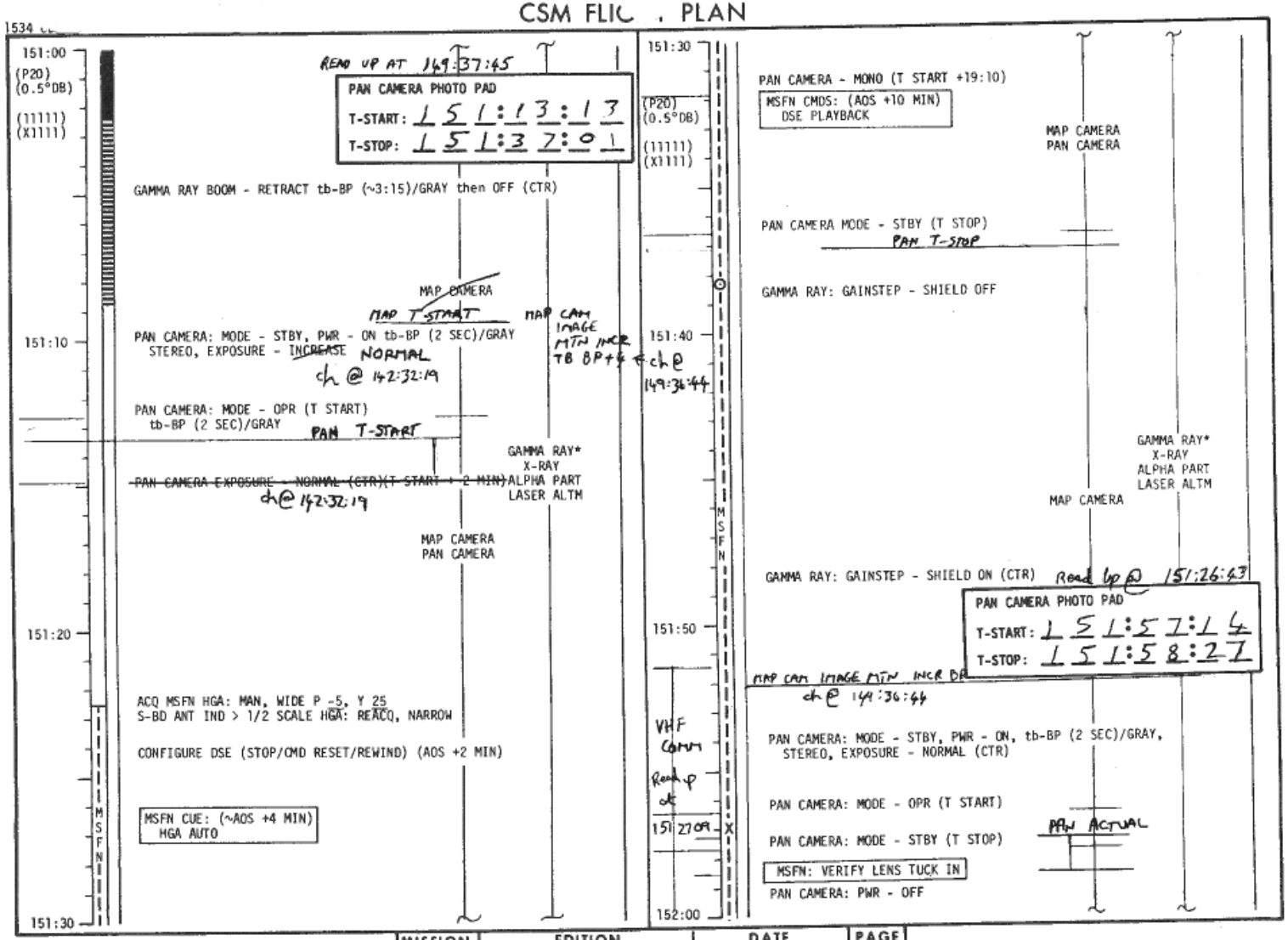
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	151:00 - 152:00	7/38	3-222

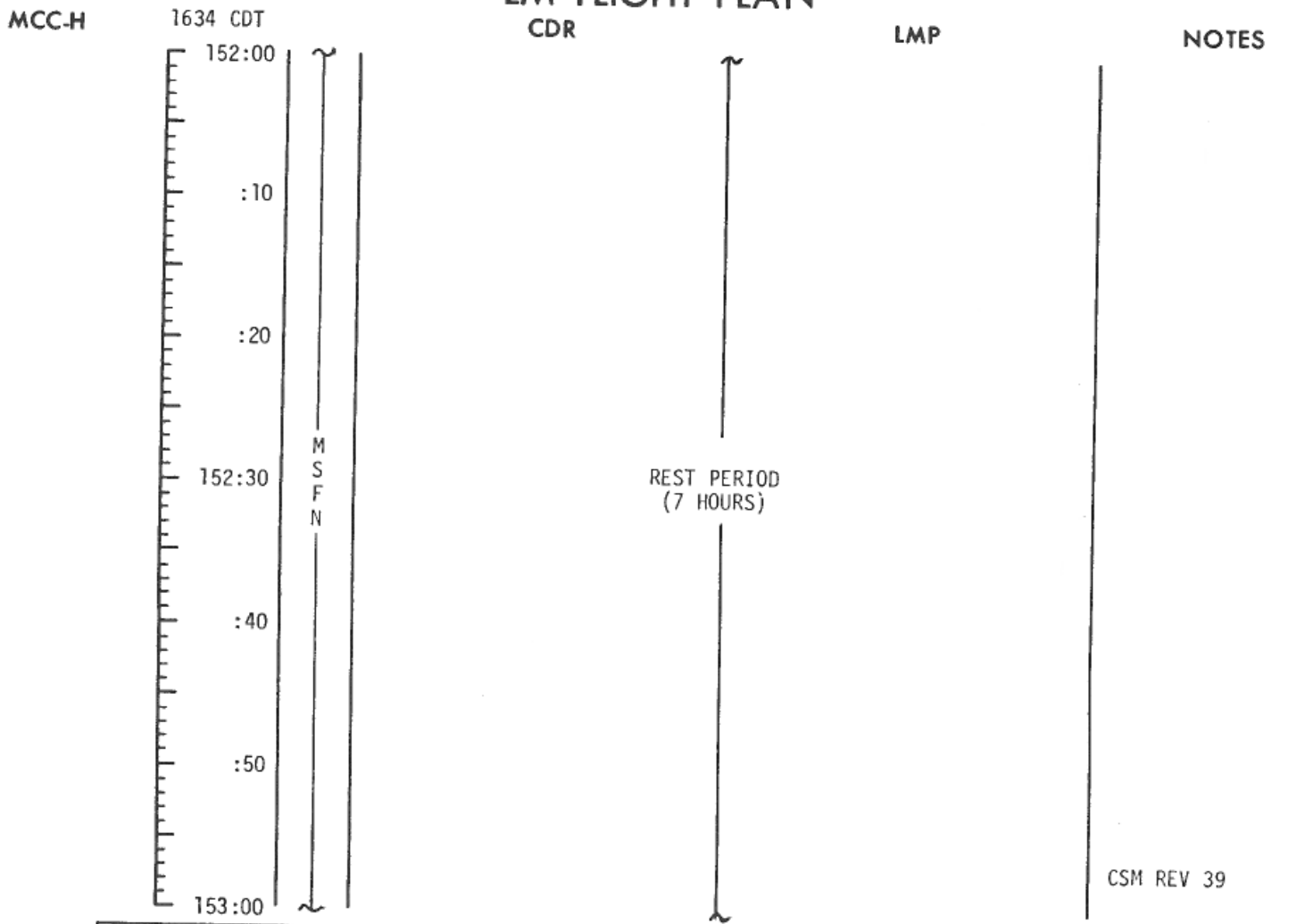
FLIGHT [illegible]NNING BRANCH

CSM FLIC . PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-223

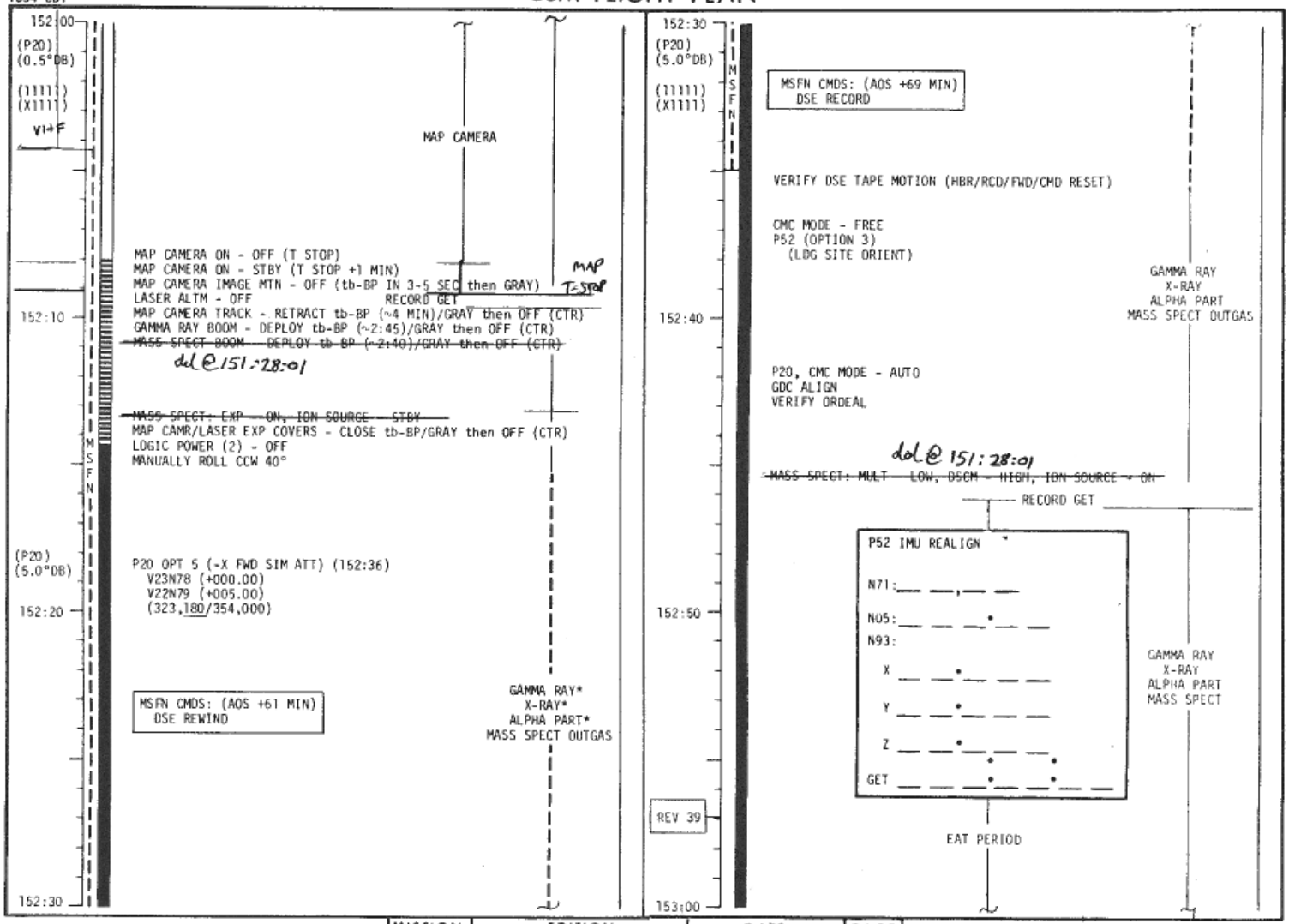
LM FLIGHT PLAN



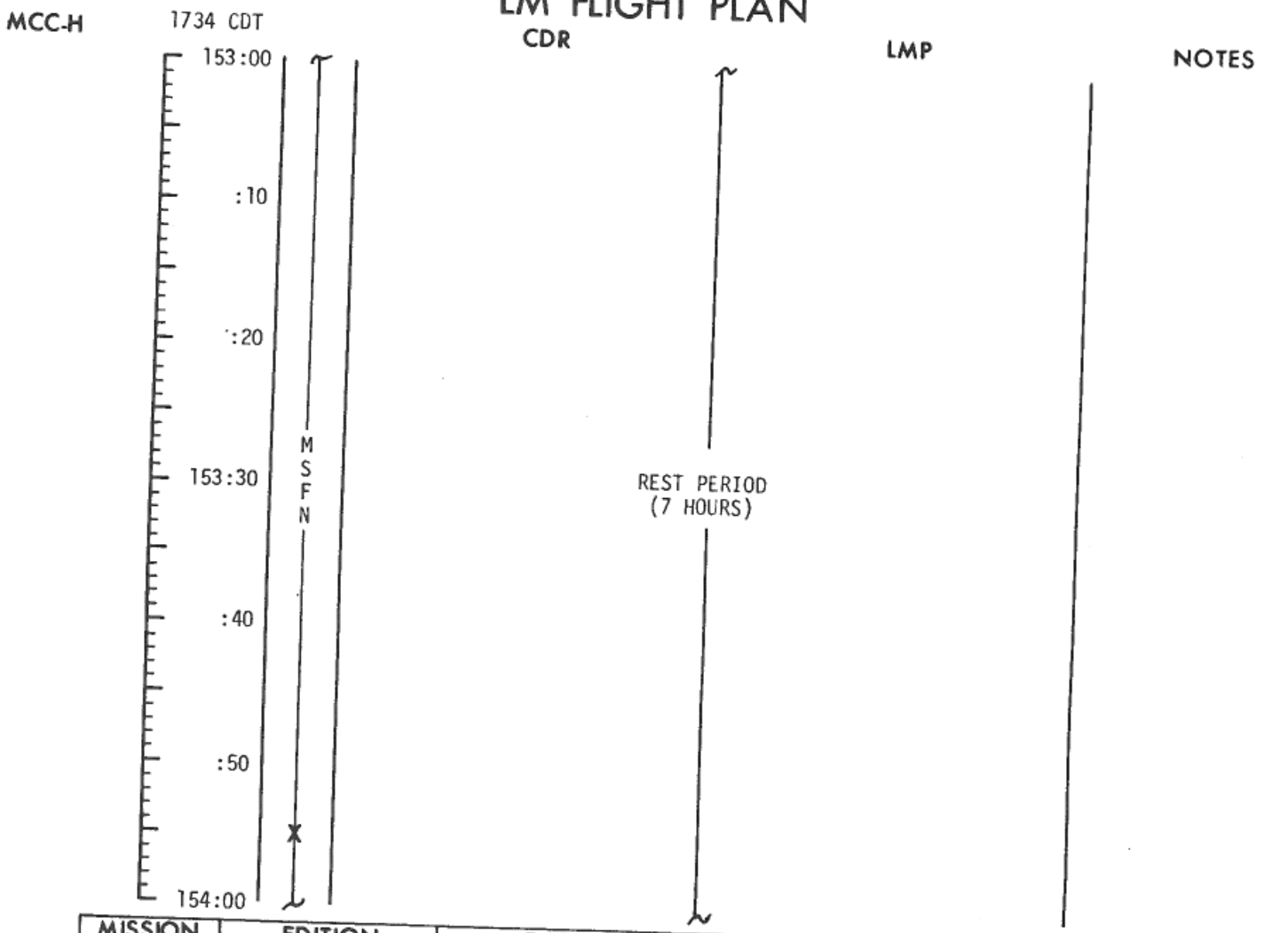
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	152:00 - 153:00	7/38-39	3-224

FLIGHT PLA' 'NG BRANCH

CSM FLIGHT PLAN



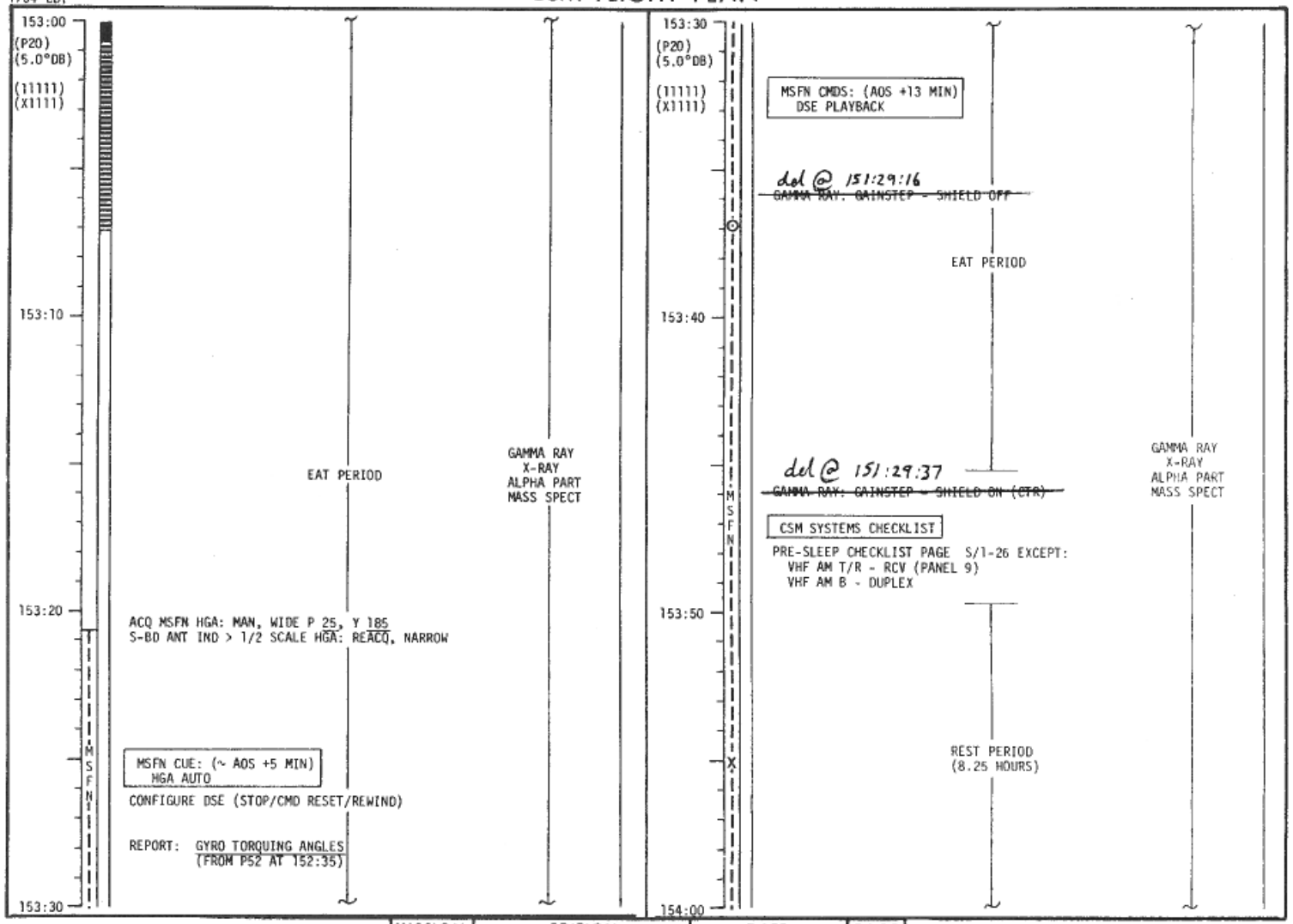
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	153:00 - 154:00	7/39	3-226

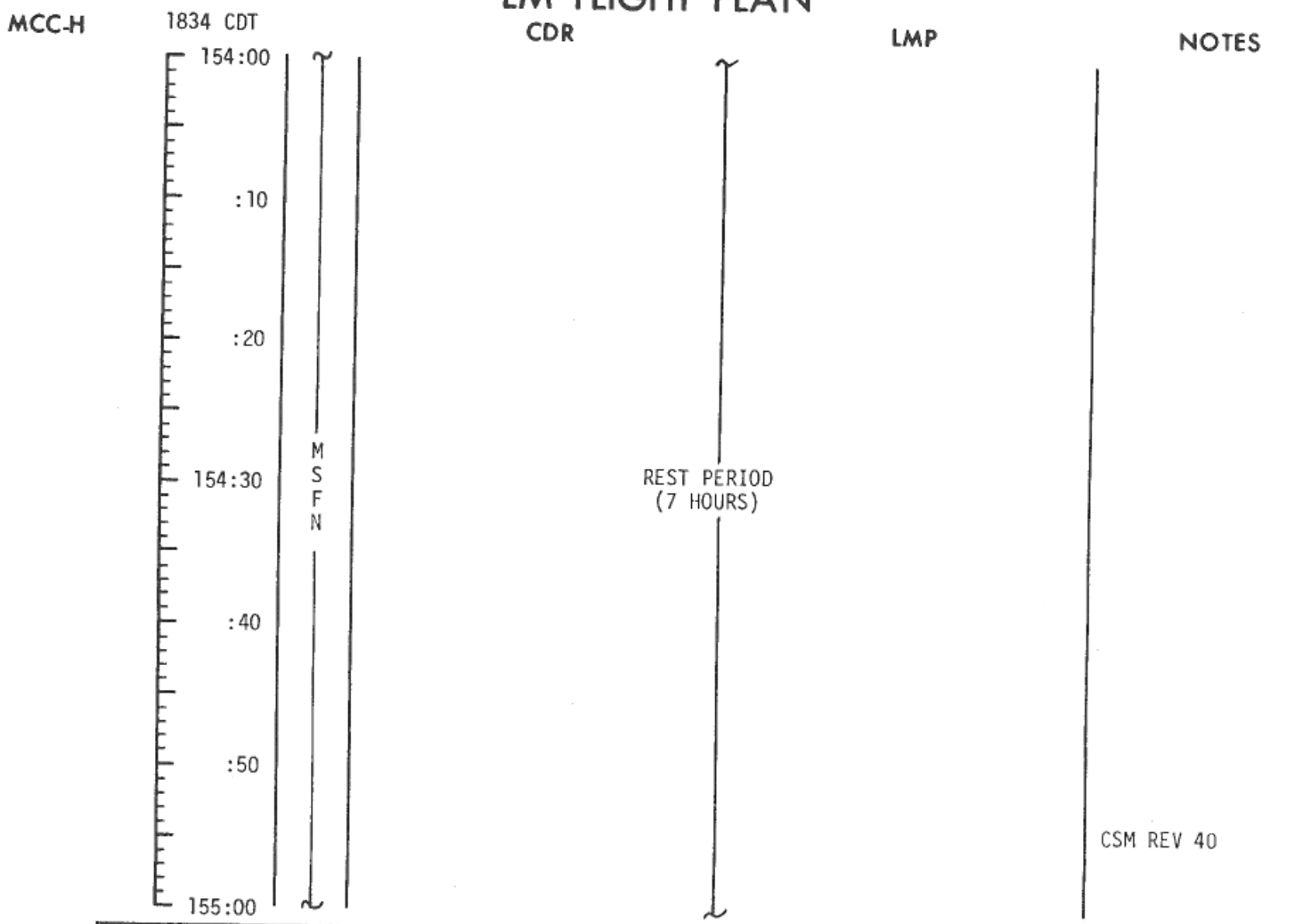
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-227

LM FLIGHT PLAN

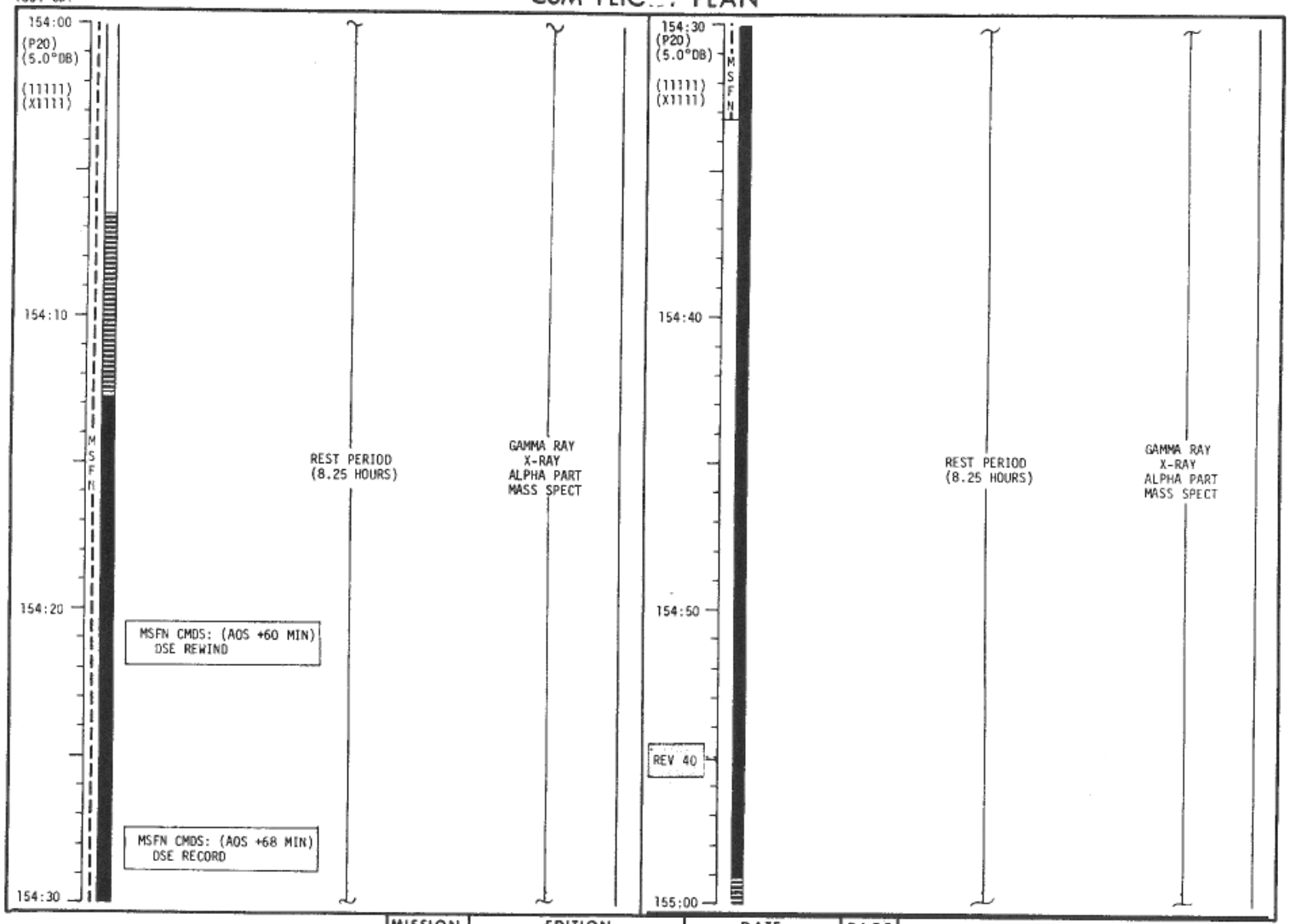


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	154:00 - 155:00	7/39-40	3-228

FLIGHT PLANNING BRANCH

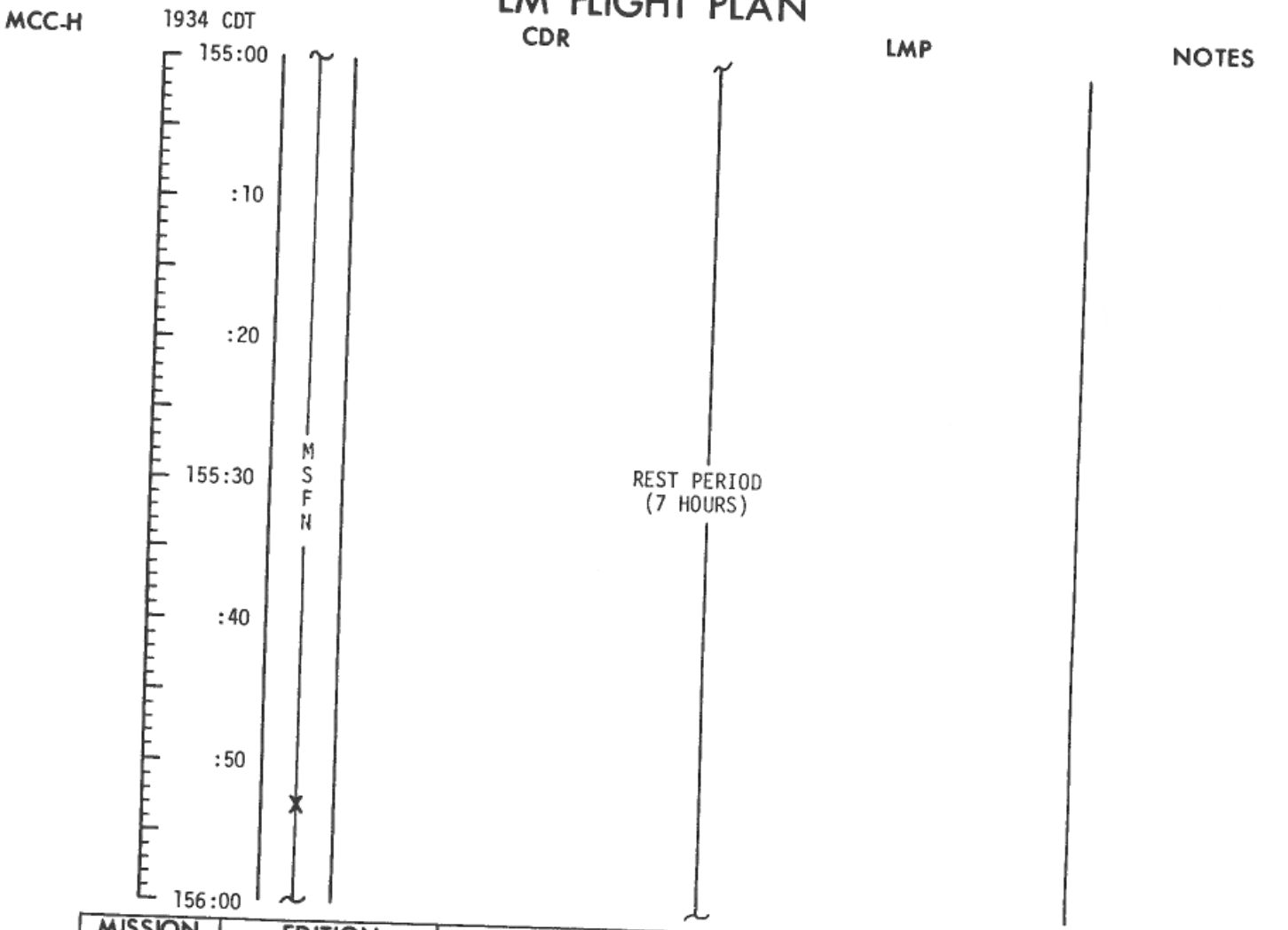
1834 Cp.

CSM FLIC... PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-229

LM FLIGHT PLAN

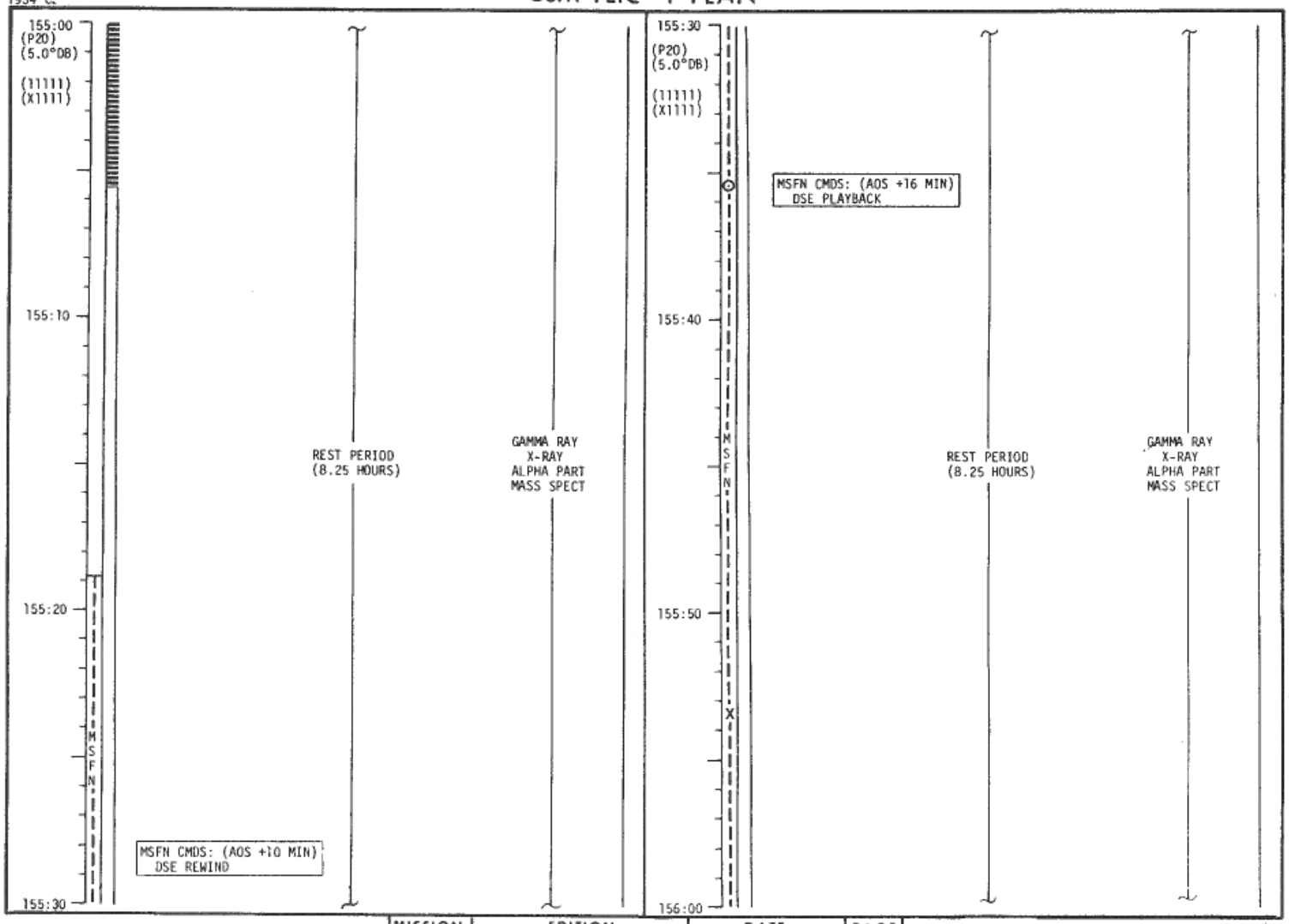


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	155:00 - 156:00	7/40	3-230

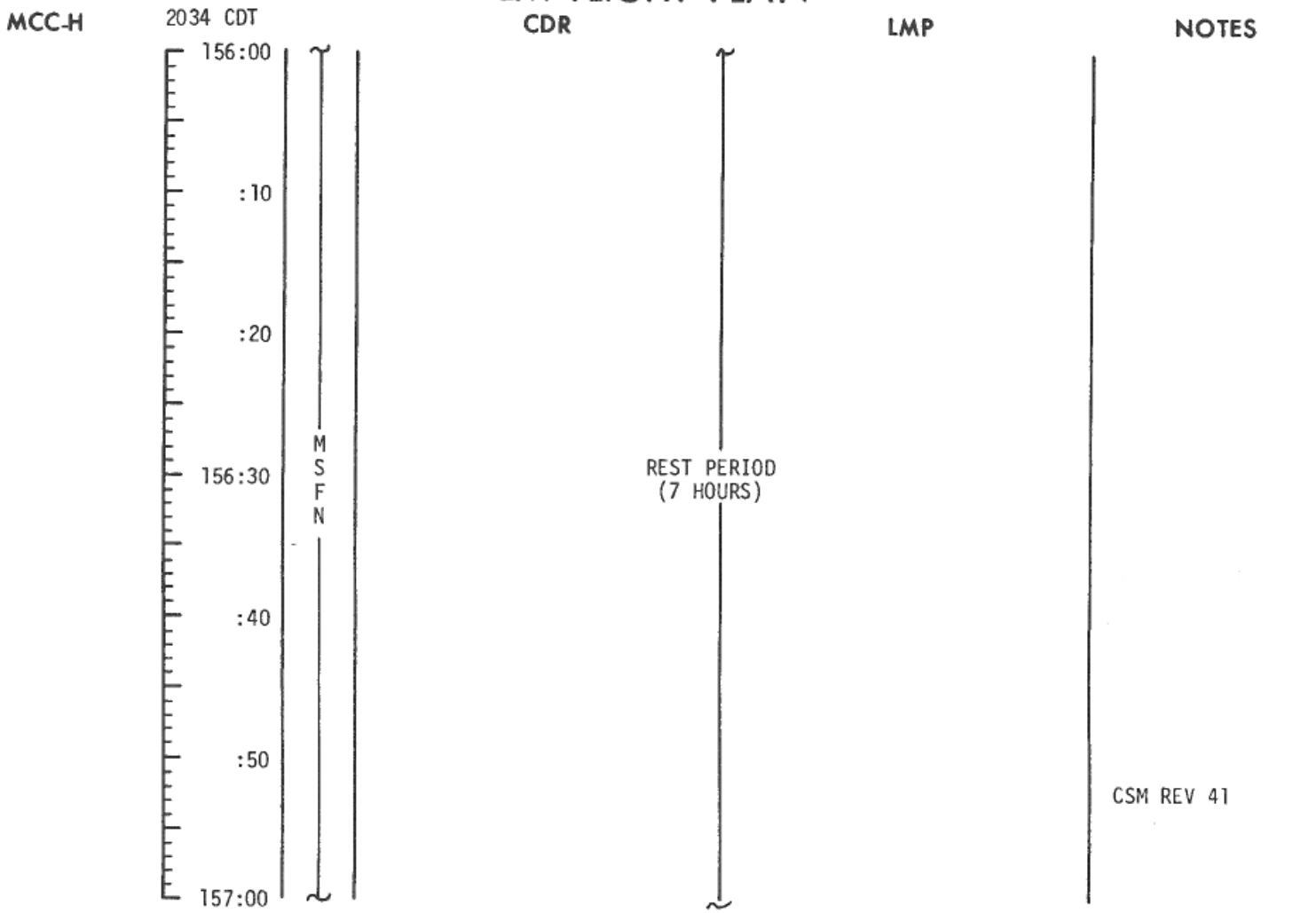
FLIGHT PLA 'NG BRANCH

1934 G

CSM FLIGHT PLAN



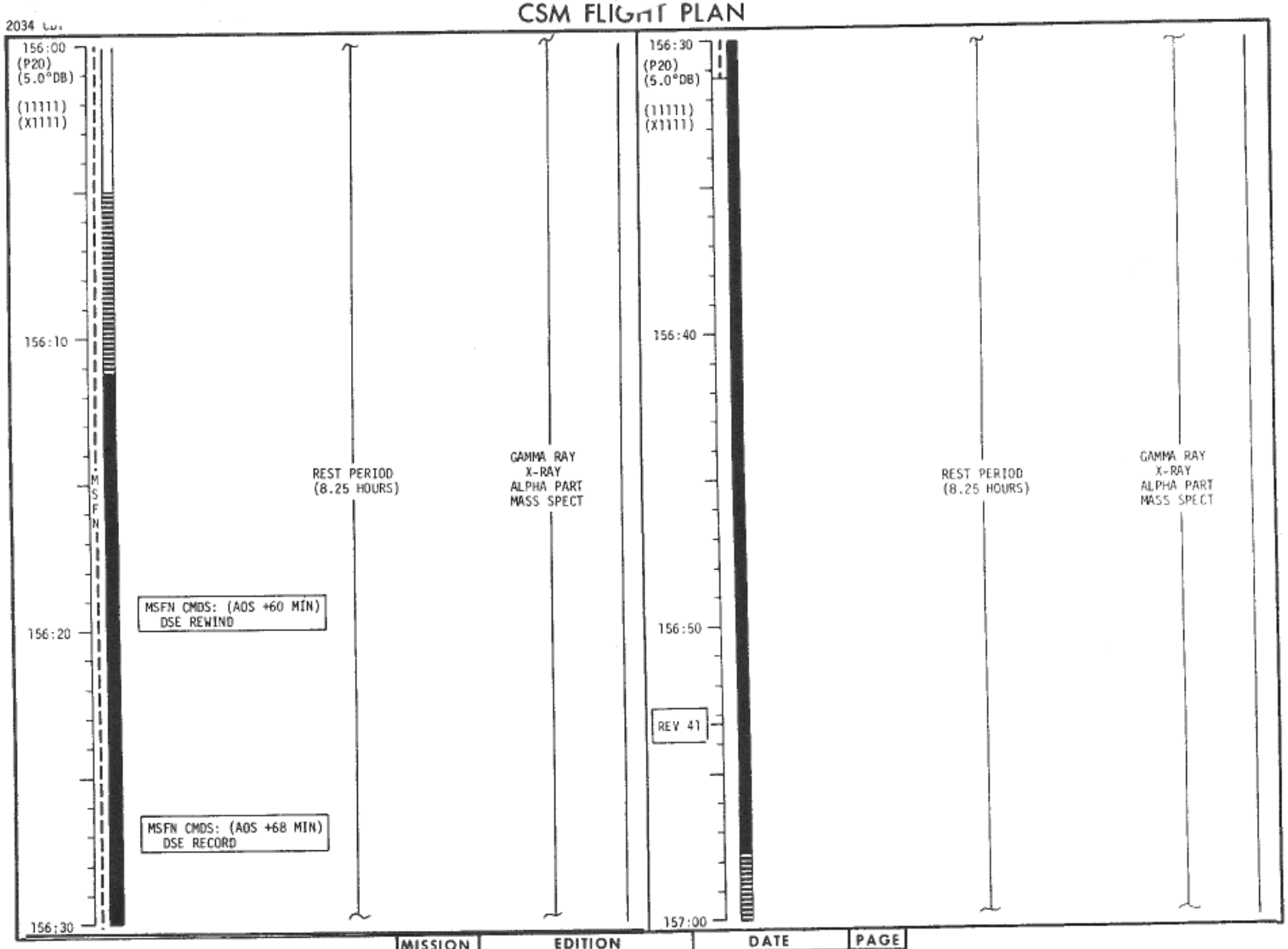
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	156:00 - 157:00	7/40-41	3-232

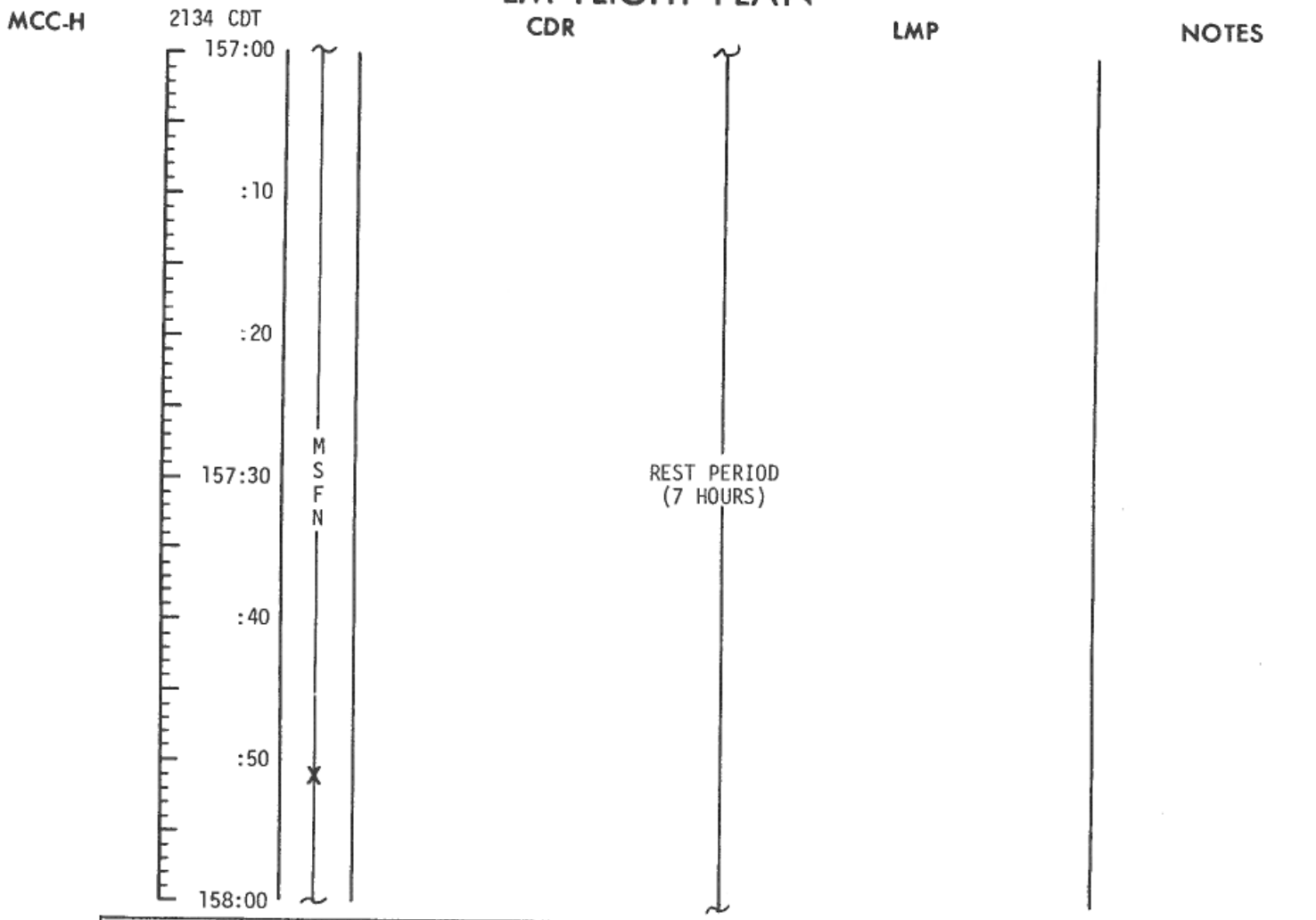
FLIGHT PLA' 'NG BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-233

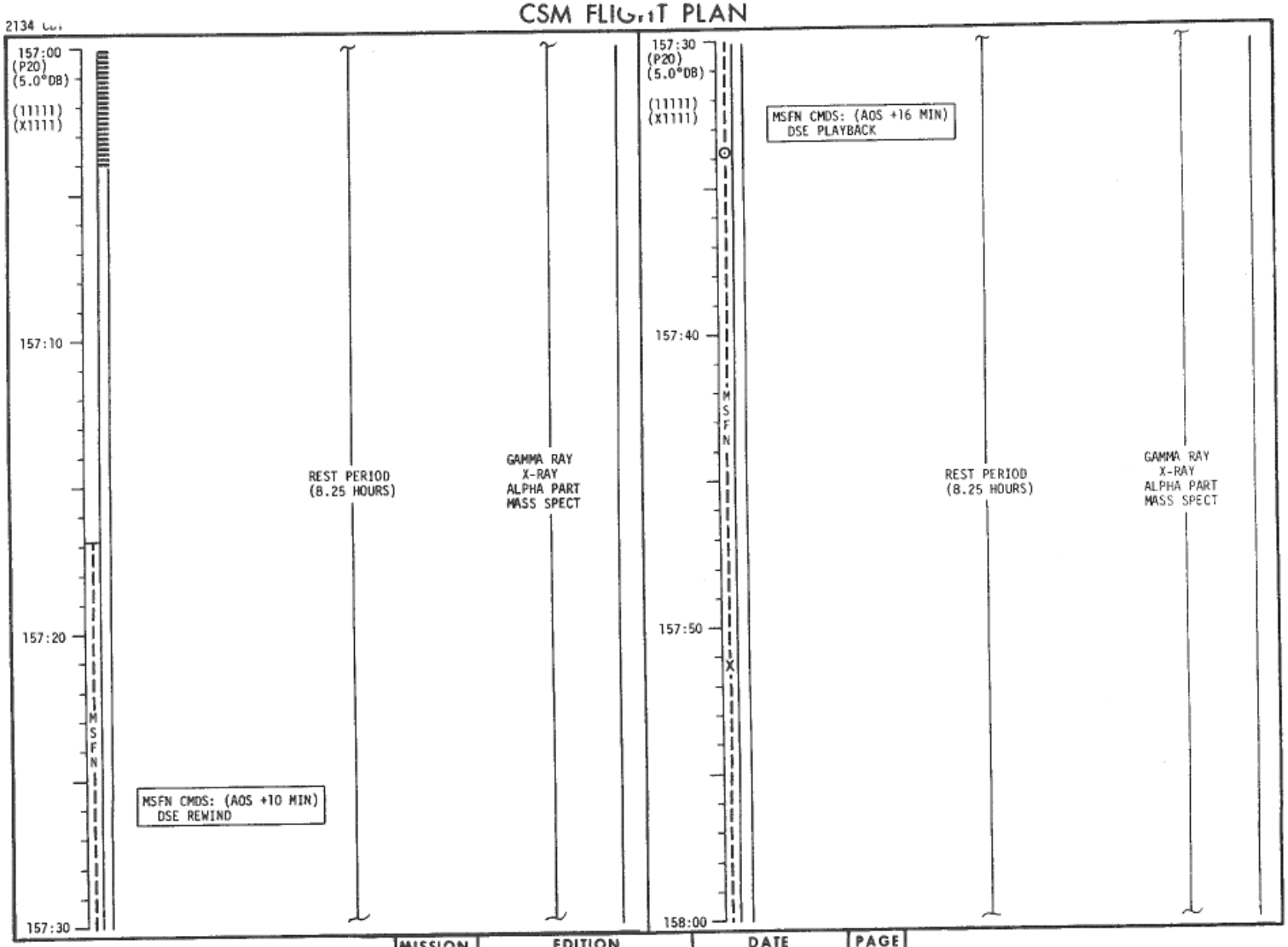
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	157:00 - 158:00	7/41	3-234

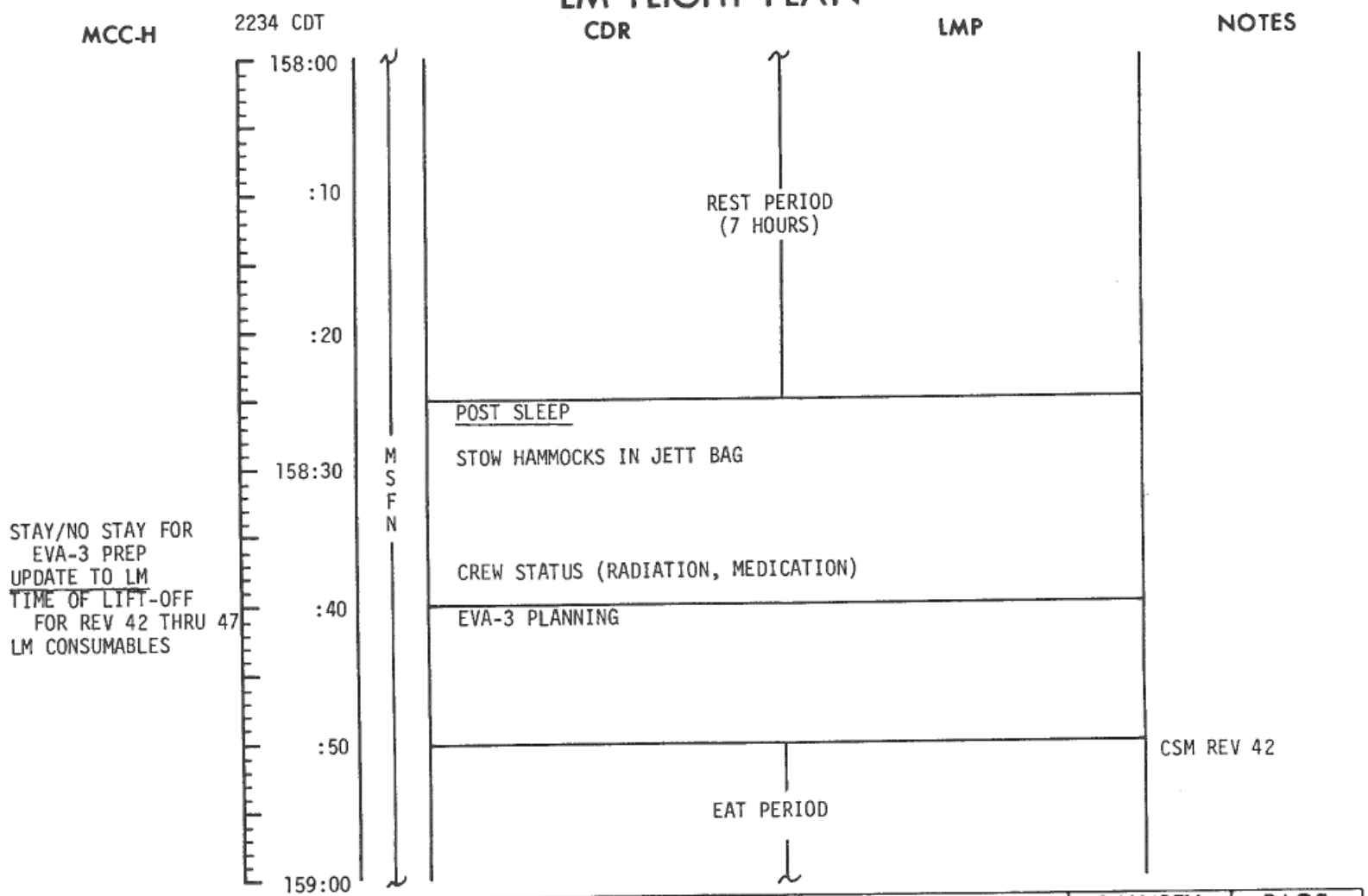
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-235

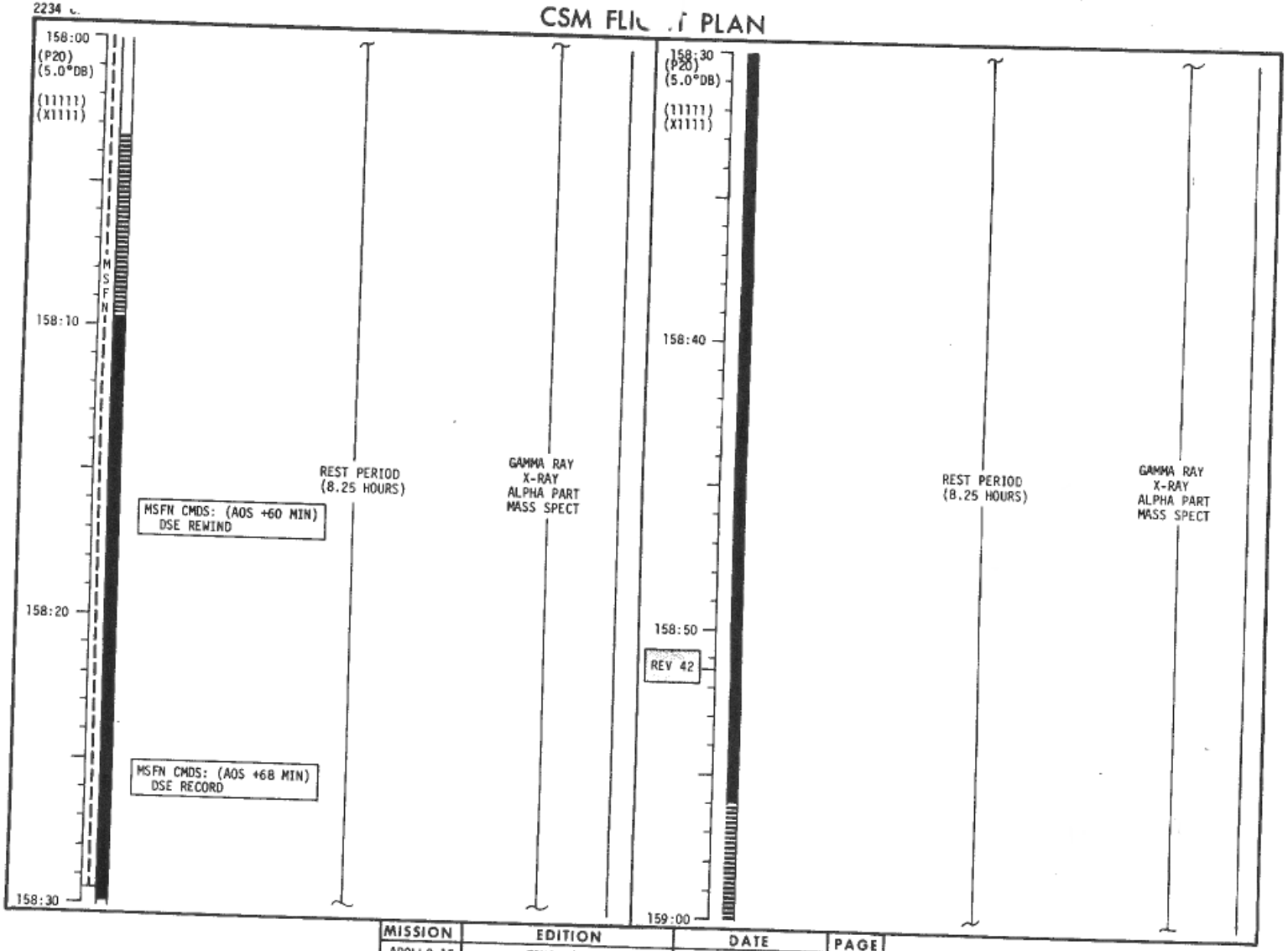
LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	158:00 - 159:00	8/41-42	3-236

FLIGHT PLANNING BRANCH

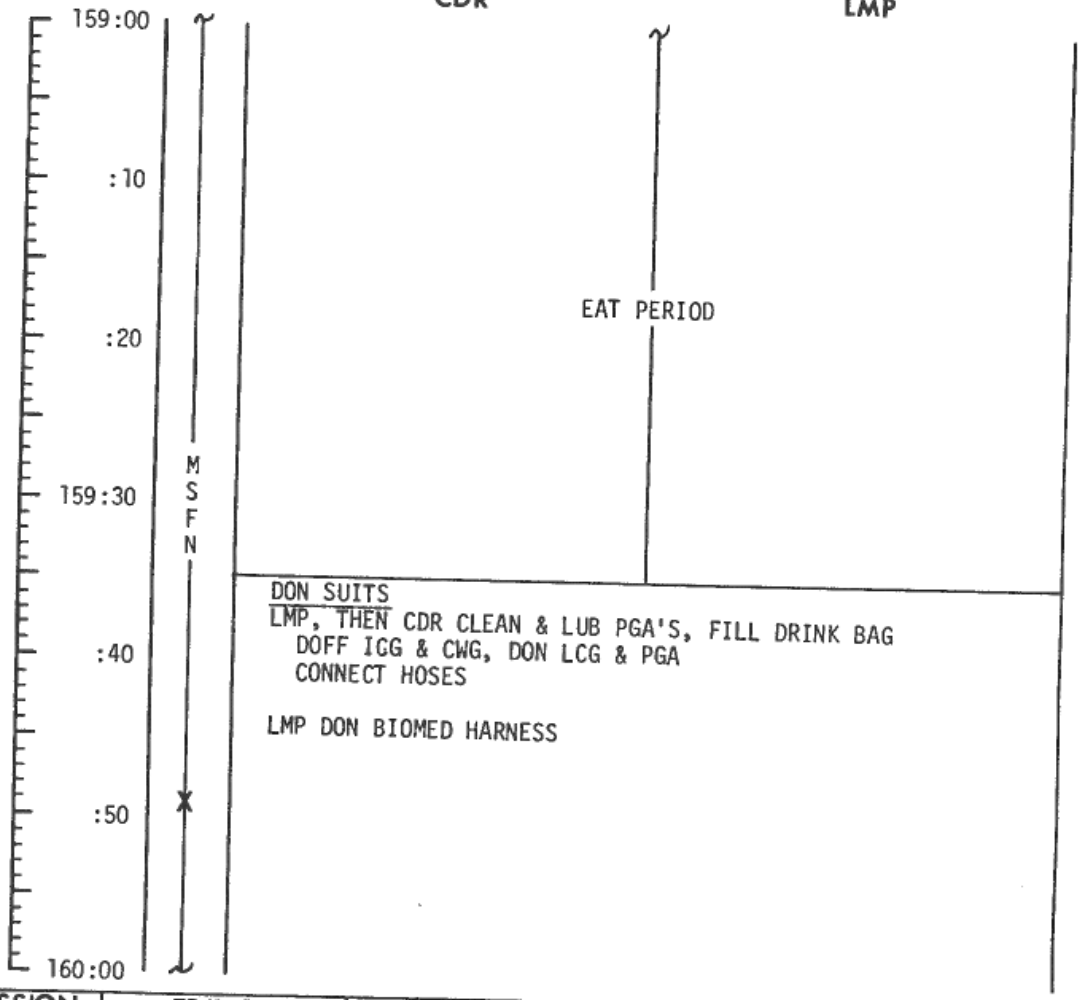
CSM FLI[illegible] PLAN


158:00
(P20)
(5.0°DB)
(11111)
(X1111)
MSFN
158:10
158:20
158:30
MSFN CMDS: (AOS +60 MIN)
DSE REWIND
MSFN CMDS: (AOS +68 MIN)
DSE RECORD
REST PERIOD
(8.25 HOURS)
GAMMA RAY
X-RAY
ALPHA PART
MASS SPECT
158:30
(P20)
(5.0°DB)
(11111)
(X1111)
158:40
158:50
REV 42
159:00
REST PERIOD
(8.25 HOURS)
GAMMA RAY
X-RAY
ALPHA PART
MASS SPECT

LM FLIGHT PLAN

MCC-H

2334 CDT

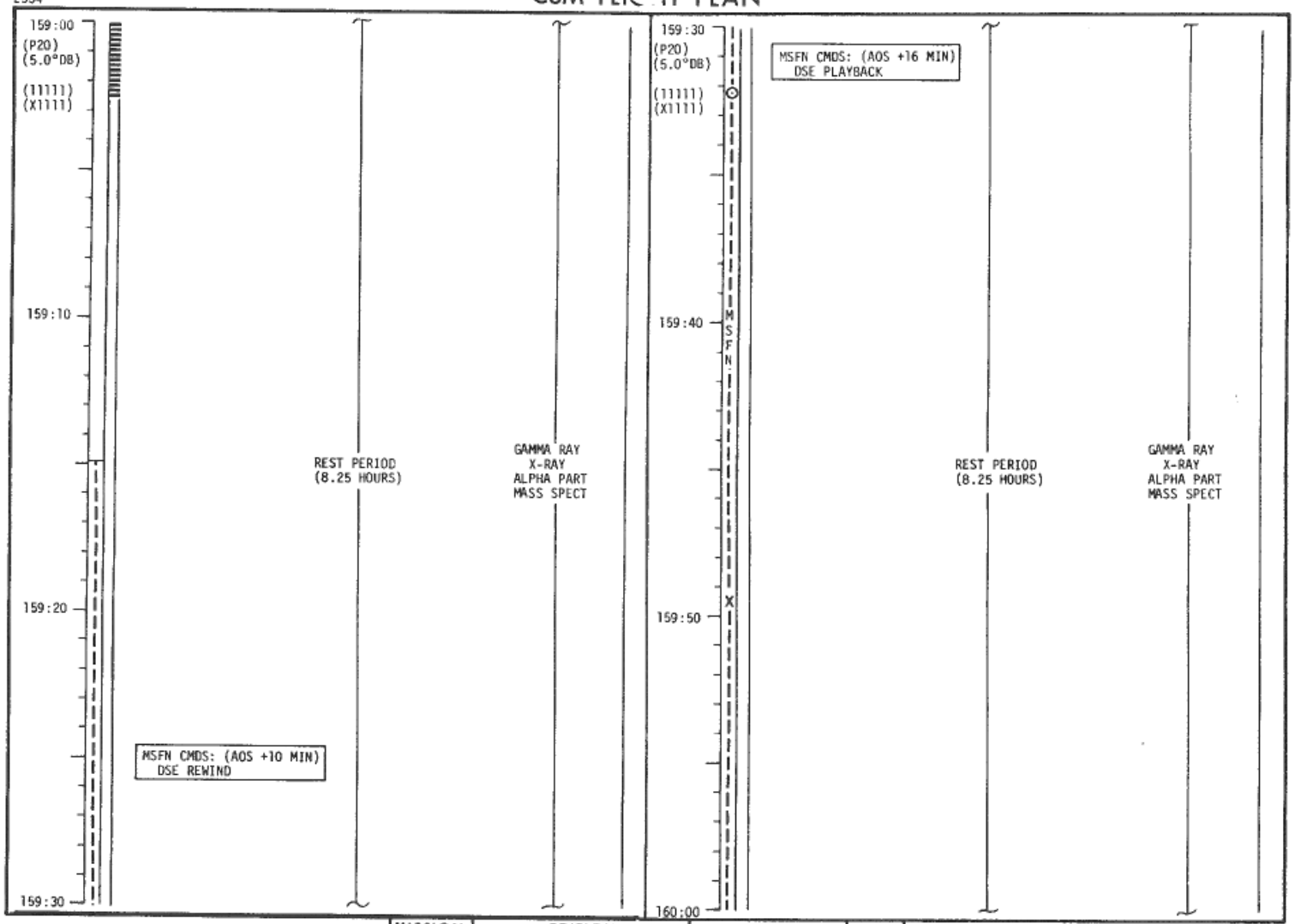


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	159:00 - 160:00	8/42	3-238

FLIGHT PLA NG BRANCH

2334

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-239

LM FLIGHT PLAN

MCC-H | 0034 CDT | CDR | LMP | NOTES

160:00

:10

VERIFY COMM — BIOMED - RIGHT
BATS 1,2 & LUNAR BAT (CDR) - ON
BATS 3,4 & LUNAR BAT (LMP) - OFF/RESET
CHECK BUS VOLTS

:20

EVA-3 PREP — -1:30
STOW ALL LOOSE ITEMS NOT REQD FOR EVA

MSFN

160:30 — -1:20

UNSTOW EVA-3 PREP & POST CARD
STOW LUNAR SURFACE CHECKLIST

:40

UNSTOW AND CHECK BOTH OPS — -1:10

PREPARE VISORS & HELMETS FOR EVA

UNLOCK FORWARD HATCH HANDLE — CSM REV 43

:50

PLSS DONNING — -1:00

CONFIGURE LMP PLSS
ATTACH OPS TO PLSS
LMP DON PLSS/OPS
CONNECT RCU TO PGA AND PLSS
UNSTOW LMP OPS O2 ACTUATOR AND CONNECT TO RCU
CDR REPEAT PLSS DONNING — - :50

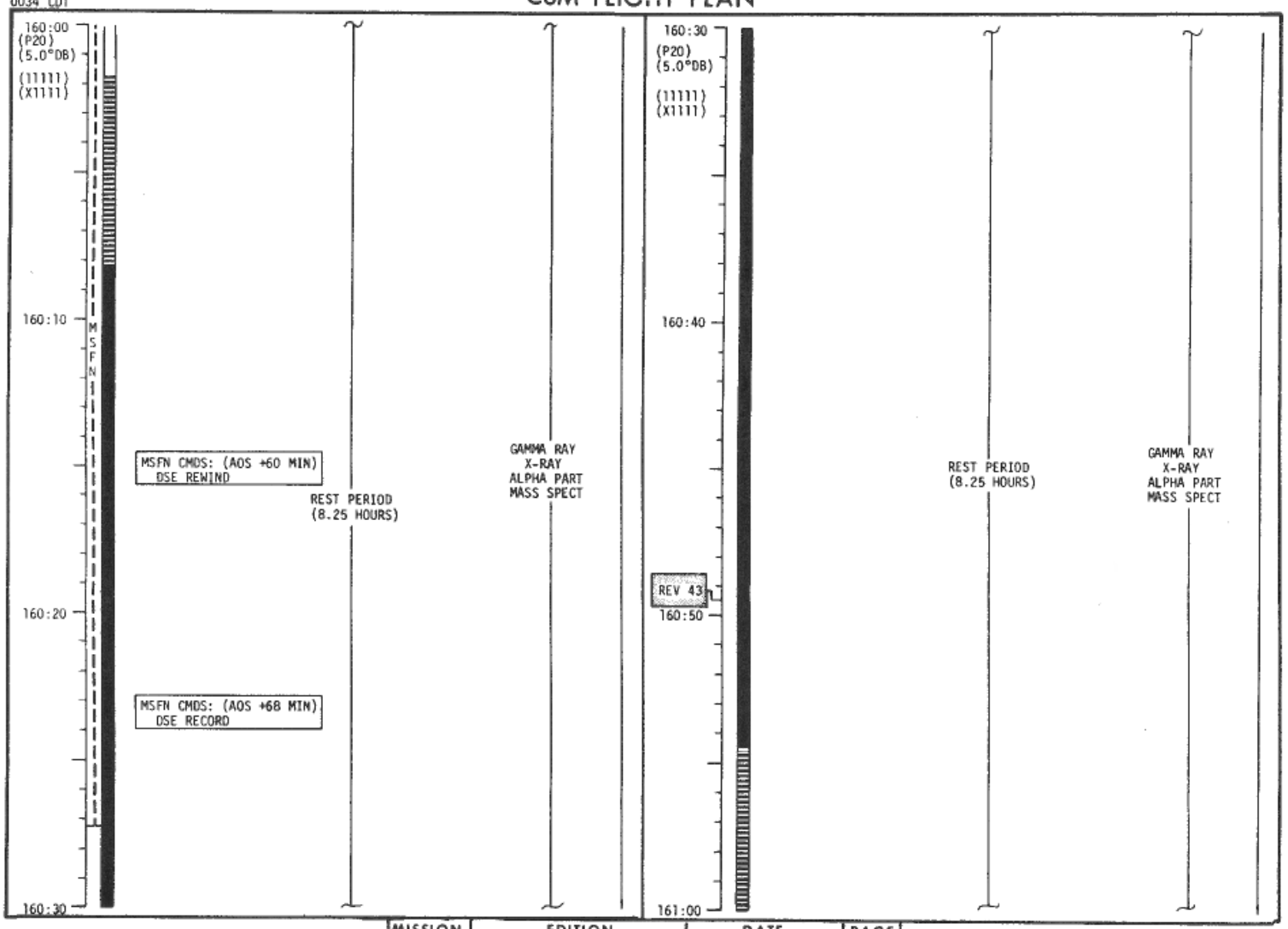
161:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	160:00 - 161:00	8/42-43	3-240

FLIGHT PLANNING BRANCH

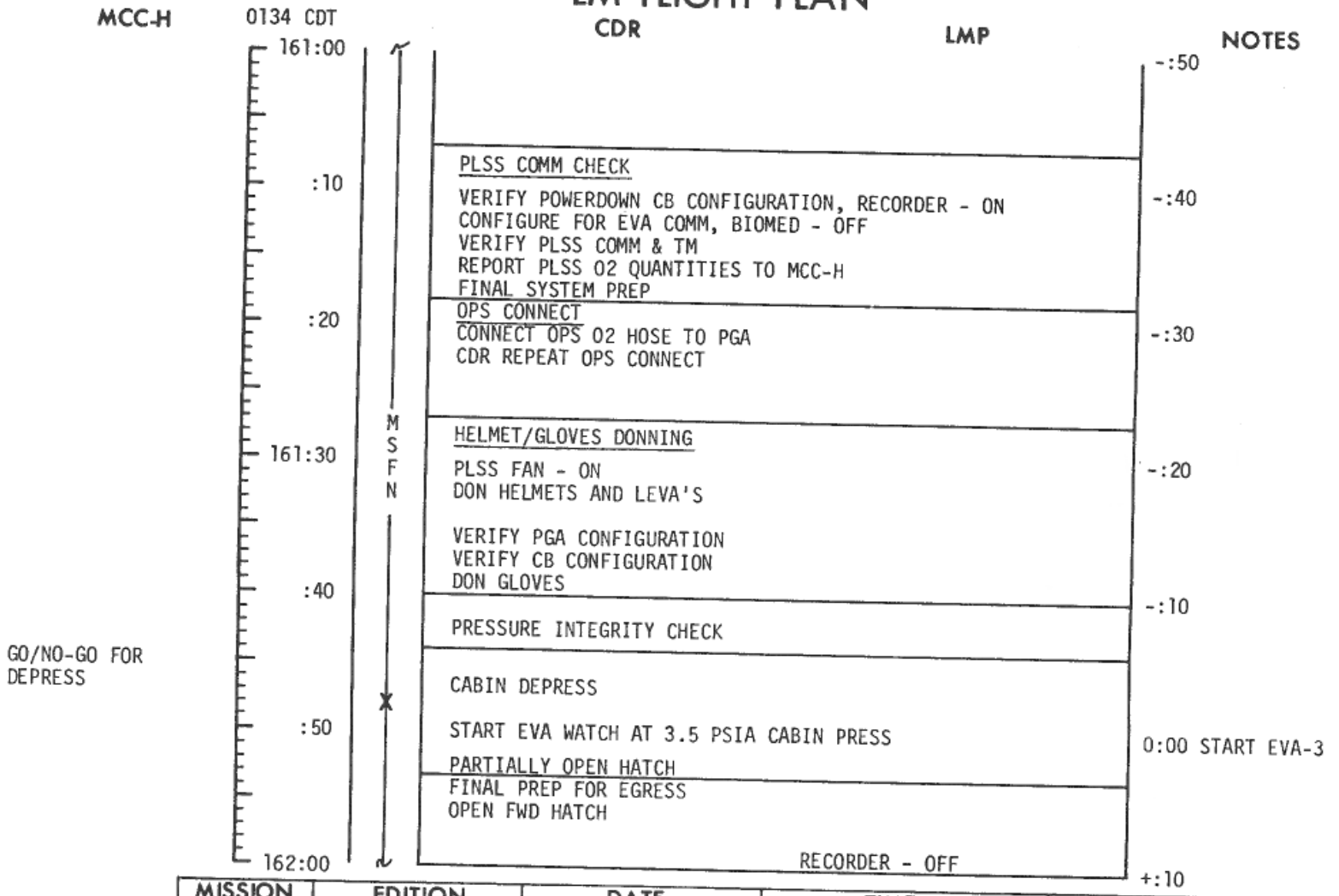
0034 CD1

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-241

LM FLIGHT PLAN

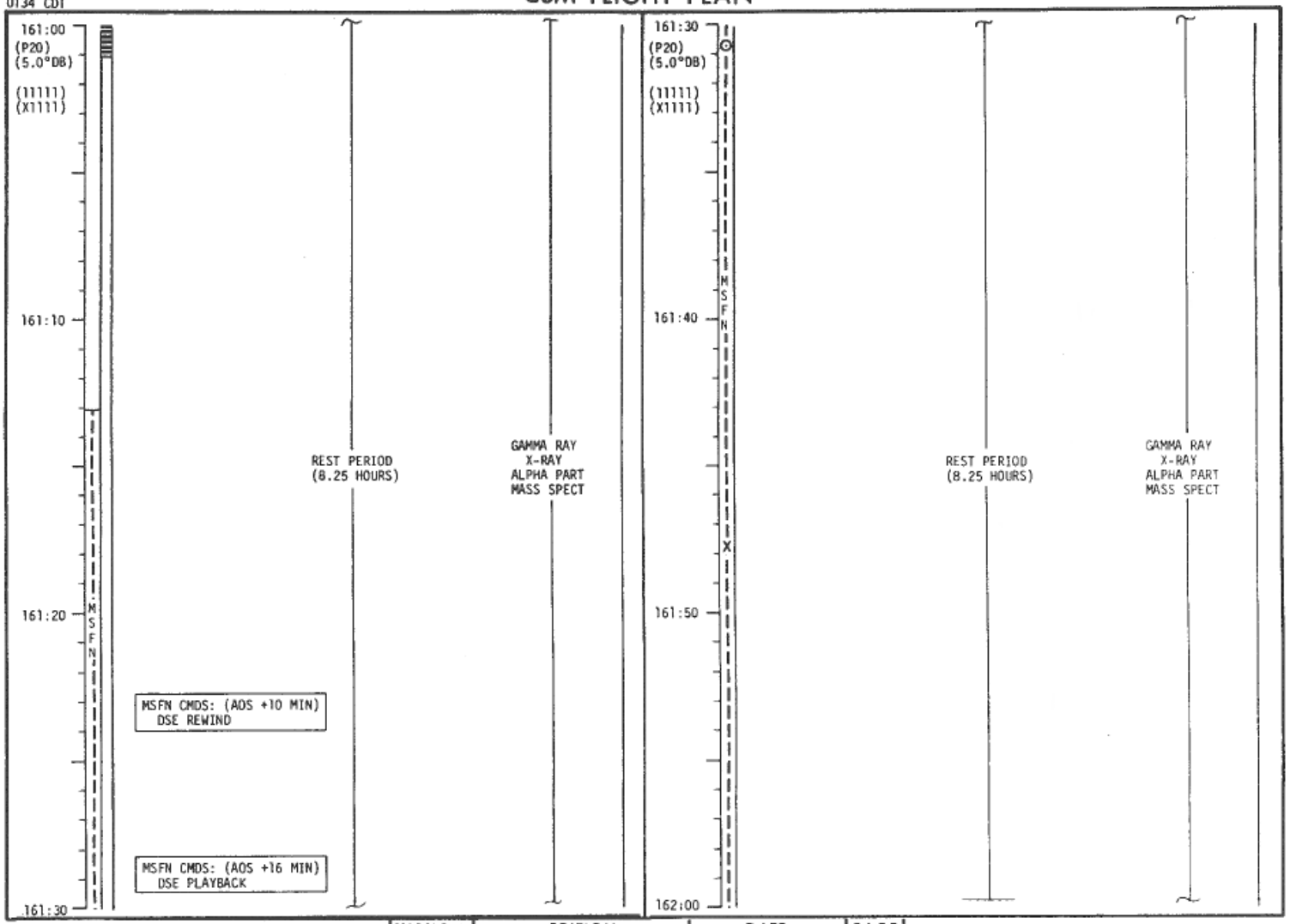


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	161:00 - 162:00	8/43	3-242

FLIGHT PLANNING BRANCH

0134 CDT

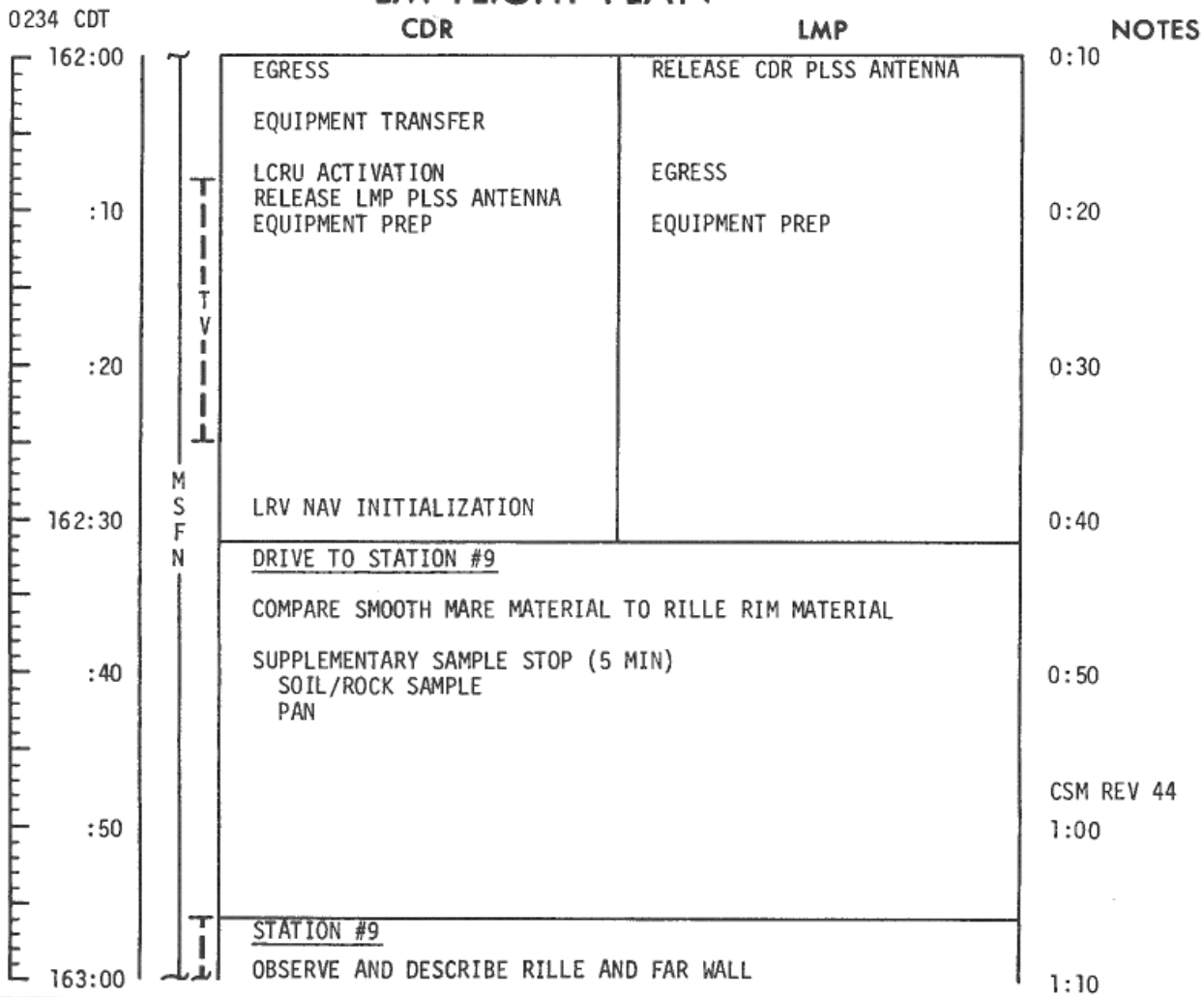
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-243

LM FLIGHT PLAN

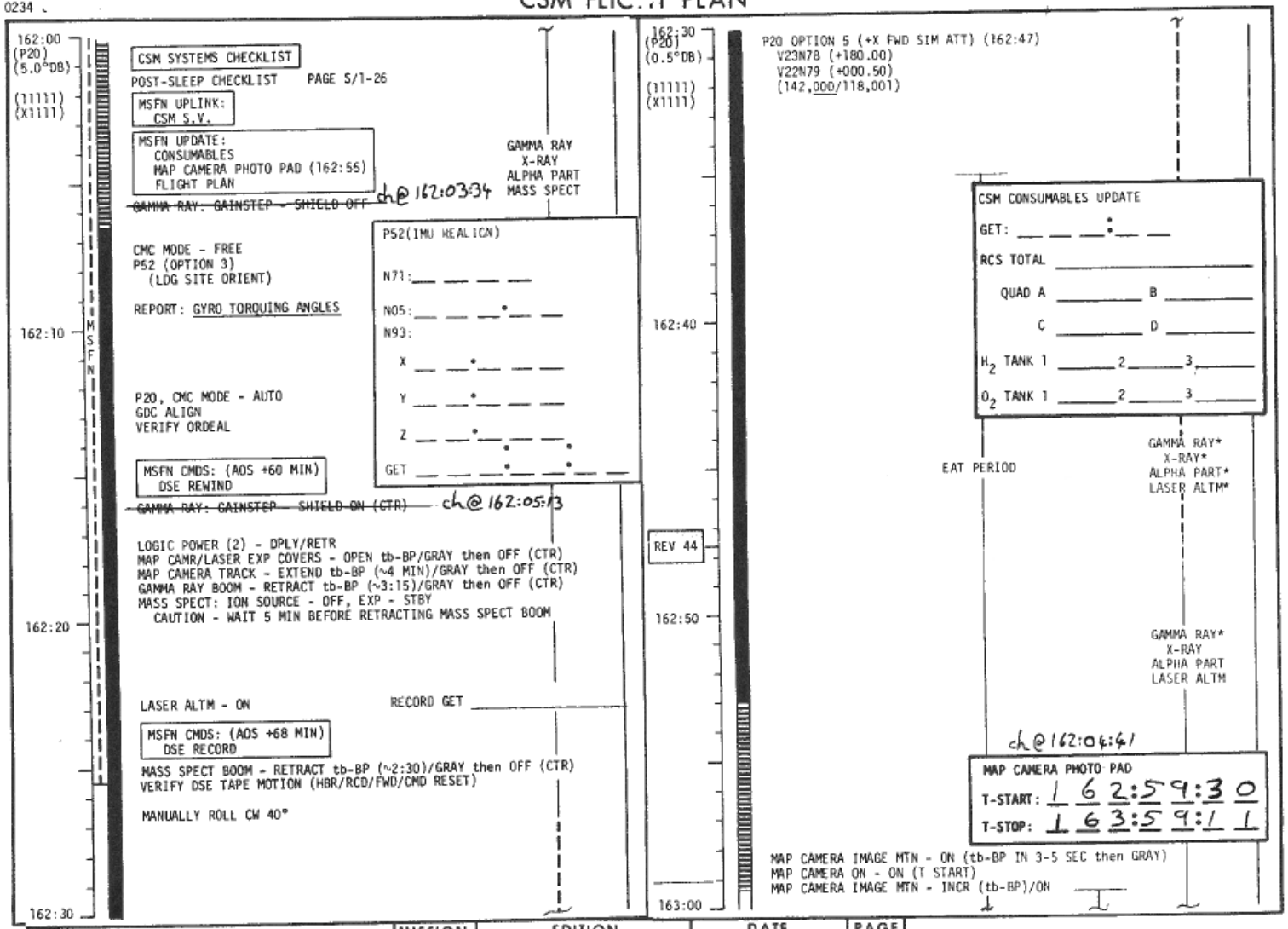
MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	162:00 - 163:00	8/43-44	3-244

FLIGHT PLANNING BRANCH

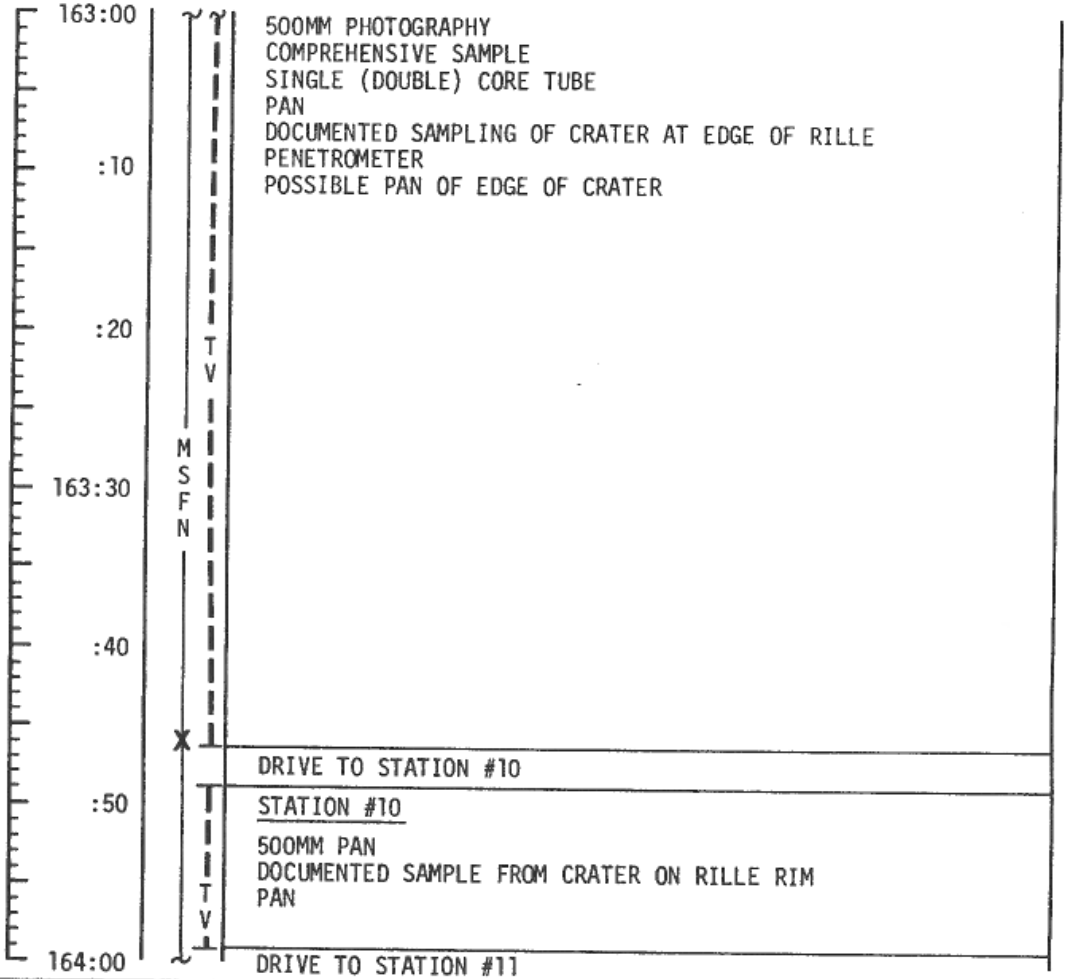
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-245

LM FLIGHT PLAN

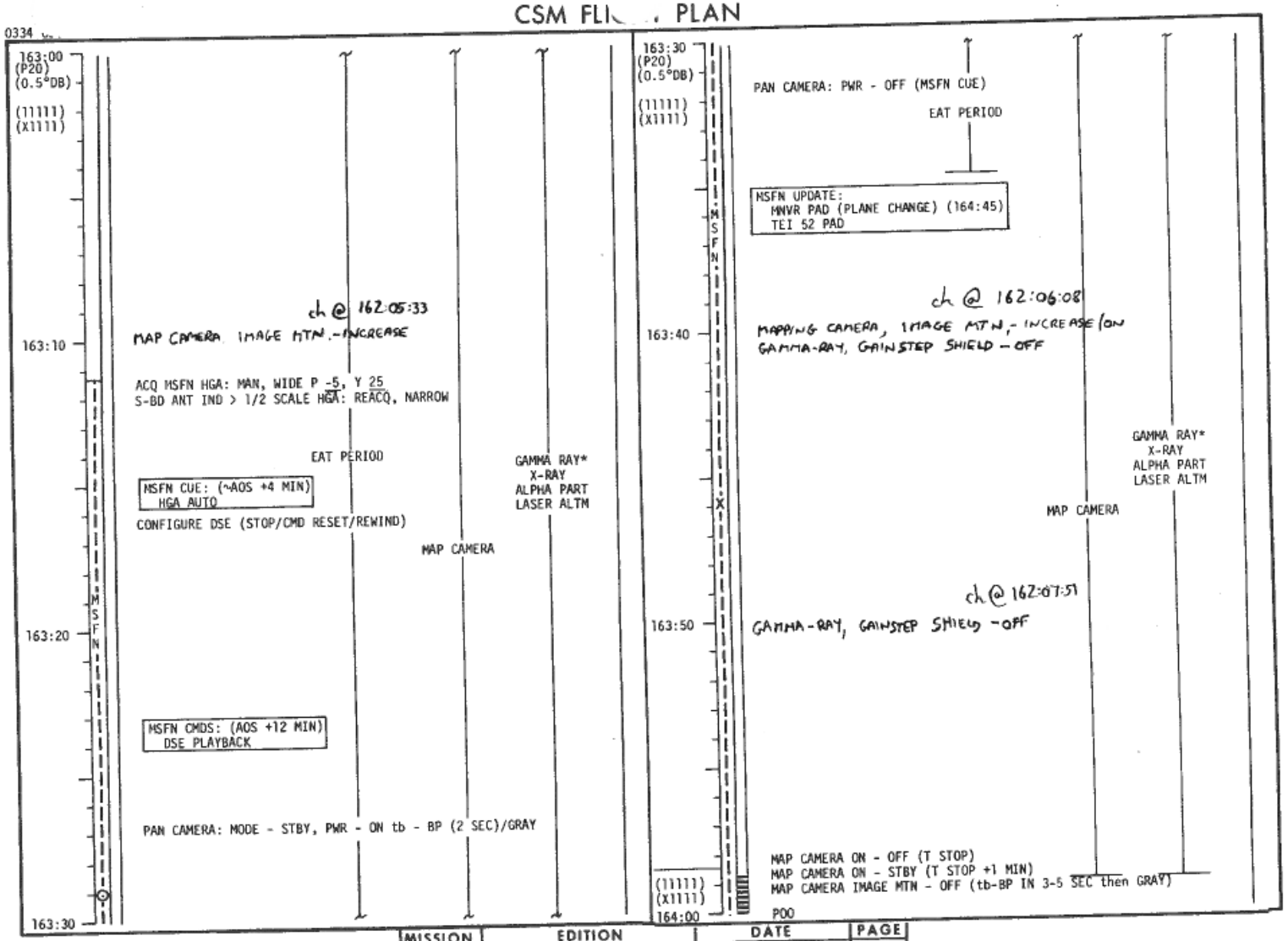
MCC-H 0334 CDT



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	163:00 - 164:00	8/44	3-246

FLIGHT PLAN[illegible]IG BRANCH

CSM FLI[illegible]. PLAN


0334
163:00
(P20)
(0.5°DB)
(11111)
(X1111)
163:10
163:20
163:30
MSFN
ch @ 162:05:33
MAP CAMERA IMAGE MTN.-INCREASE
ACQ MSFN HGA: MAN, WIDE P -5, Y 25
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW
EAT PERIOD
MSFN CUE: (~AOS +4 MIN)
HGA AUTO
CONFIGURE DSE (STOP/CMD RESET/REWIND)
MAP CAMERA
GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM
MSFN CMDS: (AOS +12 MIN)
DSE PLAYBACK
PAN CAMERA: MODE - STBY, PWR - ON tb - BP (2 SEC)/GRAY
163:30
(P20)
(0.5°DB)
(11111)
(X1111)
163:40
163:50
(11111)
(X1111)
164:00
MSFN
PAN CAMERA: PWR - OFF (MSFN CUE)
EAT PERIOD
MSFN UPDATE:
MNVR PAD (PLANE CHANGE) (164:45)
TEI 52 PAD
ch @ 162:06:08
MAPPING CAMERA, IMAGE MTN,- INCREASE ON
GAMMA-RAY, GAINSTEP SHIELD - OFF
GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM
MAP CAMERA
ch @ 162:07:51
GAMMA-RAY, GAINSTEP SHIELD - OFF
MAP CAMERA ON - OFF (T STOP)
MAP CAMERA ON - STBY (T STOP +1 MIN)
MAP CAMERA IMAGE MTN - OFF (tb-BP IN 3-5 SEC then GRAY)
POO

LM FLIGHT PLAN

MCC-H

0434 CDT

164:00	CDR	LMP	NOTES
	CONTINUE DESCRIPTION OF RILLE AND RILLE RIM MATERIAL PHOTOGRAPHY AS APPROPRIATE		2:10
:05	STATION #11 OBSERVE AND DESCRIBE RILLE AND FAR RILLE WALL, COMPARE TO PREVIOUS OBSERVATIONS 500MM PHOTOGRAPHY DOCUMENTED SAMPLES OF RILLE RIM AND CRATER AT EDGE OF RILLE PAN COMPARE RILLE RIM MATERIAL TO OTHER TERRAIN		
:10			2:20
164:15			
:20			2:30
:25	DRIVE TO STATION #12 OBSERVE CHANGES IN MATERIAL BETWEEN RILLE RIM, MARE, AND NORTH COMPLEX OBSERVE CHARACTERISTICS OF CRATER CHAIN ORIGINATING IN CHAIN CRATER OBSERVE POSSIBLE SECONDARY CRATERS		
164:30			2:40

MSFN · TV

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	164:00 - 164:30	8/44	3-248

FLIGHT PLA[illegible]NG BRANCH

CSM FLIGHT PLAN

164:00 (11111) (X1111)

GAMMA RAY EXP - OFF
X-RAY - OFF, α RAY/X DR - α OFF RECORD GET _____
LASER ALTM - OFF
MASS SPECT: EXP - OFF

MAP CAMERA TRACK - RETRACT tb-BP (~4 MIN)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

MSFN UPLINK:
CSM S.V.
PLANE CHANGE TGT LOAD
DESIRED ORIENT (PLANE CHANGE)

MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)
LOGIC POWER (2) - OFF
cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE

ENABLE ALL JETS

164:10 — MSFN

V49 MNVR TO P52 ATT (164:15)
(180,214,045) HGA P -10, Y 206

MSFN CMDS: (AOS +61 MIN)
DSE REWIND

P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

164:20

P52 (OPTION 1)
(PLANE CHANGE ORIENT)

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

GDC ALIGN
VERIFY ORDEAL

164:30

P52 IMU REALIGN

N71: __ __, __ __
N05: __ __ __ __ __
N93:
X __ __ __ __ __
Y __ __ __ __ __
Z __ __ __ __ __
GET __ __ __ __ __ __

LM FLIGHT PLAN

MCC-H

0504 CDT

CDR

LMP

NOTES

164:30

SUPPLEMENTARY SAMPLE STOP (5 MIN)
SOIL/ROCK SAMPLE
PAN

2:40

:35

:40

2:50

164:45

CSM REV 45

MSFN

:50

STATION #12
DOCUMENTED SAMPLE OF CRATER EJECTA
DOCUMENTED SAMPLE OF NORTH COMPLEX MATERIAL
PAN
DESCRIBE WALL OF CRATER AND RELATION TO
ELONGATED DEPRESSION
ATTEMPT TO DETERMINE IF CRATER IS ENDOGENETIC OR IMPACT

3:00

:55

TV

165:00

3:10

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	164:30 - 165:00	8/44-45	3-250

FLIGHT PLANNING BRANCH

164:30 (11111) (X1111) — P30 VERIFY PC-1 TIG AND ΔV'S

V49 MNVR TO PC-1 BURN PAD ATT (164:45)

164:40

REV 45 — SXT STAR CHECK

164:50 — SET DET COUNTING UP TO PLANE CHANGE

SECURE EQUIPMENT FOR PC-1

(P40) (0.5°DB) — P40 (TRIM)

165:00

P30 MANEUVER

DENEB VEGA
SET STARS

R ALIGN 1 8 9
P ALIGN 2 5 6
Y ALIGN 3 3 0

ULLAGE B + D
17 SECONDS

C	S	M	P	C	I	PURPOSE	
S	P	S/	G	&	N	PROP/GUID	
+	3	7	2	0	2	WT	N47
	0	0	0	.3	3	P TRIM	N48
	0	0	1	.0	7	Y TRIM	
+	0	0	1	6	5	HRS	GETI
+	0	0	0	1	1	MIN	N33
+	0	3	1	.9	6	SEC	
−	0	0	0	9	.2	ΔVX	N81
+	0	3	3	0	.3	ΔVY	
+	0	0	1	8	.4	ΔVZ	
X	X	X	0	0	0	R (000)	
X	X	X	0	0	0	P (000)	
X	X	X	0	0	0	Y (000)	
+	0	0	6	4	.4	HA	N44
+	0	0	5	3	.3	HP	
+	0	3	3	0	.9	ΔVT	
X	X	X	0	:1	8	BT	
X	0	3	1	9	.1	ΔVC	
X	X	X	X	3	6	SXTS	
+	0	1	2	.8	0	SFT	
+	3	9	.2	0	0	TRN	
X	X	X		N	A	BSS	
X	X			N	A	SPA	
X	X	X		N	A	SXP	

LM FLIGHT PLAN

MCC-H 0534 CDT

165:00	CDR	LMP	NOTES 3:10
	TV		
:10	DRIVE TO STATION #13 OBSERVE INTERCRATER AREA IN NORTH COMPLEX COMPARE EJECTA BETWEEN CRATERS COMPARE NORTH COMPLEX TO OTHER TERRAIN TYPES		3:20
:20	STATION #13 DOCUMENTED SAMPLING PAN OR STEREO PAN EXPLORATORY TRENCH SOIL SAMPLE 500mm TARGETS OF OPPORTUNITY PENETROMETER POSSIBLE CORE TUBE		3:30
165:30	MSFN		3:40
:40	TV		3:50
:50			4:00
166:00			4:10

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	165:00 - 166:00	8/45	3-252

FLIGHT PLANNING BRANCH

0534 Cv.

CSM FLIC... PLAN

165:00
(P40)
(0.5°DB)
(11111)
(X1111)

MAP CAMERA ON - STBY (VERIFY)
MAP CAMERA IMAGE MTN - OFF (VERIFY)
PAN CAMERA: PWR - BOOST
DATA SYS ON - OFF
S-BD AUX TV - OFF (CTR)

CSM PLANE CHANGE 1 BURN TABLE

P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	+10° TERMINATE	BT +1 SEC	TRIM V_{gy} TO 0.2 FPS IF $-V_{gy}$ ROLL 90° CCW AND USE -Z THRUSTERS

165:10

ACQ MSFN HGA P -10, Y 251

GO/NO-GO FOR PLANE CHANGE 1

CSM PLANE CHANGE 1 (000,000,000)
____:____:____.____

TIG: 165:12:50.6
BT: 16.5 SEC
ΔVT: 308.6 FPS
ULLAGE: 4 JET, 13 SEC
ORBIT: 59.8 x 59.2

(11111)
(X1111)

P00

REPORT: BURN STATUS

MSFN CMDS:
DSE DUMP

V49 MNVR TO P52 ATT (165:27)
(358,000,049) HGA P -9, Y 203

165:20

S-BD AUX TV - SCI
PCM BIT RATE - HIGH (VERIFY)
DATA SYS ON - ON

PAN CAMERA: PWR - OFF
GAMMA RAY: EXP - ON, GAINSTEP - SHIELD ON (CTR)
X-RAY - STBY, α RAY/X DR - α ON RECORD GET
MASS SPECT: EXP - STBY

GAMMA RAY*
ALPHA PART*

165:30

MSFN

165:30
(11111)
(X1111)

165:40

165:50

MSFN UPLINK:
DESIRED ORIENT (LIFT-OFF)
RLS UPDATE (IF REQD)

CREW EXERCISE PERIOD

MSFN UPDATE:
REFSMMAT 00 TIME

166:00

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						FUEL
X						OX
X						UNBAL

GAMMA RAY*
ALPHA PART*

REFSMMAT 00 TIME

+	0	0				HRS
+	0	0	0			MIN
+	0					SEC

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-253

LM FLIGHT PLAN

MCC-H

0634 CDT

CDR

LMP

NOTES

166:00

:10

:20

166:30

:40

:50

167:00

MSFN

TV

TV

4:10

4:20

DRIVE TO STATION #14

OBSERVE AND DESCRIBE DIFFERENCES IN MATERIAL AND SURFACE TEXTURES BETWEEN NORTH COMPLEX AND MARE

NOTE AMOUNT OF SECONDARY CRATERING
PHOTOGRAPHY AS APPROPRIATE

4:30

4:40

STATION #14

COMPARE BLOCKS AND MARE MATERIAL WITH NORTH COMPLEX
DOCUMENTED SAMPLE OF MARE MATERIAL
(POSSIBLE FILLET/ROCK, EQUIDIMENSIONAL ROCK AND RADIAL SAMPLES)
PAN
EXPLORATORY TRENCH IN RAY MATERIAL

4:50

CSM REV 46

5:00

DRIVE TO LM

DESCRIBE DIFFERENCES BETWEEN THIS AREA AND OTHER MARE AREAS
NOTE DISTRIBUTION OF POSSIBLE SECONDARIES

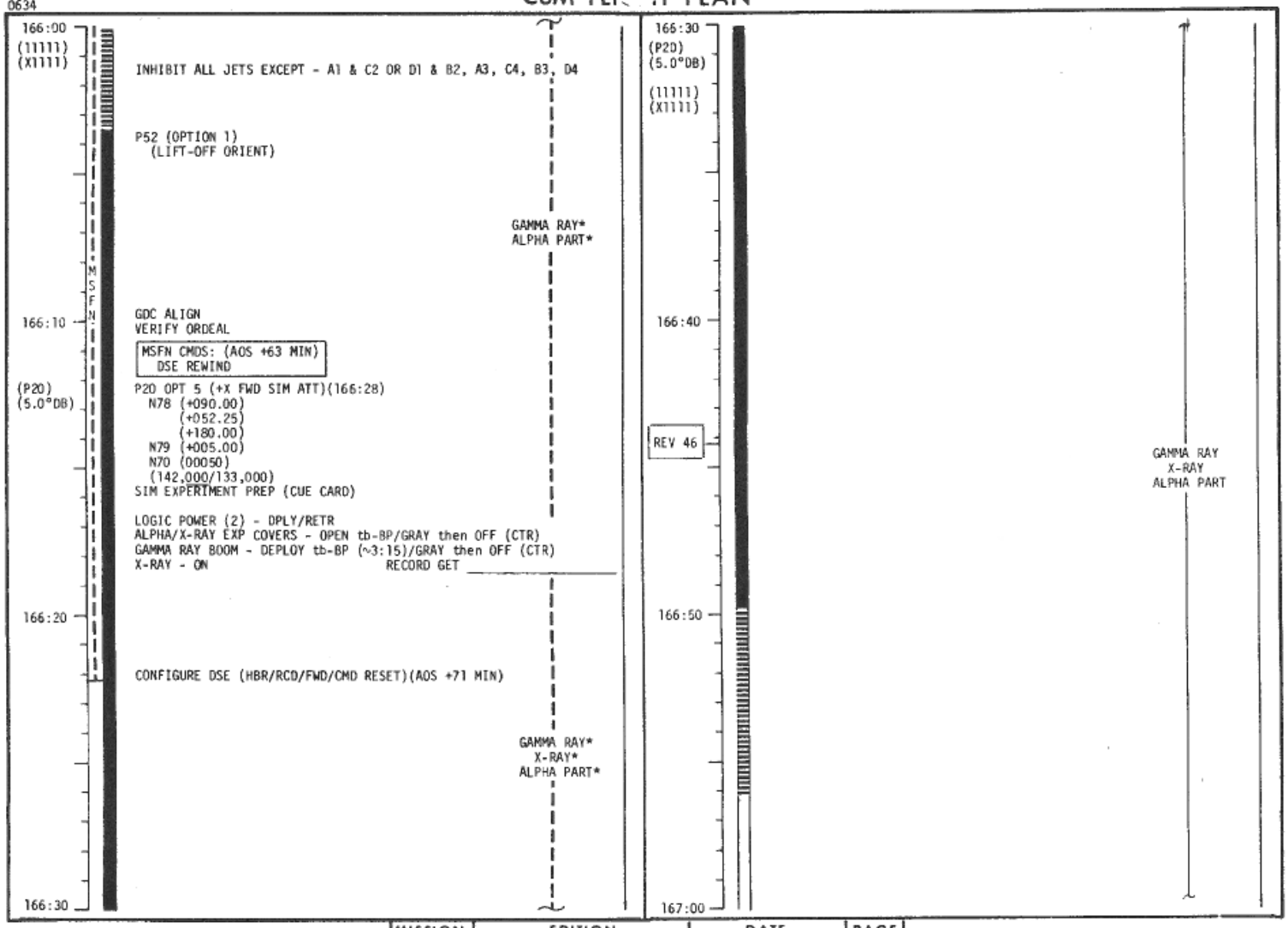
5:10

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	166:00 - 167:00	8/45-46	3-254

FLIGHT PLA[illegible]NG BRANCH

CSM FLI. .T PLAN

0634

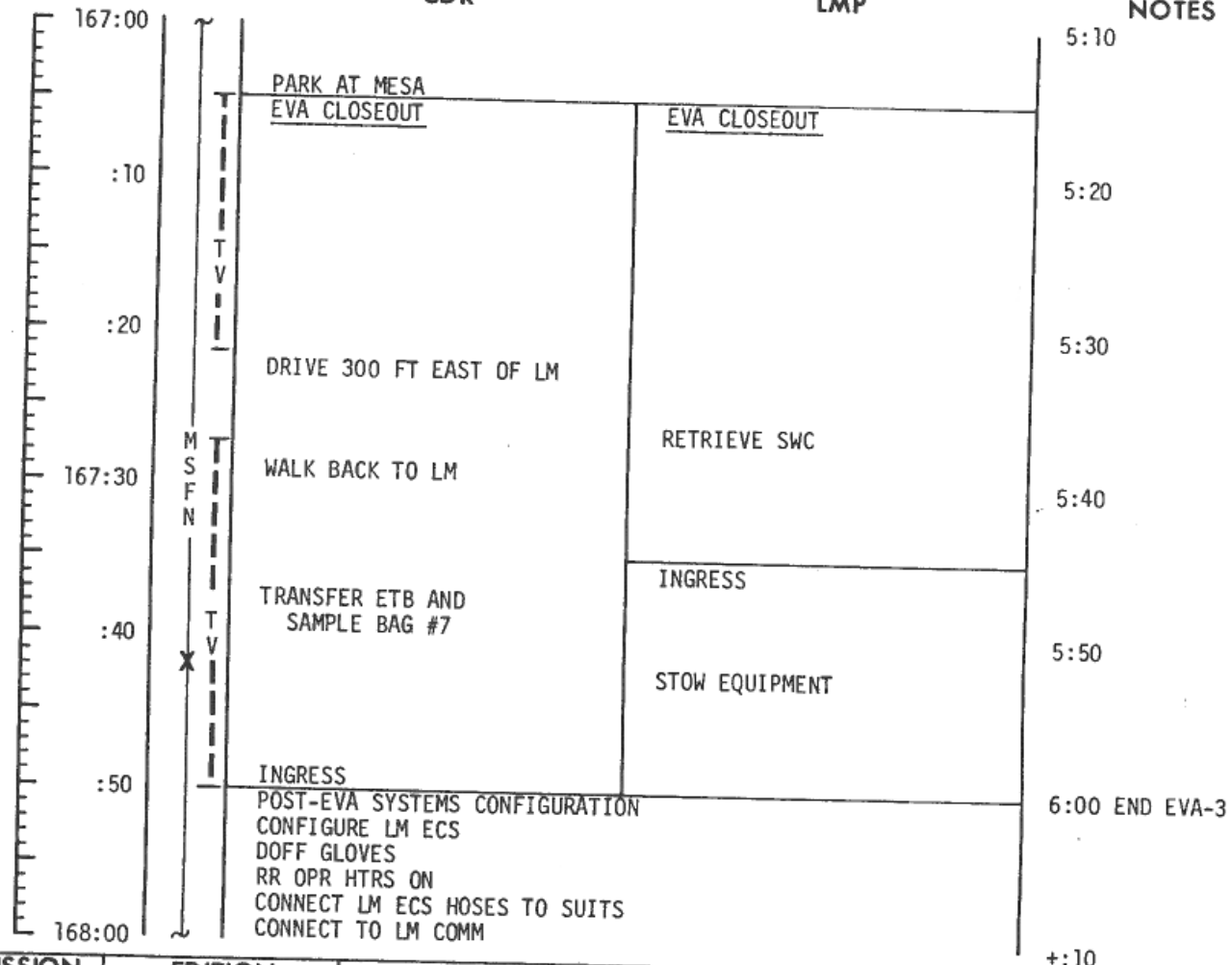


MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-255

LM FLIGHT PLAN

MCC-H

0734 CDT

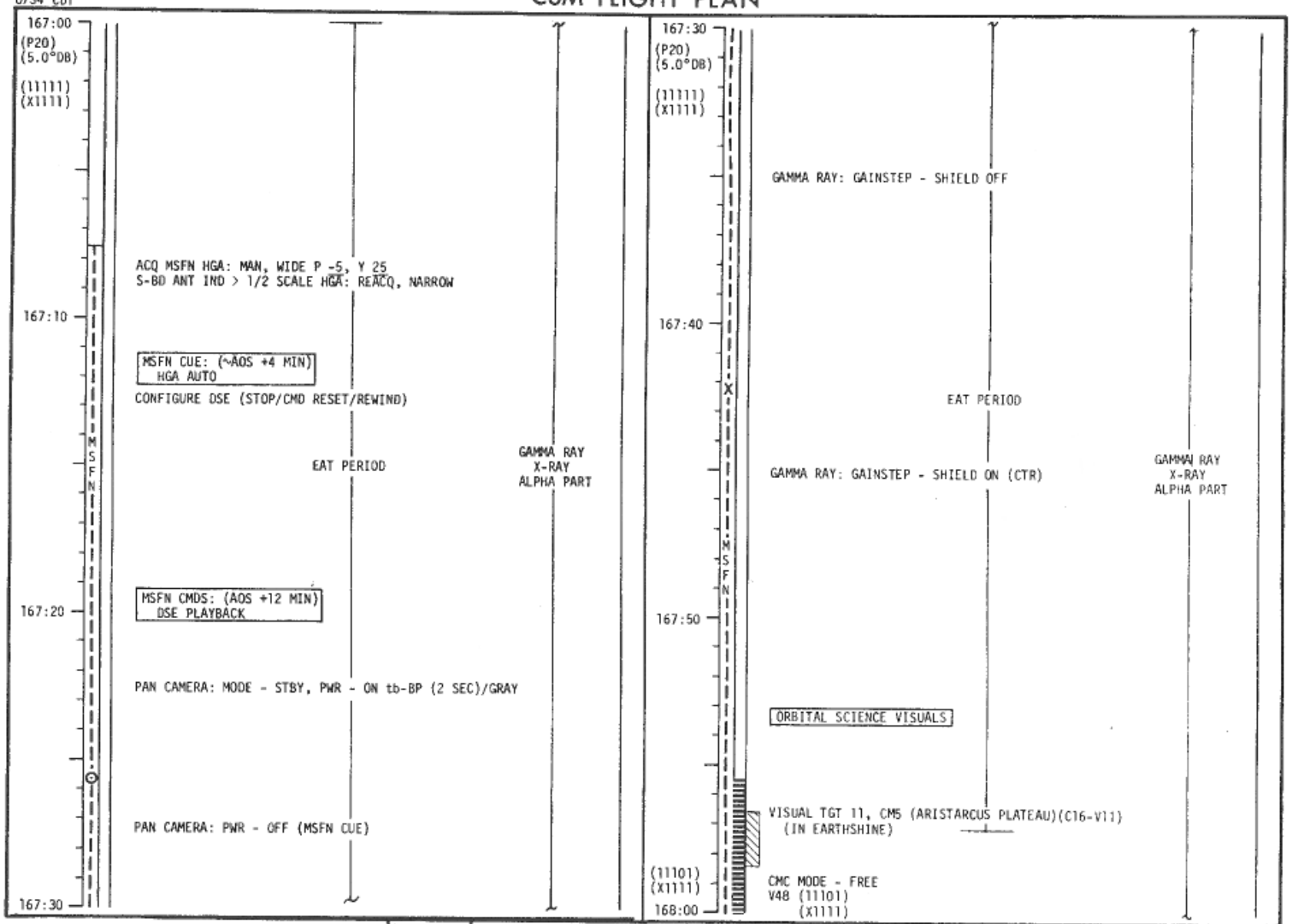


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	167:00 - 168:00	8/46	3-256

FLIGHT PLANNING BRANCH

0734 CU1

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-257

LM FLIGHT PLAN

MCC-H	0834 CDT		CDR	LMP	NOTES
	168:00	M S F N	PLSS/OPS DOFFING DISCONNECT OPS ACTUATORS & RCU'S DISCONNECT AND DOFF PLSS/OPS (LMP FIRST) CDR, THEN LMP, DISASSEMBLE PLSS/OPS CHECKOUT AND STOW OPS VERIFY POWER DOWN CB CONFIGURATION		+:10 +:20
	:20		PREP FOR EQUIPMENT JETTISON UNSTOW SCALE WEIGH BSLSS/ROCK BAG & COLLECTION BAGS #7 & 8, REPORT TO MCC-H, STOW SCALE DOFF LUNAR BOOTS POSITION PLSS FOR JETTISON DON EVA GLOVES		+:30
GO/NO GO FOR DEPRESS	168:30		PRESSURE INTEGRITY CHECK CABIN DEPRESS FOR JETTISON OPEN FORWARD HATCH JETTISON JET BAG AND PLSS'S CLOSE HATCH REPRESSURIZE CABIN DOFF HELMET & GLOVES		+:40 +:50
UPDATE TO LM P57 LIFT-OFF TIME P22 ACQ TIME UPLINK TO LM CSM S.V. (L/O) ZERO POS/NEG CELLS RLS	:40 (12102)		PGNS TURN ON & SELF TEST E-MEMORY DUMP	BATS 3&4 - ON LUNAR BAT (CDR) - OFF/RESET	CSM REV 47
	:50		P57 LUNAR SURFACE ALIGN OPTION 4 LANDING SITE A/T 3 - GRAVITY AND CELESTIAL BODY (LIFT-OFF ORIENTATION)	BIOMED - LEFT	+1:00
	169:00		POST-EVA CABIN CLEANUP		+1:10

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	168:00 - 169:00	8/46-47	3-258

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

168:00
(11101)
(X1111)

POO; V49 MNVR TO ANTISOLAR POINT (168:15)
(180,252,041) HGA P -66, Y 156
CMC MODE - AUTO

CONFIGURE CAMERA: (GEGENSCHEIN)
INSTALL CAMERA SHIELD
CM4/NK/55/VHBW-BRKT, (f1.2,1/500,∞) (12 FR)

MAG ( ) _____, FR # _____

GAMMA RAY*
X-RAY*
ALPHA PART*

GAMMA RAY BOOM - RETRACT tb-BP (~3:15)/GRAY then OFF (CTR)
X-RAY - STBY
RECORD GET _____
DATA SYS ON - OFF
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

M S F N

168:10

LOGIC POWER (2) - OFF
S-BD AUX TV - OFF
PCM BIT RATE - LOW

MSFN CMDS: (AOS +63 MIN)
DSE REWIND

GAMMA RAY*
ALPHA PART*

ENABLE ALL JETS EXCEPT - A3,C4,B3,D4

GEGENSCHEIN PHOTOS

CONFIGURE DSE (LBR/RCD/FWD/CMD RESET)(AOS +71 MIN)

168:20

DIM INTERIOR LIGHTS

CYCLE 1 FRAME, CHANGE SHUTTER TO T
1 FRAME, EXP TIME 1 MIN

1 FRAME, EXP TIME 3 MIN

CHANGE SHUTTER TO 1/500
CYCLE 1 FRAME, LIGHTS UP
V49 MNVR TO MIDWAY PT (168:30)
(180,257,032)

168:30

168:30
(11101)
(X1111)

DIM INTERIOR LIGHTS

CYCLE 1 FRAME, CHANGE SHUTTER TO T
1 FRAME, EXP TIME 1 MIN

1 FRAME, EXP TIME 3 MIN

CHANGE SHUTTER TO 1/500
CYCLE 1 FRAME, LIGHTS UP
V49 MNVR TO MOULTON PT (168:38)
(180,261,021)

DIM INTERIOR LIGHTS

CYCLE 1 FRAME
1 FRAME, EXP TIME 1 MIN

168:40

1 FRAME, EXP TIME 3 MIN

REV 47

CHANGE SHUTTER TO 1/500
CYCLE 1 FRAME, LIGHTS UP

cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE
ENABLE ALL JETS

GAMMA RAY*
ALPHA PART*

RNDZ XPNDR ACTIVATION AND SELF TEST (DECAL)

168:50

RNDZ XPNDR - HTR

CONFIGURE CAMERA: (LDMK TRK)
CM/DAC/SXT(EXP PAD) 1 fps (3.8% MAG)

MAG (E) _____, MAG % _____
UTILITY POWER - ON

169:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-259

LM FLIGHT PLAN

MCC-H	0934 CDT	CDR	LMP	NOTES
	169:00 (12102)	SECURE OPS'S ON FLOOR		+1:10
	:05	STOW EQUIPMENT FOR RETURN		
	:10			+1:20
		PACK ISA		
M S F N	169:15			
	:20			+1:30
		ATTACH BSLSS/ROCK BAG TO +Z27		
		STOW COLLECTION BAGS		
	:25	INSTALL ISA IN AFT CABIN		
		SECURE LEVA BAGS ON ENG COVER		
	169:30	STOW EVA ONBOARD DATA IN FLIGHT DATA FILE		+1:40

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	169:00 - 169:30	8/47	3-260

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

169:00
(11101)
(X1111)

L10H CANISTER CHANGE
(13 INTO A, STOW 11 IN A9)

ACQ MSFN HGA P -68, Y 114

MSFN CMDS:
DSE DUMP

169:10

MSFN UPDATE:
P24 LDMK TRACK (169:50)

MSFN

(P20)
(0.5°DB)

P20 OPT 5 (LDMK TRK ATT)(169:32)
N78 (+000.00)
(-068.00)
(+000.00)
N79 (+000.50)
N70 (00050)
(000,338/272,000) OMNI D

GAMMA RAY*
ALPHA PART*

169:20

CONFIGURE FOR VHF COMM CHECK WITH LM
VHF AM B ~~- DUPLEX~~ (VERIFY) VHF AM A - SIMPLEX
~~VHF AM~~ - T/R (PANEL 9) VHF B - OFF
MODE - VOX
RNDZ XPNDR - PWR change @ 120:36:56

169:30

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-261

LM FLIGHT PLAN

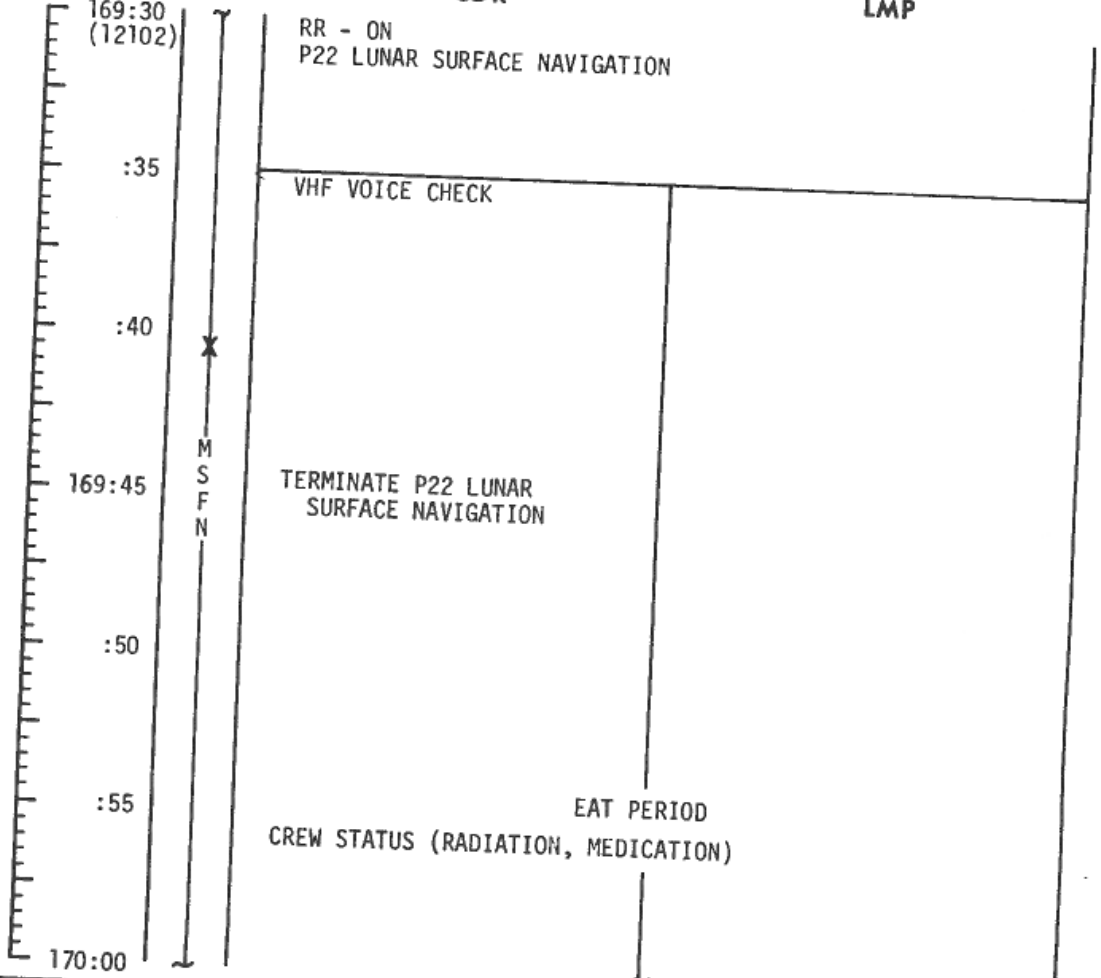
MCC-H

1004 CDT

CDR

LMP

NOTES



UPDATE TO LM
ASCENT PADS
CSI PAD
LM DAP WTS

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	169:30 - 170:00	8/47	3-262

FLIGHT P[illegible]NNING BRANCH

CSM FLI[illegible] PLAN

1004 C[illegible]

169:30
(P20)
(0.5°DB)
(11101)
(X1111)

MSFN CMDS:
DSE RECORD

P24 (L/S LDMK 15-2)
OPT ZERO - OFF, OPT MODE - CMC

0:00 T1(HORIZON)DET - RESET/START

3:50 - DAC - ON

4:50 - T2(LDMK ACQ) OPT MODE - MAN, TAKE MARKS 10 SEC APART

169:40

6:30 - TCA
7:18 - T3(LDMK LOSS) DAC - OFF

P00

(11101)
(X1111)

VHF AM B - OFF (CTR)
MODE - INTERCOM/PTT
RNDZ XPNDR - HTR
V48 (11112)
(X1111)

(11112)
(X1111)

V49 MNVR TO P52/
COAS CAL ATT (169:54)
(180,224,016)
HGA P -46, Y 164

169:50

MSFN UPLINK:
LM S.V. (INS +18)
CSM S.V. (L/O)
RESET SURFACE FLAG

MSFN UPDATE:
CONSUMABLES (IF REQD)
CSM S.V. (L/O) COPY AT 170:15

MSFN UPDATE TO LM WITH CSM COPY:
ASCENT PADS AND CSM WEIGHT COPY AT 171:10

CONFIGURE FOR URINE DUMP

MSFN CMDS:
DSE DUMP

CONFIGURE FOR URINE DUMP

170:00

MSFN

GAMMA RAY*
ALPHA PART*

CSM CONSUMABLES UPDATE

GET: ___ ___ ___:___ ___

RCS TOTAL _____

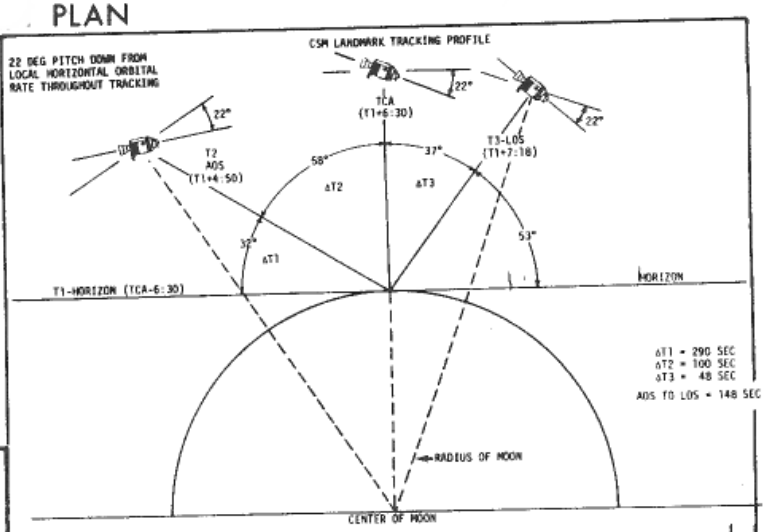
QUAD A _____ B _____

C _____ D _____

H_2 TANK 1 _____ 2 _____ 3 _____

O_2 TANK 1 _____ 2 _____ 3 _____

CSM LANDMARK TRACKING PROFILE



P24 LDMK TRACKING
TGT: 15-2 ( )

T_1 ___ ___ ___:___ ___:___ ___

T_2 ___ ___ ___:___ ___:___ ___

TCA ___ ___ ___:___ ___:___ ___

T_3 ___ ___ ___:___ ___:___ ___

R _____ °P _____ °Y _____ ° (T2 ACQ)

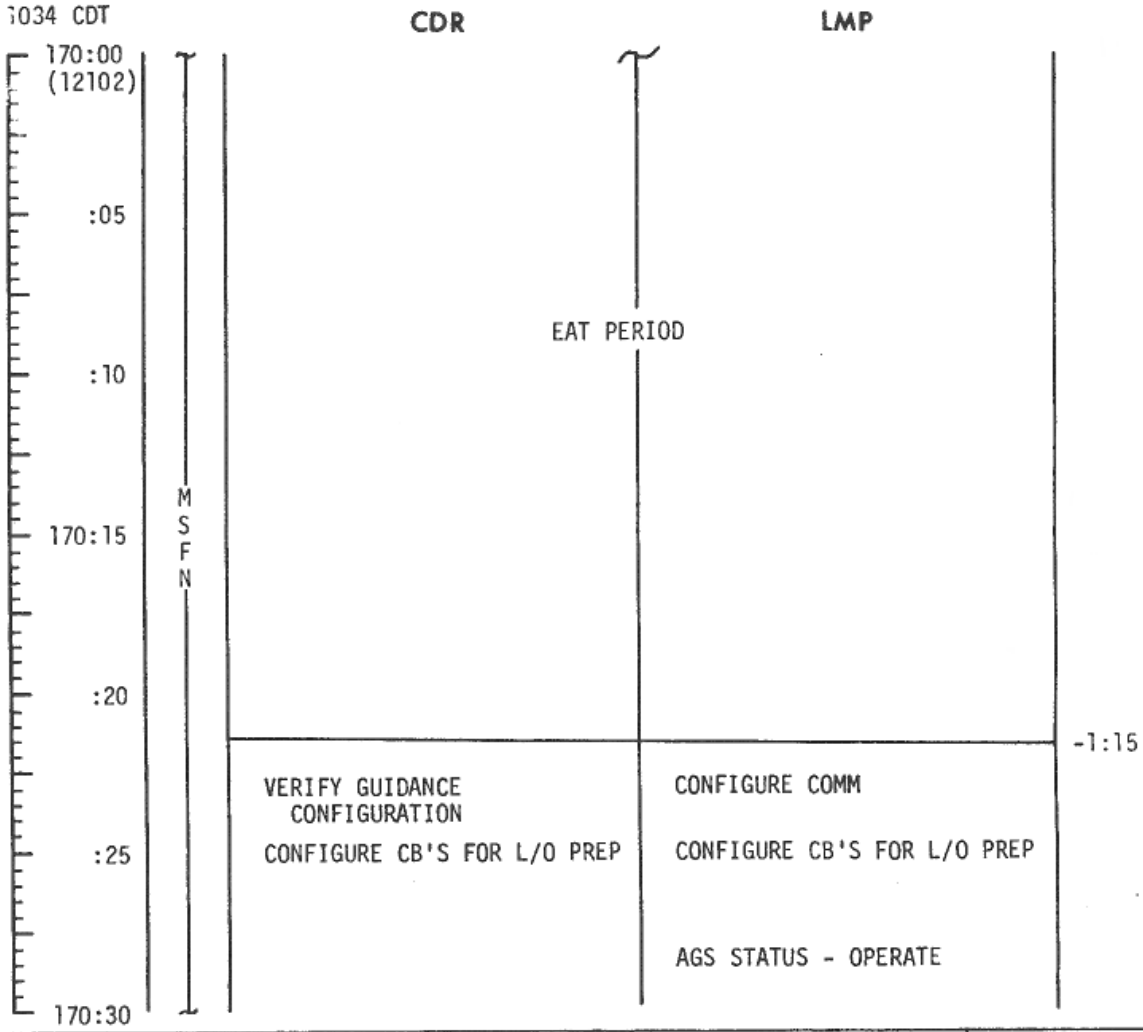
N or S NM ___ ___ / SA ___ ___ TA ___ ___ (T2 ACQ)

N89
LAT +25.991
LONG/2 +01.807
ALT -01.744

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-263

LM FLIGHT PLAN

MCC-H



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	170:00 - 170:30	8/47	3-264

FLIGHT PLA[illegible]NG BRANCH

1034 CDT

170:00
(11112)
(X1111)

H_2 PURGE LINE HEATERS - ON

P52 (OPTION 3)
(LIFT-OFF ORIENT)
REPORT: GYRO TORQUING ANGLES

P52 (COAS CALIB)
USE STAR NO. 41

MSFN

170:10

P00
GDC ALIGN
VERIFY ORDEAL

CONFIGURE CAMERAS: (DOCKING)

CM2/DAC/18/CEX-BRKT,MIR (T8,1/250,∞) 6 fps (40% MAG)

MAG (C) ____, MAG % ____
UTILITY PWR - ON

MSFN CMDS:
DSE RECORD

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

MSFN ENABLES MSFN S-BAND RELAY

170:20

CM/EL/80/CEX (f8,1/250,FOCUS) (10 FR)

MAG (Q) ____, FR # ____

CM4/TV-BRKT
(f44, PEAK) 11 MIN (ZOOM - 75MM)

H_2 AND O_2 FUEL CELL PURGE
WASTE WATER DUMP
URINE DUMP

170:30

GAMMA RAY*
ALPHA PART*

P52 IMU REALIGN

N71: __ __,__ __

N05: __ __ __.__ __

N93:

X __ __.__ __ __

Y __ __.__ __ __

Z __ __.__ __ __

GET __ __ __:__ __:__ __

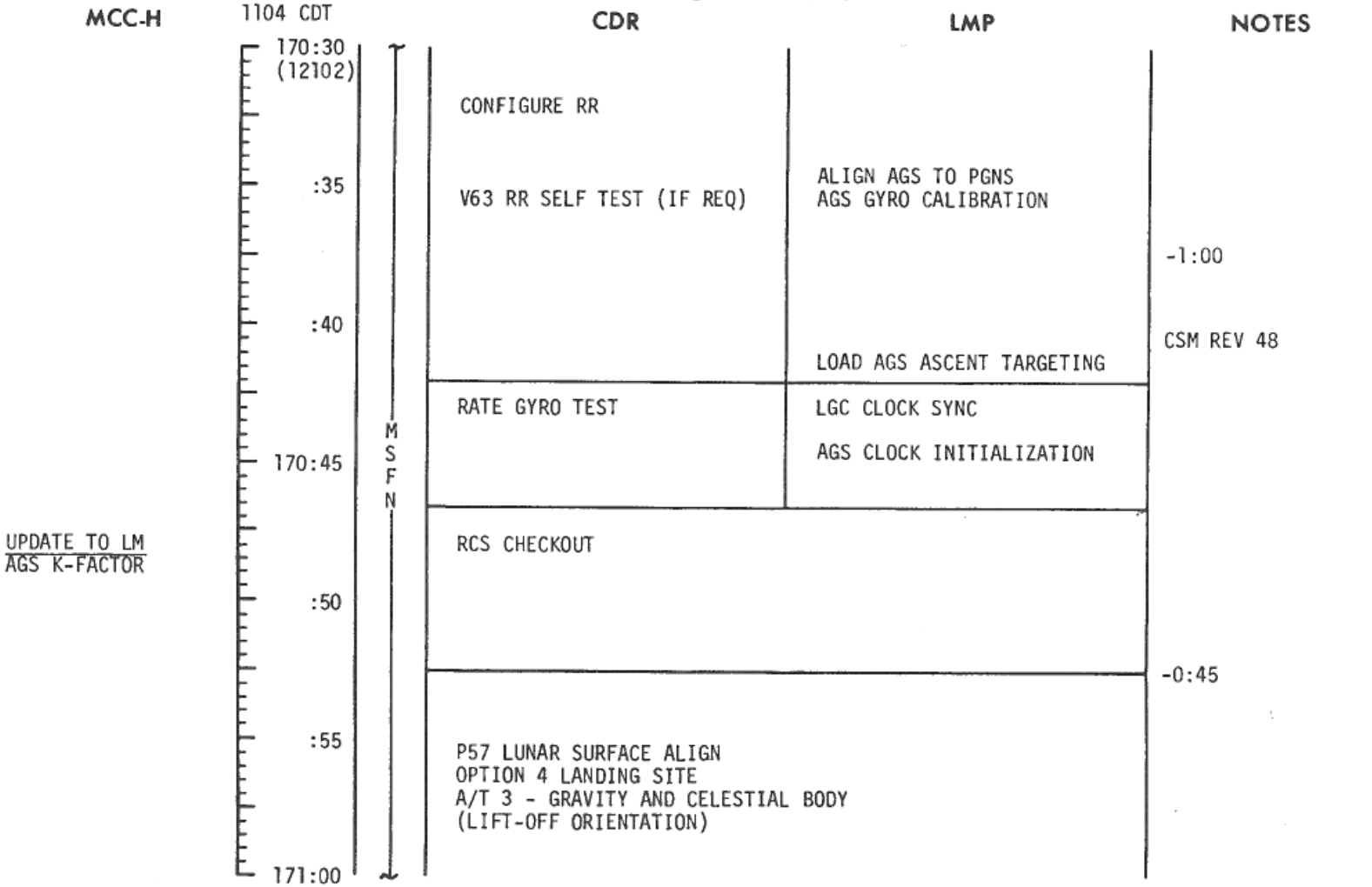
COAS CALIB - N92

SHAFT: __ __ __.__ __

TRUN: __ __.__ __ __

CSM S.V. (L/O)	P27 UPDATE	
PURP	V	V
GET	: :	: :
304 01	INDEX	INDEX
02		
03		
04		
05		
06		
07		
10		
11		
12		
13		
14		
15		
16		
17		
20		
21		
22		
23		
24		

LM FLIGHT PLAN

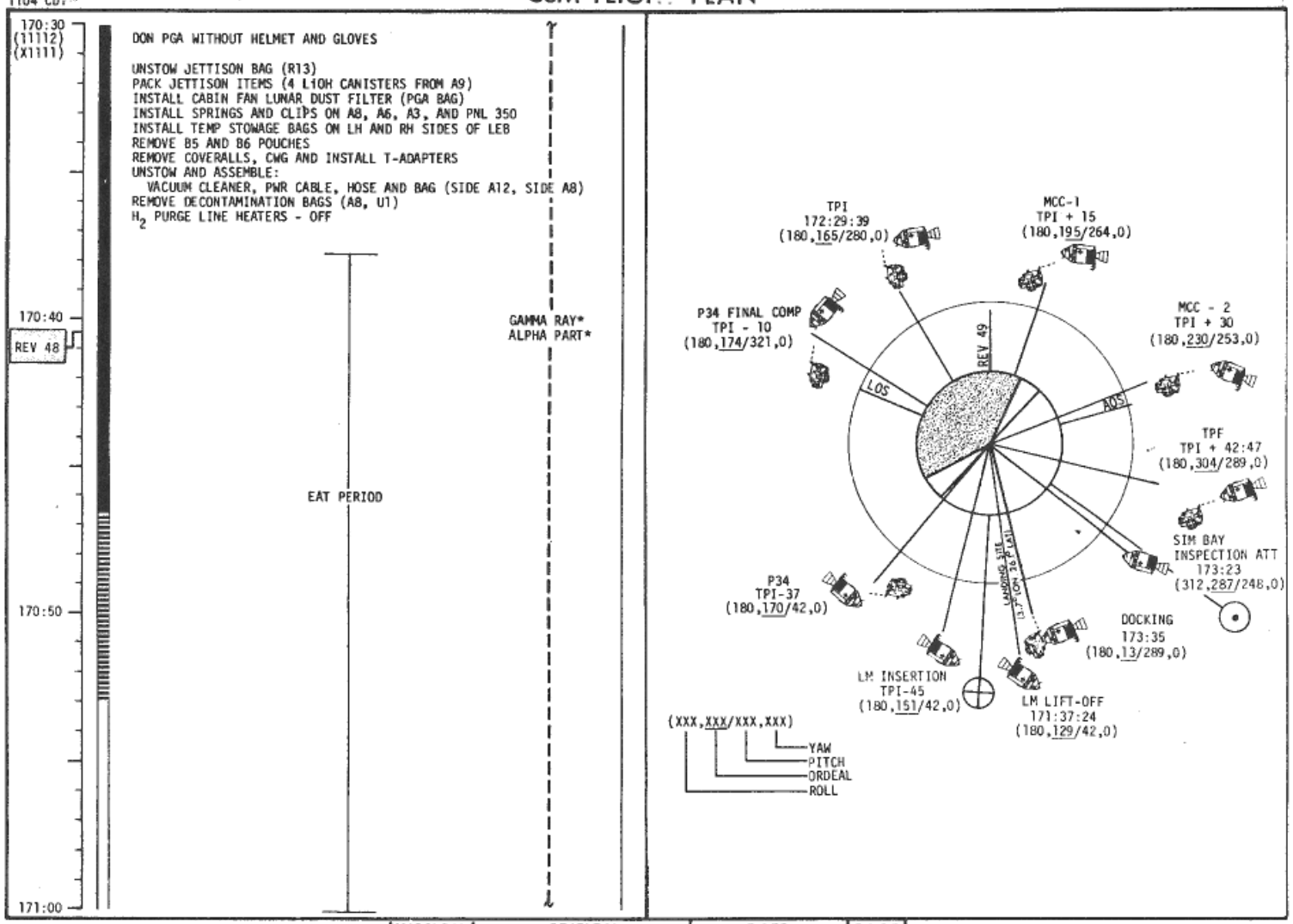


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	170:30 - 171:00	8/47-48	3-266

FLIGHT PLANNING BRANCH

1104 Cu...

CSM FLIG.. PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-267

LM FLIGHT PLAN

MCC-H	1134 CDT	CDR	LMP	NOTES
	171:00		ALIGN AGS TO PGNS	
	(12102)	POSITION RR ANT	BATS 5&6 - ON, 1&3-OFF/RESET SET CAMERA: LM3/DAC	
UPLINK TO LM CSM S.V. (L/O) (IF REQD) RLS (IF REQD) LGC GYRO COMP	:05	LOAD DAP, LM WT P12 POWERED ASCENT		-0:30
			AGS LUNAR ALIGN	
	:10	PRELAUNCH SWITCH CHECKS	PRELAUNCH SWITCH CHECKS	
		DON HELMET & GLOVES	DON HELMET & GLOVES	
	171:15			
	:20		V47 SET AGS BIAS LIFT-OFF COMM, RECORDER - ON BAT 2,4 - OFF/RESET DES BATS - DEADFACE	-0:15
GUIDANCE RECOMMEN- DATION FOR ASCENT	:25	VERIFY CB STATUS	VERIFY CB STATUS	
		APS PRESSURIZATION		
	171:30			

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	171:00 - 171:30	8/48	3-268

FLIGHT PLANNING BRANCH

CSM FLIC.., PLAN

171:00
(11112)
(X1111)

AUTO RCS SEL (16) - MNA/MNB

ACQ MSFN HGA P -46, Y 164

MSFN CMDS:
DSE DUMP

VHF AM B - DUPLEX (VERIFY)
VHF AM A - OFF (CTR) (VERIFY)
VHF RANGING - ON(UP)
VHF ANT - LEFT
RNDZ XPNDR - PWR
EXT LIGHTS RUN/EVA - ON (UP)
EXT LIGHTS RNDZ - RNDZ

171:10

CYCLE CMC MODE - FREE/AUTO
V48 (11102)
(X1111)
LOAD CSM AND LM WT
V49 MNVR TO P20 ATT (171:20)
(180,42,0) OMNI D

(11102)
(X1111)

171:20

GDC ALIGN
VERIFY ORDEAL

SYSTEMS TEST - XPNDR/C

GAMMA RAY EXP - OFF
X-RAY - OFF
α RAY/X DR - α OFF
MASS SPECT EXP - OFF
MAP CAMERA ON - STBY (VERIFY)
MAP CAMERA IMAGE MTN - OFF (VERIFY)
PAN CAMERA PWR - BOOST

LOAD N37

171:30

MSFN

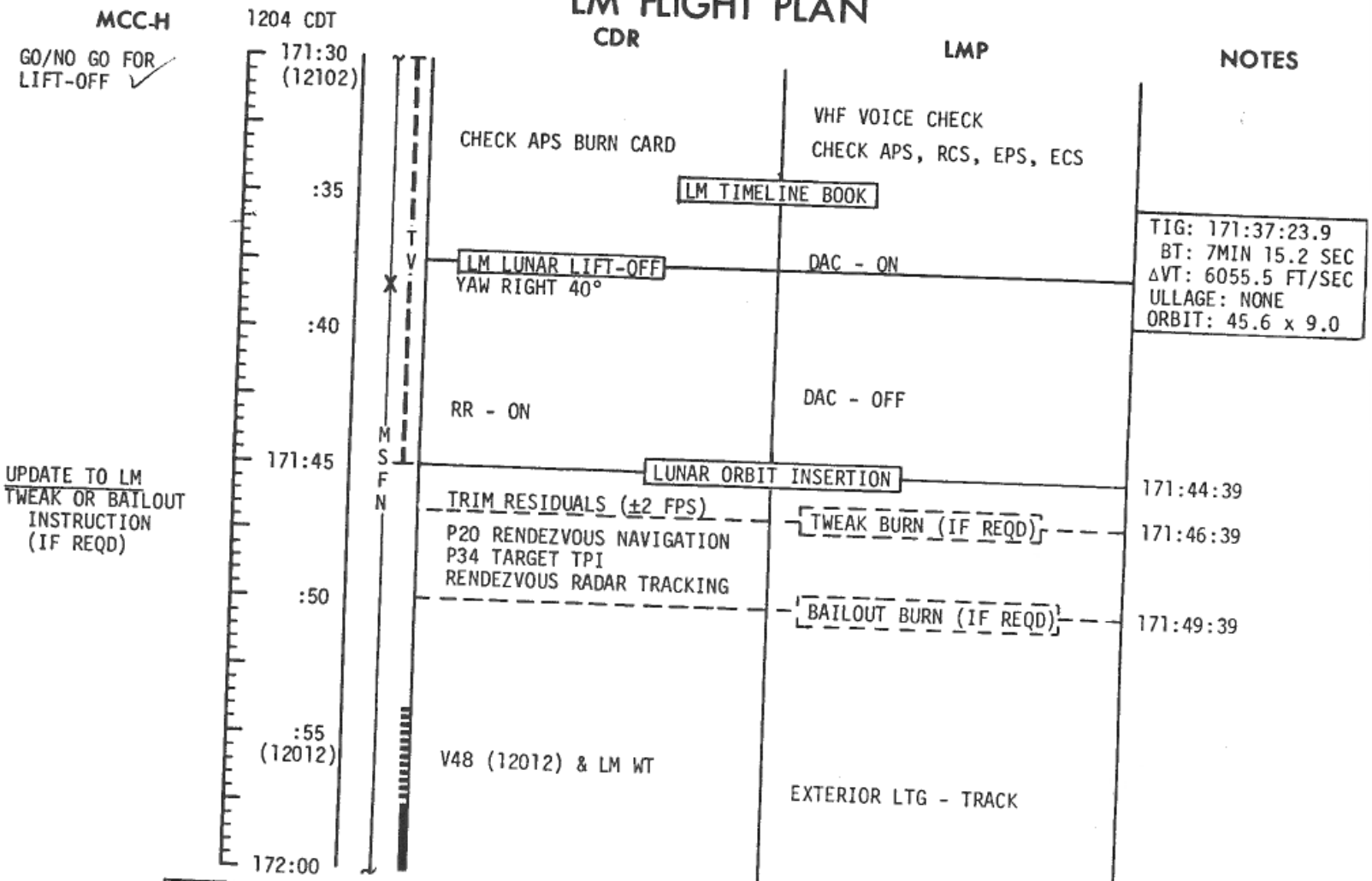
GAMMA RAY*
ALPHA PART*

DIRECT ASCENT RNDZ PAD								UPDATE (IF REQ'D)						
GETI LIFT-OFF	HRS	+	0	0				+	0	0				
	MIN	+	0	0	0			+	0	0	0			
	SEC	+	0					+	0					
GETI TPI N37	HRS	+	0	0				+	0	0				
	MIN	+	0	0	0			+	0	0	0			
	SEC	+	0					+	0					

CSM WT	+					
LM WT	+	0	5	9	0	0

COELLIPTIC RNDZ PAD								UPDATE (IF REQ'D)						
GETI LIFT-OFF	HRS	+	0	0				+	0	0				
	MIN	+	0	0	0			+	0	0	0			
	SEC	+	0					+	0					
GETI CSI N11	HRS	+	0	0				+	0	0				
	MIN	+	0	0	0			+	0	0	0			
	SEC	+	0					+	0					
GETI TPI N37	HRS	+	0	0				+	0	0				
	MIN	+	0	0	0			+	0	0	0			
	SEC	+	0					+	0					

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	171:30 - 172:00	8/48	3-270

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

1204 GET

171:30
+55
0
171:40
-45
154.62
-448.0
171:50
-37
92.91
-349.9
172:00

MSFN

MSFN UPDATE:
GO/NO GO FOR LM LIFT-OFF

VHF VOICE CHECK

MSFN DISABLES MSFN S-BAND RELAY
GO VHF COMM

VHF ANT - RIGHT

LM LIFT-OFF
: : . 171:37:24

VHF RNG-RESET

LM INSERTION
: : . 171:44:39

MSFN UPLINK:
LM S.V.

P34(TRIM)(180,170/42,0)
VERIFY N37 AND N55

BEFORE STEADY STATE
PRE-TPI: N49 > (+00200,+00120) REJECT/REPEAT
POST-TPI:N49 > (+00080,+00050) REJECT/REPEAT
AFTER STEADY STATE
ANYTIME: N49 > (+00030,+00020) REJECT/REPEAT

VERIFY LM TRACKER LT-ON

P30 MANEUVER

N/A / SET STARS	C/S	S/P	M/S	B/G	/&	O/N	PURPOSE / PROP/GUID	
	+			N	/	A	WT	N47
R ALIGN N / A		0	0	N	/	A	P_{TRIM}	N48
P ALIGN N / A		0	0	N	/	A	Y_{TRIM}	
Y ALIGN N / A	+	0	0				HRS	GETI
	+	0	0	0			MIN	N33
	+	0		.			SEC	
ULLAGE				.			ΔV_X	N81
4 JET, 11 SEC				.			ΔV_Y	
				.			ΔV_Z	
	X	X	X				R	
	X	X	X				P	
	X	X	X				Y	
ΔVC	+			N	/	A	H_A	N44
				N	/	A	H_P	

*IF LM BAILOUT REQD:
* COPY P76 DATA FROM LM
*
*33 : : .
*
*84 . . .
*
*GO TO RESCUE BOOK PG 6

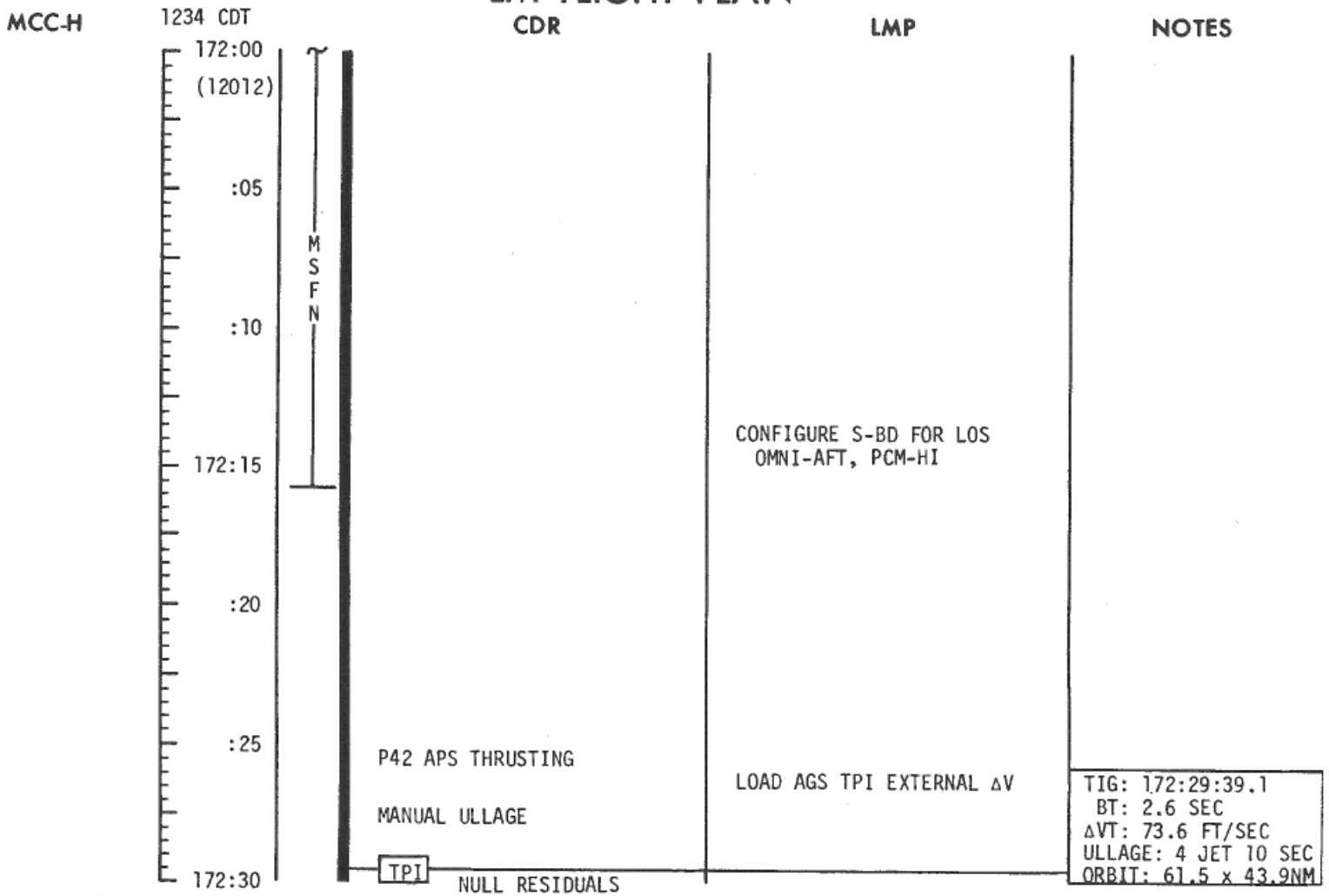
*IF CSM BAILOUT REQD:
*
*MSFN UPDATE:
* CSM BAILOUT P30 PAD
*P30
*P40 ; SET UP EMS
*SPS BURN CUE CARD
*CSM BAILOUT BURN
*GO TO RESCUE BOOK PG 6

P34 INPUT

37	LM GETI-TPI : :		
55	INTEG OPT +00000	ELEVATION ° +000.00	TRANSFER ° +130.00

* IF NO SXT,V57-LOAD R2=1;CALL N78, *
* LOAD R2=0; V58; V54; VHF ONLY *
* UNTIL TPI-16, THEN VHF/COAS(6). *

LM FLIGHT PLAN

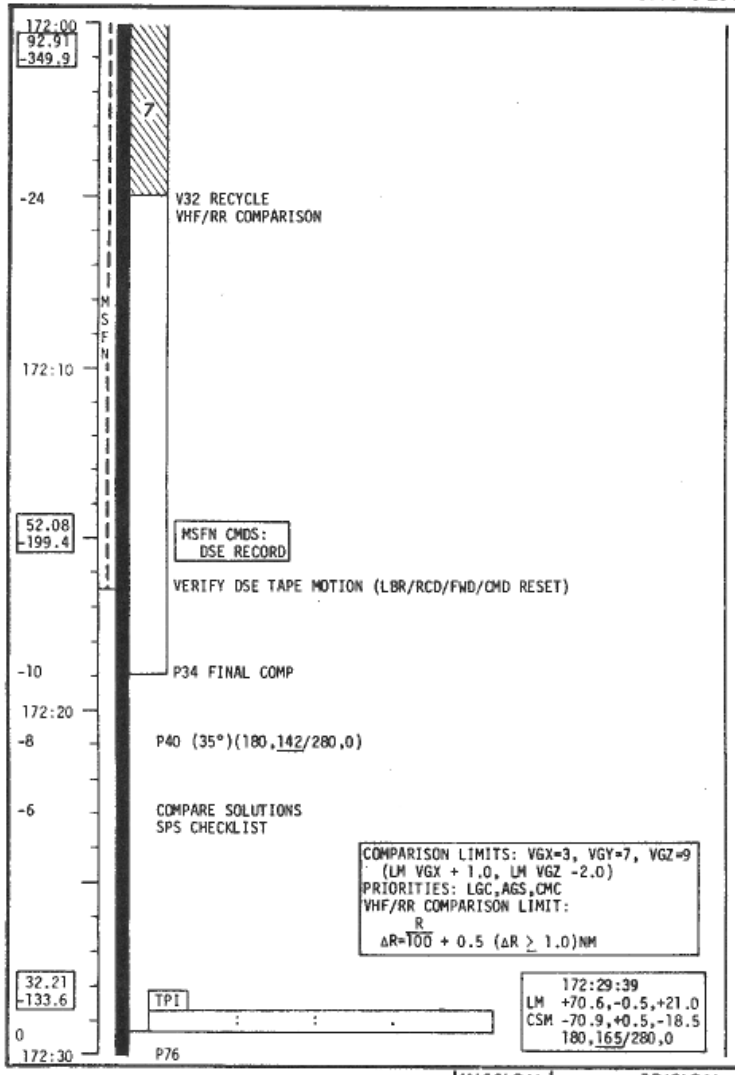


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	172:00 - 172:30	8/48	3-272

FLIGHT PLAN[illegible]IG BRANCH

CSM FLIGHT PLAN

1234 CDT



* * * * * * * * * * * * * * * * * * * *
* CONTINGENCY PROCEDURE *
* (P30-P40 BACKUP WITH LM SOLUTION) *
* P30-MIRROR IMAGE OF LM ΔV *
* P40 *
* * * * * * * * * * * * * * * * * * * *

P34 RECYCLE			
55	INTEG OPT +00000	ELEVATION ↓	TRANSFER ↓ +130.00
58	PERILUNE ALT	TPI ΔV	TPF ΔV
81	TPI ΔV-LV		
84	LM TPI ΔV-LV		

GROUND TPI FOR LM

						ΔV_X
						ΔV_Y
						ΔV_Z

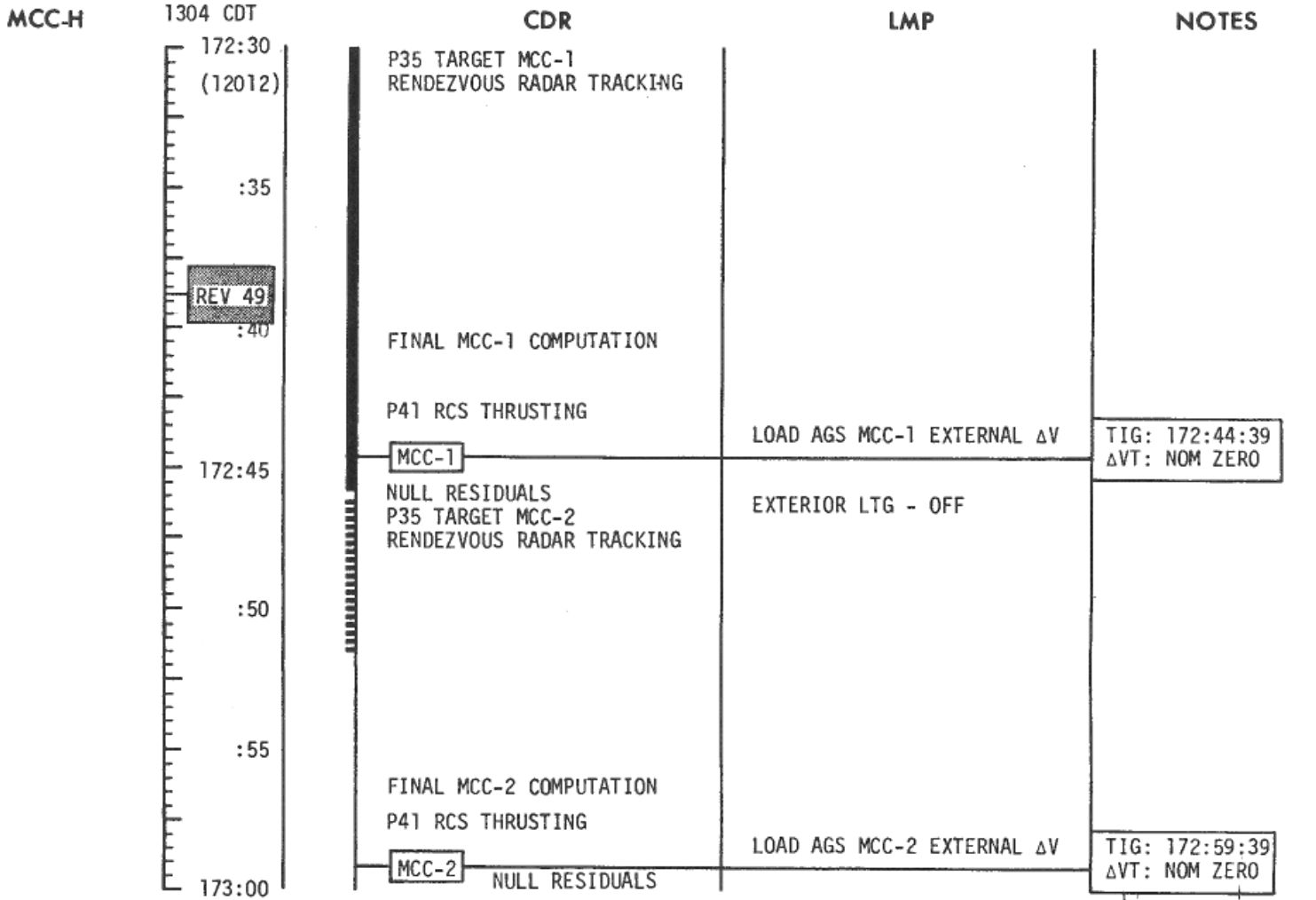
P34 FINAL COMP			
55	INTEG OPT +00000	ELEVATION ↓	TRANSFER ↓ +130.00
58	PERILUNE ALT	TPI ΔV	TPF ΔV
81	TPI ΔV-LV		
84	LM TPI ΔV-LV		
84	LM TPI ΔV-LV		

P76

* * * * * * * * * * * * * * *
* IF SXT OR VHF ONLY, OR *
* VHF/COAS, V57-LOAD R2=1.*
* * * * * * * * * * * * * * *

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-273

LM FLIGHT PLAN

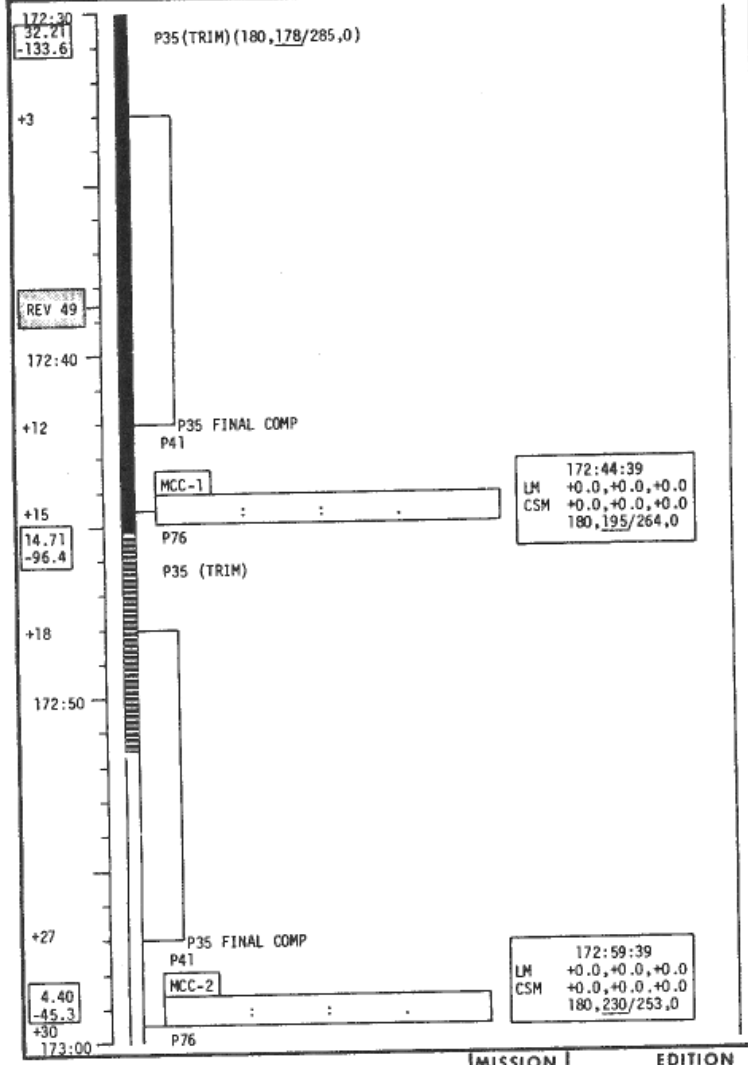


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	172:30 - 173:00	8/48-49	3-274

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

1304 GET



P35 FINAL COMP			
81	MCC1 ΔV-LV		
84	LM MCC1 ΔV-LV		
84	LM MCC1 ΔV-LV		

P76

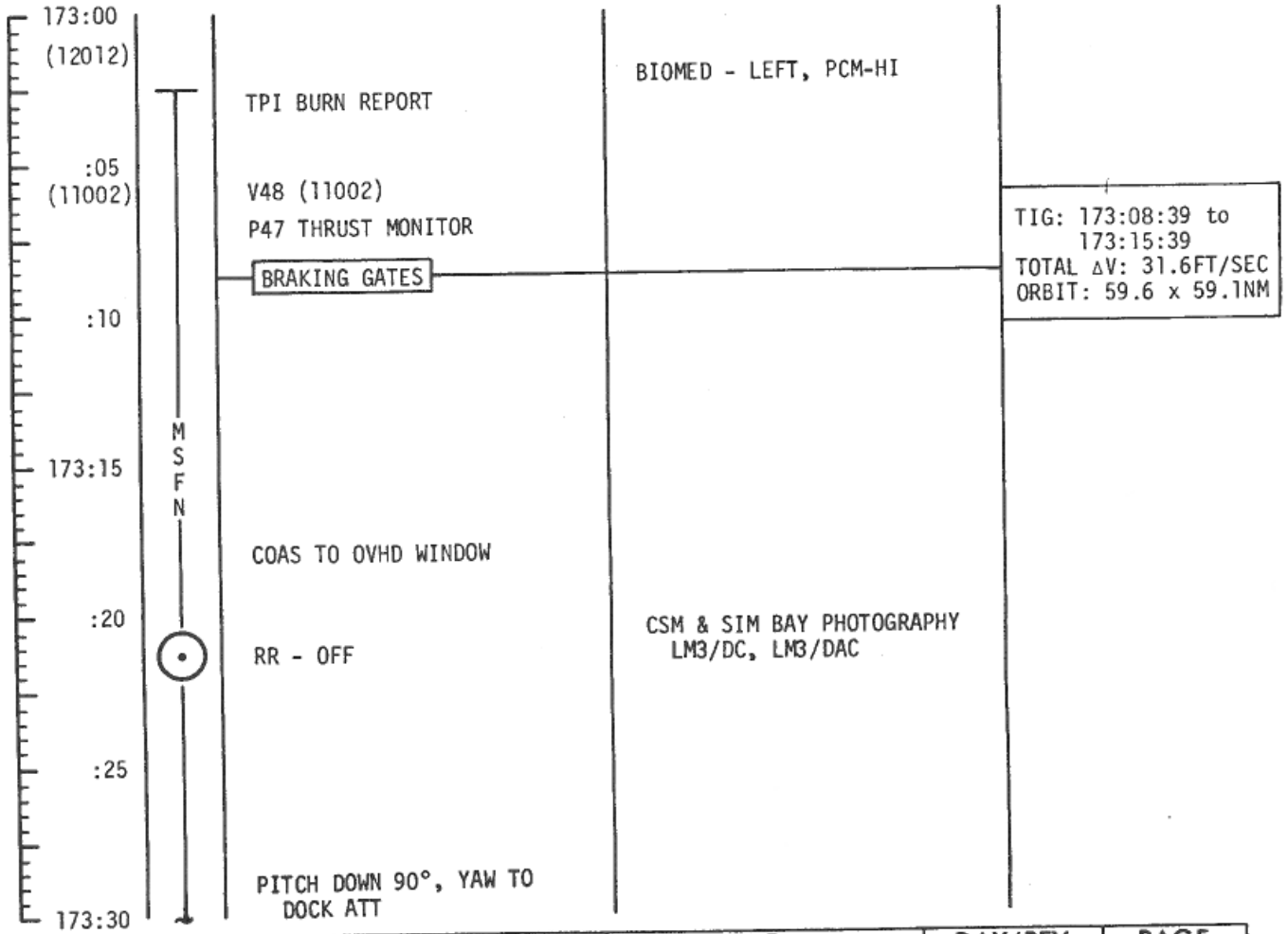
```
* * * * * * * * * * * * * * * * * * * * *
* IF CSM ACTIVE & N58 TPF ΔV >55 FPS     *
* GO TO PRE-BRAKING SPS BURN PROCEDURES  *
* (SEE RESCUE BOOK PG 40)                *
* * * * * * * * * * * * * * * * * * * * *
```

```
* * * * * * * * * * *
* IF VHF/COAS, V93  *
* BEFORE FIRST MARK *
* * * * * * * * * * *
```

P35 FINAL COMP			
81	MCC2 ΔV-LV		
84	LM MCC2 ΔV-LV		
84	LM MCC2 ΔV-LV		

P76

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	173:00 - 173:30	8/49	3-276

FLIGHT PLANNING BRANCH

CSM FLIC . PLAN

173:00
4.40
-45.3

P79(35°)(180,271/289,0)

ACQ MSFN HGA P -57, Y 45
MSFN CMDS:
DSE DUMP
PERFORM PRE-DOCK CHECKLIST

IF CSM ACTIVE:
P47 AT R=1.25 NM

SEC PRPLNT FUEL PRESS (4) - OPEN

V83E
N83E
KEY REL

UTILITY PWR - ON (VERIFY)
TV - ON
DAC - ON
LM PHOTOS WITH DAC/TV

173:10

TPF

: :

173:12:26
LM 31.7 (TOTAL)
CSM 33.6 (TOTAL)
180,304/289,0

EMS MODE - STBY
EMS FUNC - OFF
EXT LIGHT RNDZ - OFF

LM STATIONKEEP

POO
DAC/TV - OFF

CMC MODE - AUTO

V49 MNVR TO SIM BAY INSPECTION ATTITUDE (173:23)
(312,248,0)

173:20

V49 MNVR TO DOCKING ATT (173:31)
(180,289,0) ACQ MSFN HGA P -57, Y 45

CUE MSFN FOR LOGIC ARM
SECS LOGIC (BOTH) - ON (UP)
MSFN GO FOR PYRO ARM
SECS PYRO ARM (2) - ON (UP)

173:30

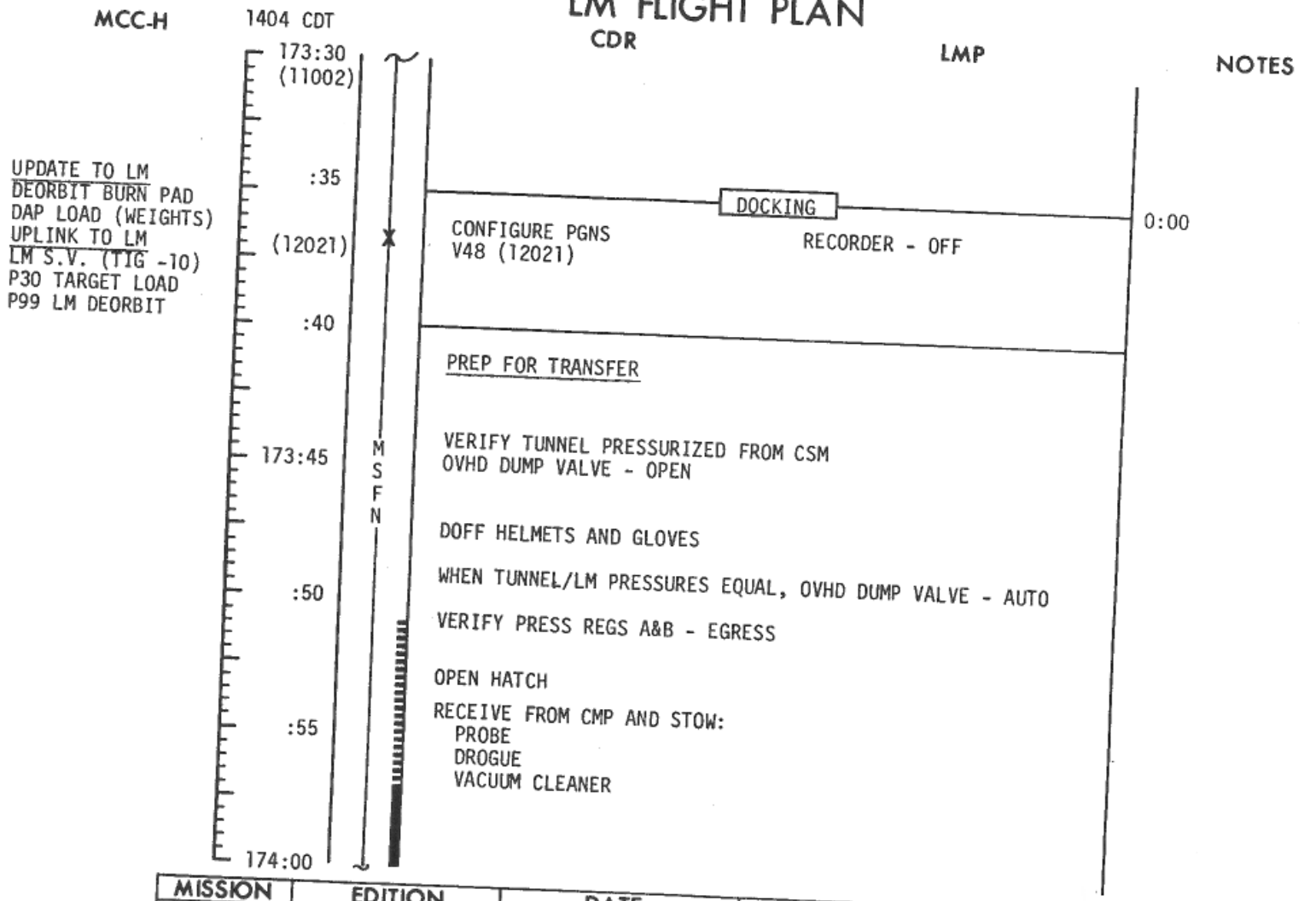
PRE-DOCK CHECKLIST

MAN ATT (3) - RATE CMD (VERIFY)	CB DOCK PROBE (2) - CLOSED
LIMIT CYCLE - OFF (VERIFY)	PROBE RETRACT (2) - OFF (VERIFY)
ATT DB - MIN	PROBE EXTD/REL - RETRACT
RATE - LOW (VERIFY)	PROBE EXTD/REL TB (2) - GRAY (VERIFY)
TRANS CONTR PWR - ON (UP)	(IF TB NOT GRAY, GO TO PG S/2-12, E)
ROT CONTR PWR DIRECT (BOTH) - MNA/MNB	CB SECS LOGIC (2) - CLOSED (VERIFY)
SC CONT - CMC (VERIFY)	CB SECS ARM (2) - CLOSED
CMC MODE - HOLD	EXT LIGHTS RUN/EVA - ON (UP) (VERIFY)
AUTO RCS SEL (16) - MNA/MNB (VERIFY)	COAS PWR - ON (UP) (VERIFY)

BRAKING GATES

R,NM	R,FPS	RETICLE ANG,DEG	R,FT
1.50	45	.08	9000
1.00	30	.13	6000
.50	20	.26	3000
.25	10	.54	1500
.08	5	1.60	500
.05		2.70	300
.03		4.00	200
.02		8.50	100

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	173:30 - 174:00	8/49	3-278

FLIGHT NNING BRANCH

CSM FLI .. PLAN

173:30
(11102)
(X1111)

P47
DAC/TV - ON (ZOOM - 25MM)
LM PITCH DOWN 90°, YAW LEFT 120°

T TRANSLATE TO CAPTURE LATCH
V PERFORM DOCKING CHECKLIST

DOCKING

_____:_____:_____._____ 173:35:00

DAC/TV - OFF
P00

(61101)
(11111)

V48 (61101)
(11111)

RECORD MAG % _____

RECORD EL FR # _____

CMC MODE - AUTO
SC CONT - CMC
RNDZ XPNDR - OFF

173:40

MSFN UPDATE:
DAP LOAD - UPDATE WEIGHTS (174:01)
MAP CAMERA PHOTO PAD (174:48)
PAN CAMERA PHOTO PAD (175:22)

PREPARE COUCH FOR HATCH

REMOVE PROBE STRAPS (R5)

CDR - VERIFY FWD DUMP VLV - AUTO
CABIN FANS - ON (UP)

EQUALIZE CSM/LM PRESSURE (LOD DECAL)

TUNNEL LIGHTS - LIGHTS
REMOVE HATCH AND STOW (DECAL)

173:50

VERIFY DOCKING LATCHES (DECAL)

REMOVE AND TEMP STOW PROBE AND DROGUE (DECAL)

TRANSFER TO CDR AT HIS REQUEST:
PROBE
DROGUE
VACUUM CLEANER (ASSEMBLED)

DOFF PGA
ZIP SUIT & INSTALL ELECTRICAL COVER PRIOR TO STOWING (PGA BAG)
STOW COMM CARRIERS AND UCTA (PGA BAG)
TRANSFER PRD TO CWG

174:00

MSFN

DOCKING CHECKLIST

AT CAPTURE

PROBE EXTD/REL TB (2) - BP
(IF TB NOT BP, GO TO PG S/2-11, A)
REPORT CAPTURE TO LM
SC CONT - CMC (VERIFY)
CMC MODE - FREE
ALLOW PROBE TO DAMP SC MOTION (10 SEC)
WHEN WITHIN +3° OF DOCKING ATTITUDE
PROBE RETRACT SEC - 1 (PRIM - 2 IF REQD)

AT DOCK LATCH

PROBE EXTD/REL TB (2) - GRAY

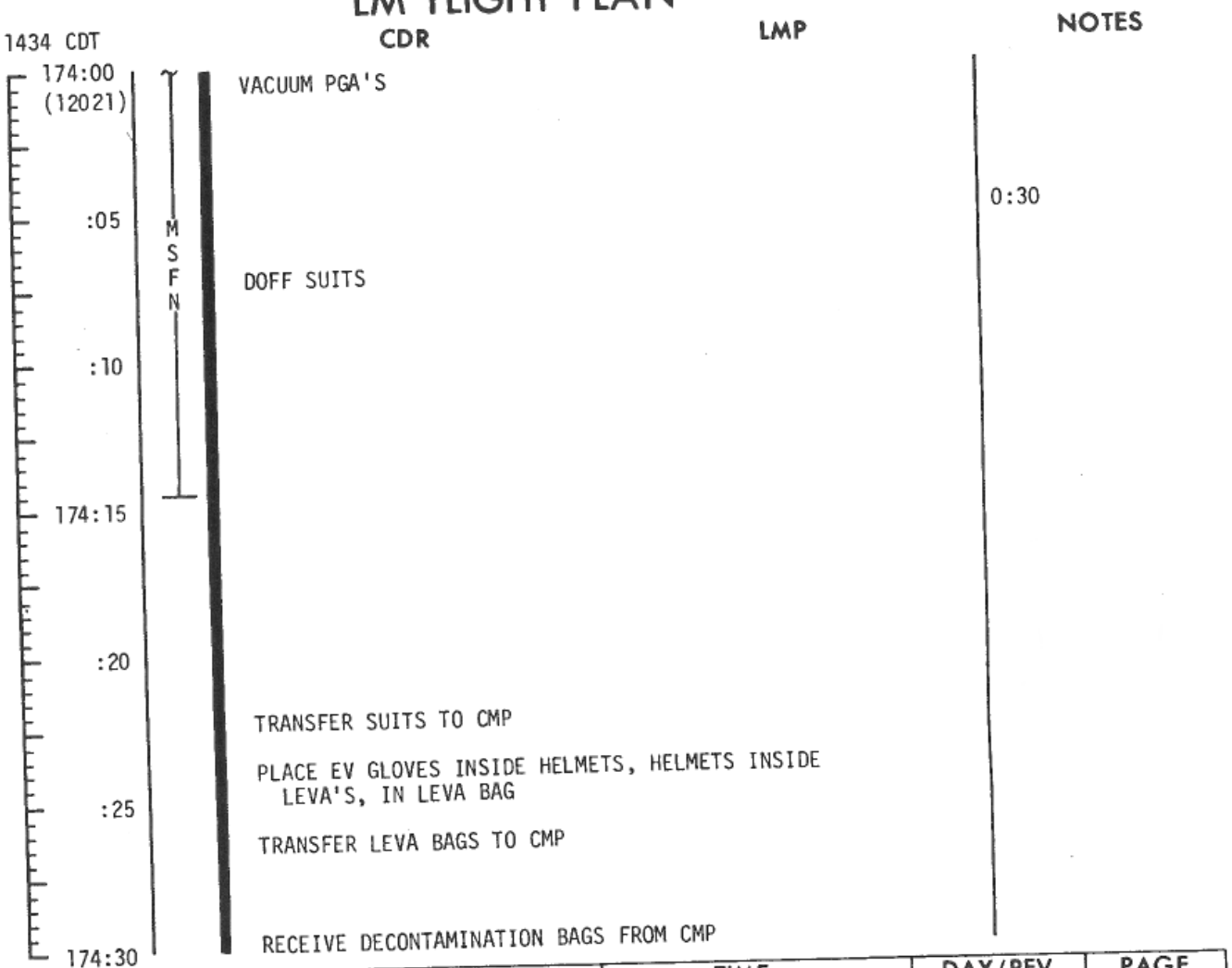
AT HARD DOCK

SECS PYRO ARM (2) - SAFE
SECS LOGIC (BOTH) - OFF
CB SECS ARM (2) - OPEN
CB DOCK PROBE (2) - OPEN
THC - LOCKED
RHC - LOCKED
BMAG MODE (3) - RATE 2
PROBE EXTD/REL - OFF

PROBE RETRACT (2) - OFF

EXT LIGHTS (2) - OFF
COAS PWR - OFF
LIMIT CYCLE - ON (UP)
ATT DB - MAX
SC CONT - SCS
BMAG MODE (3) - ATT 1/RATE 2
AUTO RCS SEL B/D ROLL (4) - OFF
TRANS CONTR PWR - OFF
ROT CONTR PWR DIRECT (BOTH) - OFF

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	174:00 - 174:30	8/49	3-280

FLIGHT PL NG BRANCH

CSM FLIGHT PLAN

1434 CDT

174:00
(61101)
(11111)

MSFN

V48 LOAD CSM & LM WEIGHT

CSM WT	+
LM WT	+

S-BD AUX TV - SCI
PCM BIT RATE - HIGH

INHIBIT ALL JETS EXCEPT: A1 & C2 OR D1 & B2, A3, C4, B3, D4
P20 OPT 5 (+X FWD SIM ATT)(174:15)
N78 (+090.00)
(+052.25)
(+180.00)
N79 (+000.50)
N70 (00050)
(142,000/154,000)

(P20)
(0.5°DB)

SIM EXPERIMENT PREP (CUE CARD)

MSFN CMDS:
DSE RECORD

174:10

DATA SYSTEMS ON - ON
LOGIC POWER (2) - DPLY/RETR
~~MAP CAMR/LASER EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)~~
ALPHA/X-RAY EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)
~~MAP CAMERA TRACK - EXTEND tb-BP (~4 MIN)/GRAY then OFF (CTR)~~

deleted @ 174:03:39

VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)

GAMMA RAY: EXP - ON, GAINSTEP - SHIELD ON
X-RAY - ON, α RAY/X DR - α ON
~~LASER ALTM - ON~~ deleted @ 174:04:13
MASS SPECT EXP - STBY
PAN CAMERA PWR - OFF

RECORD GET

174:20

RECEIVE SUITS FROM CDR

RECEIVE LEVA BAGS

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

TRANSFER TO CDR
DECONTAMINATION BAGS

174:30

LM FLIGHT PLAN

MCC-H

1504 CDT

	CDR	LMP	NOTES
174:30 (12021)	UNSTOW, VACUUM/WET WIPE AND BAG:		
	70MM MAG BAG (13 MAGS)		
	SURFACE 16MM MAG BAG (8 MAGS)		
:35	4 COLLECTION BAGS		1:00
REV 50	ISA		
	BSLSS/ROCK BAG		
:40			
174:45			
:50	TRANSFER ABOVE ITEMS TO CSM		
:55			
175:00			

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	174:30 - 175:00	8/49-50	3-282

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

1504 CDT

174:30
(P20)
(0.5°DB)
(61101)
(11111)

REV 50

CMC MODE - FREE
P52 (OPTION 3)
(LIFT-OFF ORIENT)

P52(IMU REALIGN)

N71: _ _ _ _

N05: _ _ _ . _ _

N93:

X _ _ _ . _ _ _ _

Y _ _ _ . _ _ _ _

Z _ _ _ . _ _ _ _

GET _ _ _ . _ _ . _ _

ch @ 174:03:50

P20, CMC MODE - AUTO
GDC ALIGN
VERIFY ORDEAL

174:40

MAP CAM/LASER COVERS - OPEN
tb-BP/GRAY then OFF (CTR)

MAP CAM TRACK - EXTEND
tb-BP (~4 min)/GRAY then OFF (CTR)

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

MAP CAMERA PHOTO PAD

T-START: 174:50:04

T-STOP: 175:49:36

ch @ 174:04:30

LASER ALTIMETER - ON

MAP CAMERA IMAGE MTN - ON (tb-BP IN 3-5 SEC then GRAY) +4

MAP CAMERA ON - ON (T START)

MAP CAMERA IMAGE MTN - INCR (tb-BP)/ON

174:50

MAP CAMERA

RECEIVE ITEMS FROM LM AND STOW
(LM TO CM TRANSFER LIST)

ACQ MSFN: MAN, WIDE P -5, Y 25
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW

175:00

LM TO CM TRANSFER LIST

ITEM	CM STOWAGE LOCATION
16MM MAG (6) IN DECOM BAG	R13
16MM MAG (2) IN DECOM BAG	R13
70MM MAG (4) IN DECOM BAG	R13
70MM MAG (3) IN DECOM BAG	A8
70MM MAG (3) IN DECOM BAG	R13
70MM MAG (3) IN DECOM BAG	R13
FLIGHT DATA FILE (KIT)	R3
OPS (1)	A7
LEVA BAGS (2)	UNDER RIGHT COUCH
PENETROMETER IN DECOM BAG	A7
ISA DECOM BAG	TOP A2
COLLECTION BAG IN DECOM BAG	TOP A7
COLLECTION BAG IN DECOM BAG	TOP A1
COLLECTION BAG IN DECOM BAG	TOP A1
COLLECTION BAG IN DECOM BAG	PGA .BAG
BSLSS/ROCK BAG IN DECOM BAG	A9
CORE TUBES (3)	A9
SRC IN DECOM BAG (2)	B5,B6
VACUUM CLEANER	A6
PURSE	
UNOPENED FOOD BAGS	
USED URINE BAGS	
USED FECAL BAGS	
ANCILLARY PACKAGE	A8

LM FLIGHT PLAN

MCC-H

1534 CDT

175:00 (12021)	CDR	LMP	NOTES
	UNSTOW SRC'S, VACUUM AND BAG, TRANSFER TO CSM		1:30
:10	RECEIVE B5 & B6 FROM CMP AND STOW IN SRC RACK		
	TRANSFER VACUUM CLEANER TO CSM		
:20			
	UNSTOW OPS, CHECKOUT, TRANSFER TO CMP		
	DON LT WT HEADSET		
175:30	CONNECT CWG ADAPTER		
	CONNECT LM COMM		
:40			
:50			
176:00			

MSFN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	175:00 - 176:00	8/50	3-284

FLIGHT PLANNING BRANCH

1534

CSM FL_ PLAN

175:00
(P20)
(0.5°DB)
(61101)
(11111)

MSFN CUE: (~AOS +4 MIN)
HGA AUTO

CONFIGURE DSE (STOP/CMD RESET/REWIND)

REPORT: GYRO TORQUING ANGLES
(FROM P52 AT 174:35)

175:10

TRANSFER B5, B6 CONTAINERS TO LM
REMOVE CANISTERS & DIVIDER FROM A9 AND
PLACE IN JETTISON STOWAGE BAG
(NOTE: CANISTER 14 is UNUSED)

MSFN CMDS: (AOS +12 MIN)
DSE PLAYBACK

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

MAP CAMERA

175:20

PAN CAMERA PHOTO PAD
T-START: 175:34:32
T-STOP: 175:36:52

added @ 175:50:45
IMAGE MOTION - BP

175:30

175:30
(P20)
(0.5°DB)
(61101)
(11111)

MAP CAMERA

PAN CAMERA MODE - STBY, PWR - ON tb-BP (2 SEC)/GRAY
STEREO, EXPOSURE - INCREASE

PAN CAMERA MODE - OPR tb-BP (2 SEC)/GRAY (T START)

MAP CAMERA
PAN CAMERA

PAN CAMERA MODE - STBY (T STOP)

MSFN: VERIFY LENS TUCK IN

PAN CAMERA: PWR - OFF

MSFN UPDATE:
LM JETTISON PAD
CSM SEPARATION PAD (177:10)

175:40

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

MAP CAMERA

GAMMA RAY: GAINSTEP - SHIELD OFF

LM JETTISON PAD

+	0	0	1	7	7	HRS	GETI
+	0	0	0	2	0	MIN	N33
+	0	3	3	0	0	SEC	
X	X	X	0	1	4	R	(014)N22
X	X	X	0	3	8	P	(040)
X	X	X	3	4	4	Y	(343)

175:49.27

MAP CAMERA ON - OFF (T STOP)
LASER ALTM - OFF ch @ 174:04:45

175:50

MAP CAMERA ON - STBY (T STOP +1 MIN)
MAP CAMERA IMAGE MTN - OFF (tb-BP IN 3-5 SEC then GRAY)

GAMMA RAY: GAINSTEP - SHIELD ON (CTR)
V48 (61102)
(11111)

(61102)
(11111)

POO

MSFN CMDS:
DSE REWIND

V49 MNVR TO LM JETTISON PAD ATT (176:03)
HGA P -40, Y 1

X-RAY - STBY
~~LASER ALTM - OFF~~ deleted @ 174:05:13

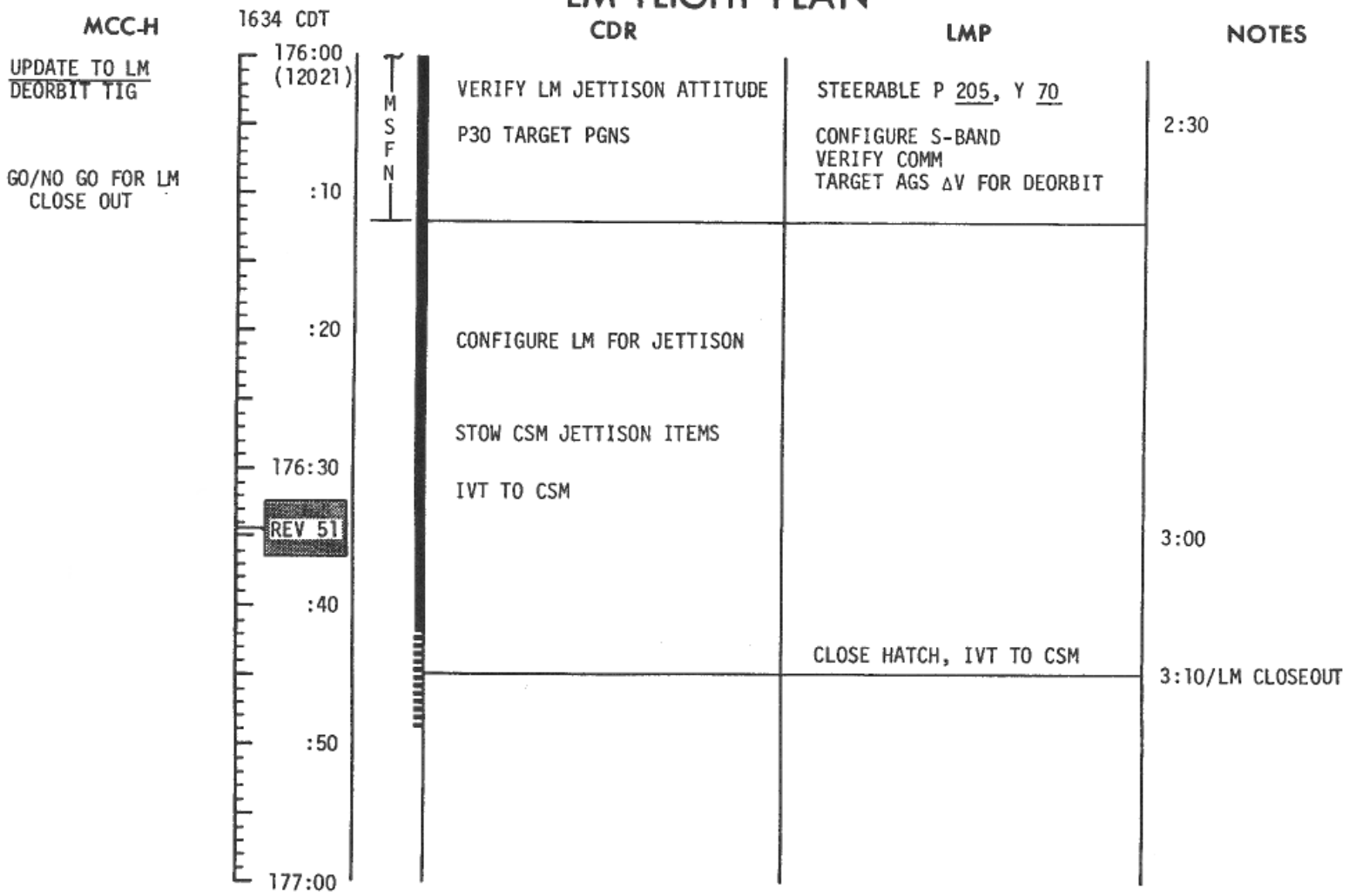
RECORD GET

MSFN UPLINK:
CSM S.V. (CSM SEP -10)
LM S.V. (TIG LM DEORBIT -10)

176:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-285

LM FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	176:00 - 177:00	8/50-51	3-286

FLIGHT NING BRANCH

CSM FLIGHT PLAN

176:00
(61102)
(11111)

MAP CAMERA TRACK - RETRACT tb-BP (~4 MIN)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

moved up @ 174:05:49

MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

LOGIC POWER (2) - OFF

ENABLE ALL JETS

cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE

MSFN UPDATE:
GO/NO-GO FOR LM CLOSEOUT

MSFN CMDS:
DSE RECORD

176:10

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

GAMMA RAY*
ALPHA PART*

176:20

TRANSFER CM JETTISON ITEMS TO LM

WARNING
NO URINE/FECES
ALL OPENED FOOD MUST
BE TREATED AND
STORED IN BETA BAG

176:30

176:30
(61102)
(11111)

REV 51

176:40

VHF AM B - OFF (CTR)
VHF RANGING - OFF

GAMMA RAY*
ALPHA PART*

LMP - CLOSE LM HATCH

DIRECT O_2 VLV - CLOSED (CW)

UNSTOW AND INSTALL FORWARD HATCH (DECAL)

PERFORM HATCH INTEGRITY CHECK (DECAL)

176:50

TUNNEL LIGHTS - OFF

CONFIGURE CAMERA FOR LM JETTISON PHOTOS
CM2/DAC/18/CEX-BRKT,MIR (f8,1/250,7) 12 fps (50% MAG)

MAG (D) ____, MAG % ____
UTILITY PWR - ON

ACQ MSFN HGA: P -40, Y 1

MSFN CMDS:
DSE REWIND

177:00

CSM FLIGHT PLAN

1734 CDT

177:00 (61102) (11111)

P30; LOAD CSM SEP PAD DATA

LM PWR - OFF (VERIFY)
CB SECS ARM (2) - CLOSED
CUE MSFN FOR LOGIC ARM

SECS LOGIC (BOTH) - ON (UP)

MSFN UPDATE:
GO/NO-GO FOR PYRO ARM

MSFN

177:10

LOAD ΔV IN EMS TO +100.0
CHECK NULL BIAS
GDC ALIGN
VERIFY ORDEAL

REPORT: CM/LM ΔP

PRE-JETTISON CHECKLIST

GAMMA RAY*
ALPHA PART*

(11102) (11111)

V48 (11102) (11111)

SECS PYRO ARM (2) - ARM

P47 (JETT -1 MIN)
EMS MODE NORMAL (JETT -30 SEC)
DAC - ON

177:20

LM JETTISON

177 : 20 : 33 .

177:20:45
(014,090/040,343)

P00
DAC - OFF
PRE-SEPARATION CHECKLIST
EMS MODE - NORMAL (SEP -30 SEC)

CSM SEPARATION

: : .

177:25:45
-1.0,+0.0,+0.0
(014,105/040,343)

P00

177:30

P30 MANEUVER

SET STARS	C R	S C	M S/G	S E &	E N	P A	PURPOSE / PROP/GUID	
	+			N	/	A	WT	N47
R ALIGN ___ ___ ___		0	0	N	/	A	P TRIM	N48
P ALIGN ___ ___ ___		0	0	N	/	A	Y TRIM	
Y ALIGN ___ ___ ___	+	0	0				HRS	GETI
	+	0	0	0			MIN	N33
	+	0					SEC	
ULLAGE ___	-	0	0	0	1	0	ΔV_X	N81
___	+	0	0	0	0	0	ΔV_Y	
___	+	0	0	0	0	0	ΔV_Z	
___	X	X	X				R	
	X	X	X				P	
	X	X	X				Y	

PRE-JETTISON CHECKLIST

BMAG MODE (3) - ATT 1/RATE 2
ATT DB - MIN
RATE - LOW
SC CONT - SCS
EMS FUNC - ΔV
AUTO RCS SEL (16) - MNA/MNB
THC PWR - ON
RHC PWR DIR - MNA/MNB
THC - ARMED
RHC - ARMED

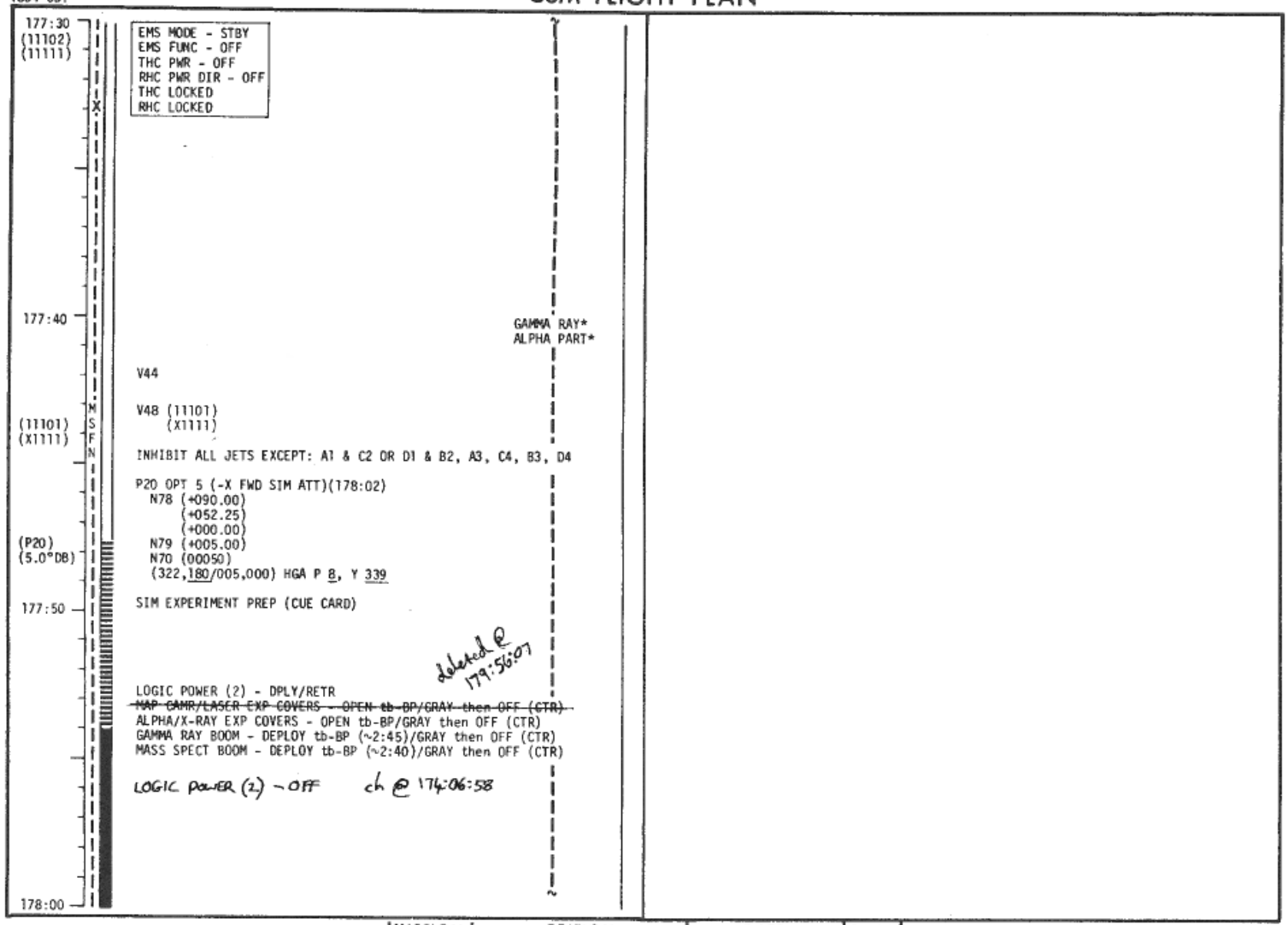
PRE-SEPARATION CHECKLIST

EMS MODE - STBY
SC CONT - CMC
BMAG MODE (3) - RATE 2

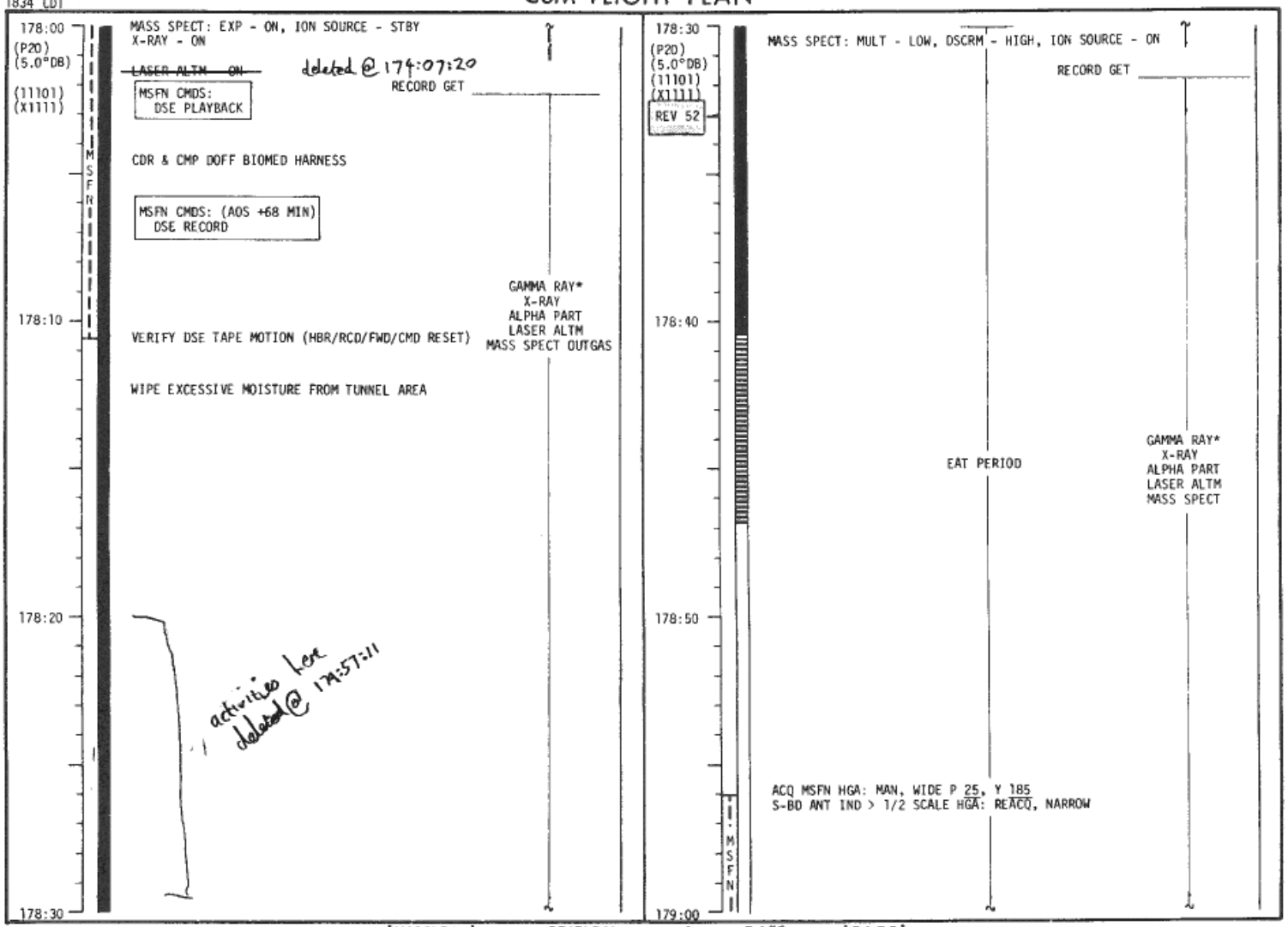
P41 (BYPASS MNVR)

SECS PYRO ARM (2) - SAFE
SECS LOGIC (BOTH) - OFF
CB SECS ARM (2) - OPEN

CSM FLIGHT PLAN

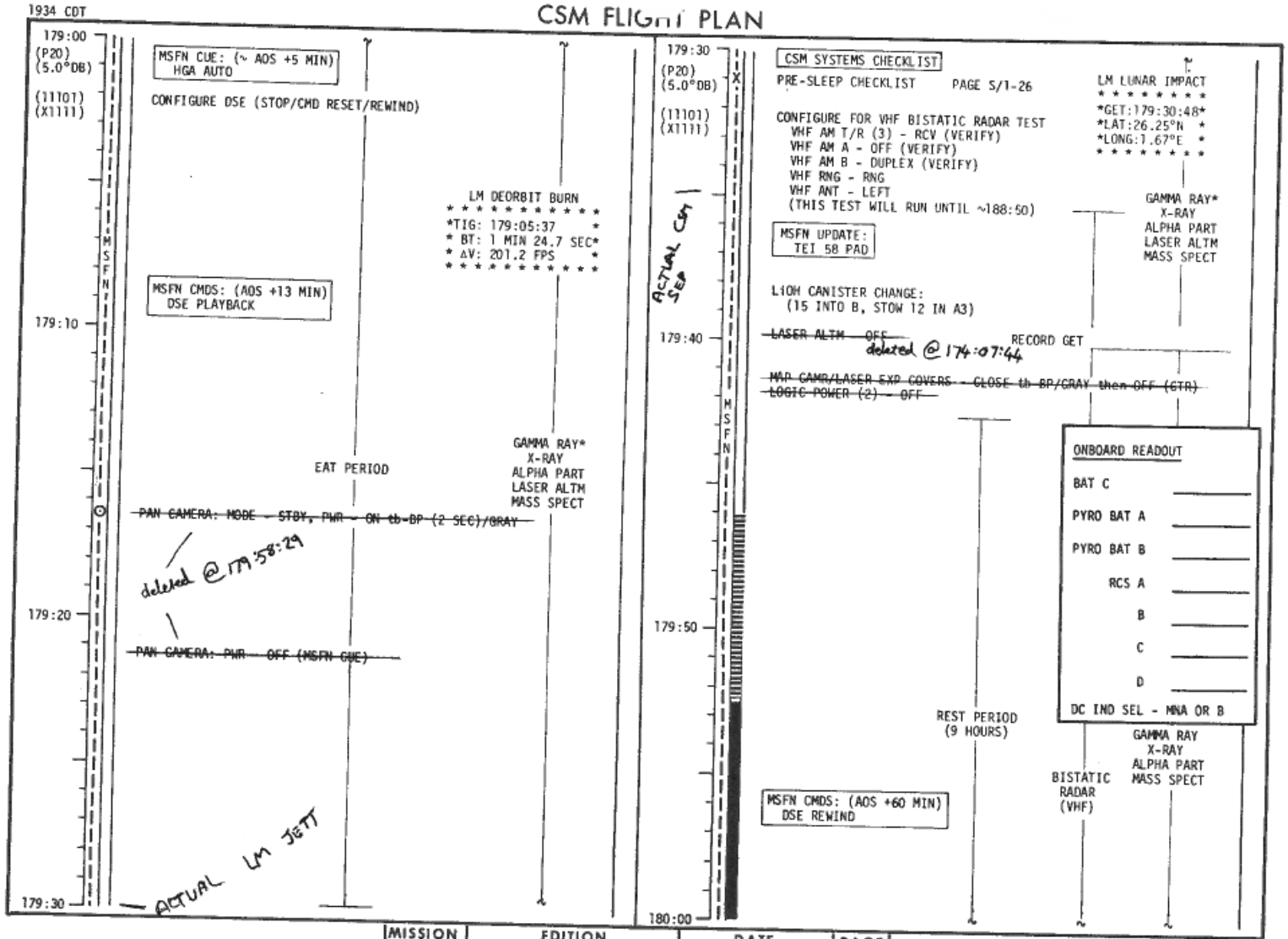


CSM FLIGHT PLAN



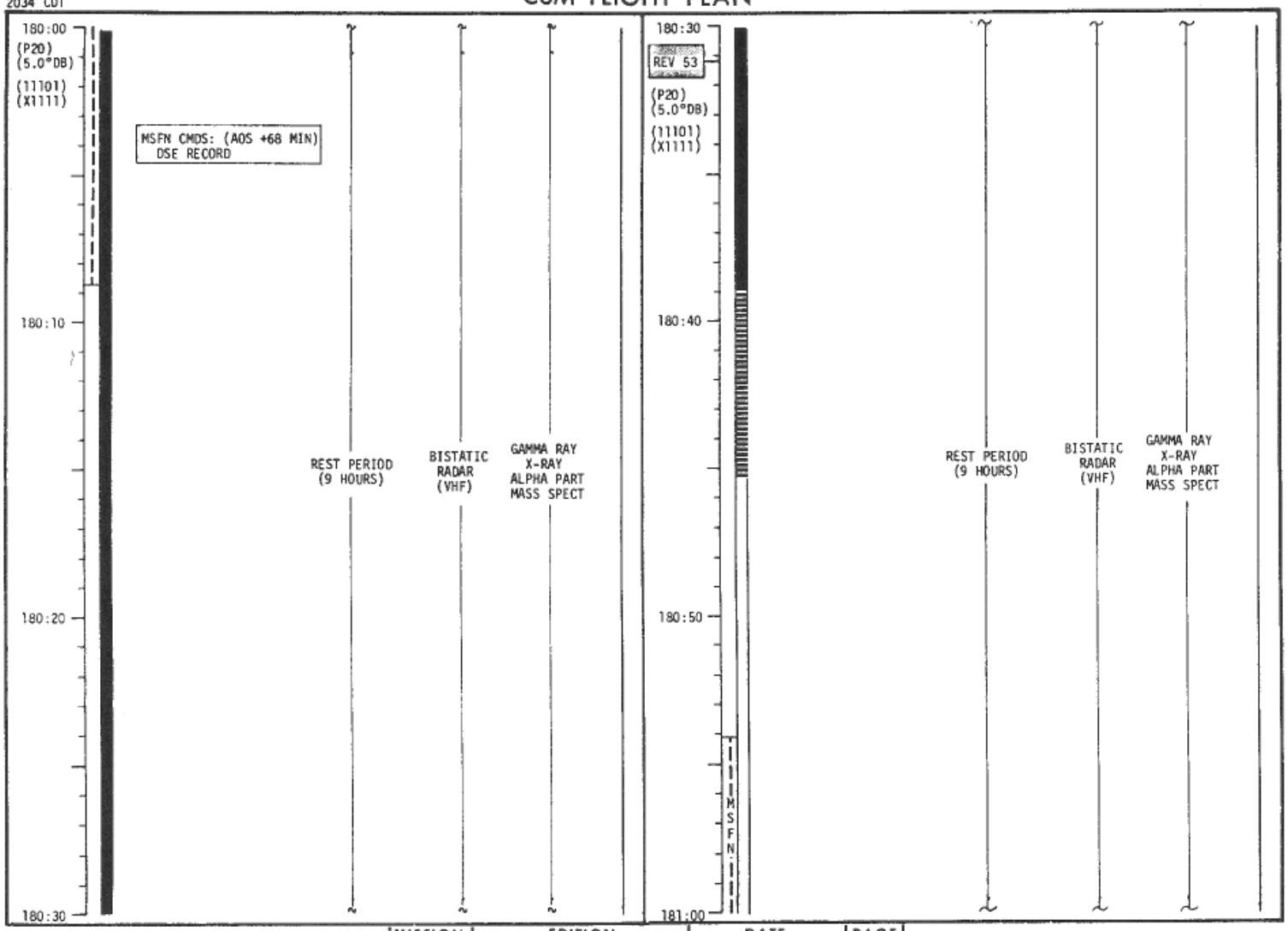
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-290

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-291

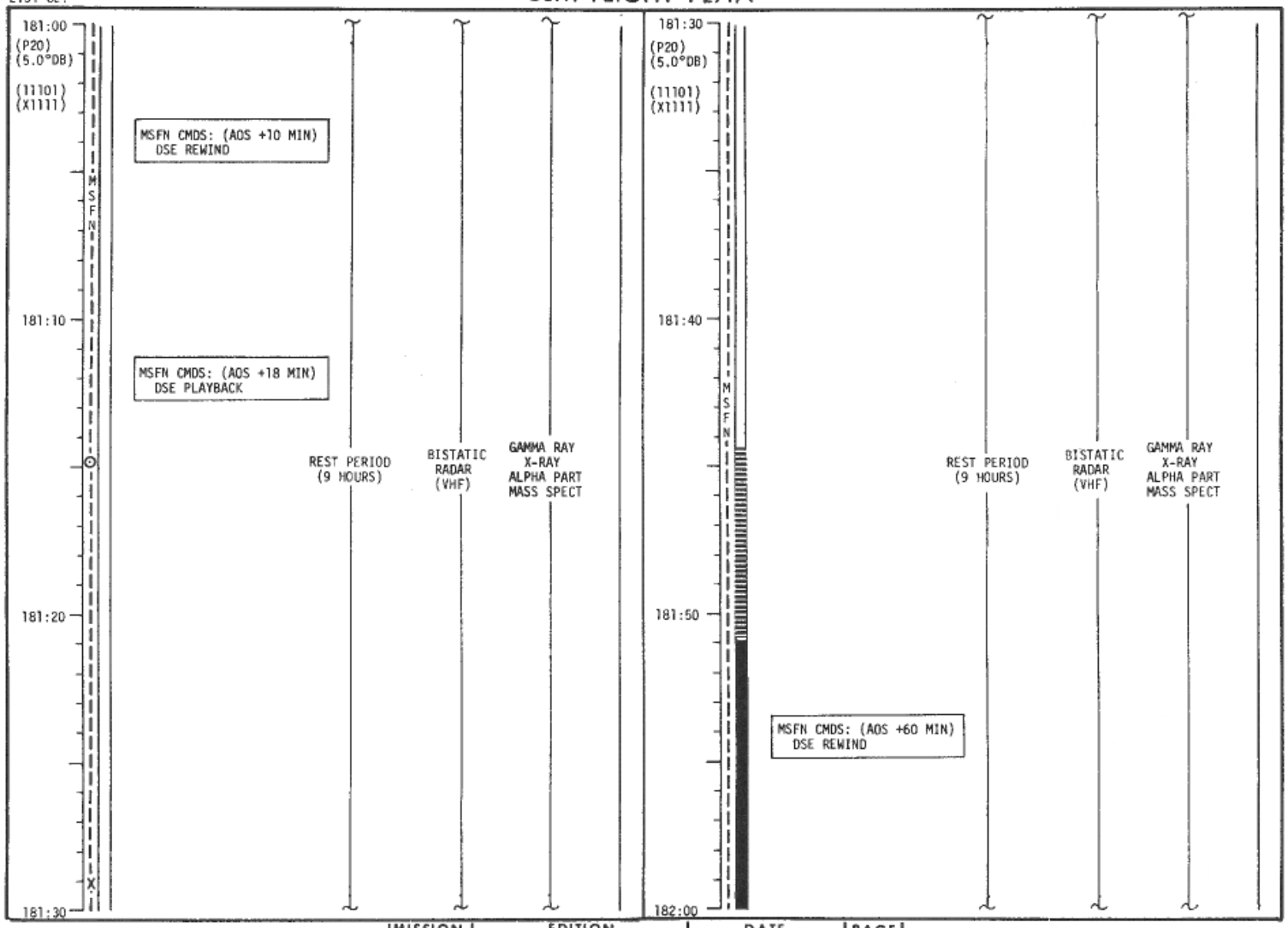
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-292

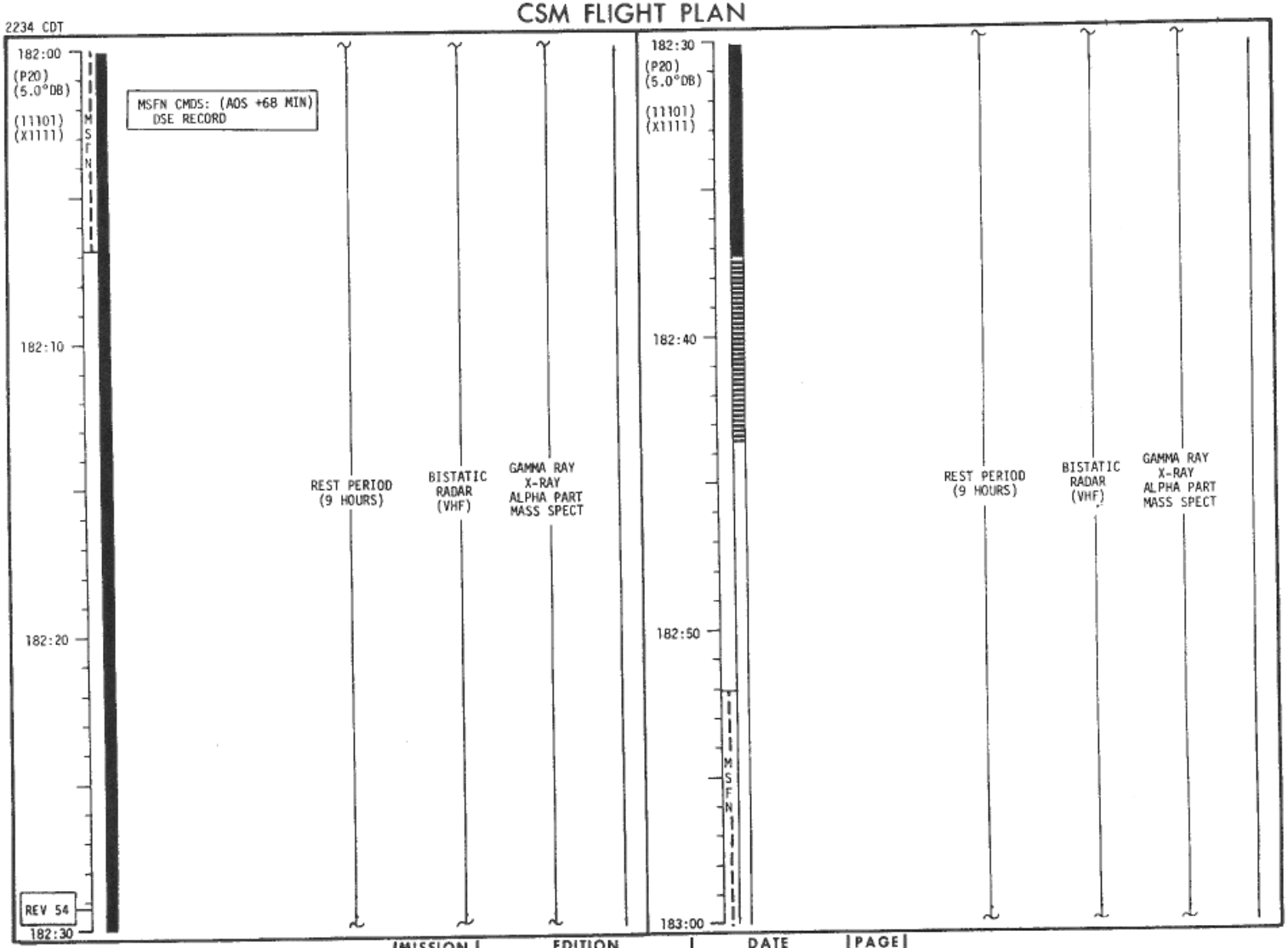
2134 GET

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-293

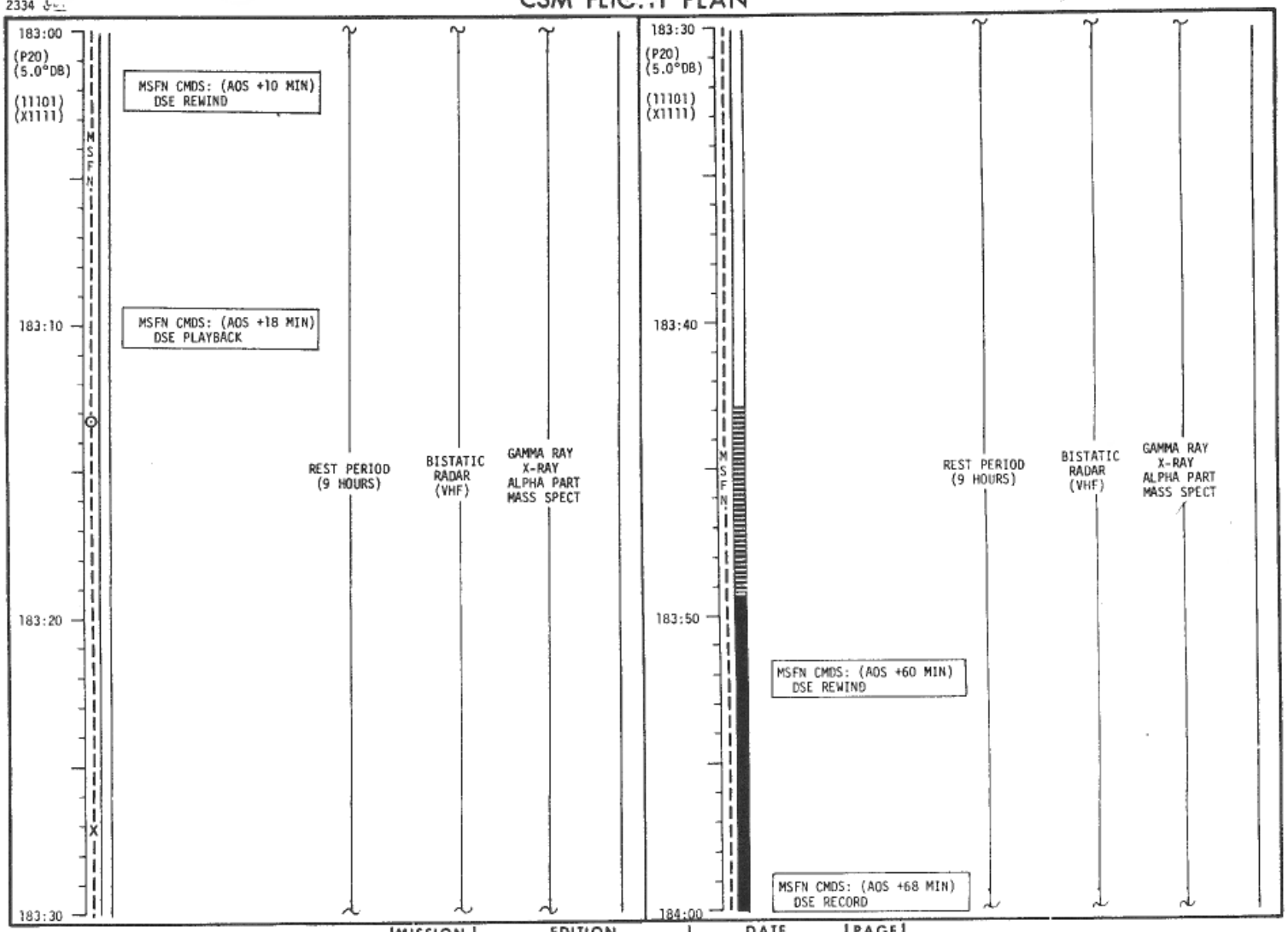
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-294

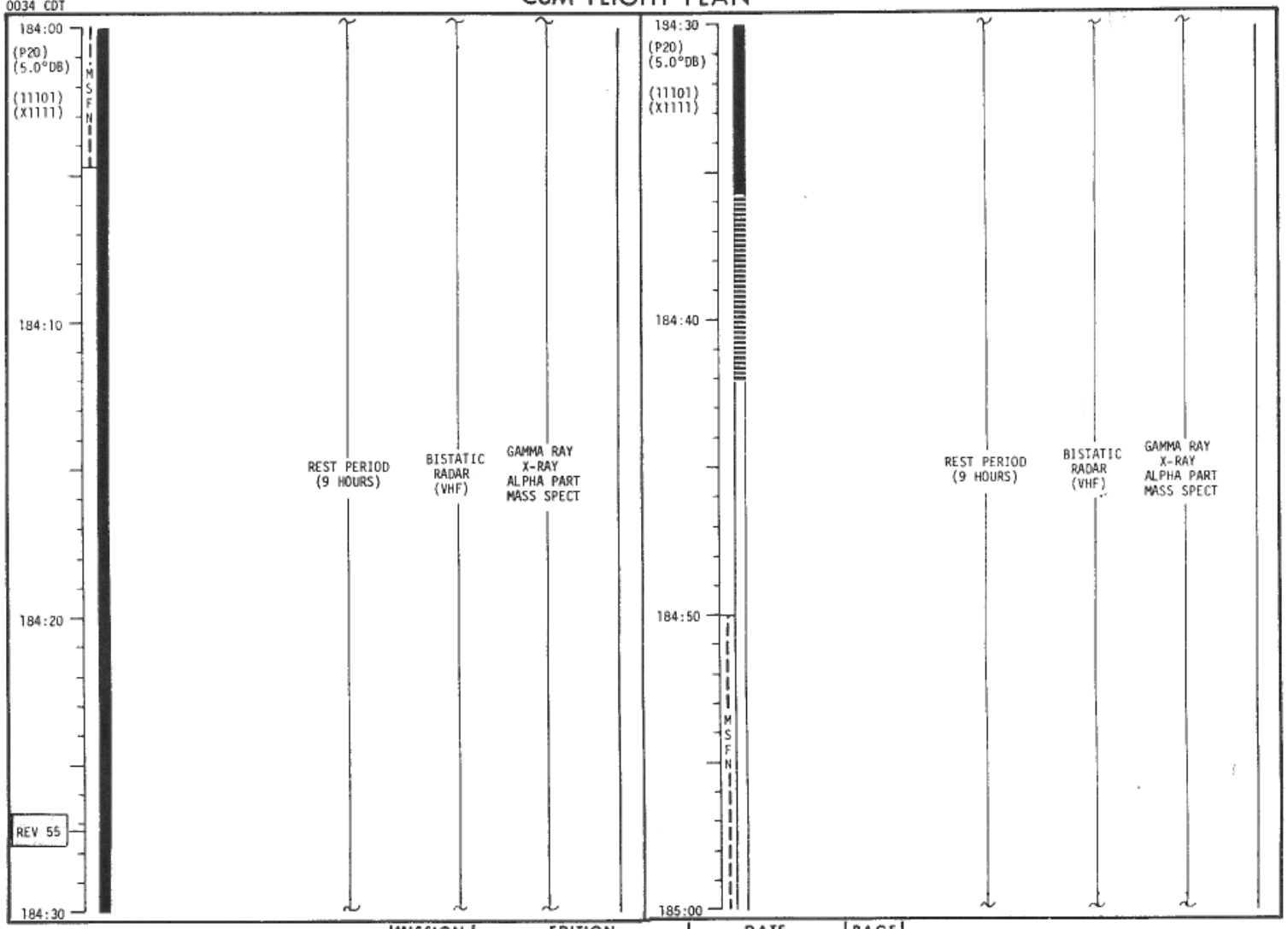
2334 &c.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-295

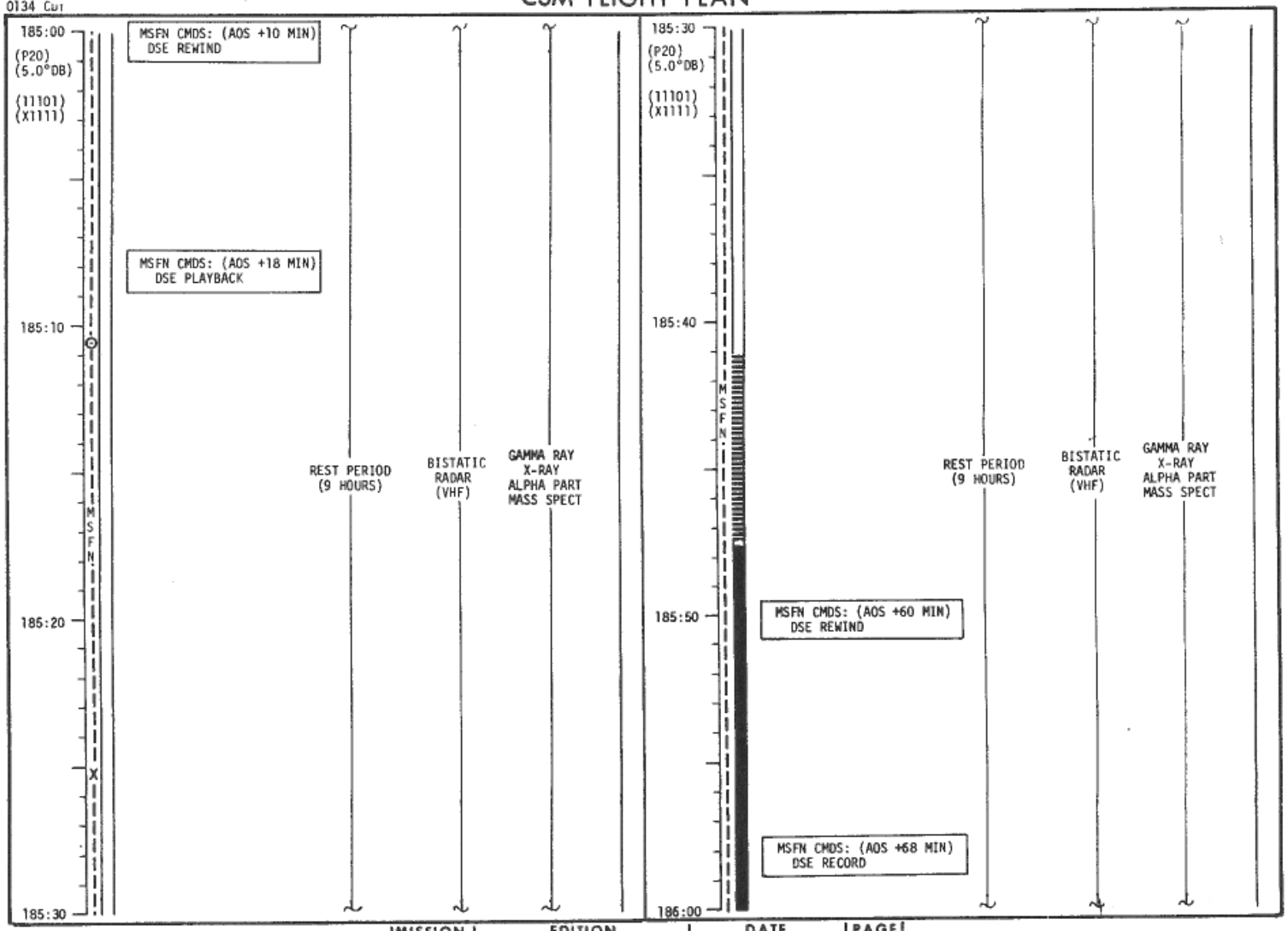
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-296

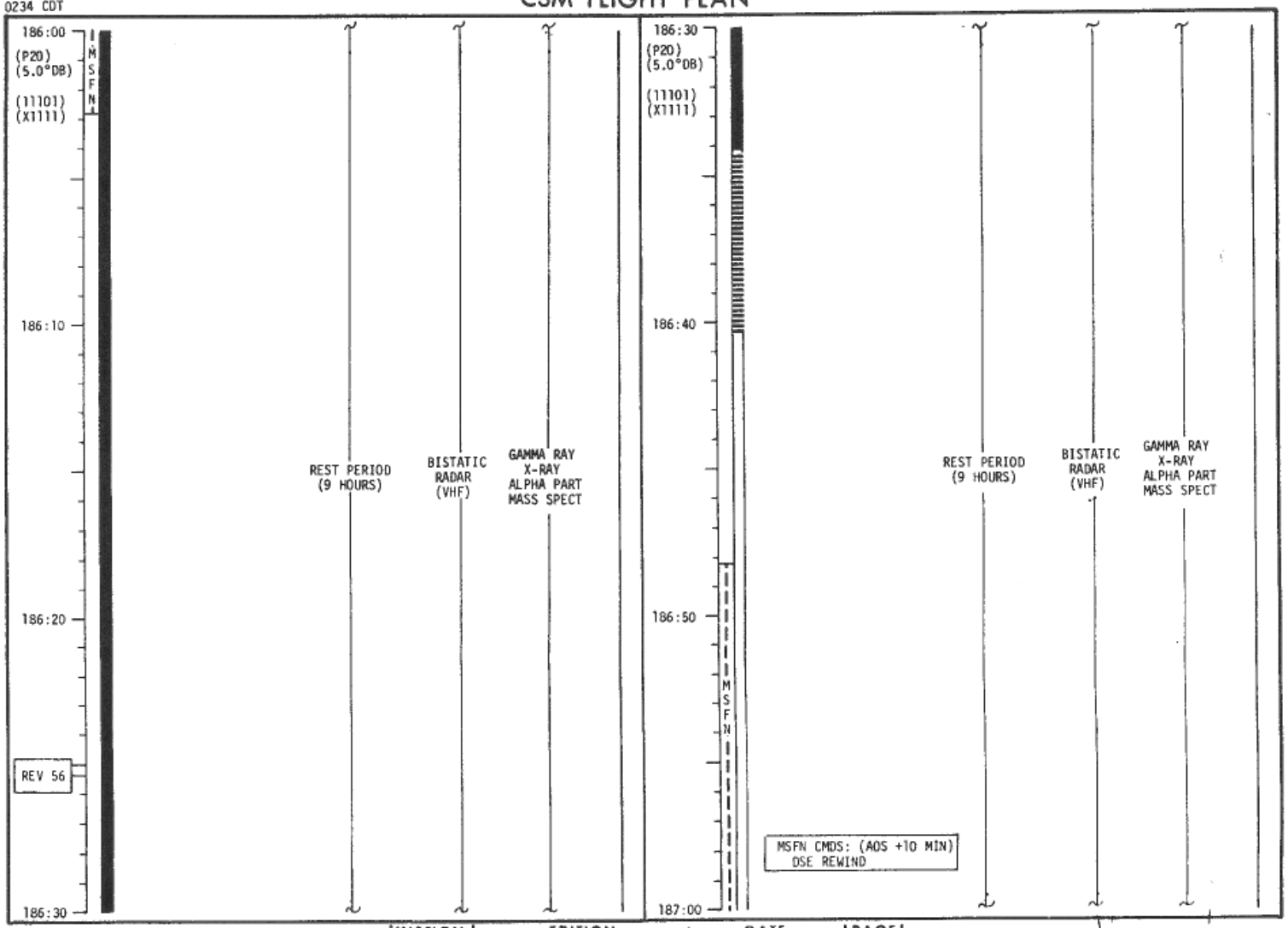
CSM FLIGHT PLAN

0134 Cut



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-297

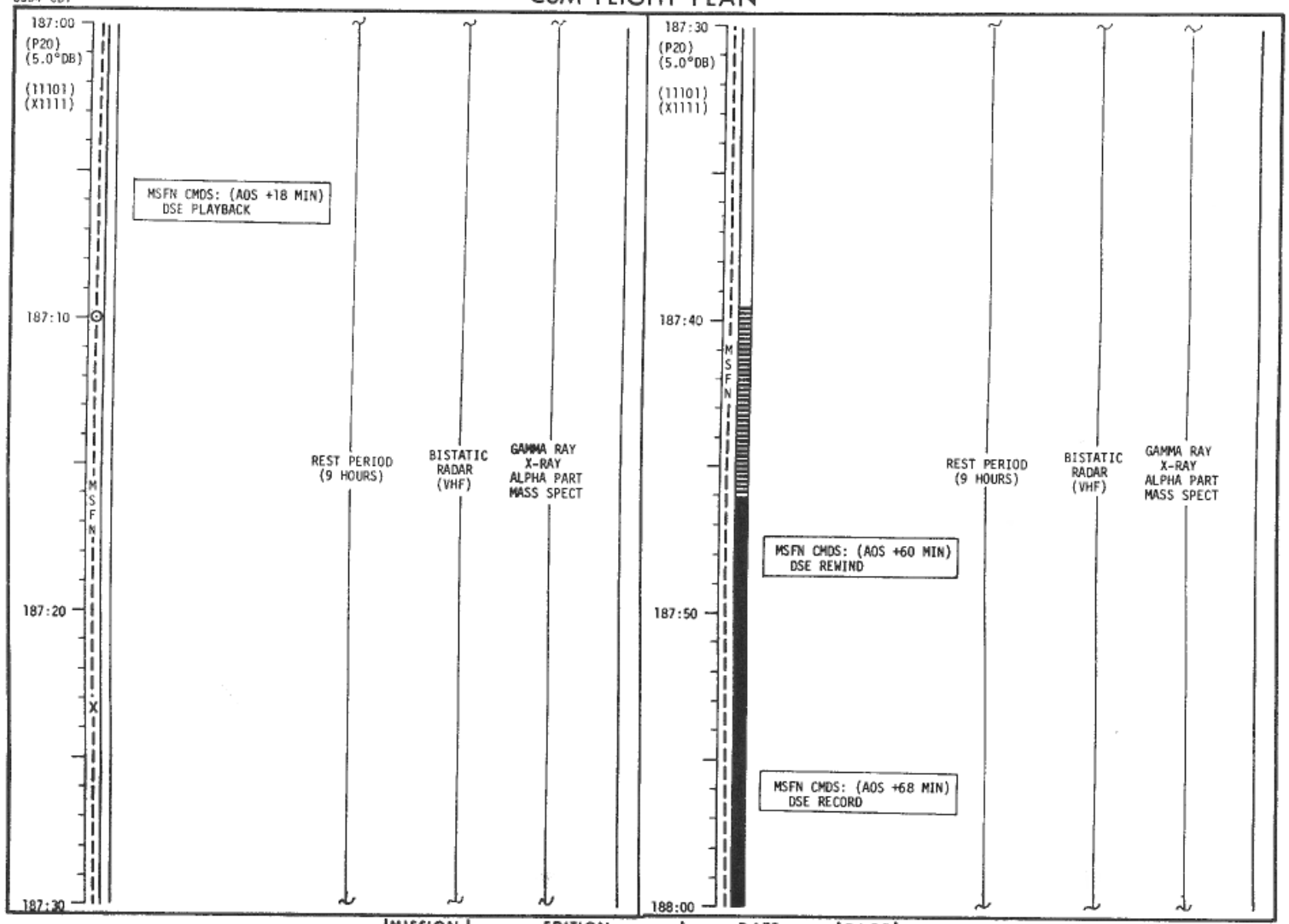
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-298

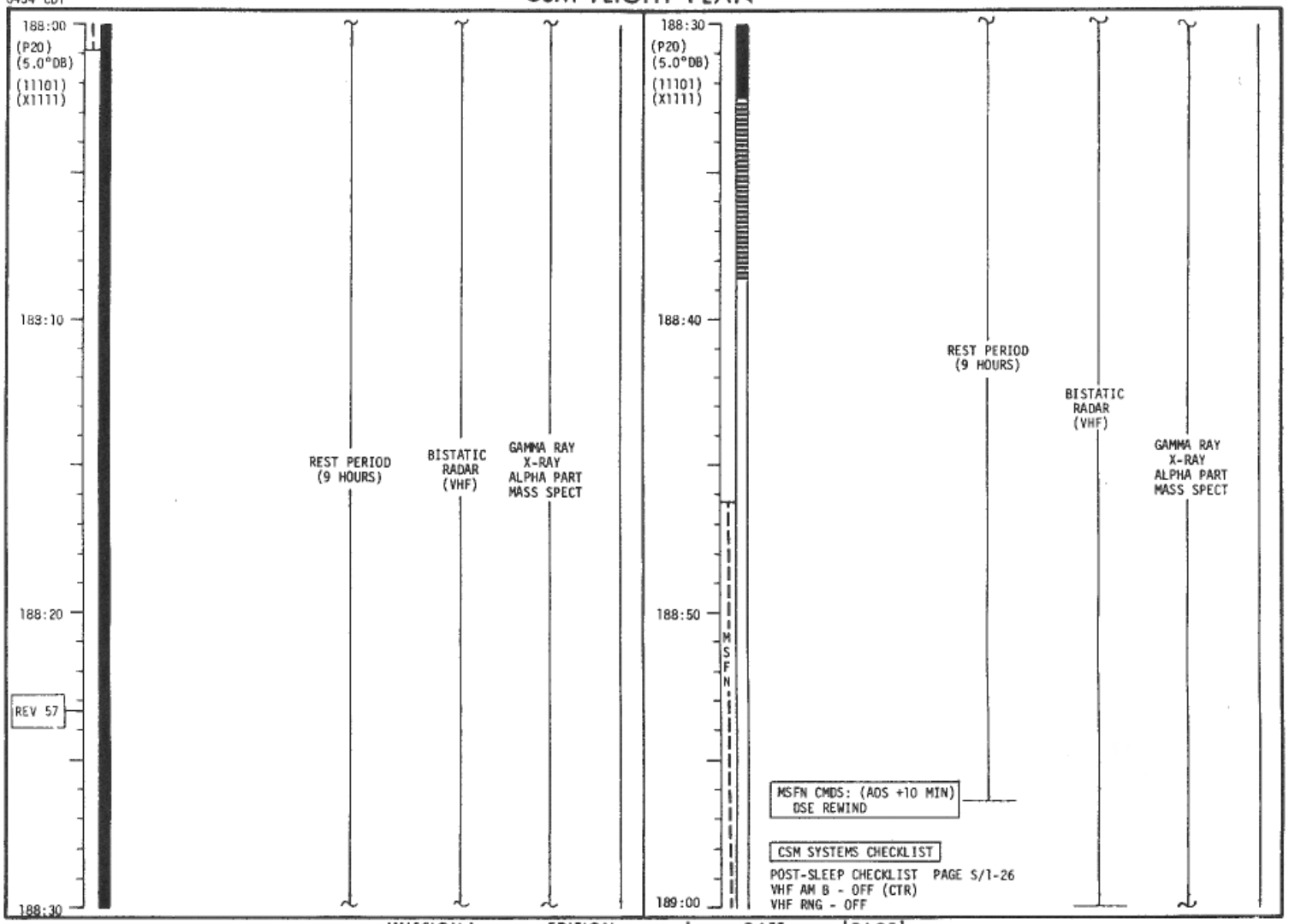
0334 Cu

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-299

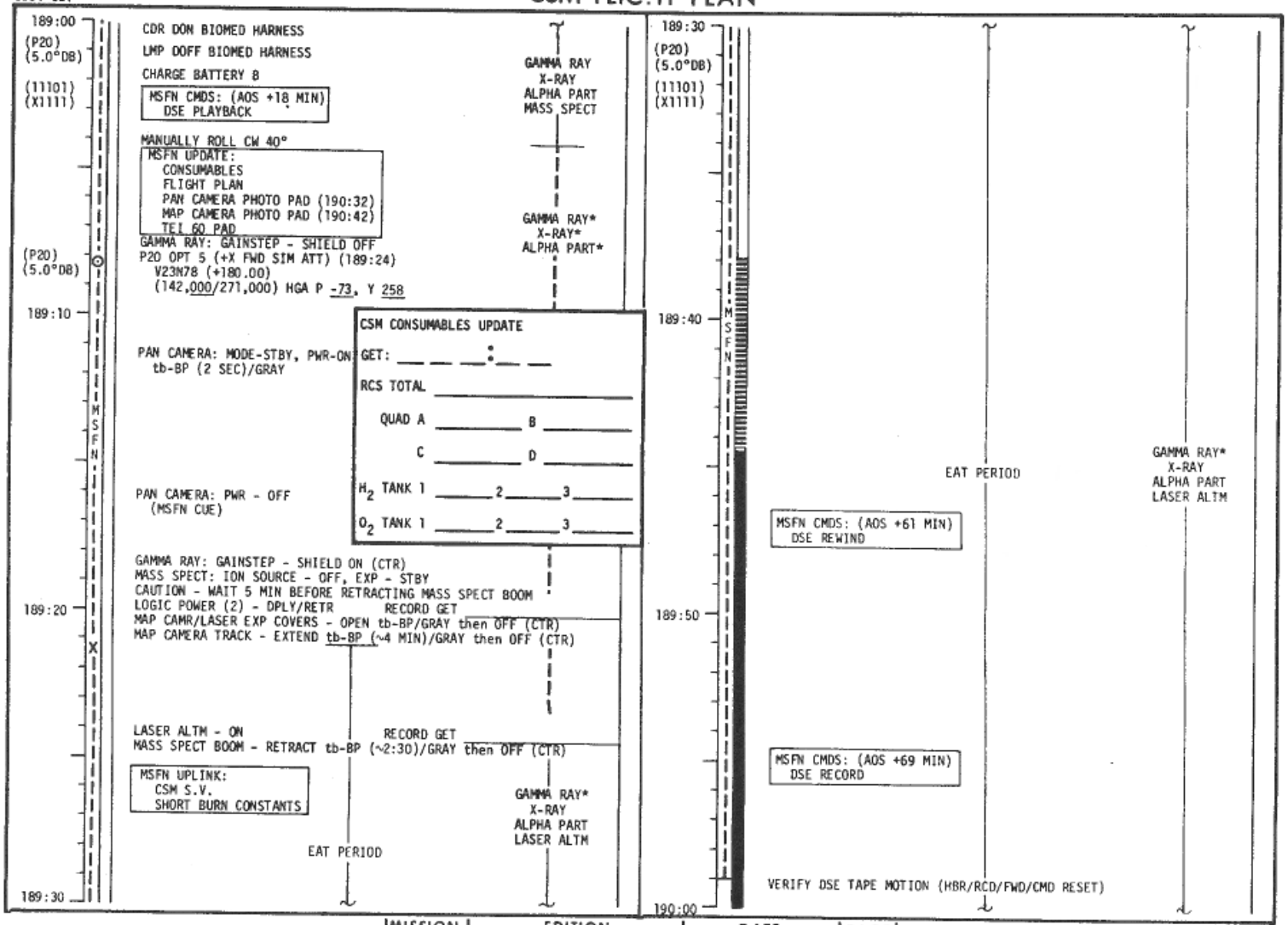
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-300

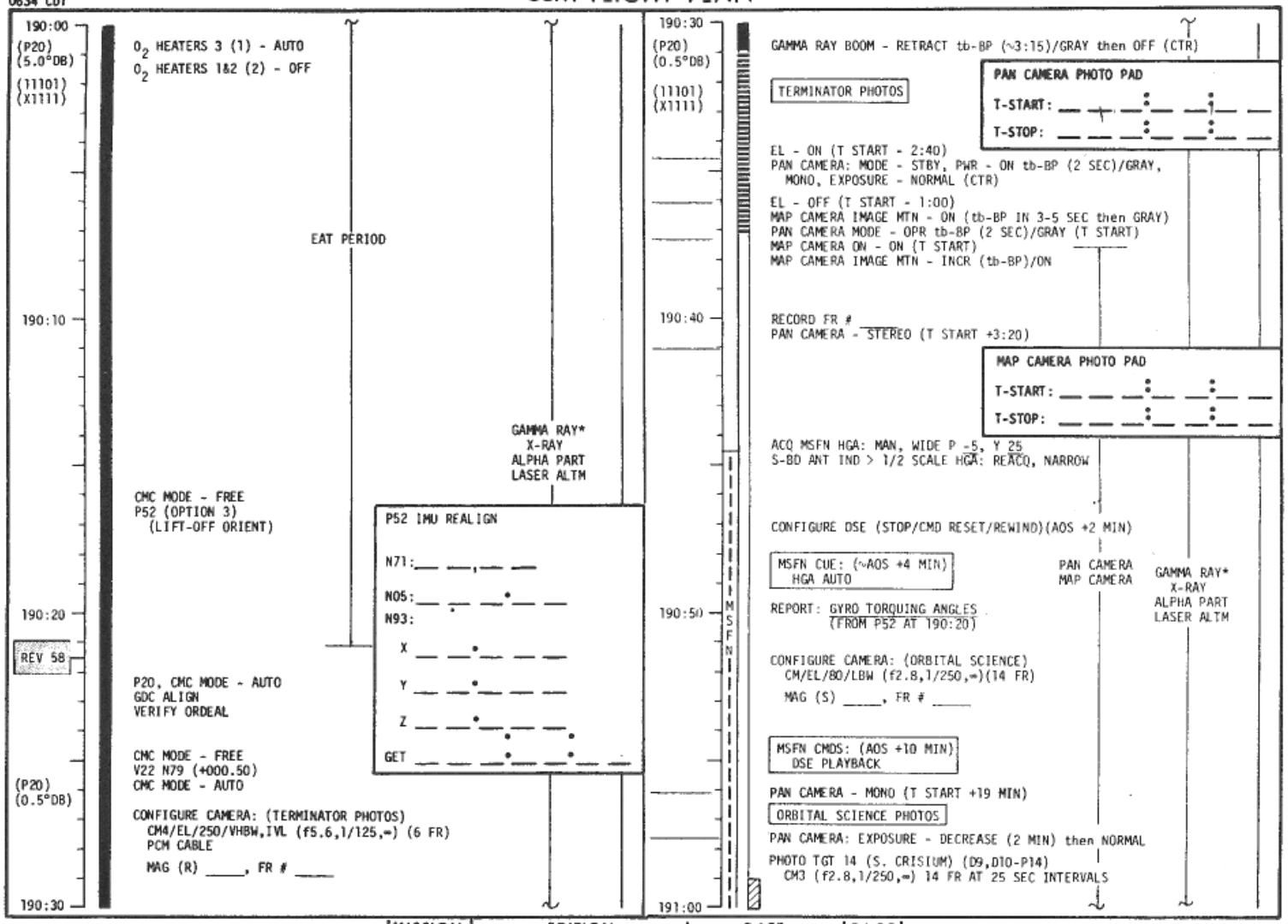
0534 Ed.

CSM FLIGHT PLAN

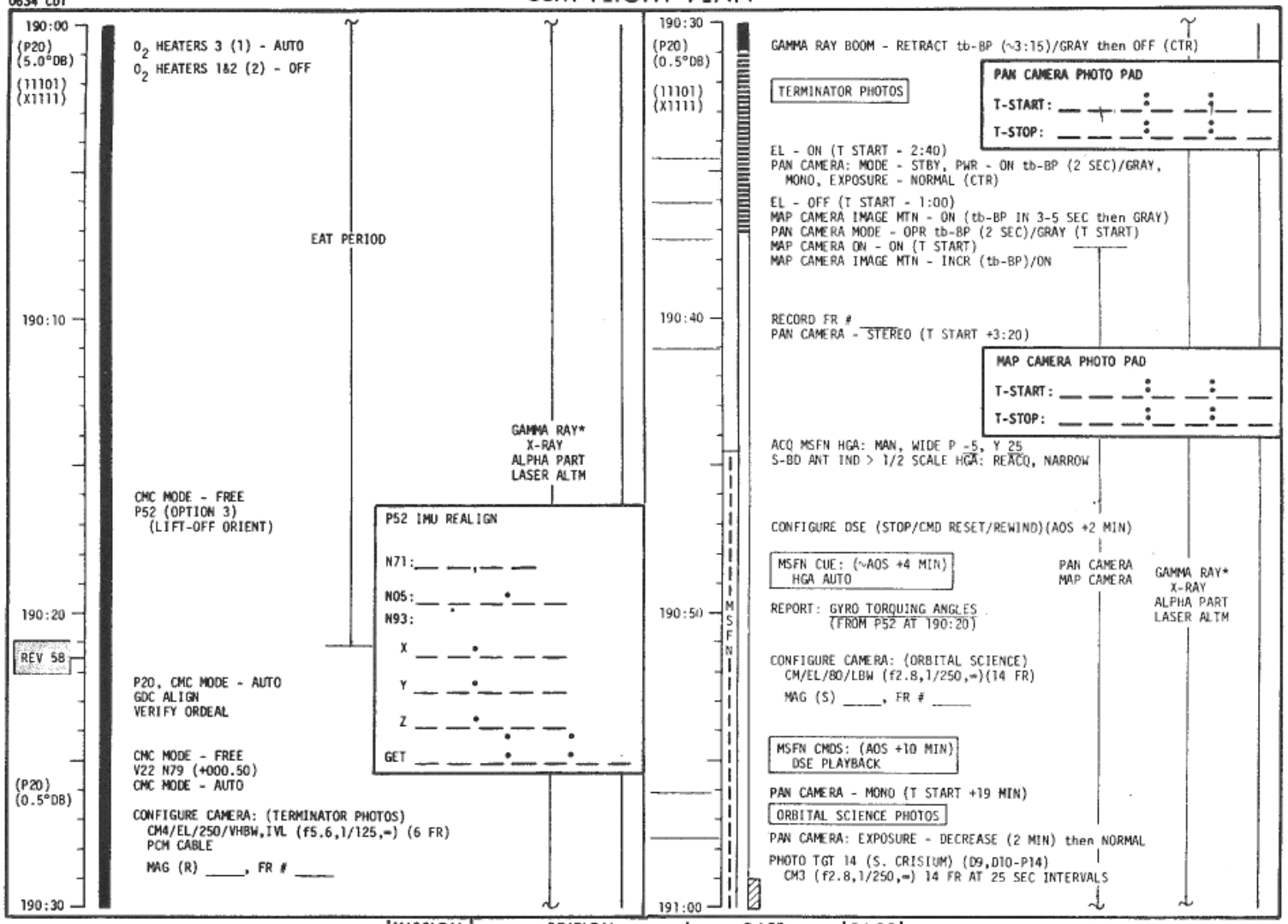


MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-301

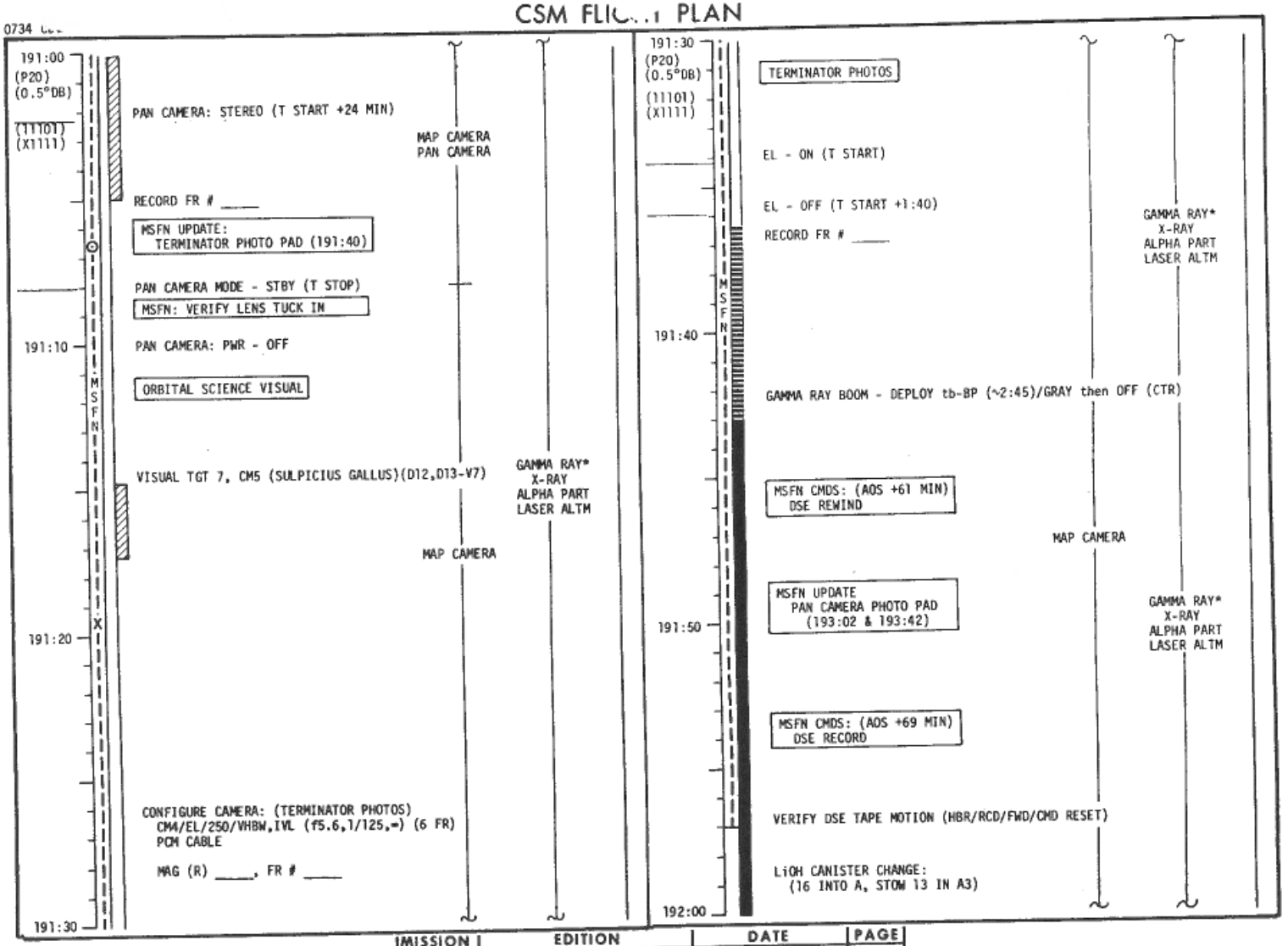
CSM FLIGHT PLAN



CSM FLIGHT PLAN

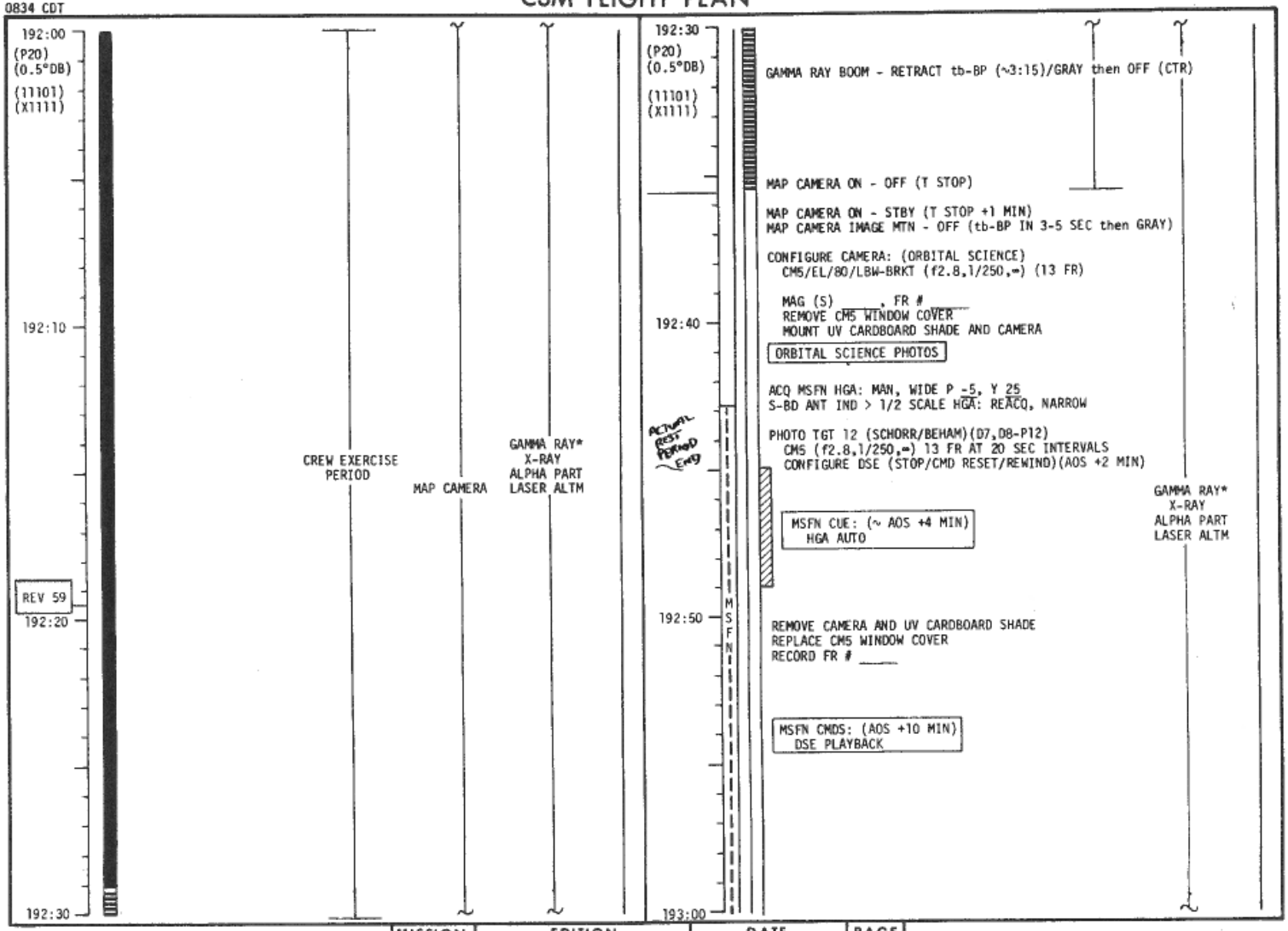


CSM FLIGHT PLAN



CSM FLIGHT PLAN

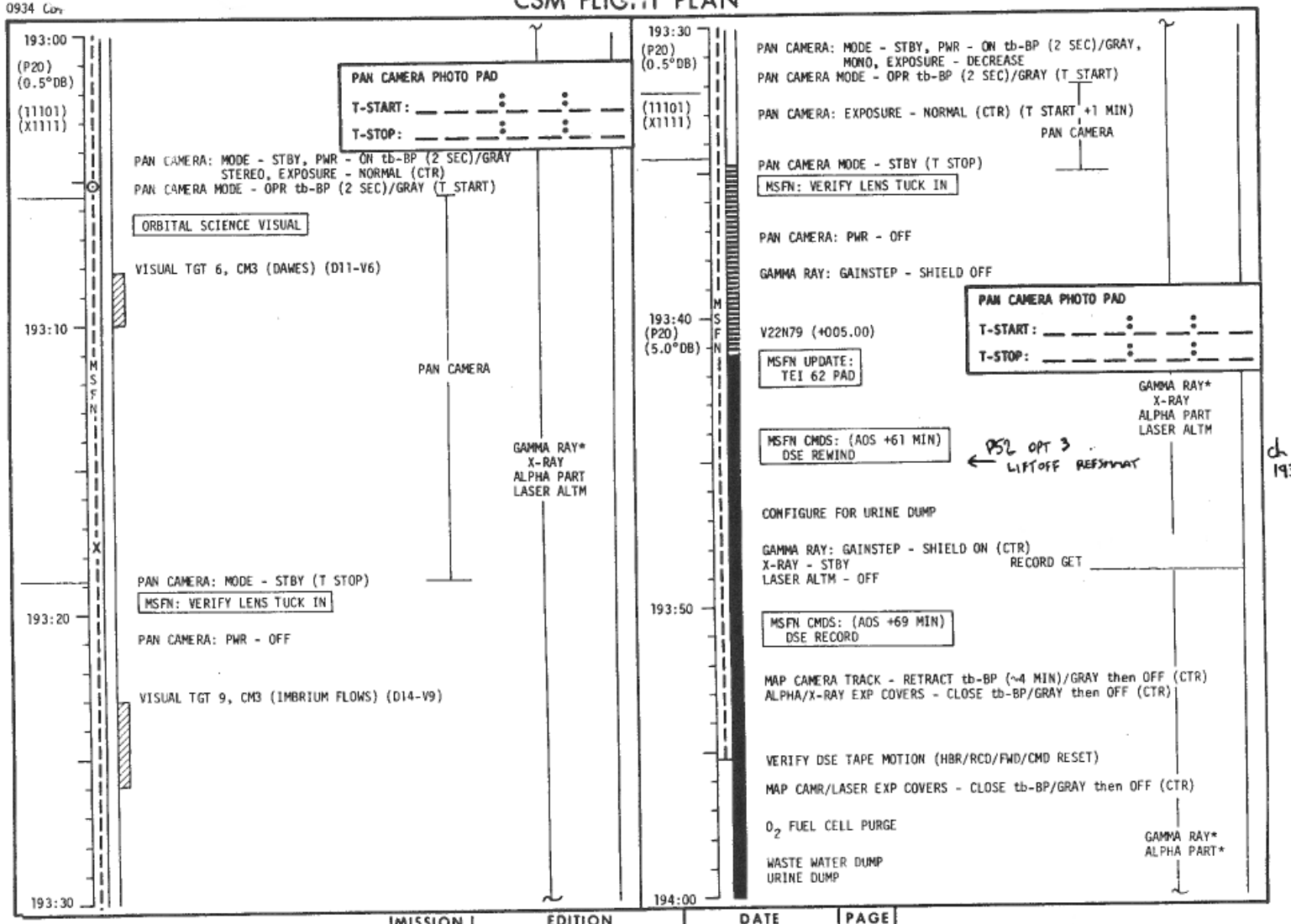
0834 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-304

0934 Cor

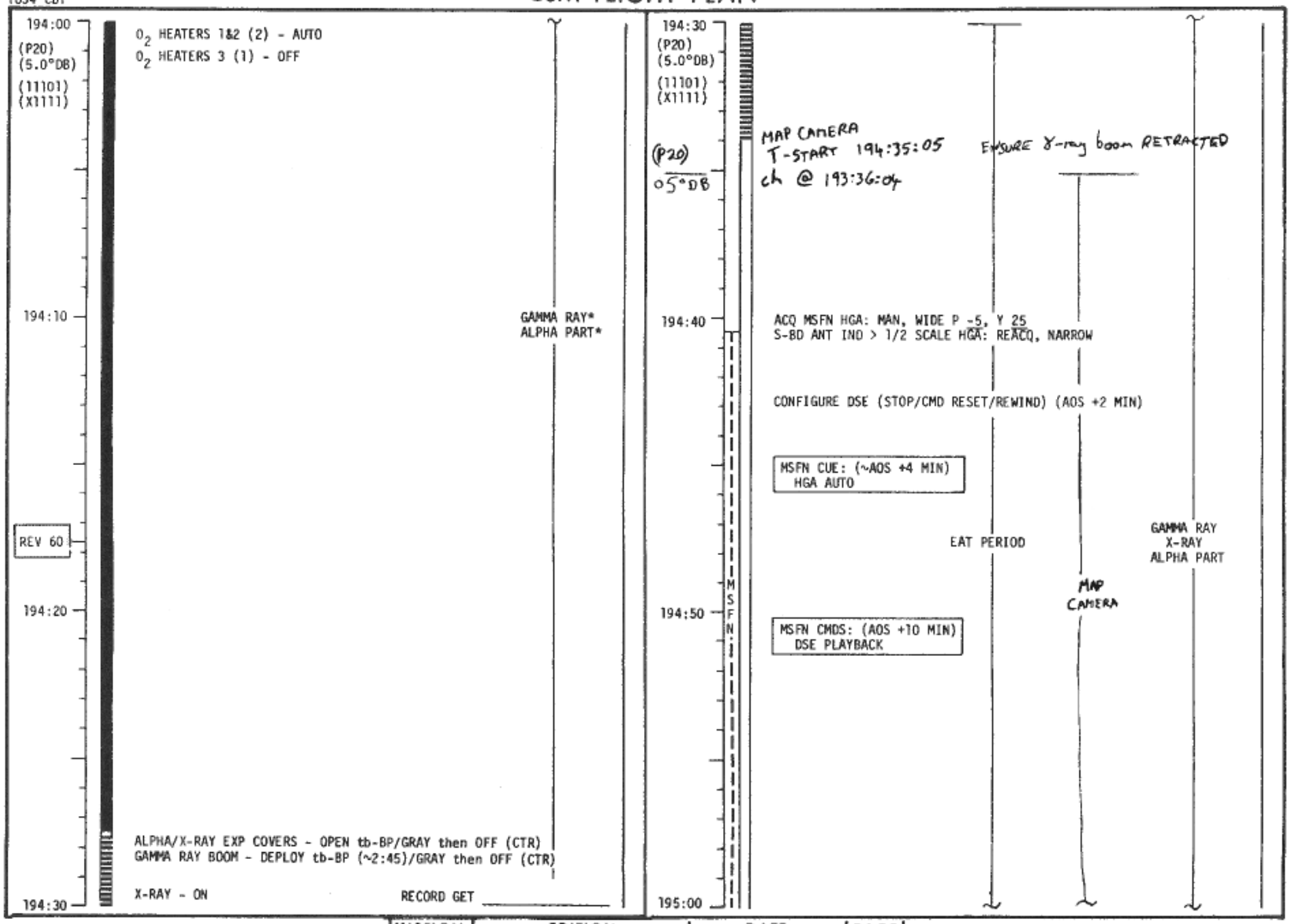
CSM FLIGHT PLAN



ch @ 193:09:58

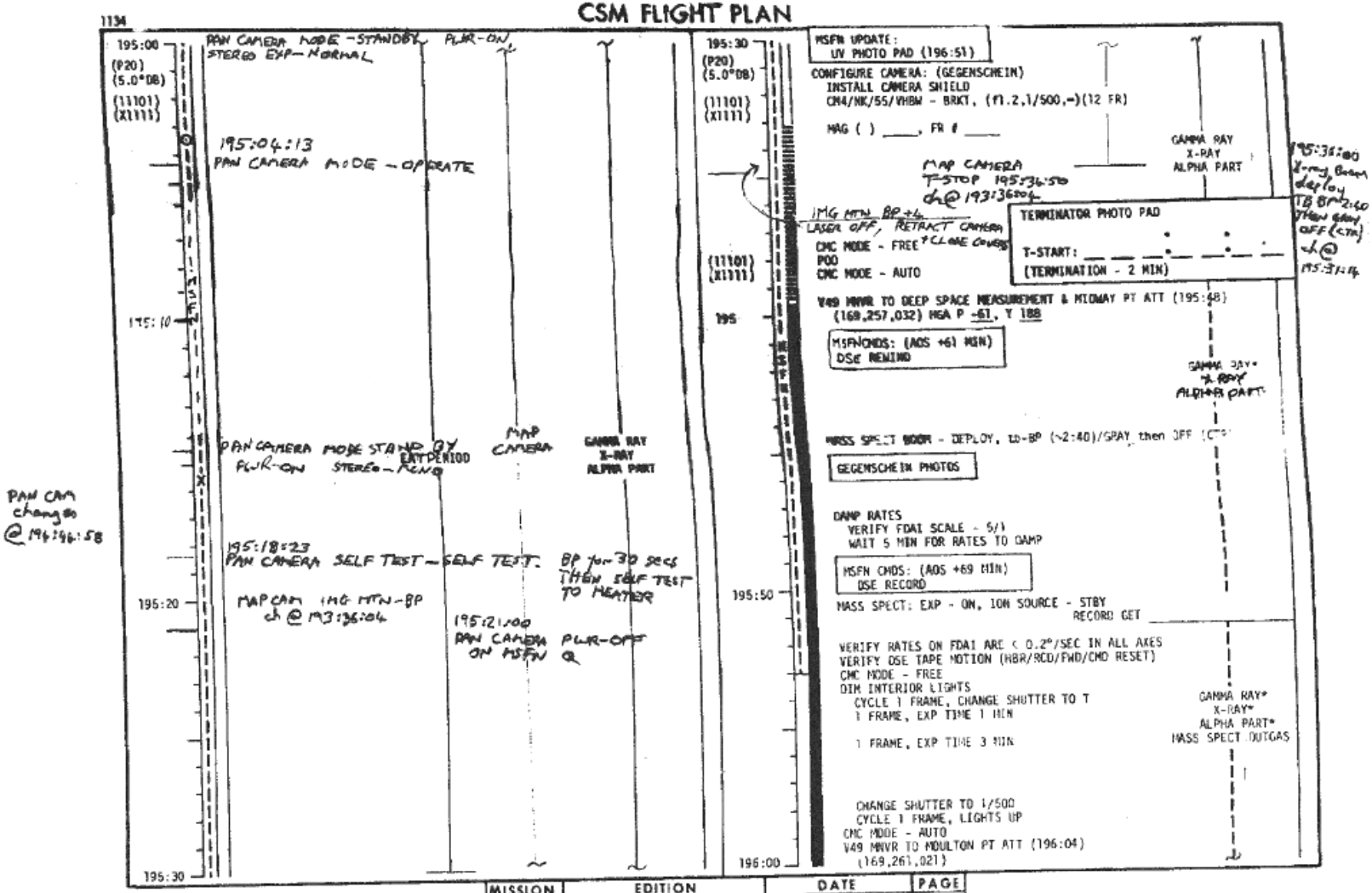
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-305

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-306

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	8/21/71	3-307

CSM FLIGHT PLAN

1234 CDT

196:00
(11101)
(X1111)

DAMP RATES
VERIFY FDAI SACLE 5/1
WAIT 5 MIN FOR RATES TO DAMP

VERIFY RATES ON FDAI ARE < 0.2°/SEC IN ALL AXES
CMC MODE - FREE
DIM INTERIOR LIGHTS
CYCLE 1 FRAME, CHANGE SHUTTER TO T
1 FRAME, EXP TIME 1 MIN

1 FRAME, EXP TIME 3 MIN

196:10

CHANGE SHUTTER TO 1/500
CYCLE 1 FRAME, LIGHTS UP
CMC MODE - AUTO
RECORD FR # _____

REV 61

GAMMA RAY*
X-RAY*
ALPHA PART*
MASS SPECT OUTGAS

STOW CAMERA
REMOVE CAMERA SHIELD

196:20

P20 OPT 5 (+X FWD SIM ATT) (196:37)
N78 (+090.00)
(+052.25)
(+180.00)
N79 (+005.00)
N70 (00050)
(143,000/034,000)
MASS SPECT: MULT - LOW, DSCRM - HIGH, ION SOURCE - ON
RECORD GET _____

(P20)
(5.0°DB)

196:30

196:30
(P20)
(5.0°DB)
(11101)
(X1111)

~~MAP CAMR/LASER EXP COVERS - OPEN tb BP/GRAY then OFF (CTR)~~
~~MAP CAMERA TRACK - EXTEND tb-BP (~4 MIN)/GRAY then OFF (CTR)~~
deleted @ 195:32:23

GAMMA RAY*
X-RAY*
ALPHA PART*
MASS SPECT*

~~LASER ALTM - ON~~ dd @ 195:32:23 RECORD GET _____

ACQ MSFN HGA: MAN, WIDE P -5, Y 25
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW

196:40

CONFIGURE DSE (STOP/CMD RESET/REWIND) (AOS +2 MIN)

MSFN CUE: (~AOS +4 MIN)
HGA AUTO

UV PHOTOS - LUNAR MARIA

CONFIGURE CAMERA: (UV - LUNAR MARIA)
CM5/EL/105/UV,BRKT,CONT (f4.3,1/250,∞) (10 FR)
RINGSLIDE
MAG (N) _____, FR # _____

GAMMA RAY
X-RAY
ALPHA PART
LASER ALTM
MASS SPECT*

REMOVE R12 FLIGHT DATA FILE STOWAGE BOX
REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE & CAMERA

MSFN CMDS: (AOS +10 MIN)
DSE PLAYBACK

196:50

MSFN UPDATE
TEI 64 PAD

UV PHOTO PAD read-up @ 195:15:02
T-START: 196:56:19

CMC MODE - FREE
2 FRAMES FILTER 4, CHANGE SHUTTER TO 1/60 (T START)
2 FRAMES FILTER 1, CHANGE SHUTTER TO 1/20
2 FRAMES FILTER 2, CHANGE SHUTTER TO 1/60
2 FRAMES FILTER 3, CHANGE SHUTTER TO 1/250
2 FRAMES FILTER 4 RECORD FR # _____
CMC MODE - AUTO

REMOVE CAMERA & UV CARDBOARD SHADE
NOTE COMMENTS AS TO CONDITION OF WINDOW 5
REPLACE CM5 WINDOW COVER

197:00

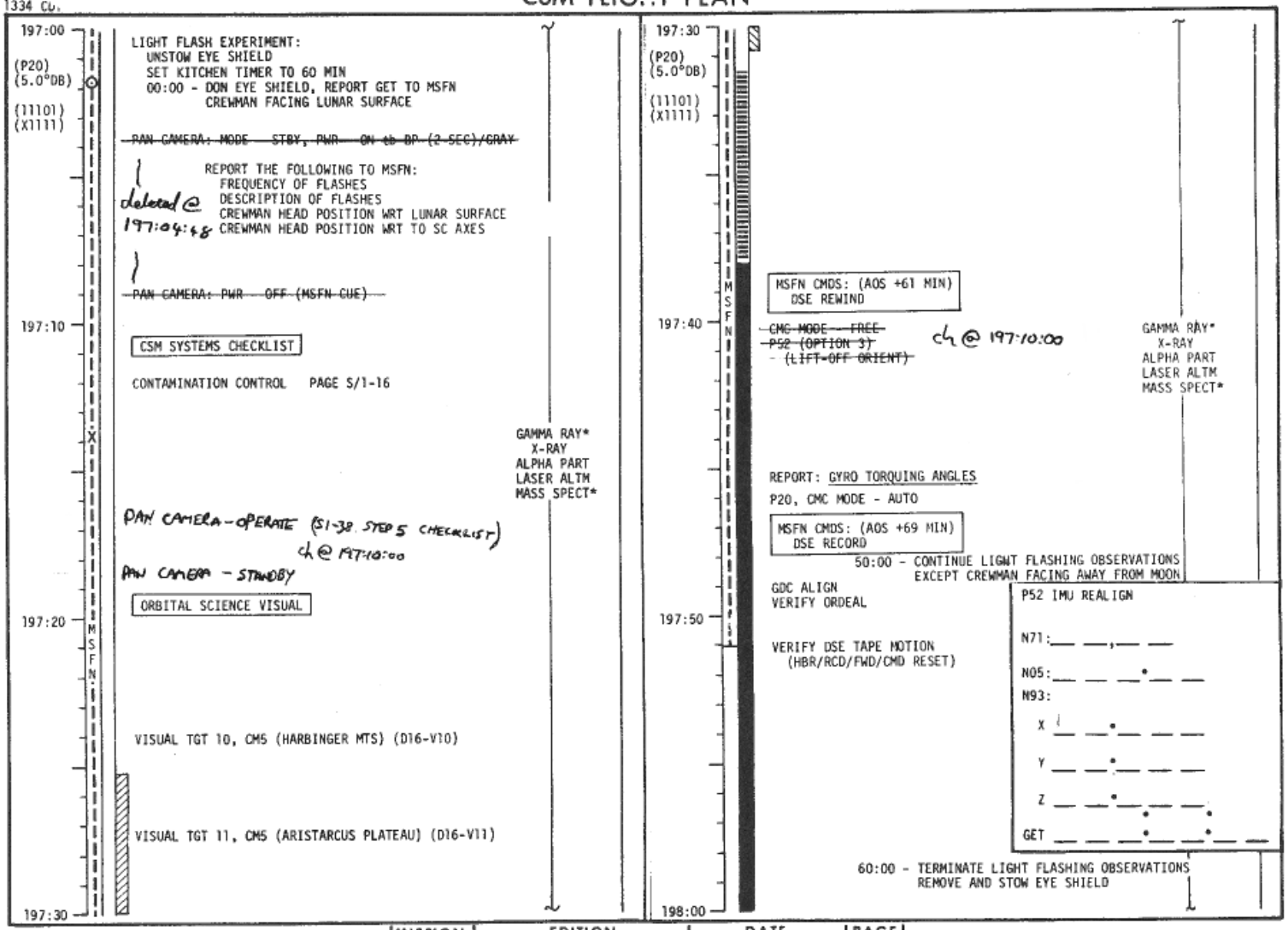
196:30

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-308

Revised Plan
Rev 61 — UV photography - scheduled 196:40

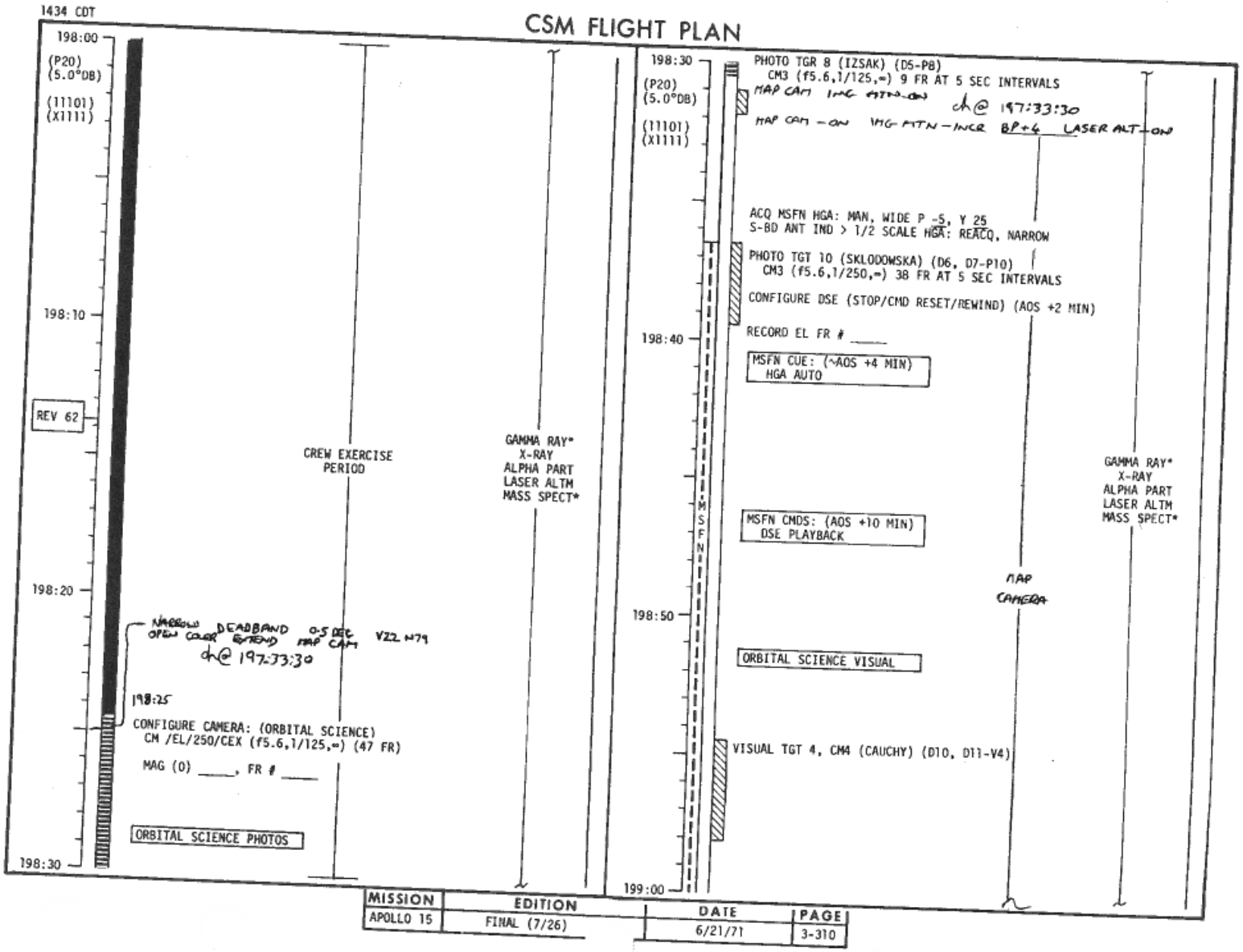
1334 Cu.

CSM FLIG.. PLAN



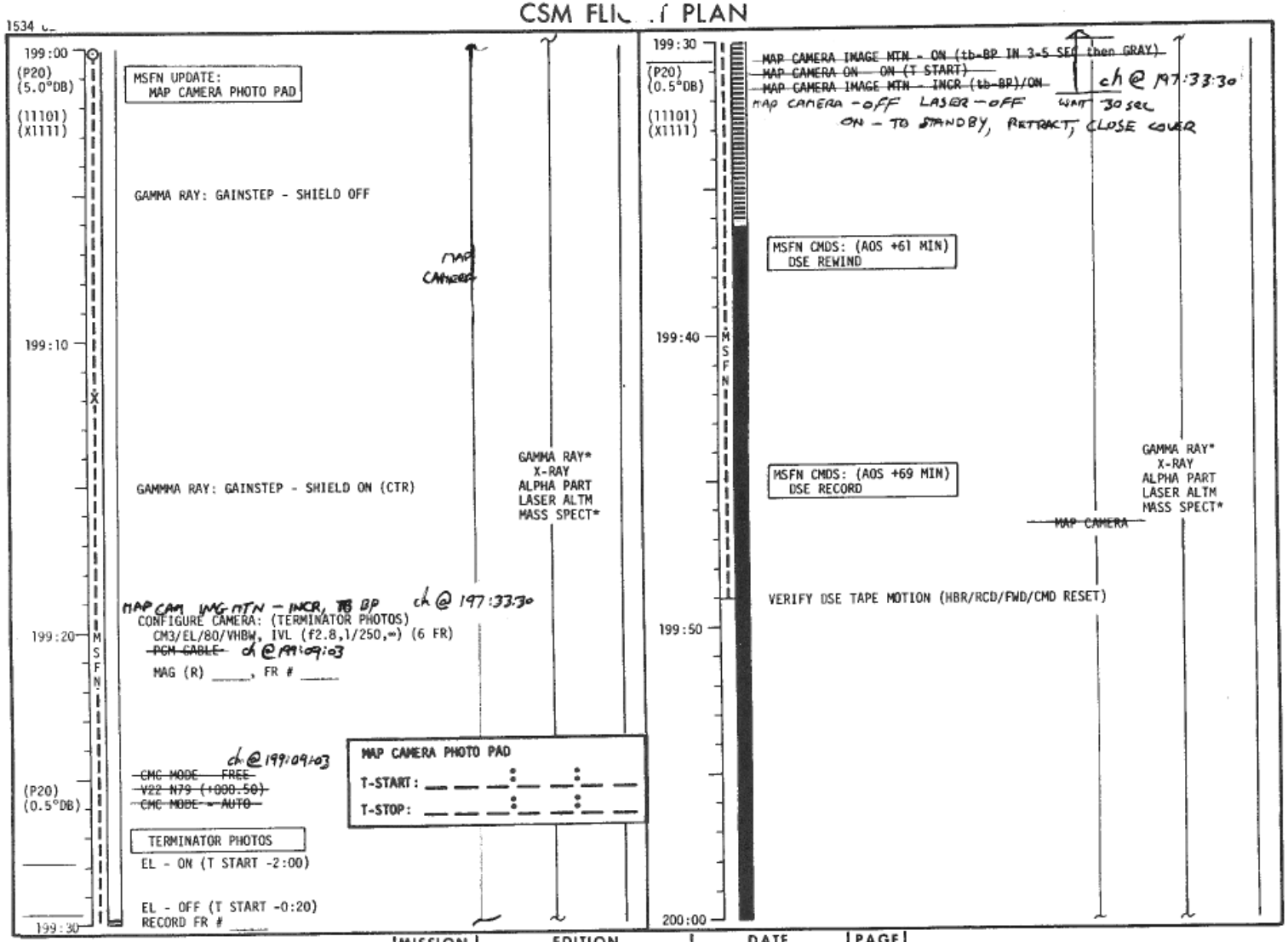
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-309

Revised Flight Plan
Rev 62 - Crew exercise - Science photos + visuals
Hopping Camera + Laser Altimeter
Terminator Photos



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-310

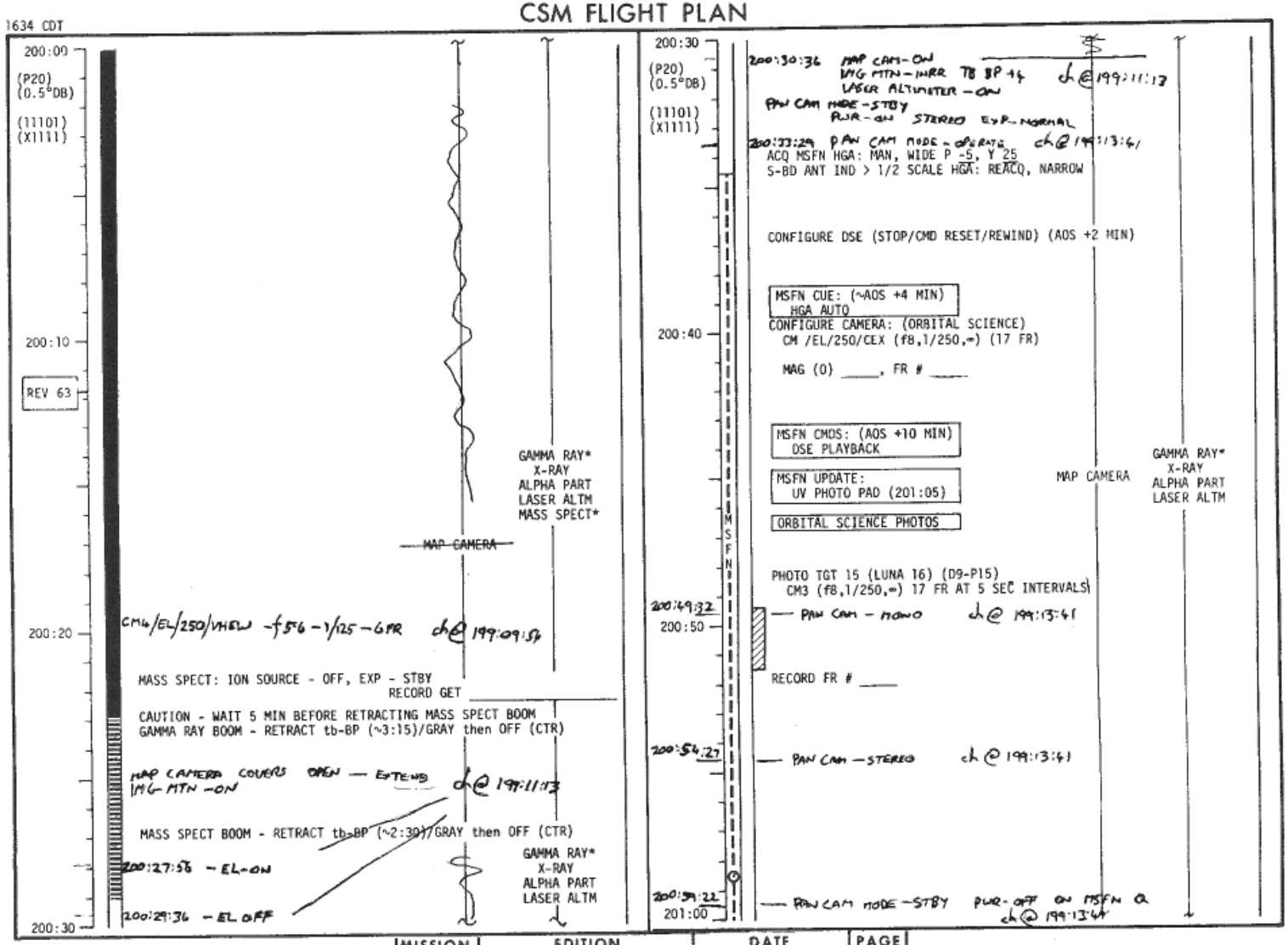
CSM FLI. .T PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-311

Revised Flight Plan
Rev 63 – Mapping Camera, Laser Altimeter, Pan Camera, UV and Terminator Photos

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-312

CSM FLIGHT PLAN

201:00 (P20) (0.5°DB) (11101) (X1111)

CONFIGURE CAMERA: (UV - LUNAR TERRA)
CM5/EL/105/UV,BRKT,CONT (f8,1/250,∞) (10 FR)
RINGSLIDE
MAG (N) ____, FR # ____
REMOVE R12 FLIGHT DATA FILE STOWAGE BOX
REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE AND CAMERA

UV PHOTO PAD — ch @ 200:47:00
T-START: 201:11:19 (5° E)

UV PHOTOS - LUNAR TERRA

CMC MODE - FREE
2 FRAMES FILTER 4, CHANGE SHUTTER TO 1/60 (T START)
2 FRAMES FILTER 1, CHANGE SHUTTER TO 1/20
2 FRAMES FILTER 2, CHANGE SHUTTER TO 1/60
2 FRAMES FILTER 3, CHANGE SHUTTER TO 1/250
2 FRAMES FILTER 4
CMC MODE - AUTO

201:10

RECORD FR # ____
REMOVE CAMERA AND UV CARDBOARD SHADE
NOTE COMMENTS AS TO CONDITION OF WINDOW 5
REPLACE CM5 WINDOW COVER

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

201:17:00 — MAP CAM IMG MTN - INCR TB-BP — ch @ 199:13:41

MSFN

CONFIGURE CAMERA: (TERMINATOR PHOTOS)
CM3/EL/250/VHBW,IVL (f5.6,1/125,∞)(6 FR)
~~PCM CABLE~~ del @ 200:47:22
MAG (R) ____, FR # ____

201:20

MAP CAMERA

TERMINATOR PHOTOS

EL - ~~ON~~ (T STOP -2:00)

EL - ~~OFF~~ (T STOP -0:20)
~~MAPPING CAMERA ON - OFF (T STOP)~~

EL on
EL OFF

RECORD FR # ____

201:30

201:30 (P20) (0.5°DB) (11101) (X1111)

~~OFF LASER ALTIMETER - ON~~
MAP CAMERA ~~ON - STBY (T STOP +1 MIN)~~
MAP CAMERA IMAGE MTN - ~~OFF (tb-BP IN 3-5 SEC then GRAY)~~
RETRACT - CLOSE COVER

MANUALLY ROLL CCW 40°

2nd ch @ 200:52:29 returning to printed instructions as part of Laser Altimeter test

GAMMA RAY*
X-RAY*
ALPHA PART*
LASER ALTM*

MSFN CMDS: (AOS +61 MIN)
DSE REWIND

(P20) (5.0°DB)

P20 OPT 5 (-X FWD SIM ATT) (201:50)
V23N78 (+000.00)
V22N79 (+005.00)
(323,180/343,000)

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

MSFN

201:40

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)

201:50

CMC MODE - FREE
P52 (OPTION 3)
(LIFT-OFF ORIENT)

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

P20, CMC MODE - AUTO
GDC ALIGN
VERIFY ORDEAL
MASS SPECT BOOM - DEPLOY tb-BP(~2:45)/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY tb-BP(~2:40)/GRAY then OFF (CTR)

202:00

CSM FLIGHT PLAN

1834 CDT

LM @ 200:47:37

202:00
(P20)
(5.0°DB)
(11101)
(X1111)

MASS SPECT: EXP - STBY, ION SOURCE - STBY

RECORD GET

CONFIGURE CAMERA: (MASS SPECT BOOM)
CM5/DAC/18/CEX-BRKT,MIR (T5.6,1/250,∞) 1 fps (100% MAG)

MAG ( ) ____, MAG % ____

UTILITY PWR - ON

REV 64

202:10

ASSEMBLE CAMERA, LENS, MIRROR AND MAGAZINE ON SPECIAL WINDOW 5 BRACKET (ROTATE LENS 180°)
REMOVE CM5 WINDOW COVER
MOUNT DAC CARDBOARD SHADE
MOUNT BRACKET ASSEMBLY TO SC

CMP DON BIOMED HARNESS
CDR DOFF BIOMED HARNESS

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM
MASS SPECT OUTGAS

DAC - ON

202:20

EAT PERIOD

202:30

202:30
(P20)
(5.0°DB)
(11101)
(X1111)

MASS SPECT: MUTL - LOW, DSCRM - ~~HIGH~~ LOW, EXP - ON, ION SOURCE - ON

RECORD GET

ACQ MSFN HGA: MAN, WIDE P 25, Y 185
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW

CONFIGURE DSE (STOP/CMD RESET/REWIND) (AOS +1 MIN)

MSFN CUE: (~AOS +5 MIN)
HGA AUTO

202:40

REPORT: GYRO TORQUING ANGLES
FROM P52 AT 201:50

MSFN CMDS: (AOS +9 MIN)
DSE PLAYBACK

MSFN

EAT PERIOD

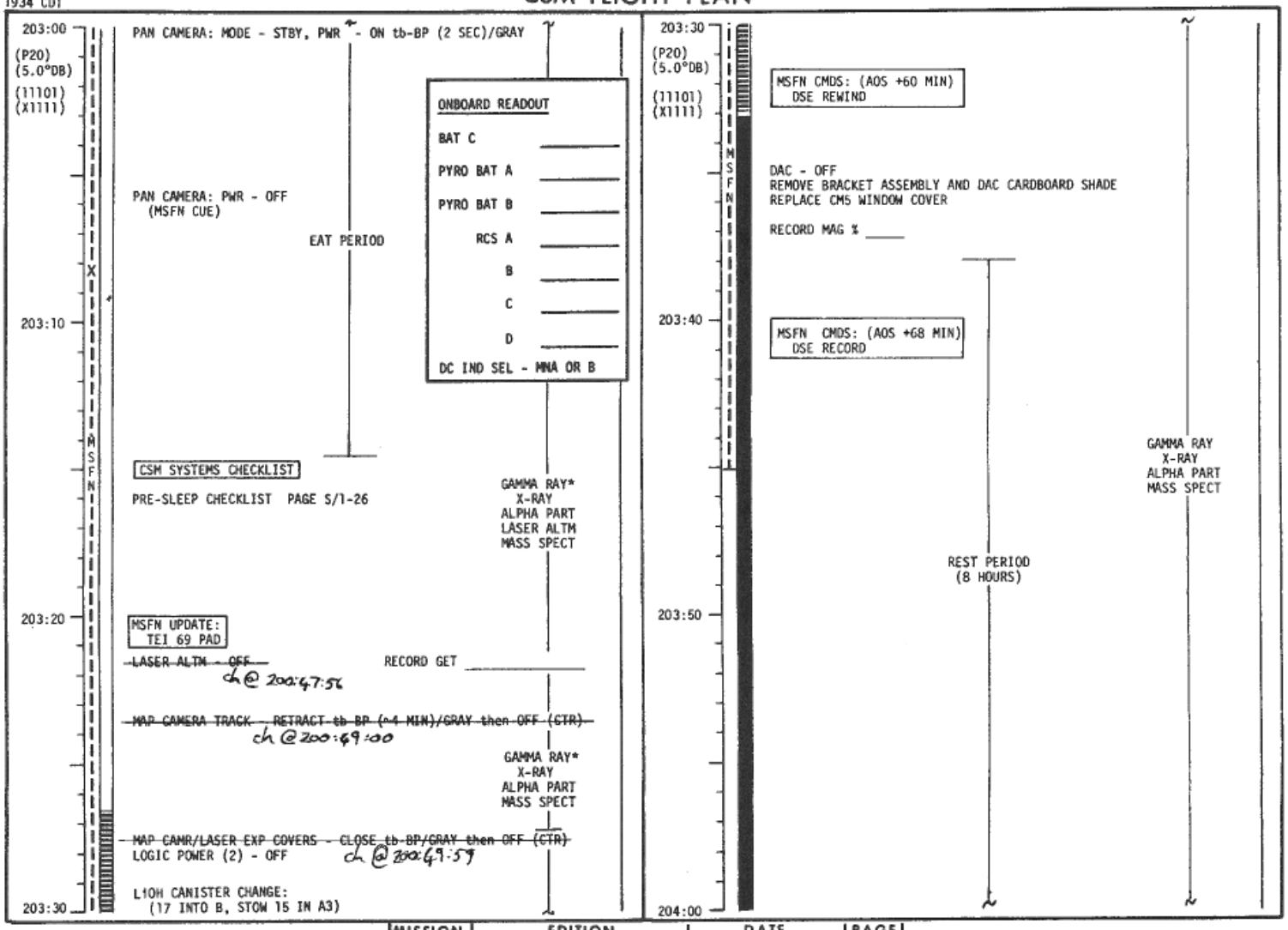
GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM
MASS SPECT

202:50

203:00

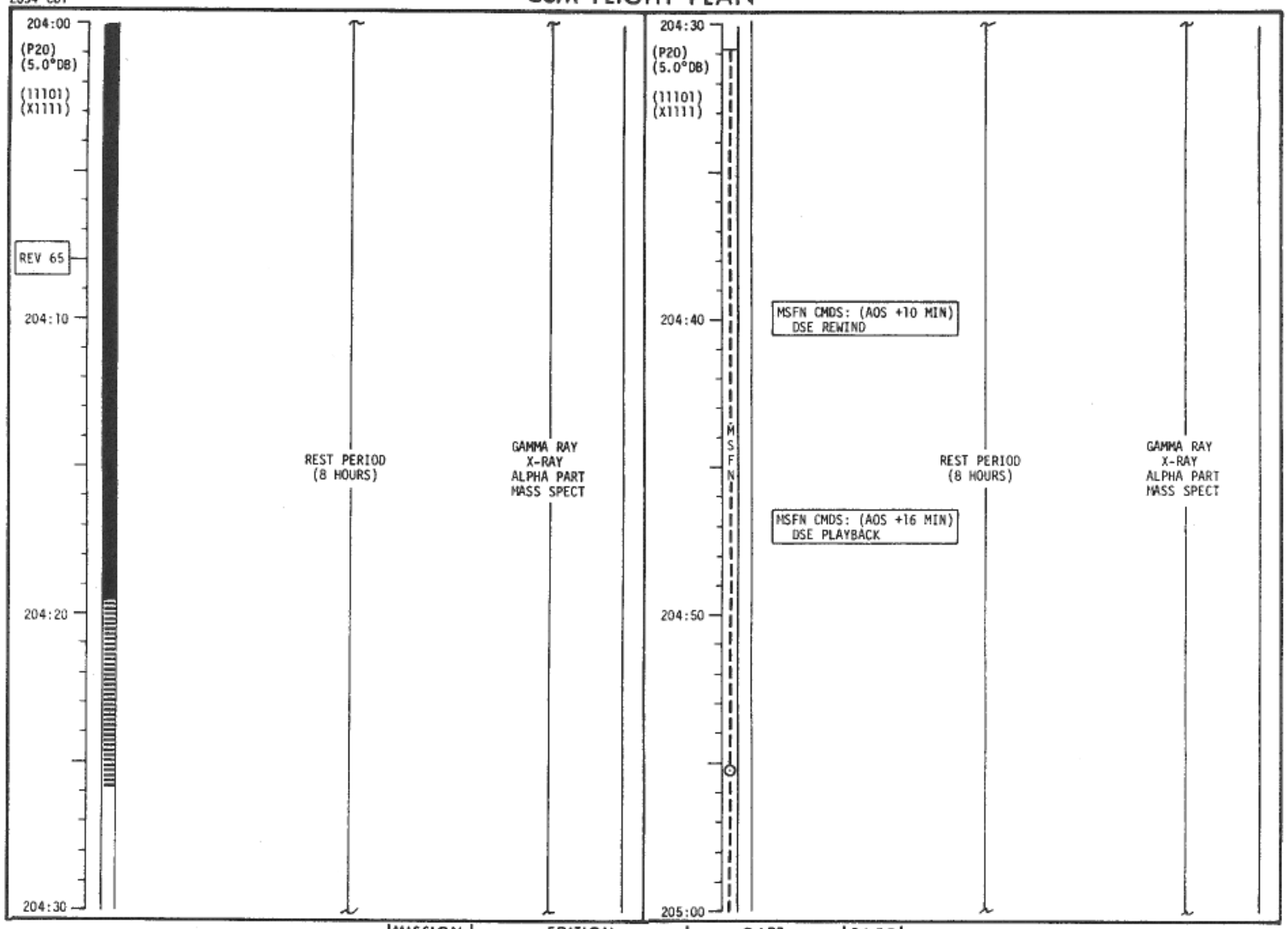
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-314

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-315

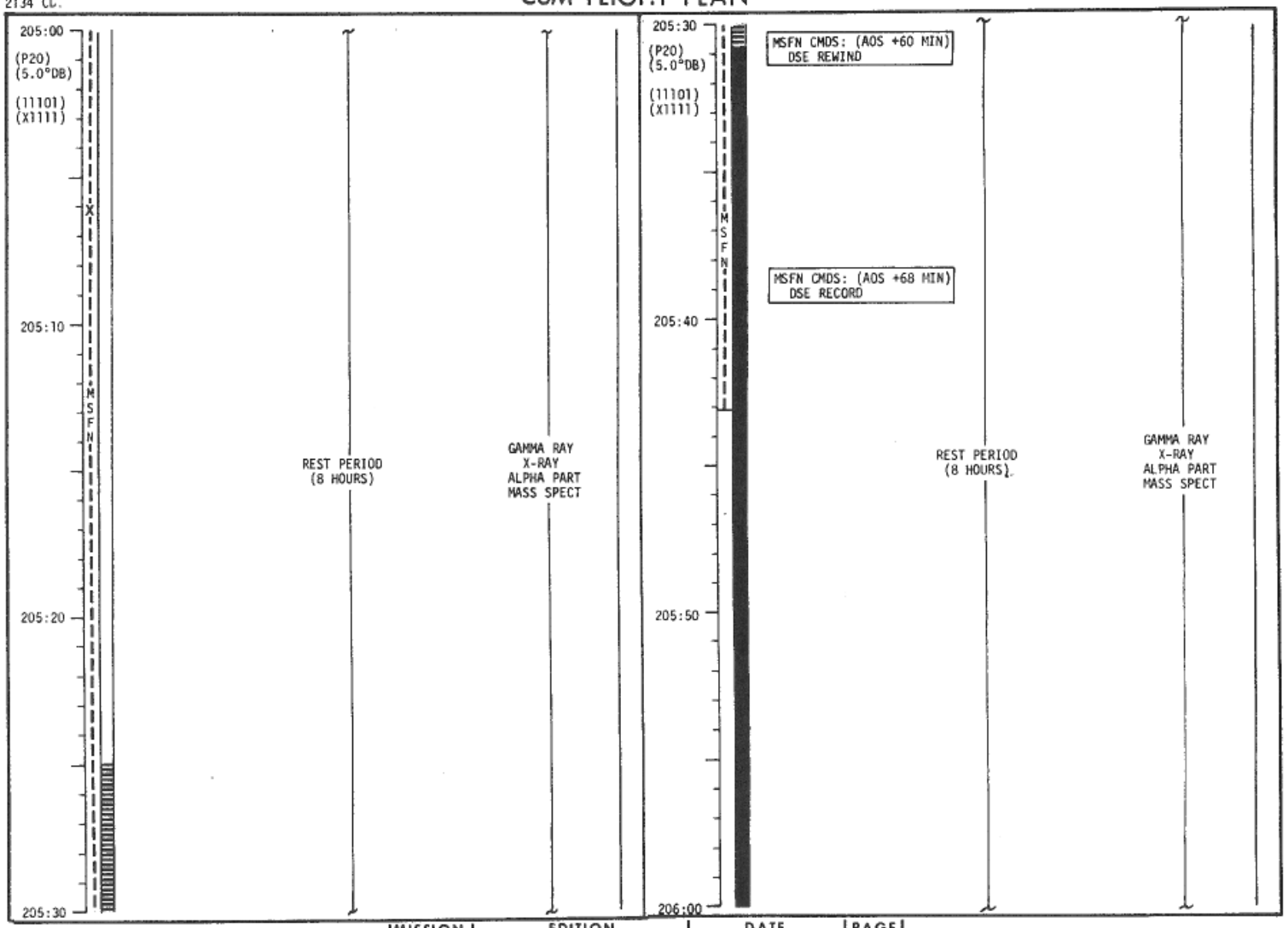
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-316

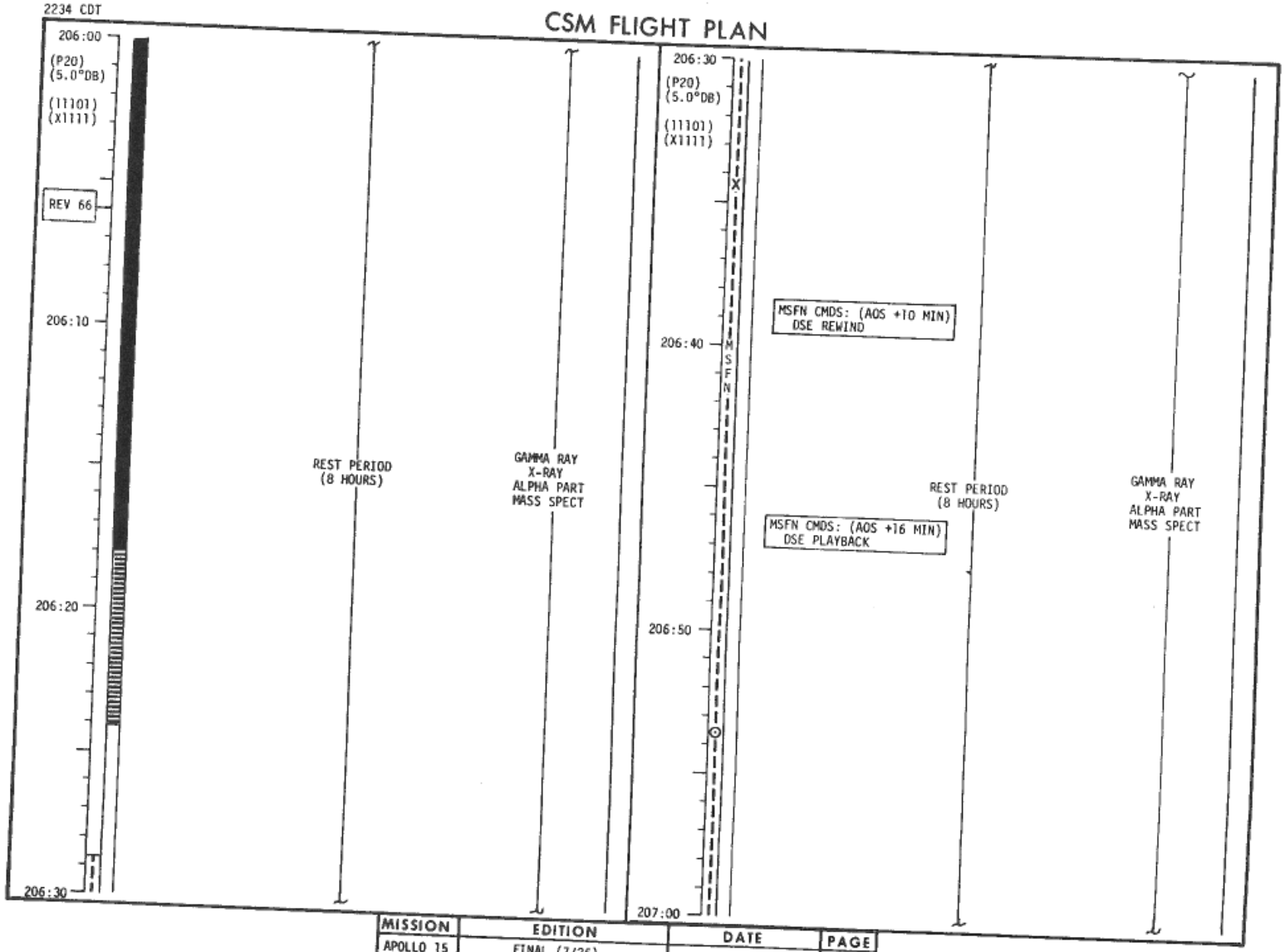
2134 Cl.

CSM FLIG..' PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-317

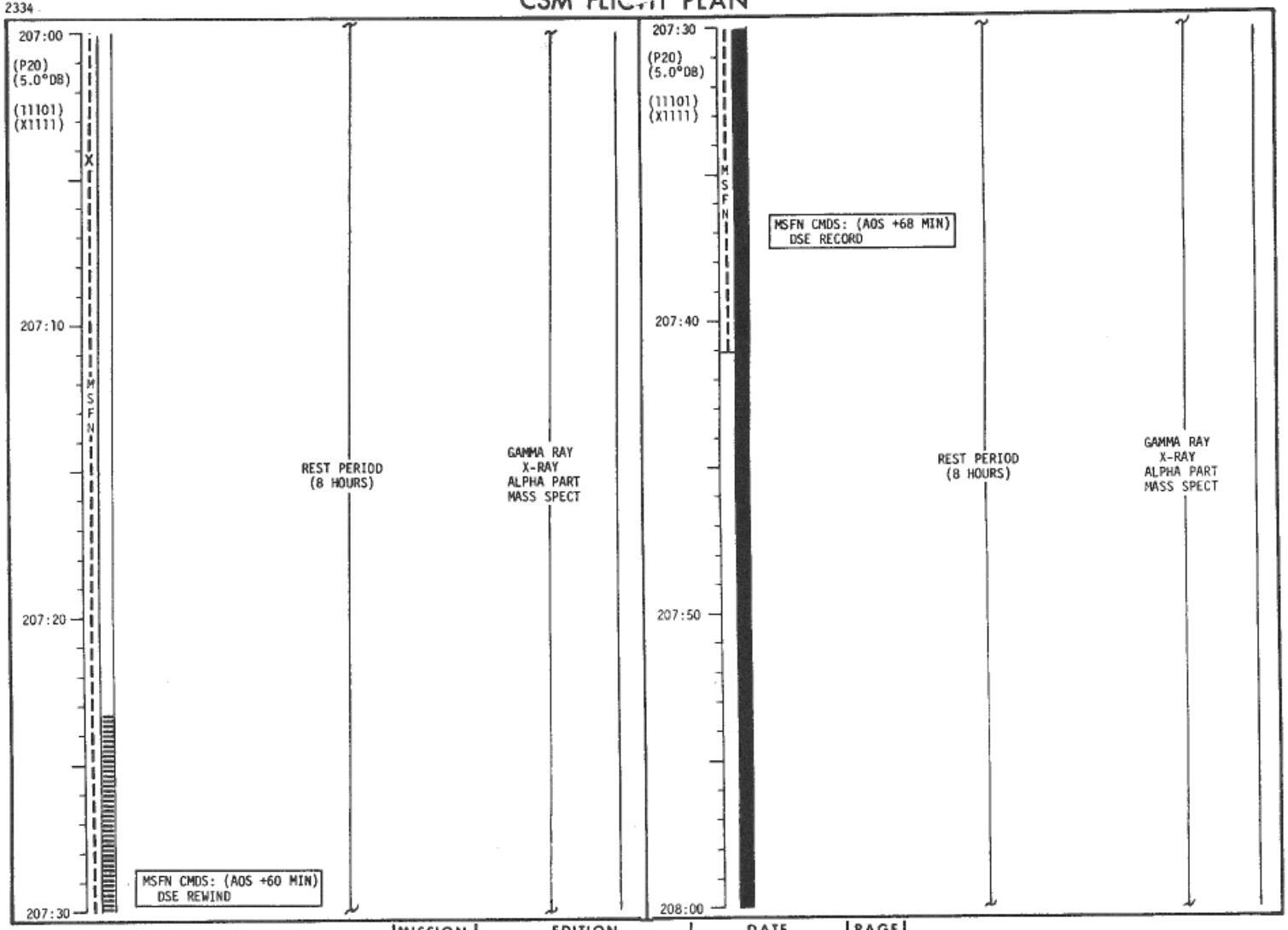
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-318

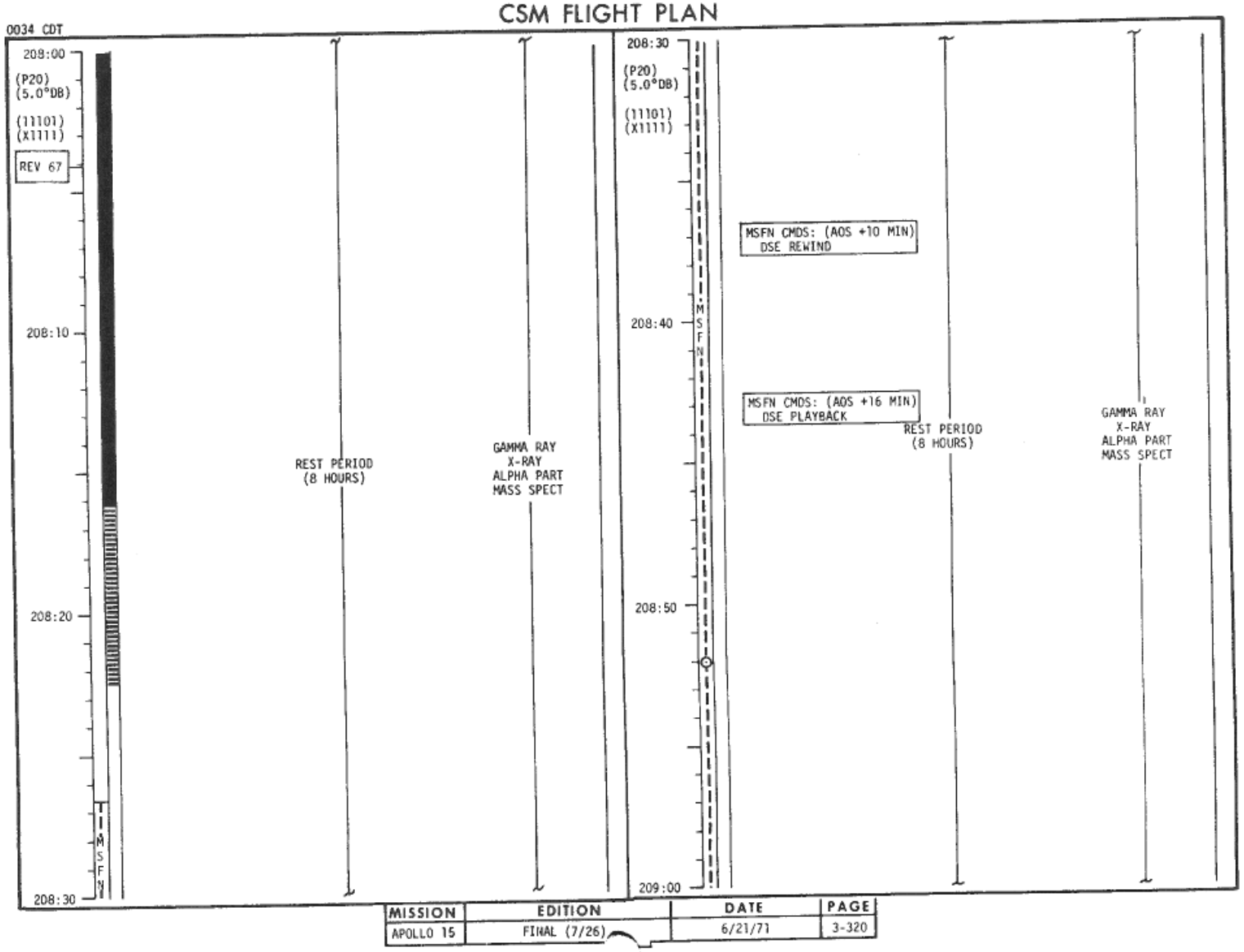
2334

CSM FLIGHT PLAN



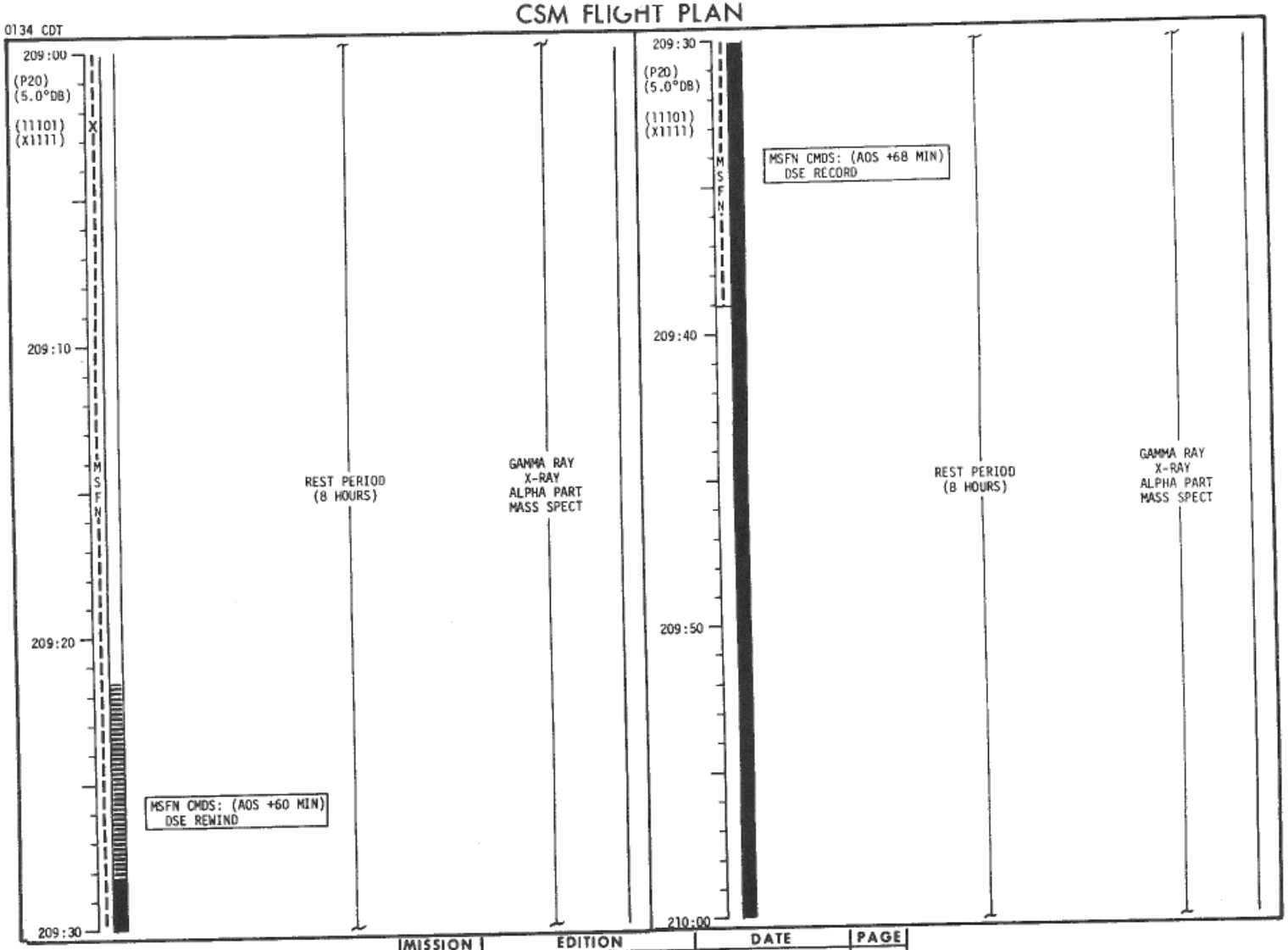
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-319

CSM FLIGHT PLAN



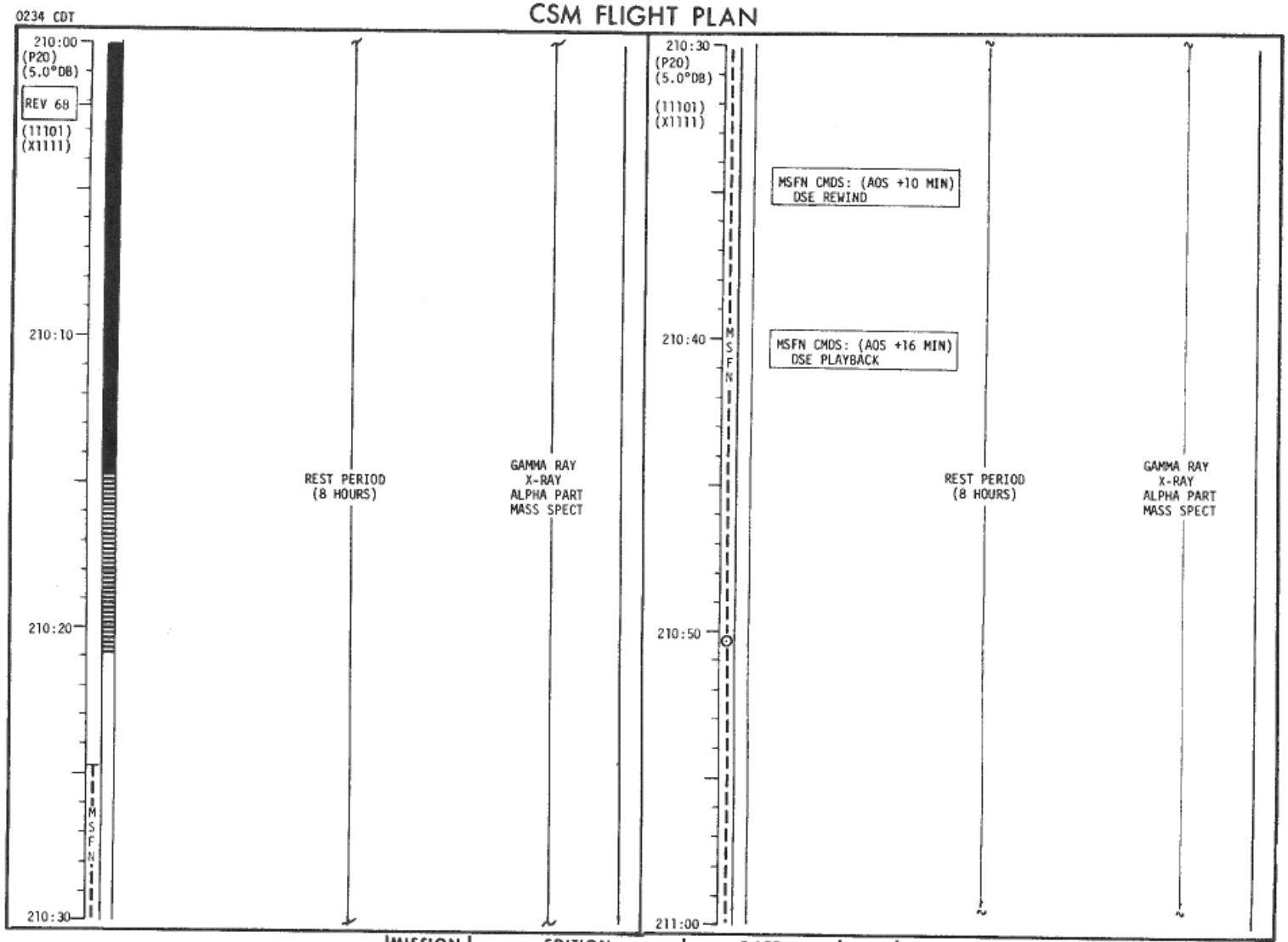
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-320

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-321

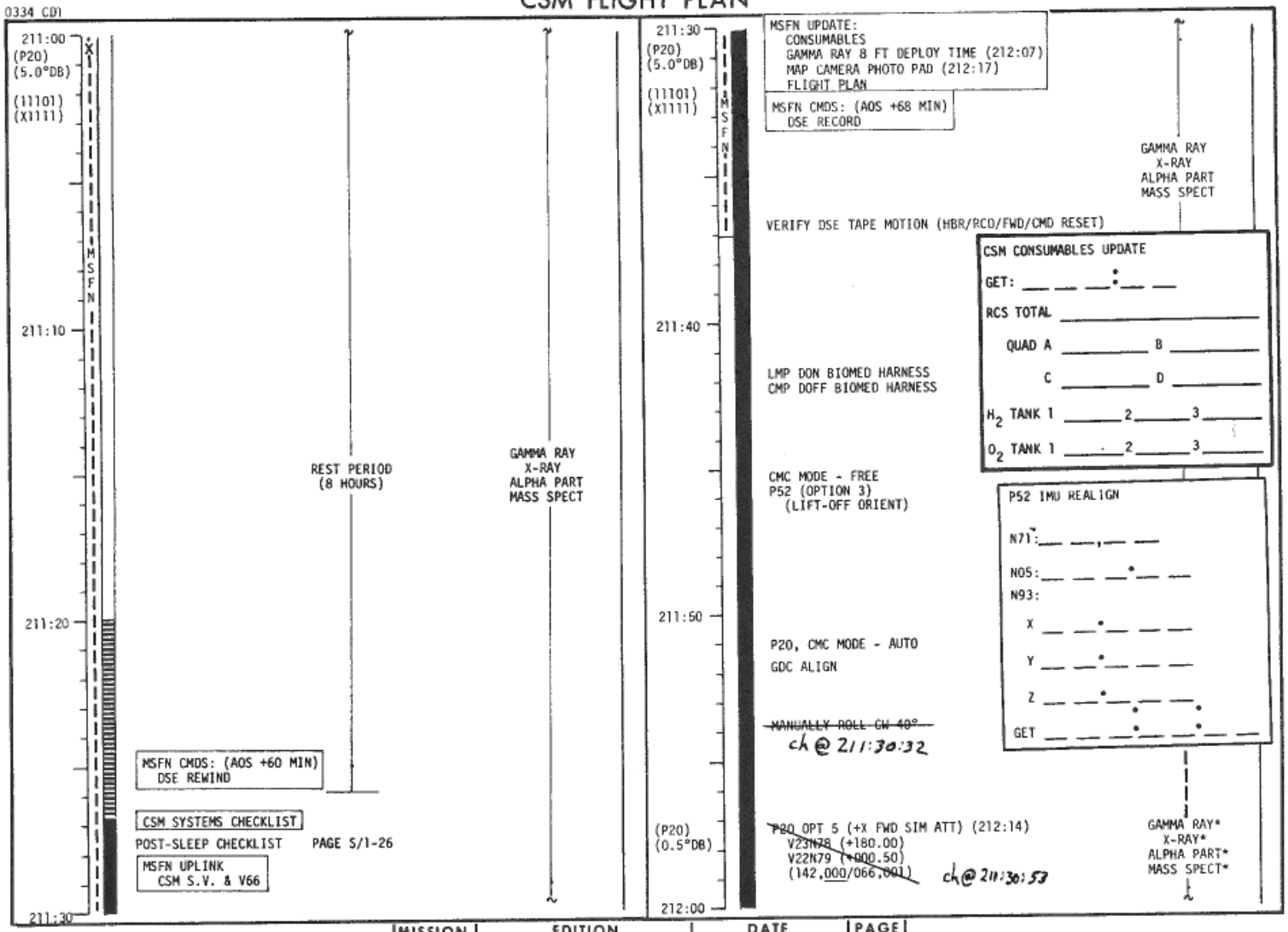
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-322

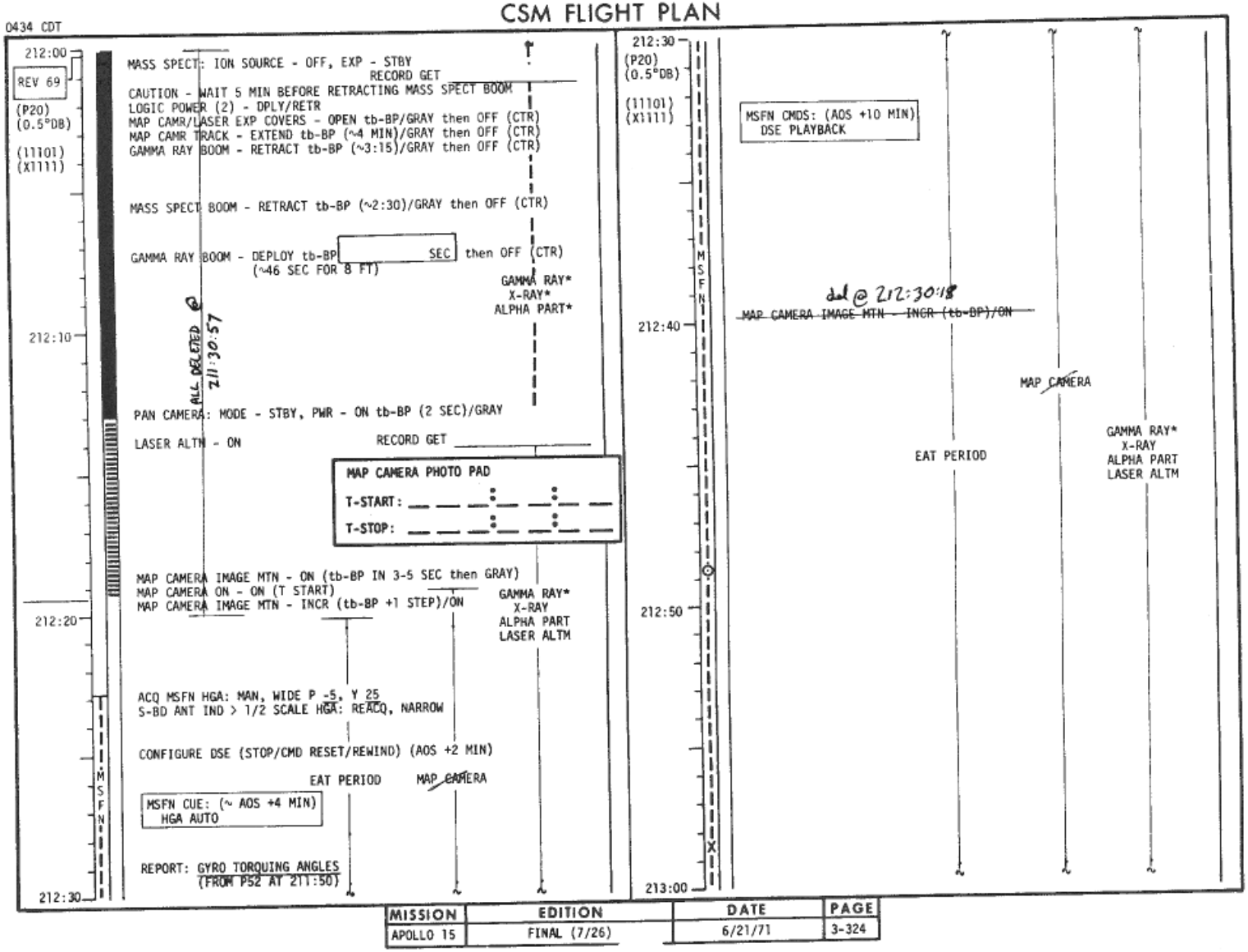
CSM FLIGHT PLAN

0334 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-323

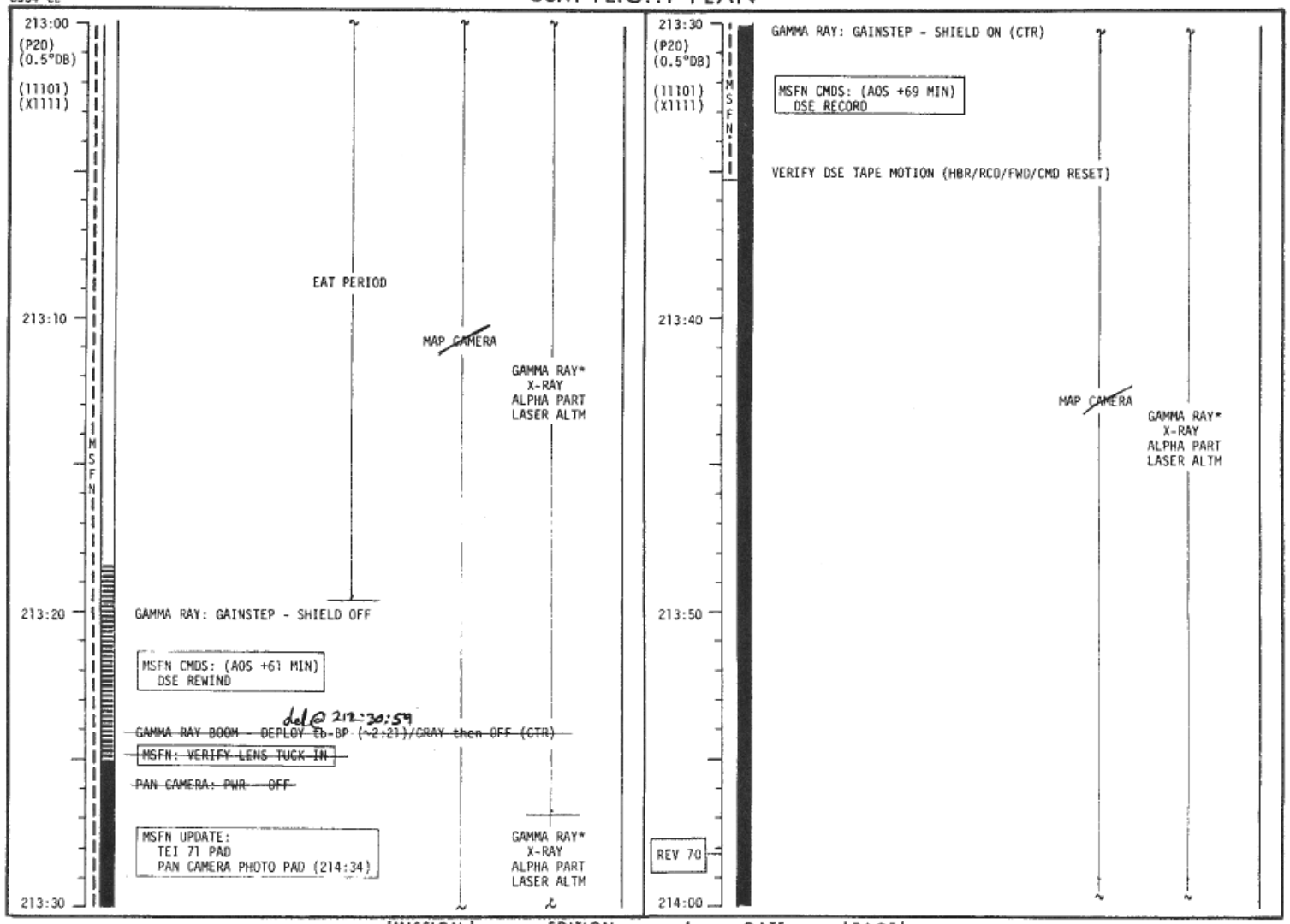
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-324

0534 Ec

CSM FLIG... PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-325

CSM FLIGHT PLAN

0634 CDT

214:00 (P20) (0.5°DB) (11101) (X1111)

CONFIGURE CAMERA: (TERMINATOR PHOTOS)
CM3/EL/~~250~~/WBW, IVL (f2.8,1/250,∞) (6 FR)
PCM CABLE 250-mm f5.6 1/125
MAG (R) ____, FR # ____ ch @ 212:31:30

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

MASS SPECT, ION SOURCE - OFF, EXPT - STBY
LOGIC PWR - DEPLOY/RETRACT ch @ 212:32:08

214:10

MAP CAMERA
IF ION SRCE - OFF FOR EMIN MASS SPECT BOOM - RETRACT ch @ 212:33:17
GAMMA RAY BOOM - RETRACT tb-BP (~3:15)/GRAY then OFF (CTR)
MAP CAM/LASER COVERS - OPEN ch @ 212:33:26
TERMINATOR PHOTOS MAP CAM - EXTENS, IMG MTN - ON

EL - ON (T ~~STOP~~ START -1:40) ch @ 212:34:09
EL - OFF (T ~~STOP~~ START) LASER ALTIMETER - ON ch @ 212:34:31
MAP CAMERA ON - ~~OFF (T STOP)~~ ON (T-START)
~~MAP CAMERA ON - STBY (T STOP +1 MIN)~~
MAP CAMERA IMAGE MTN - ~~OFF (tb-BP IN 3-5 SEC then GRAY)~~ TRICA (tb BP + 4 STEPS/ON) ch @ 212:34:58
RECORD FR # ____

214:20

ACQ MSFN HGA: MAN, WIDE P -5, Y 25 MAP CAM ch @ 212:46:15
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW

T-START 214:20:03
T-STOP 215:19:49
GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

TRUE AOS →
CONFIGURE DSE (STOP/CMD RESET/REWIND)(AOS +2 MIN)
CHARGE BATTERY A

MSFN CUE: (~ AOS +4 MIN)
HGA AUTO

MAP CAM
CONFIGURE CAMERA: (ORBITAL SCIENCE)
CM/EL/250/CEX (f5.6,1/250,∞)(11 FR)
MAG (O) ____, FR # ____

MSFN CMDS: (AOS +10 MIN)
DSE PLAYBACK

214:30

MSFN

214:30 (P20) (0.5°DB) (11101) (X1111)

PAN CAMERA PHOTO PAD
T-START: ___ ___ : ___ : ___
T-STOP: ___ ___ : ___ : ___

MAP CAM

214:40

del @ 214:28:34
~~PAN CAMERA: MODE - STBY, PWR - ON tb-BP (2 SEC)/GRAY, STEREO, EXPOSURE - NORMAL (CTR)~~
~~PAN CAMERA MODE - OPR tb-BP (2 SEC)/GRAY (T START)~~

ORBITAL SCIENCE PHOTOS

REMOVE CM5 WINDOW COVER
PHOTO TGT 22 (TRANQUILITY BASE)(D11-P22)
CM5 (f5.6,1/250,∞) 4 FR AT 15 SEC INTERVALS

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

REPLACE CM5 WINDOW COVER

PAN CAMERA

del @ 214:28:55
~~PAN CAMERA MODE - STBY (T STOP)~~
~~MSFN: VERIFY LENS TUCK IN~~

214:50

PHOTO TGT 24 (BUSCOVICH)(D12-P24)
CM5 (f8,1/250,∞) 7 FR AT 10 SEC INTERVALS

~~PAN CAMERA: PWR - OFF~~

del @ 214 29:15
~~GAMMA RAY BOOM - DEPLOY tb-BP (~2:45)/GRAY then OFF (CTR)~~

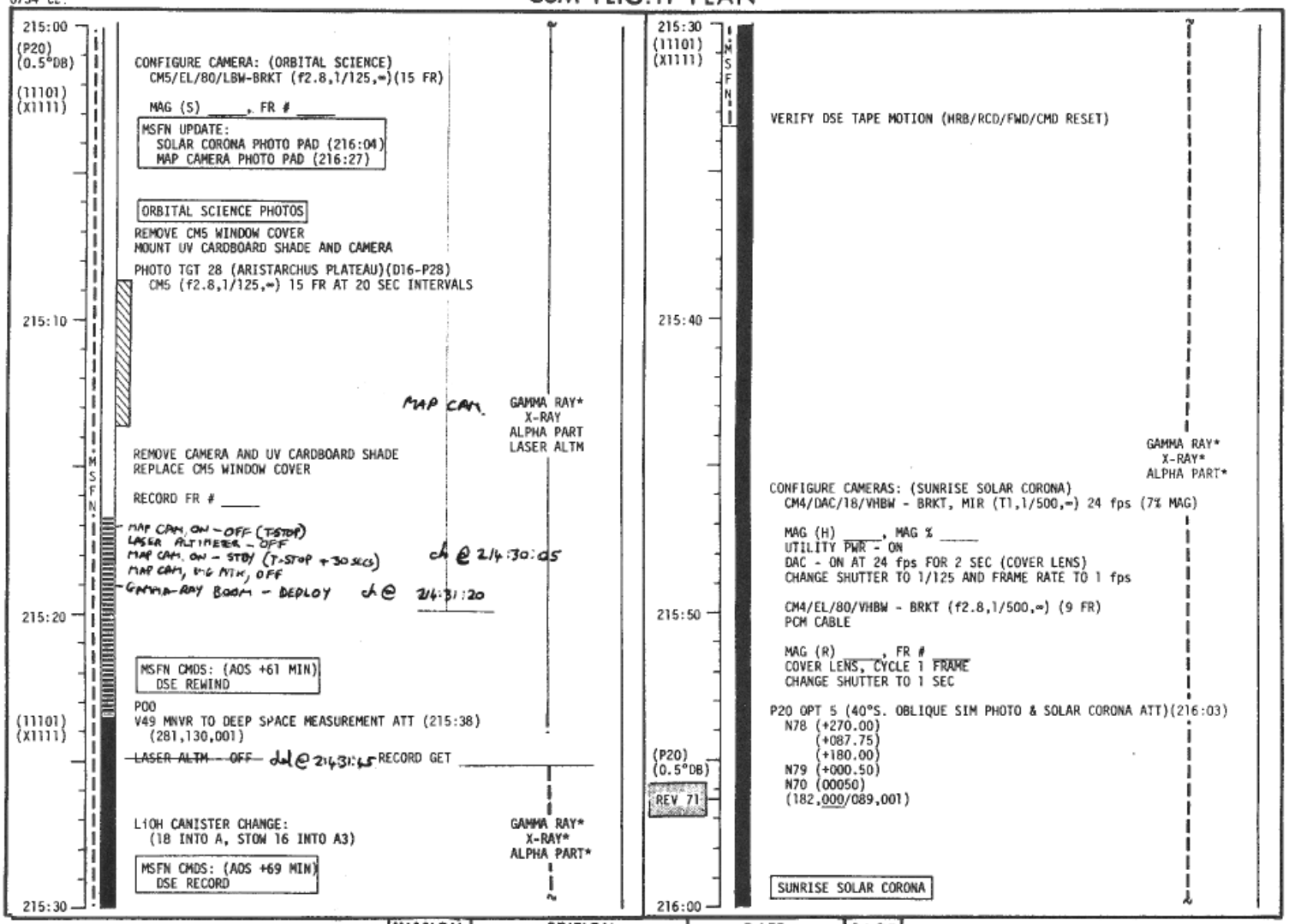
RECORD FR # ____

MSFN

215:00

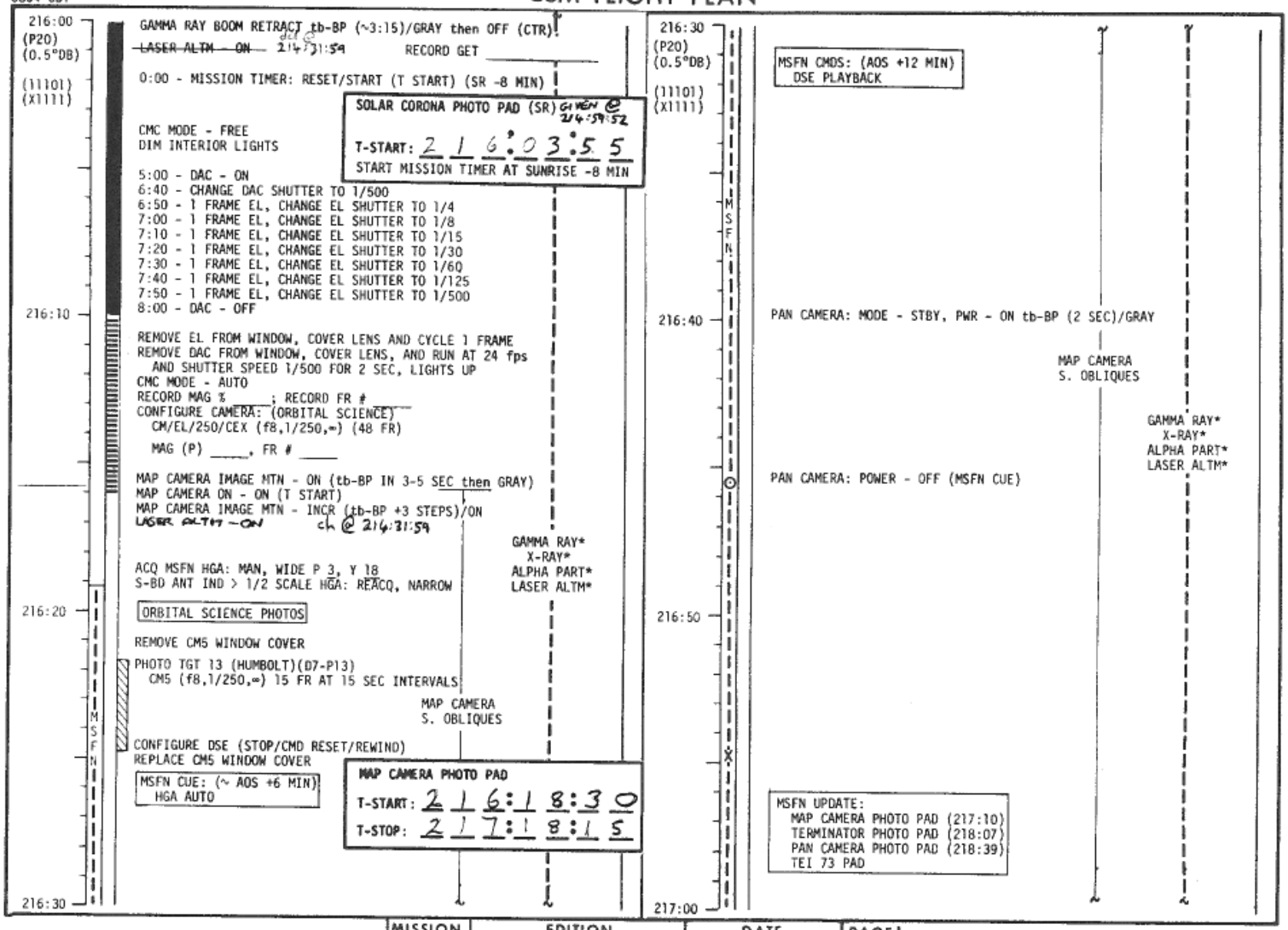
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-326

CSM FLI...T PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-327

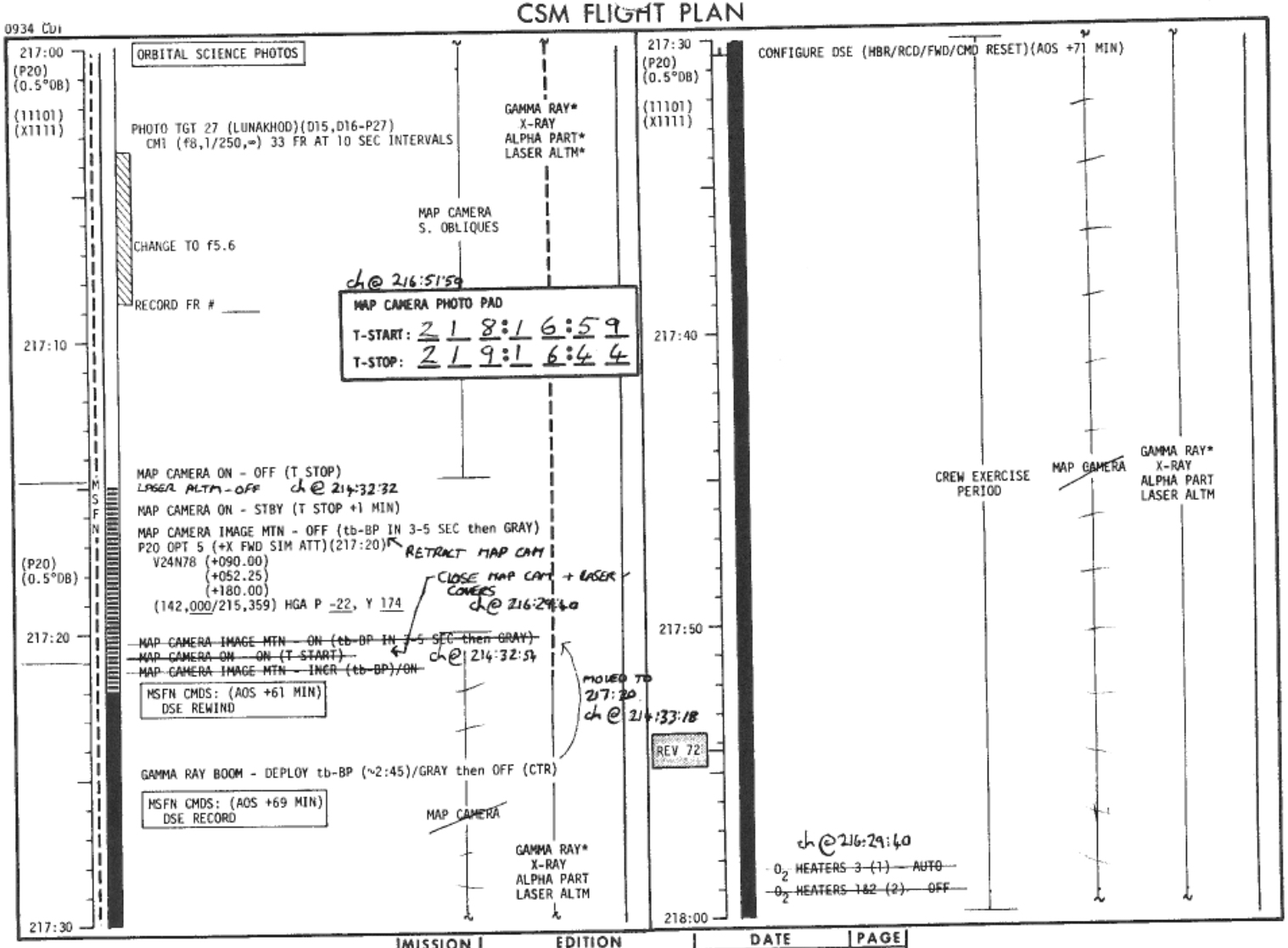
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-328

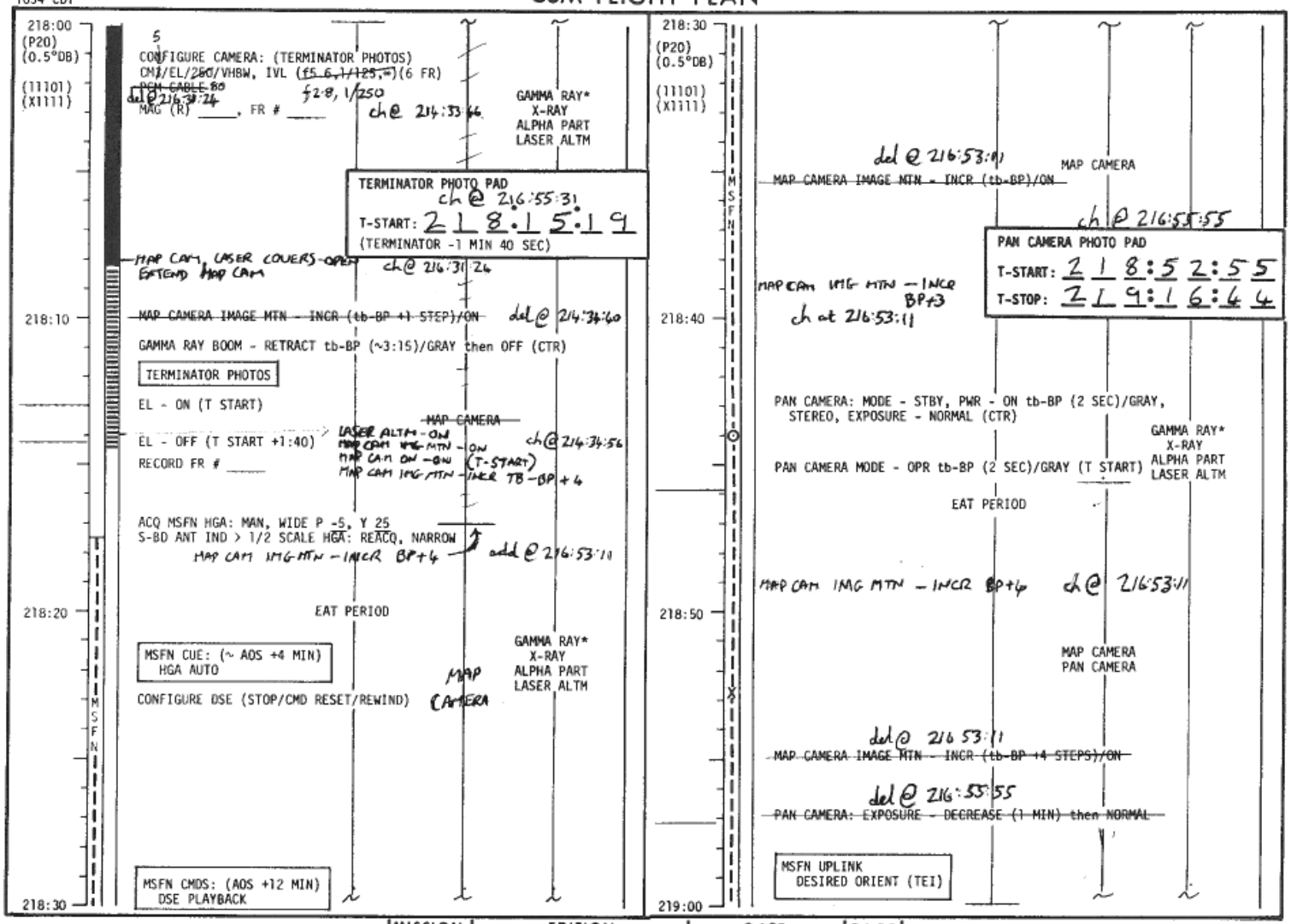
CSM FLIGHT PLAN

0934 CDT



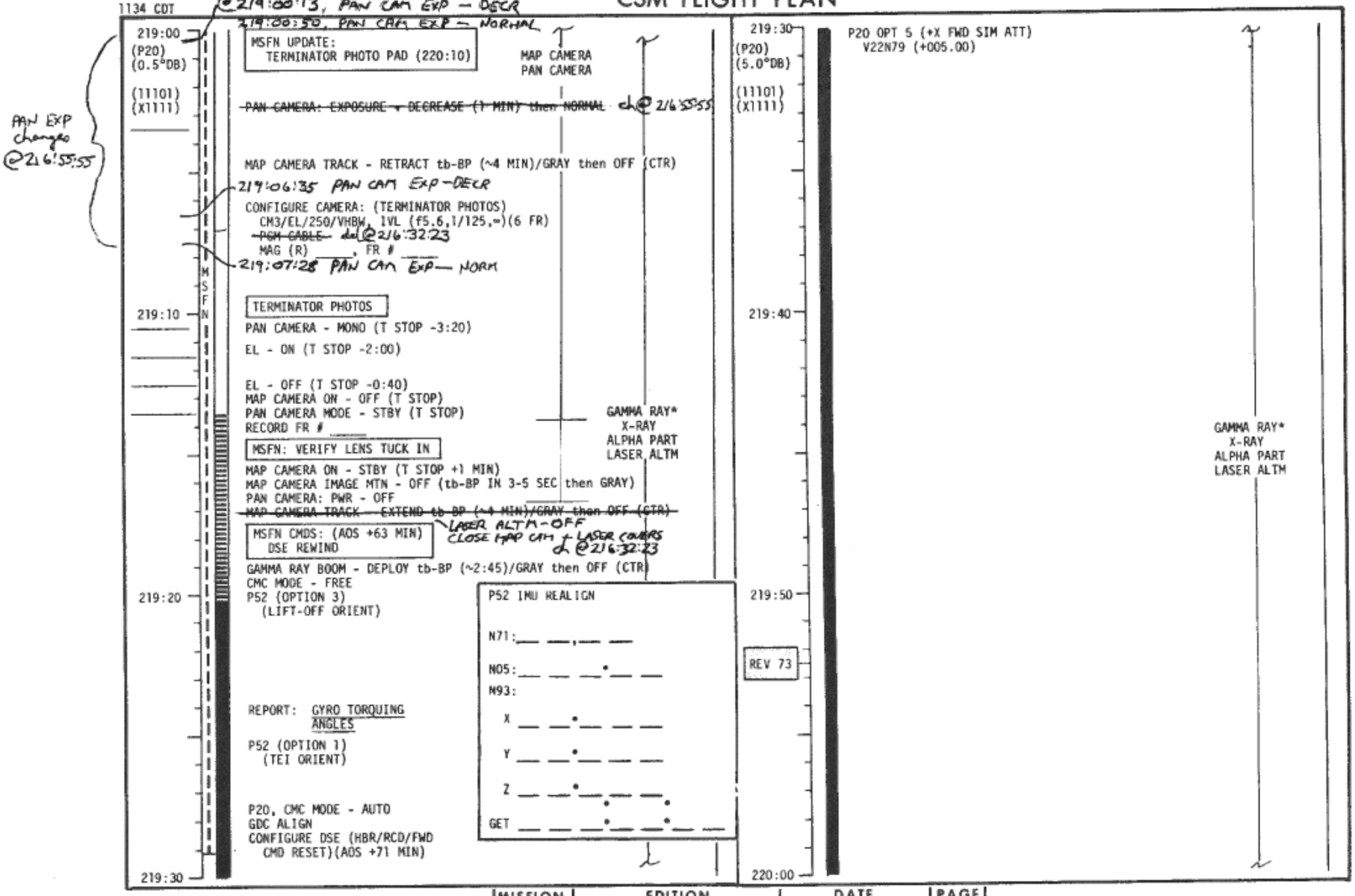
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-329

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-330

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-331

CSM FLIGHT PLAN

1234 CDT

220:00
(P20)
(5.0°DB)
(11101)
(X1111)

TERMINATOR_PHOTOS

CONFIGURE CAMERA: (TERMINATOR PHOTOS)
CM3/EL/250/VHBW, IVL (f5.6,/125,∞)(6 FR)
~~PGM CABLE~~
MAG (R) ____, FR # ____
PAN CAM -STBY, PWR-ON
MONO, EXP-NORM
ch @ 214:35:56

TERMINATOR PHOTO PAD L @ 218:25:50
T-START: 220:13:45
(TERMINATOR -1 MIN 40 SEC)

220:10

EL - ON (T START)

EL - OFF (T START +1:40) → PAN CAM MODE-OPR (@ T-START)
RECORD FR # ____
ACQ MSFN HGA: MAN, WIDE P -5, Y 25
S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW
220:15:25 PAN CAM. RUN CAMERA TO DEPLETION
ch @ 218:26:25

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

EXPECT TB-FILM DEPLETION — THEN MODE-STBY
ON MSFN CUE, PWR-OFF

MSFN CUE: (~ AOS +4 MIN)
HGA AUTO

220:20

CONFIGURE DSE (STOP/CMD RESET/REWIND)
GAMMA RAY: GAINSTEP - SHIELD OFF

MSFN UPDATE:
SHAPE MNVR PAD (221:15)
SUBSAT LAUNCH PAD (222:10)
TEI 74 PAD (PRELIM)(223:15)

MSFN UPLINK:
CSM S.V.
SHAPE TGT LOAD

MSFN CMDS: (AOS +12 MIN)
DSE PLAYBACK

GAMMA RAY: GAINSTEP - SHIELD ON (CTR)

220:30

MSFN

220:30
(P20)
(5.0°DB)
(11101)
(X1111)

220:40

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

220:50

GAMMA RAY EXP - OFF
X-RAY - OFF
α RAY/X DR - α OFF
LASER ALTM - OFF
MASS SPECT EXP - OFF
MAP CAMERA ON - STBY (VERIFY)
MAP CAMERA IMAGE MTN - OFF (VERIFY)
DATA SYSTEMS ON - OFF

RECORD GET ____

MAP CAMERA TRACK - RETRACK tb-BP (~4 MIN)/GRAY then OFF (CTR)
GAMMA RAY BOOM - RETRACT tb-BP (~3:15)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)

MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)
S-BD AUX TV - OFF (CTR)
LOGIC POWER (2) - OFF

221:00

MSFN

CSM FLIG.. PLAN

1334 CDt

221:00
(P20)
(5.0°DB)
(11102)
(X1111)

P30; VERIFY SHAPE BURN TIG AND ΔV's

CMC MODE - FREE
P00; V48 (11102)(X1111)
CMC MODE - AUTO
ENABLE ALL JETS
V49 MNVR TO SHAPE BURN PAD ATT (221:10)
HGA P -49, Y 155

221:10

V45
SET DET COUNTING UP TO
SHAPE BURN

cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE

H_2 PURGE LINE HEATERS - ON

MSFN CMDS: (AOS +63 MIN)
DSE REWIND

SXT STAR CHECK

(P20)
(0.5°DB)
221:20

P40 (TRIM)

221 20 47 23 actual

SHAPE BURN TABLE			
P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TERMINATE	±10° TERMINATE	BT +1 SEC	TRIM X,Y AND Z TO < 0.2 FPS
CSM SHAPE (350,068/229,006)			
___:___:___.___			TIG: 221:25:52 BT: 3.4 SEC ΔVT: 64.2 FPS ULLAGE: 4 JET, 13 SEC ORBIT: 77.6 X 57.5

P00; REPORT: BURN STATUS

MSFN CMDS:
DSE RECORD

VERIFY DSE TAPE MOTION (LBR/
RCD/FWD/CMD RESET)

221:30

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	FUEL
X	OX
X	UNBAL

P30 MANEUVER

SET STARS	TEI S	TEI P	TEI S/G	&	N	PURPOSE / PROP/GUID
	+					WT N47
R_{ALIGN} ___ ___ ___		O	O			P_{TRIM} N48
P_{ALIGN} ___ ___ ___		O	O			Y_{TRIM}
Y_{ALIGN} ___ ___ ___	+	O	O			HRS GET1
	+	O	O	O		MIN N33
	+	O				SEC
ULLAGE ___						ΔV_X N81
___						ΔV_Y
___						ΔV_Z
___	X	X	X			R (000)
	X	X	X			P (000)
	X	X	X			Y (000)
	+					H_A N44
						H_P
	+					ΔVT
HORIZON/WINDOW ___	X	X	X			BT
___	X					ΔVC
___	X	X	X	X		SXTS
___	+				O	SFT
	+			O	O	TRN
	X	X	X			BSS
	X	X				SPA
	X	X	X			SXP
OTHER ___		O				LAT N61
___						LONG
___	+					RTGO EMS
	+					V10
						GET 0.05G

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-333

CSM FLIGHT PLAN

1404 CDT

221:30
(11102)
(X1111)

CONFIGURE FOR URINE DUMP

P52 (OPTION 3)
(TEI ORIENT)

P52 IMU REALIGN

N71: ___ ___, ___ ___

N05: ___ ___ ___ . ___ ___

N93:

X ___ ___ . ___ ___ ___

Y ___ ___ . ___ ___ ___

Z ___ ___ . ___ ___ ___

GET ___ ___ ___ . ___ ___ ___

221:40

GDC ALIGN

H_2 & O_2 FUEL CELL PURGE
WASTE WATER DUMP
URINE DUMP

GAMMA RAY EXP - ON
X-RAY - STBY
α RAY/X DR - α ON
MASS SPECT EXP - STBY
DATA SYSTEMS ON - ON
S-BD AUX TV - SCI
PCM BIT RATE - HIGH

221:50

H_2 PURGE LINE HEATERS - OFF

REV 74

GAMMA RAY*
ALPHA PART*

O_2 HEATERS 1&2 (2) - AUTO
O_2 HEATERS 3 (1) - OFF
CB O_2 TANK 100 W (3) MN B, CLOSED

222:00

ck @ 218:26:25

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-334

1434 c.

CSM FLIGHT PLAN

222:00
(11102)
(X1111)

V49 MNVR TO SUBSAT LAUNCH PAD ATT (222:13)
HGA P 11, Y 318

222:10

REPORT:
GYRO TORQUING ANGLES
(FROM P52 AT 221:35)

MSFN CMDS
DSE DUMP

GAMMA RAY*
ALPHA PART*

222:20

MSFN

CONFIGURE CAMERA: (SUBSAT PHOTOS)
CM3/DAC/75/CEX-RING (f11,1/125,100) 12 fps (6.4% MAG)

MAG (E) _____, MAG % _____
UTILITY PWR - ON

DAMP RATES:
INHIBIT ALL JETS EXCEPT: A1 & C2 OR B2 & D1, A3,C4,B3,D4
WAIT 5 MIN FOR RATES TO DAMP
VERIFY SUBSAT EXTEND/LAUNCH - OFF (CTR)

222:30

set @ 220:39:40

SUBSAT LAUNCH PAD
GET: 222:39:27
R 266 (266), P 141 (141), Y 038 (038)

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-335

CSM FLIGHT PLAN

222:30

(11102)
(X1111)

VERIFY:
cb PYRO A/SEQ A - CLOSE
cb PYRO B/SEQ B - CLOSE
cb LOGIC POWER (2) - CLOSE
LOGIC POWER (2) - JETT

MSFN: VERIFY SIM PYRO BUS (2) ARMED AND RATES ≤ .05°/SEC

CMC MODE - FREE

SUBSAT - EXTEND/LAUNCH (LAUNCH -12 SEC) tb-BP UNTIL LAUNCH

SUBSAT LAUNCH 222:36:13

MSFN: VERIFY SUBSAT LAUNCH

PHOTO SUBSAT FOR ~ 30 SEC STARTING AT LAUNCH +9 SEC

CMC MODE - AUTO

SUBSAT LAUNCH

222:40

SUBSAT - RETRACT tb-BP (~ 12 SEC)/GRAY then OFF (CTR)
LOGIC POWER (2) - OFF

RECORD DAC MAG % ____

ENABLE ALL JETS

MSFN UPDATE:
TEI 74 PAD (NOMINAL)(223:15)
TEI 75 PAD
MAP UPDATE REV 75 (223:17)

MSFN

MSFN UPLINK:
CSM S.V. & V66
TEI 74 TGT LOAD

GAMMA RAY*
ALPHA PART*

CSM SYSTEM CHECKLIST

222:50

CONTAMINATION CONTROL PAGE S/1-16

C&WS OPERATIONAL CHECKS S/1-17

CM RCS MONITORING CHECK S/1-1

SM RCS MONITORING CHECK S/1-1

SPS MONITORING CHECK S/1-1

223:00

1534 CUT

CSM FLIGHT PLAN

223:00
(11102)
(X1111)

P30 VERIFY TEI TIG AND ΔV's
V49 MNVR TO TEI PAD BURN ATT (223:12)
OMNI D

GAMMA RAY*
ALPHA PART*

GAMMA RAY EXP - OFF
X-RAY - OFF
α RAY/X DR - α OFF
MASS SPECT EXP - OFF
MAP CAMERA ON - STBY (VERIFY)
MAP CAMERA IMAGE MTN - OFF (VERIFY)
DATA SYSTEMS ON - OFF
S-BD AUX TV - OFF (CTR)

223:10

M S F N

ch @ 222:19:30

MAP UPDATE REV 75

SXT STAR CHECK

LOS 223:29:45
180° 223:25:57
AOS WITH TEI 224:03:03
AOS WITHOUT TEI 224:15:30

223:20

(P40)
(0.5°DB)

P40 TRIM

MSFN CMDS:
DSE RECORD

VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)

223:30

P30 MANEUVER

VEGA, DENEB
SET STARS

R_{ALIGN} 102
P_{ALIGN} 178
Y_{ALIGN} 028

ULLAGE +X
12 secs

TES	PSG&N	PURPOSE / PROP/GUID	
	+35768	WT	N47
	+00057	P_{TRIM}	N48
	+00088	Y_{TRIM}	
	+00223	HRS	GETI
	+00048	MIN	N33
	+04505	SEC	
	+29452	ΔV_X	N81
	−07613	ΔV_Y	
	−01714	ΔV_Z	
	XXX000	R	(000)
	XXX000	P	(000)
	XXX000	Y	(000)
	+	H_A	N44
	+00221	H_P	
	+30468	ΔVT	
	XXX2212	BT	
	X3028 5	ΔVC	
	XXXX37	SXTS	
	+22430	SFT	
	+36500	TRN	
	XXX053	BSS	
	XX 1033	SPA	
	XXX 31	SXP	

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-337

CSM FLIGHT PLAN

1604 CDT

223:30
(P40)
(0.5°DB)

(11102)
(X1111)

223:40

223:50

224:00

P OR Y RATES	ATT DEVIATION	TEI BURN TABLE		
		SHUTDOWN TIME		RESIDUALS
		UNDERBURN	OVERBURN	
10°/SEC COMPLETE	±10° COMPLETE	FOR G&N C/O >3 SEC EARLY & ΔVC >+50 FPS SWITCH TO SCS AUTO & RESTART SPS	BT +2 SEC & ΔVC = -40 FPS	TRIM X AND Z AXES TO 0.2 FPS

TIG: 223:46:06
BT: 2 MIN 17.8 SEC
ΔVT 3049.7 FPS
ULLAGE: 4 JET, 13 SEC
ORBIT: N/A

TEI (000,000,000)

_____:_____:_____.____

P00

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

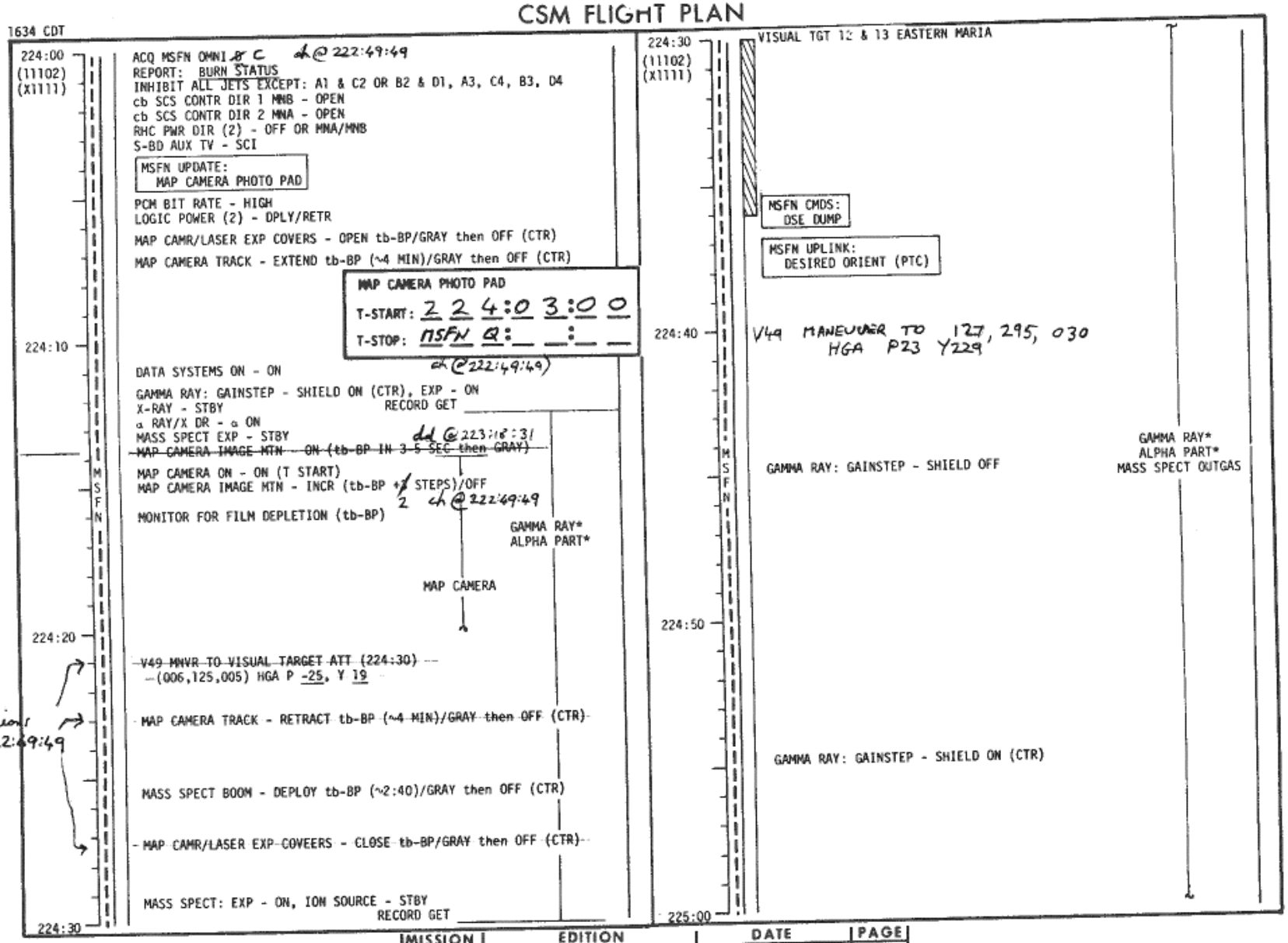
V49 MNVR TO LUNAR SURFACE
PHOTO ATT (223:57)
~~(328,030,026)~~
(127,270, 030) ch @222:48:58

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	FUEL
X	OX
X	UNBAL

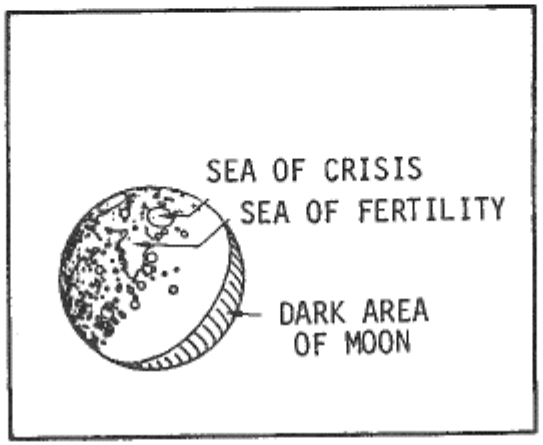
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-338

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-339

FOV = 50° GET 225:40

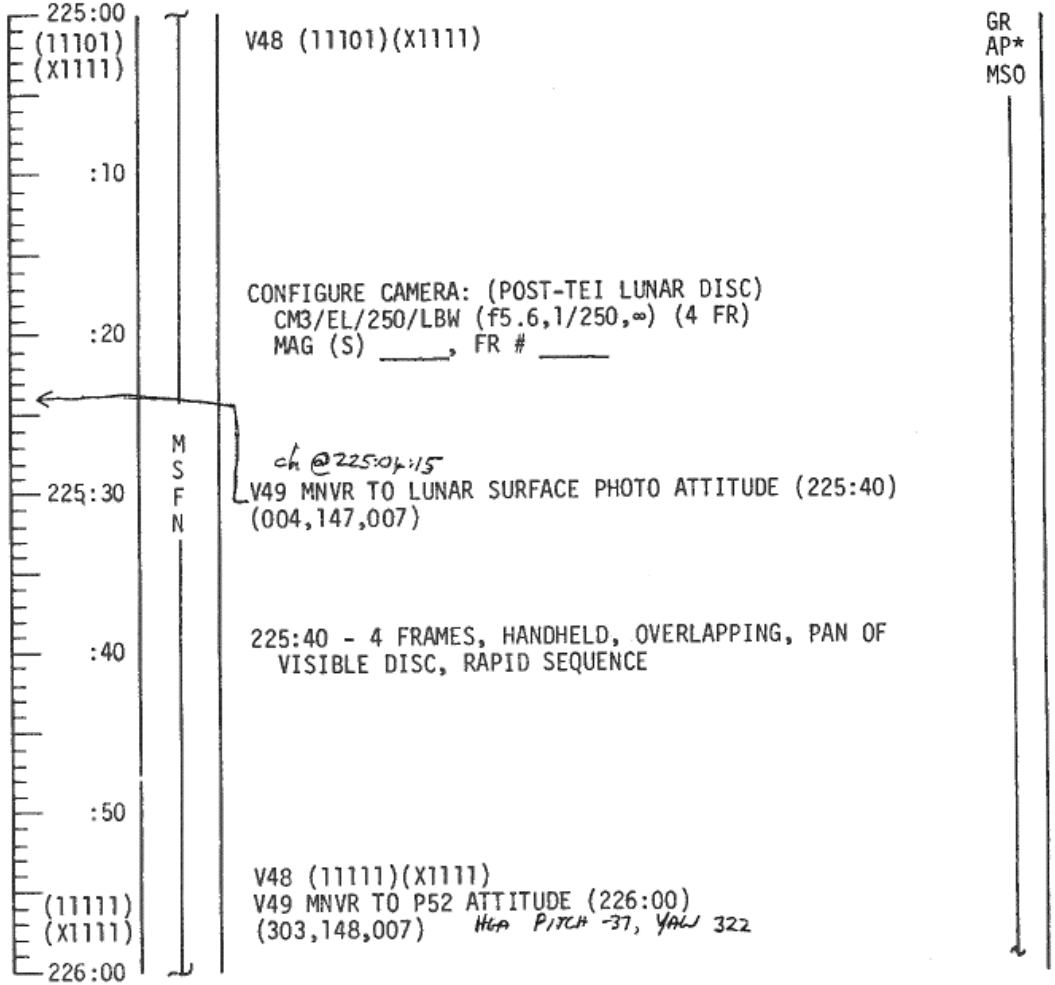


FLIGHT PLAN

MCC-H

1734 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	225:00 - 226:00	10/TEC	3-341

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1834 CDT

226:00
(11111)
(X1111)
:10
:20
226:30
:40
:50
227:00

MSFN

P52 IMU REALIGN
OPTION 3 REFSMMAT
TEI ORIENTATION

REPORT: GYRO TORQUING ANGLES

STARS ___, ___
SA ___, ___
TA ___, ___

P52 IMU REALIGN
OPTION 1 PREFERRED
PTC ORIENTATION

V49 MNVR TO X-RAY POINTING ATTITUDE (226:28)
(327,143,055) HGA P +13, Y 212 ck@ 225:27 58

X-RAY -OFF for 1 second, then ck@ 225:29:06
X-RAY - ON
ALPHA/X-RAY EXP COVERS - OPEN tb BP/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY tb-BP (~2:45)/GRAY then OFF (CTR)
RECORD GET _____

LiOH CANISTER CHANGE
(19 INTO B, STOW 17 IN A4)

CMP DON BIOMED HARNESS
LMP DOFF BIOMED HARNESS

EAT PERIOD

GR
AP*
MSO

GR
XR
AP
MSO

NOTES

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

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	226:00 - 227:00	10/TEC	3-342

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1934 CDT

NOTES

227:00
(11111)
(X1111)

:10

:20

227:30

:40

:50

228:00

MSFN

EAT PERIOD

GR
XR
AP
MSO

GR
AP*
MSO

X-RAY – STANDBY ch @ 225:29:42
(V48 line missing)
ALPHA/X-RAY EXP COVERS - CLOSE tb BP/GRAY then OFF (CTR)
RECORD GET
LOGIC POWER (2) - OFF

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2
COMM: HGA REACQ MODE P -40, Y 90
V49 MNVR TO PTC ATTITUDE
(N20,090,000)
P20 OPT 2, X-AXIS
N78 (0,0,0)
N79 (-0.3500, +000.50)
N34 (0,0,0)
MASS SPECT: MULT-LOW, DSCRM-~~HIGH~~, EXP-ON, ION SOURCE-ON
RECORD GET

QUADS C&D WILL BE USED FOR PTC RATE DAMPING, JETS B2 & D2 FOR PTC SPINUP

LOW ch @ 225:30:06

PTC

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

EARTH DISTANCE
~ 193,584 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	227:00 - 228:00	10/TEC	3-343

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2034 CDT

228:00

:20

:40

229:00

:20

:40

230:00

M
S
F
N

CSM SYSTEMS CHECKLIST

PRE-SLEEP CHECKLIST
COMM - HGA

PAGE S/1-26

REST PERIOD
(8 HOURS)

PTC

GR
AP*
MS

NOTES

DAP LOAD STATUS
(11111)(X1111)

ONBOARD READOUT

BAT C _____

PYRO BAT A _____

PYRO BAT B _____

RCS A _____

B _____

C _____

D _____

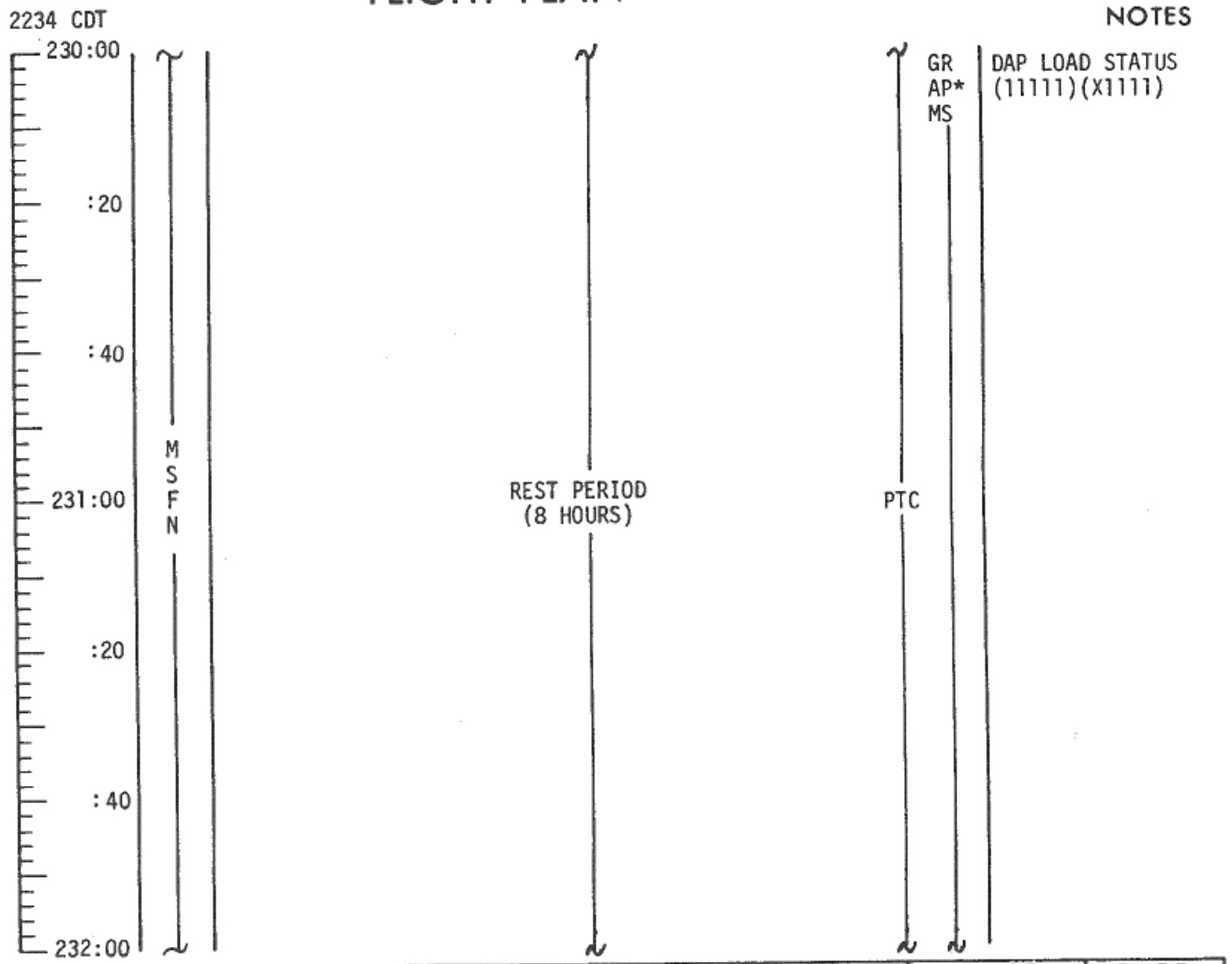
DC IND SEL - MNA OR B

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	228:00 - 230:00	10/TEC	3-344

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

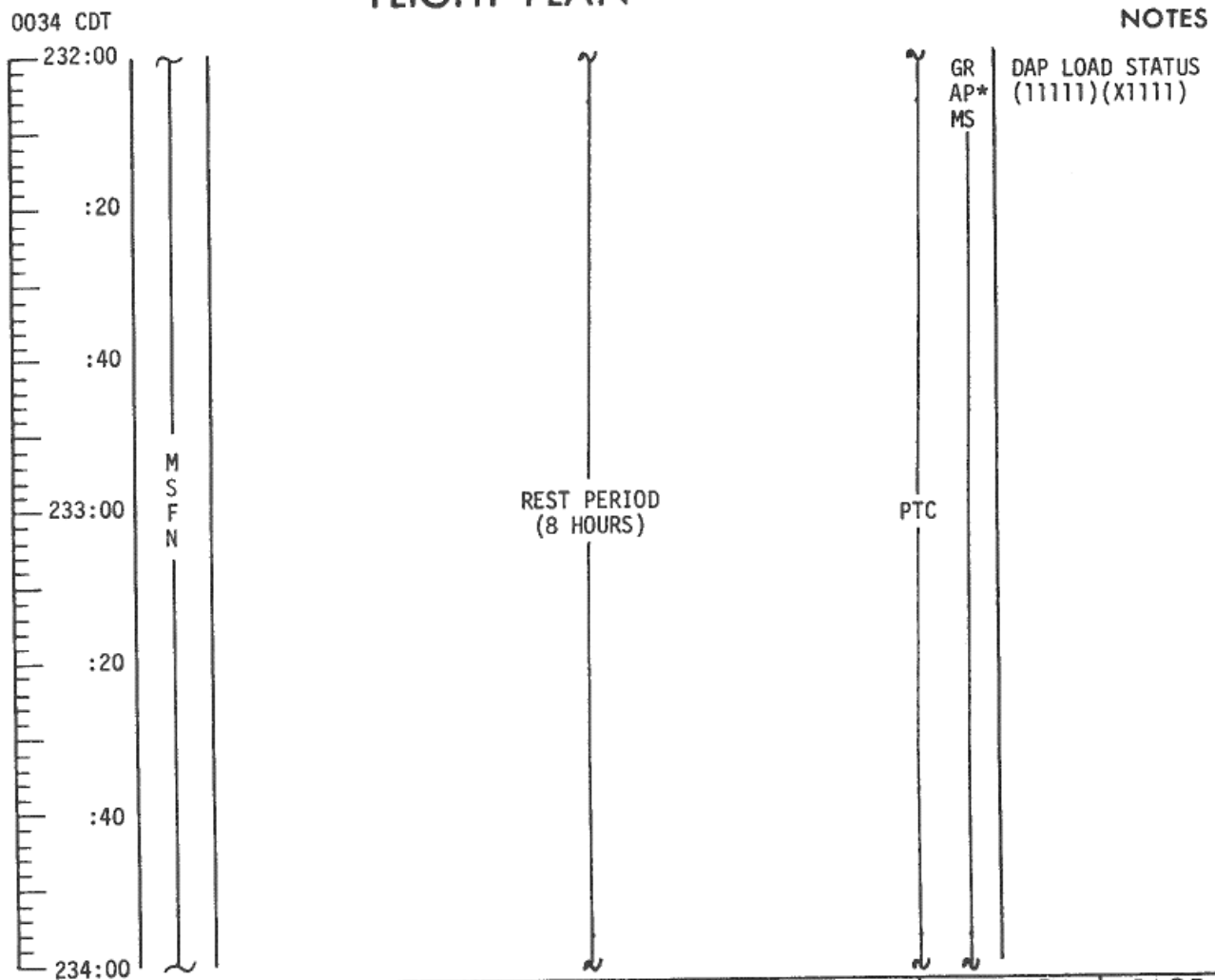


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	230:00 - 232:00	10/TEC	3-345

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H



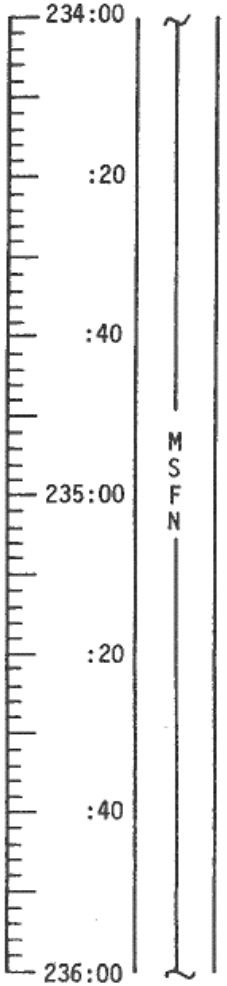
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	232:00 - 234:00	10/TEC	3-346

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0234 CDT



REST PERIOD
(8 HOURS)

PTC

GR
AP*
MS

NOTES

DAP LOAD STATUS
(11111)(X1111)

CSM CONSUMABLES UPDATE
GET: ___ ___ : ___ ___
RCS TOTAL _____
QUAD A _____ B _____
C _____ D _____
H_2 TOTAL _____
O_2 TOTAL _____

CSM SYSTEMS CHECKLIST
POST-SLEEP CHECKLIST

PAGE S/1-26

UPDATE TO CSM
CONSUMABLES
FLIGHT PLAN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	234:00 - 236:00	10/TEC	3-347

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H | 0434 CDT | NOTES

GAMMA-RAY GAIN-STEP, SHIELD – OFF ch @ 235:53:42
~~GAMMA-RAY BOOM RETRACT~~

236:00 (11111) (X1111)

EXIT G&N PTC

P52 IMU REALIGN
OPT 3 REFSMMAT
PTC ORIENTATION

:10 GAMMA-RAY BOOM – RETRACT ON MSFN CUE

REPORT: GYRO TORQUING ANGLES

(11101) (X1111)

CYCLE CMC MODE - FREE/AUTO
V48 (11101)(X1111)
V67 (+99000)(+00020)(+00003)

:20 V49 MNVR TO OPTICS CALIBRATION ATT
(066,152,350) HGA P -70, Y 295
P23 CALIBRATION STAR N70 (00020)
P00
V49 MNVR TO SIGHTING ATT

236:30 (084,120,330) HGA P -57, Y 360
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

MSFN

1. N70 (00000) (00000) (00120)
   N88 (+15707)(+98142)(+11018)

:40

X-RAY – ON ch @ 235:54:58

2. N70 (00000) (00000) (00110)
   N88 (-38535)(+79355)(+47094)

:50

3. N70 (00013) (00000) (00120)

237:00

DURING TEC, P23'S WILL BE PERFORMED ON A NON-INTERFERENCE \ BASIS WITH OTHER CREW ACTIVITIES AS IF A "NO-COMM" CONTINGENCY EXISTED. MCC-H WILL UPLINK A STATE VECTOR WHICH WILL BE STORED IN THE LM SLOTS. MCC-H WILL COMPUTE AND BIAS MID-COURSE CORRECTION MANEUVERS USING THE CSM VECTOR UPDATED BY P23 DATA.

GRAPH* MS

LOAD W-MATRIX

EARTH DISTANCE ~ 181,215 NM

57 BELLA TRIX (EFH)

50 POLLUX (ENH)

13 CAPELLA (EFH)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	236:00 - 237:00	10/TEC	3-348

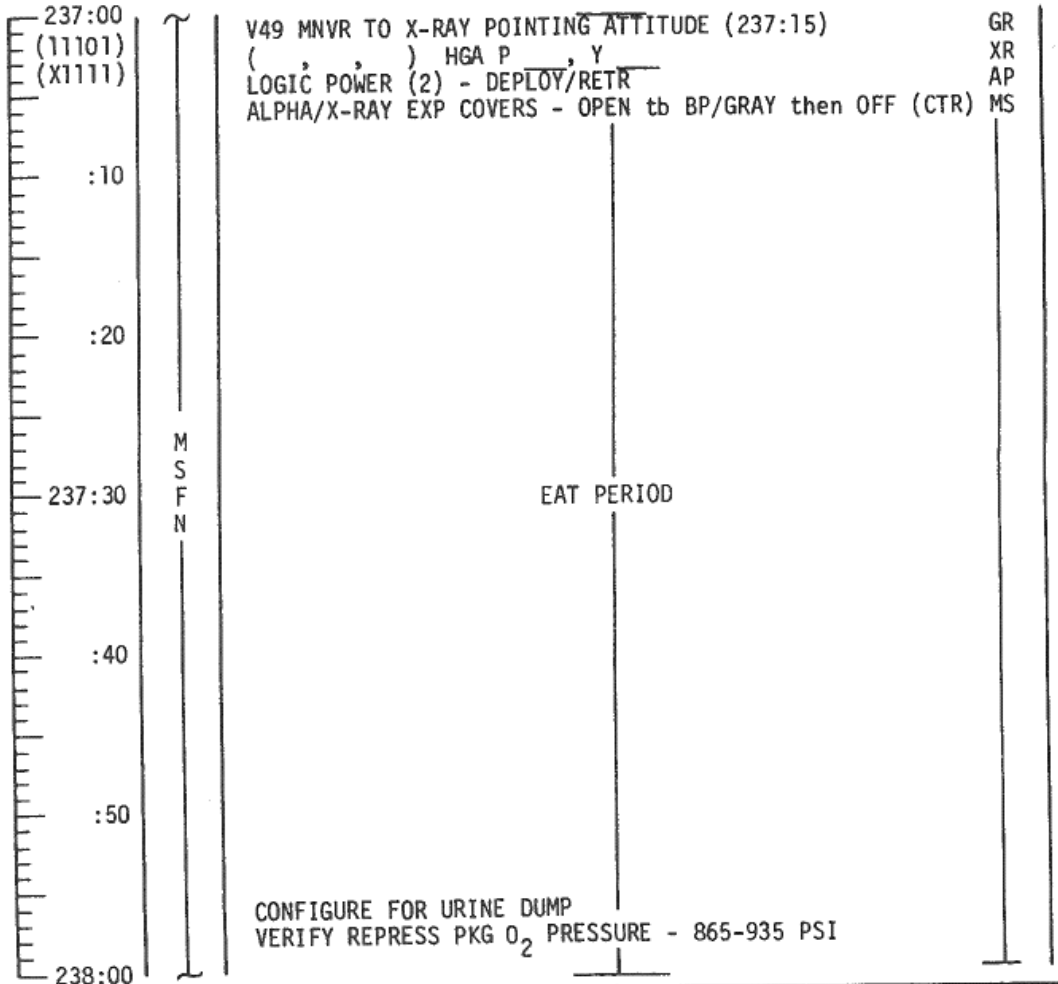
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0534 CDT

NOTES



UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS
MCC-5 TGT LOAD
UPDATE TO CSM
MCC-5 MNVR PAD

EARTH DISTANCE
~ 178,796 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	237:00 - 238:00	11/TEC	3-349

FLIGHT PLANNING BRANCH

MCC-5
BURN TABLE

MANEUVER	P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
CORRIDOR CONTROL	10°/SEC COMPLETE	±10° COMPLETE	BT + 1 SEC AND $\Delta V_c = 0$	TRIM X AXIS ONLY TO 0.2 FPS
IP CONTROL	10°/SEC TERMINATE	±10° TERMINATE	BT + 1 SEC AND $\Delta V_c = 0$	TRIM X & Z AXIS TO 0.2 FPS

FLIGHT PLAN

MCC-H

0634 CDT

238:00
(11101)
(X1111)
:10
:20
238:30
:40
:50
239:00

MSFN

MASS SPEC: EXP - STBY, ION SOURCE - OFF
CAUTION: WAIT 5 MIN BEFORE MASS SPECT BOOM RETRACT
GAMMA RAY BOOM - RETRACT tb-GRAY/BP (~3:15)/GRAY then OFF (CTR)
MASS SPECT BOOM - RETRACT tb-GRAY/BP (~2:30)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)
RECORD GET
LOGIC POWER (2) - OFF ← DELAYED TO 238:30 ch 238:06:34
GAMMA RAY EXP - OFF
α RAY/X DR - α OFF
X-RAY EXP - OFF
MASS SPECT EXP - OFF, ION SOURCE - OFF
URINE DUMP
DATA SYSTEMS ON - OFF
S-BD AUX TV - OFF (CTR)
~~P30 EXTERNAL ΔV~~
~~ENABLE ALL JETS~~
~~V49 MNVR TO PAD BURN ATTITUDE~~
~~cb SCS CONTR DIR 1 MNB - CLOSE~~
~~cb SCS CONTR DIR 2 MNA - CLOSE~~
~~SXT STAR CHECK~~
~~P40 SPS THRUSTING OR~~
~~P41 RCS THRUSTING~~
} deleted @ 238:06:34

TEI +15 HR

UPLINK TO CSM
~~CSM S.V. (MSFN)~~
TO LM SLOTS

MCC-5 deleted @ 238:06:34

~~BURN STATUS REPORT~~
~~cb SCS CONTR DIR 1 MNB - OPEN~~
~~cb SCS CONTR DIR 2 MNA - OPEN~~
~~RHC PWR DIR (2) - OFF OR MNA/MNB~~

LiOH CANISTER CHANGE
(20 INTO A, STOW 18 IN A4)

TIG: 238:46:06
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: N/A
ORBIT: N/A

NOTES

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 15	FINAL (7/26)	6/21/71	238:00 - 239:00	11/TEC	3-351

FLIGHT PLANNING BRANCH

FLIGHT PLAN

CORONA WINDOW CALIBRATION

V49 MNVR TO CORONA WINDOW CALIBRATION ATT ~~(239:05)~~
~~(090,011,025)~~ HGA ~~P -69, Y 191~~ 239:08
(057,005,025) P -48 Y 238 ch @ 238:49:15
CONFIGURE CAMERA
CM4/EL/80/VHBW-BRKT (f2.8,1/500,∞) (5 FR)
MAG (R) _____, FR # _____

~~INHIBIT JETS A3, C4, B3, D4~~ DAMP RATES FOR 5 MINS, CMC - FREE
~~CYCLE 1 FRAME, CHANGE SHUTTER TO 1/125~~
1 FRAME, CHANGE SHUTTER TO 1/60
1 FRAME, CHANGE SHUTTER TO 1/30
1 FRAME, CHANGE SHUTTER TO ~~1/500~~ 1/125
~~CYCLE 1 FRAME~~ ch @ 238:50:13
RECORD FR # _____

~~ENABLE ALL JETS~~ CMC MODE - AUTO

UV PHOTOS - TRANSEARTH COAST

POSTPONED TO 247:36

V49 MNVR TO EARTH UV PHOTO ATT (239:25)
(204,178,324) OMNI D
210, 242, 322 ch @ 245:40:32 due to postponement
CONFIGURE CAMERA: (UV)
CM5/EL/105/UV, BRKT, CONT (f8,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____
REMOVE RT2 FLIGHT DATA FILE STOWAGE BOX
DAMP RATES del @ 247:04:59
~~INHIBIT ALL JETS EXCEPT A1 & C2 or B2 & D1, A4, C3, B4, D3~~
VERIFY FDAI SCALE 5/1
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ARE <0.2°/SEC IN ALL AXES
REMOVE CM5 WINDOW COVER AND MOUNT UV CARDBOARD SHADE AND CAMERA
CMC FREE ch @ 247:05:46
2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
1 @ FRAME$, FILTER 2, EXP TIME 20 SEC and 1 @ 2 sec exp.
CHANGE SHUTTER TO 1/250 ch @ 11:40:01
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4
RECORD FR # _____

CONFIGURE CAMERA: (UV COLOR)
CM5/EL/105/CEX, BRKT, CONT (f8,1/250,∞) (1 FR)
RINGLSIDE
MAG (M) P _____, FR # _____
1 FRAME, FILTER 4
RECORD FR # _____
REMOVE CAMERA AND UV CARDBOARD SHADE
CMC Auto
NOTE: COMMENTS AS TO CONDITION OF WINDOW 5
REPLACE CM5 WINDOW COVER
~~ENABLE ALL JETS~~

ch @ 247:03:46

FLIGHT PLAN

MCC-H

0734 CDT

239:00
(11101)
(X1111)
:10
:20
239:30
:40
:50
240:00

M S F N

~~CHARGE BATTERY B~~ POSTPONED TO 246 HRS ch @ 237:37:23

CORONA WINDOW CALIBRATION

postponed to 247:36

UV PHOTOS

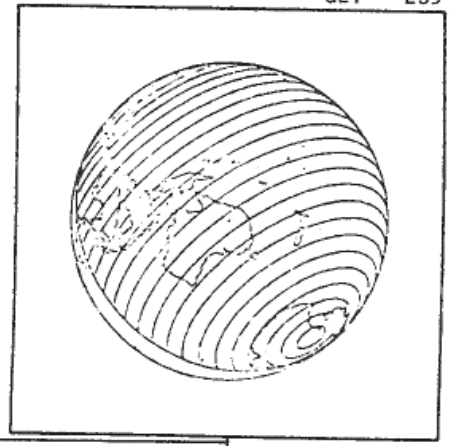
CSM SYSTEMS CHECKLIST

CM EVA PAGE S/3-1
CABIN PREP FOR CSM EVA
V49 MNVR TO CSM EVA ATTITUDE (239:45)
(352,063,050) HGA P 4, Y 225

NOTES

FOV = 3°

GET = 239



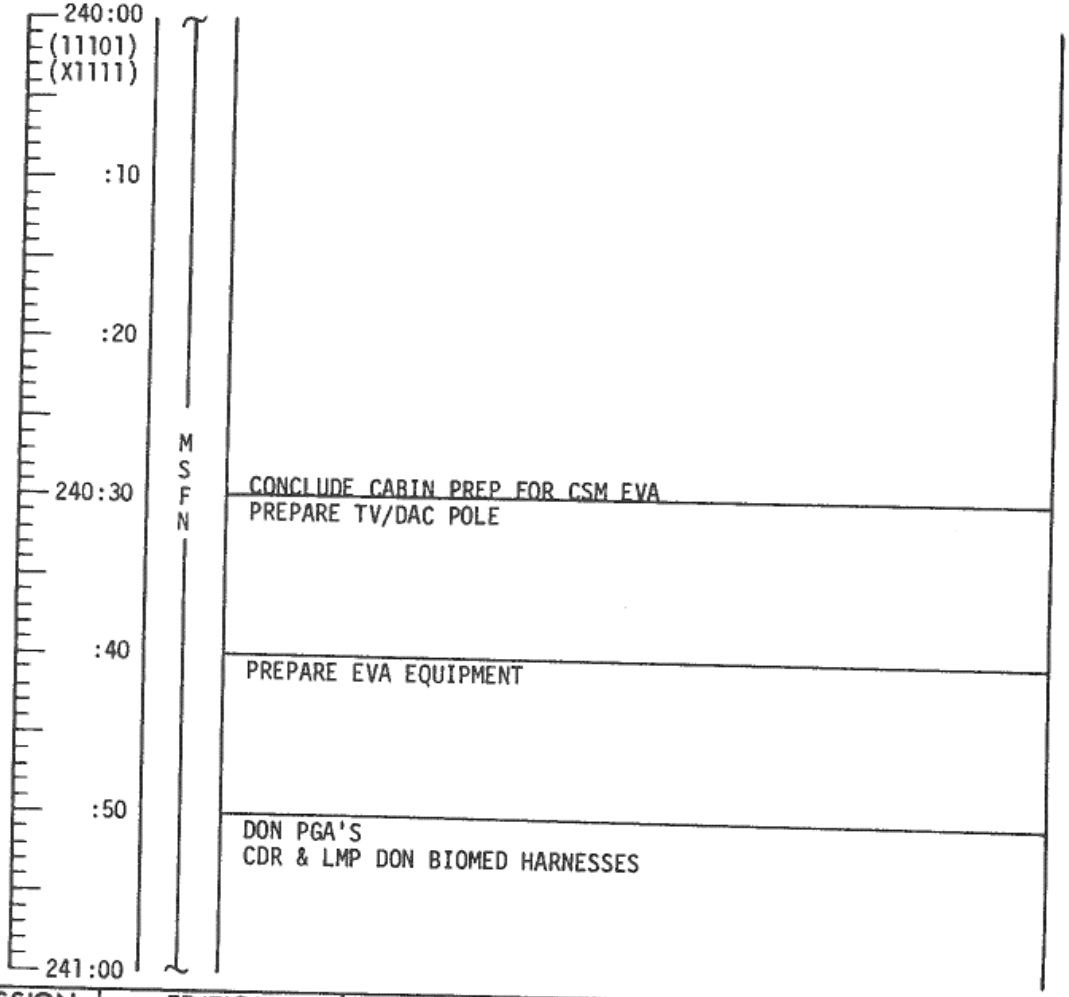
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	239:00 - 240:00	11/TEC	3-353

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H 0834 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	240:00 - 241:00	11/TEC	3-354

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0934 CDT

241:00
(11101)
(X1111)

:10

:20

241:30

:40

:50

242:00

MSFN

S-BAND AUX TV - TV
COMM CHECK

SYSTEM PREP FOR DEPRESS
DISABLE ALL JETS EXCEPT:
QUAD C, D1, D3, D4
O_2 HEATERS 1,2, & 3 (3) - AUTO
O_2 TANK 1. 50 W HEATER, MN B (1) OPEN
O_2 TANKS 2+3, 50 W HEATERS, MN A(2) - OPEN

CONCLUDE DONNING PGA'S
CMP DON EVA EQUIPMENT

CDR/LMP INTEGRITY CHECK

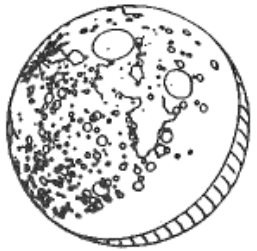
CMP INTEGRITY CHECK

CABIN DEPRESS

HATCH OPENING

NOTES

FOV 5° GET = 241



FOV 3° GET =241

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	241:00 - 242:00	11/TEC	3-355

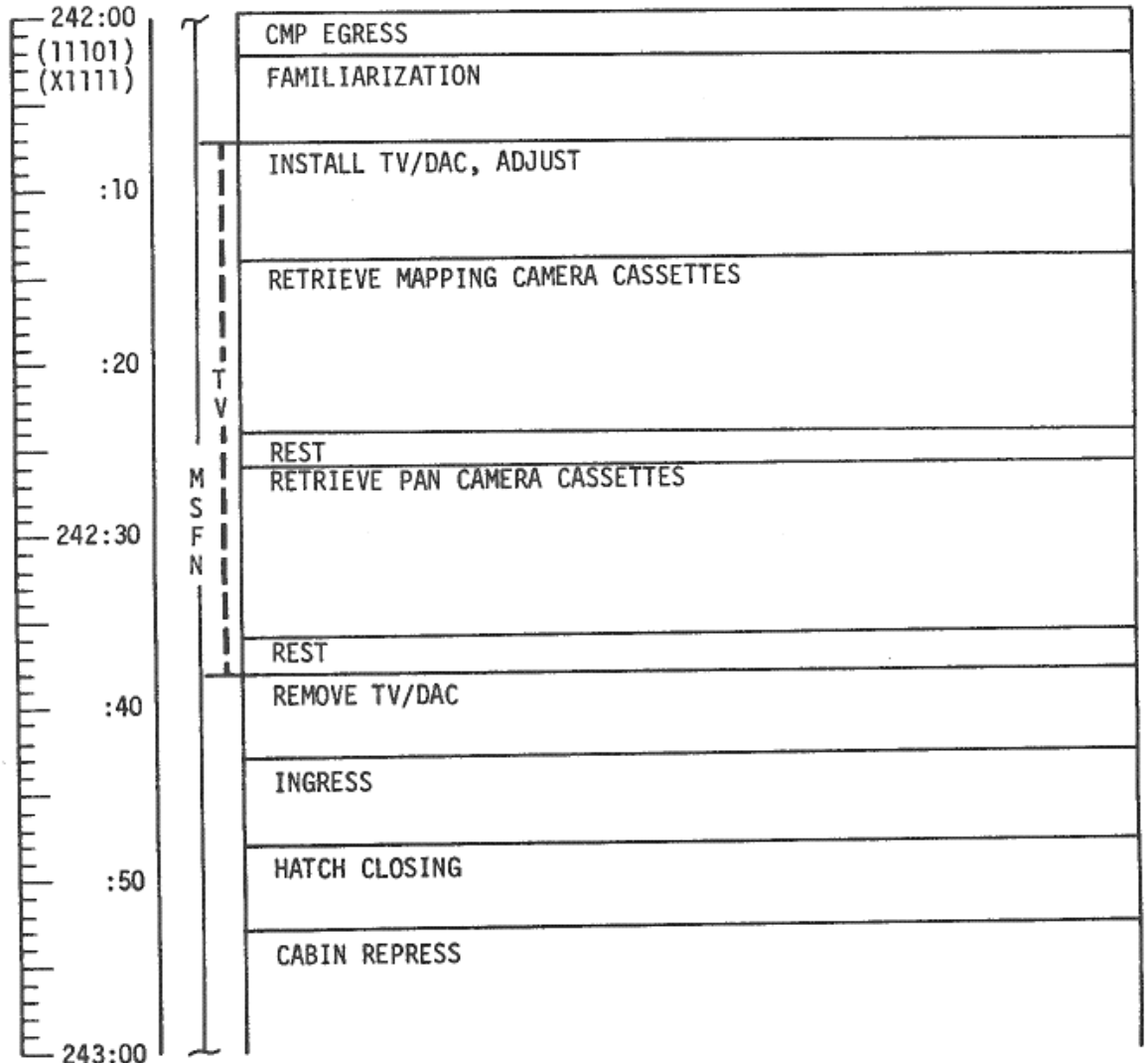
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1034 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	242:00 - 243:00	11/TEC	3-356

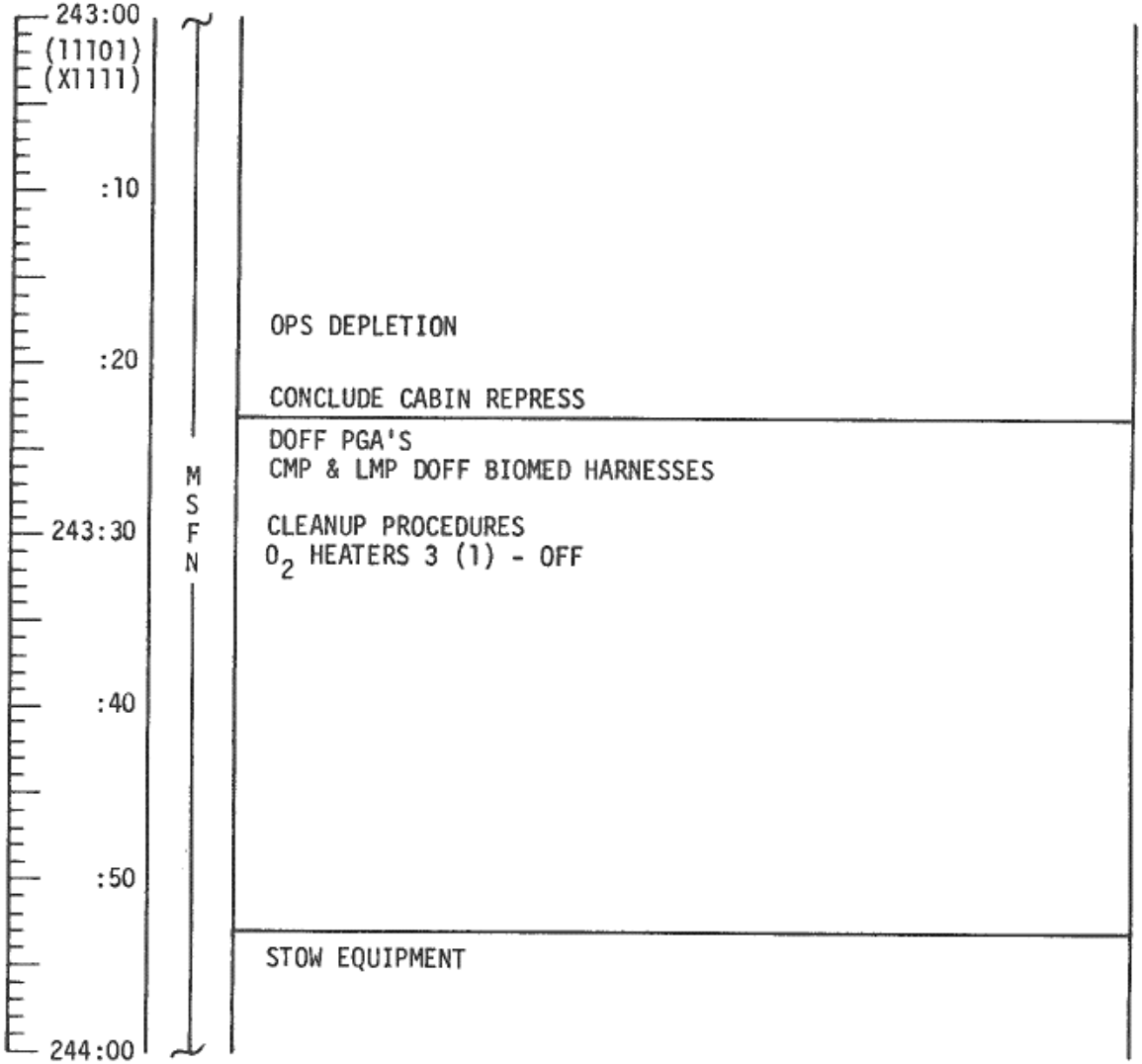
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1134 CDT

NOTES

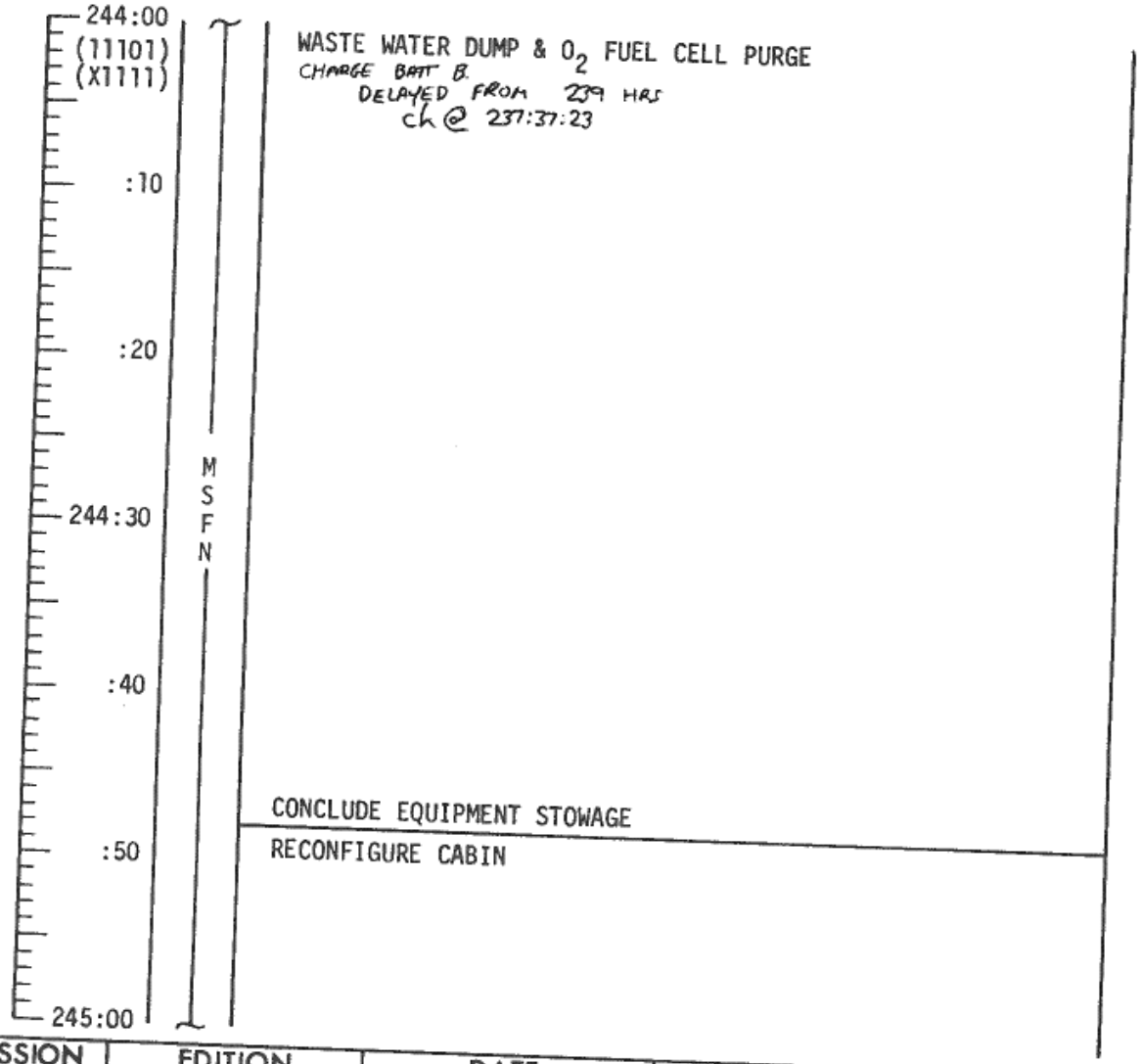


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	243:00 - 244:00	11/TEC	3-357

FLIGHT PLANNING BRANCH

MCC-H 1234 CDT

FLIGHT PLAN



NOTES

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	244:00 - 245:00	11/TEC	3-358

FLIGHT P' 'NING BRANCH

FLIGHT PLAN

MCC-H | 1334 CDT | NOTES

245:00
(11101)
(X1111)

*FOUR STEPS BELOW CALLED FOR EARLY

:10

:20

(11111)
(X1111)

MSFN

*S-BAND AUX TV - SCI
V48 (11111)(X1111)
CONCLUDE CABIN RECONFIGURATION

245:30

UPDATE TO CSM
GAMMA RAY BOOM
RETRACT TIME (15 FT)

V49 MNVR TO X-RAY POINTING ATTITUDE (245:45)
(, ,) HGA P ___, Y ___
*DATA SYSTEMS ON - ON
*DISABLE ALL JETS EXCEPT A1 & C2 OR D1 & B2,A3,C4,B3,D4
LOGIC POWER (2) - DEPLOY/RETR
ALPHA/X-RAY EXP COVERS-OPEN tb BP/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY-tb BP(~2:45)/GRAY then OFF(CTR)
GAMMA RAY BOOM - RETRACT - tb BP [SEC] then OFF (CTR)
(~ SEC = 15 FT)
MASS SPECT BOOM-DEPLOY-tb BP (~2:40) then OFF (CTR)
GAMMA RAY EXP - ON
*X-RAY EXP - ON
α RAY/X DR - α ON
MASS SPECT: EXP-ON, ION SOURCE-STBY
RECORD GET ____
DISCRIMINATOR - LOW - ch @ 245:56:44

MSO XRAP GRAT 15 FT

:40

:50

246:00

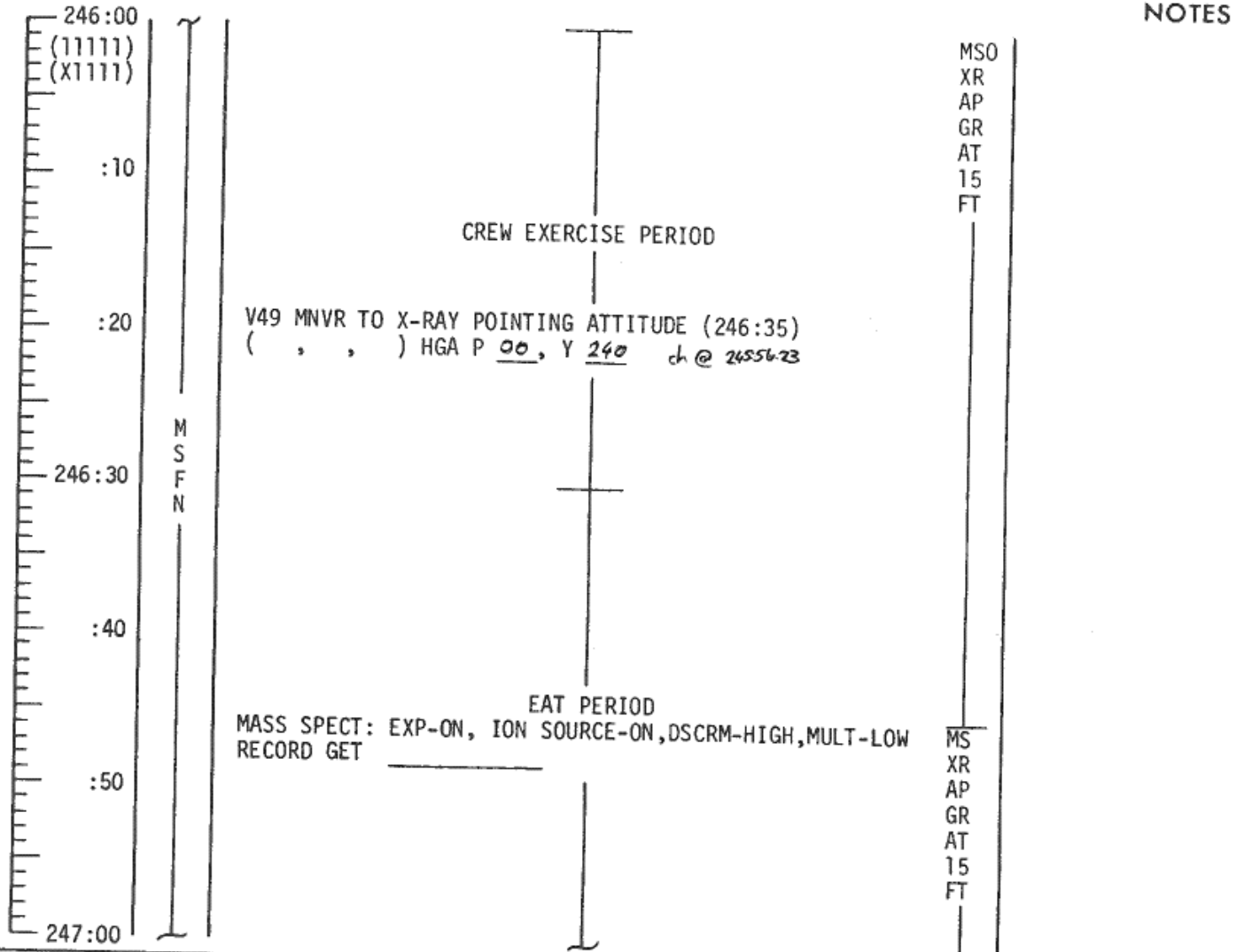
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	245:00 - 246:00	11/TEC	3-359

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H 1434 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	246:00 - 247:00	11/TEC	3-360

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H 1534 CDT

247:00
(11111) del @ 235:59:59
(X1111)
:10
:20
247:30
:40
:50
248:00

M S F N

EAT PERIOD

V48 ~~11111 X1111~~ del @ 235:58:48
CSM G&C CHECKLIST
PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2
COMM HGA REACQ MODE P -40, Y 90
V49 MNVR TO PTC ATTITUDE
(203,090,000)
P20 OPT 2, X-AXIS
N78 (0,0,0)
N79 (-0.3500,+000.50)
X-RAY – STBY ch @ 246:00:33

QUADS C&D WILL BE USED FOR PTC RATE DAMPING, JETS B2 & D2 FOR PTC SPINUP

GAMMA RAY BOOM - RETRACT tb-BP (~1:03)/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY tb-BP 72 SEC then OFF (CTR)
(~ SEC = 8 FT) UPDATE @ 247:35:49
RECORD GET _____

ALPHA/XRAY COVERS – CLOSED
" EXPT – OFF
ch @ 245:57:23
MASS SPECT MULT-HI, DISC-LOW
ch @ 245:58:10 UPDATE TO CSM
GAMMA RAY BOOM
DEPLOY TIME (8 FT)
MASS SPECT BOOM
RETRACT TIME
MASS SPECT MULT-HI, DISC-MI
ch @ 245:58:40
MULT-LO, DISC-HI
MULT-LOW, DISC-LOW
UV ATT. 210, 242, 322
INITIATE PTC.

UV PHOTOS (SEE 239.10)

PTC

MS XR AP GR AT 15 FT
del @ 245:57:23

MS XR AP GR AT 8 FT

NOTES

IN PTC, WHENEVER SUNLIGHT ENTERS THE FIELDS OF VIEW OF THE X-RAY AND ALPHA PARTICLE EXPERIMENTS, THE X-RAY - ALPHA EXPERIMENT COVER MUST BE CLOSED TO AVOID INSTRUMENT DAMAGE. THE COVERS WILL BE OPEN BETWEEN ROLL ANGLES 203° AND 307° AND CLOSED BETWEEN ROLL ANGLES 308° AND 202°. THE ONBOARD KITCHEN TIMER WILL BE SET TO 14 MIN BETWEEN COVER OPEN AND CLOSE AND 6 MIN BETWEEN COVER CLOSE AND OPEN.

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	247:00 - 248:00	11/TEC	3-361

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1634 CDT

248:00

STEP 1

:10

STEP 2
32sec

:20

STEP 3
32sec

248:30

STEP 4
32sec

:40

STEP 5
32sec

:50

249:00

MSFN

MASS SPECTROMETER BOOM RETRACTION SEQUENCE
MASS SPECT BOOM RETRACT tb-BP [33 SEC] then OFF (CTR)
(~42 SEC)
UPDATED 247:36:23

ABOVE SEQUENCE MUST BE REPEATED
5 TIMES BETWEEN GET 248:00 AND
GET 249:~~00~~ 30 WITH LAST STEP TO
FULLY RETRACTED POSITION. EACH
SAMPLE PERIOD WILL LAST ~~12~~ 20 MINUTES.
ch @ 246:01:32

PTC

XR
AP
MS
GR
AT
8
FT

NOTES

DAP LOAD STATUS
(~~11111~~)(X1111)
11101 ch@ 236:00:15

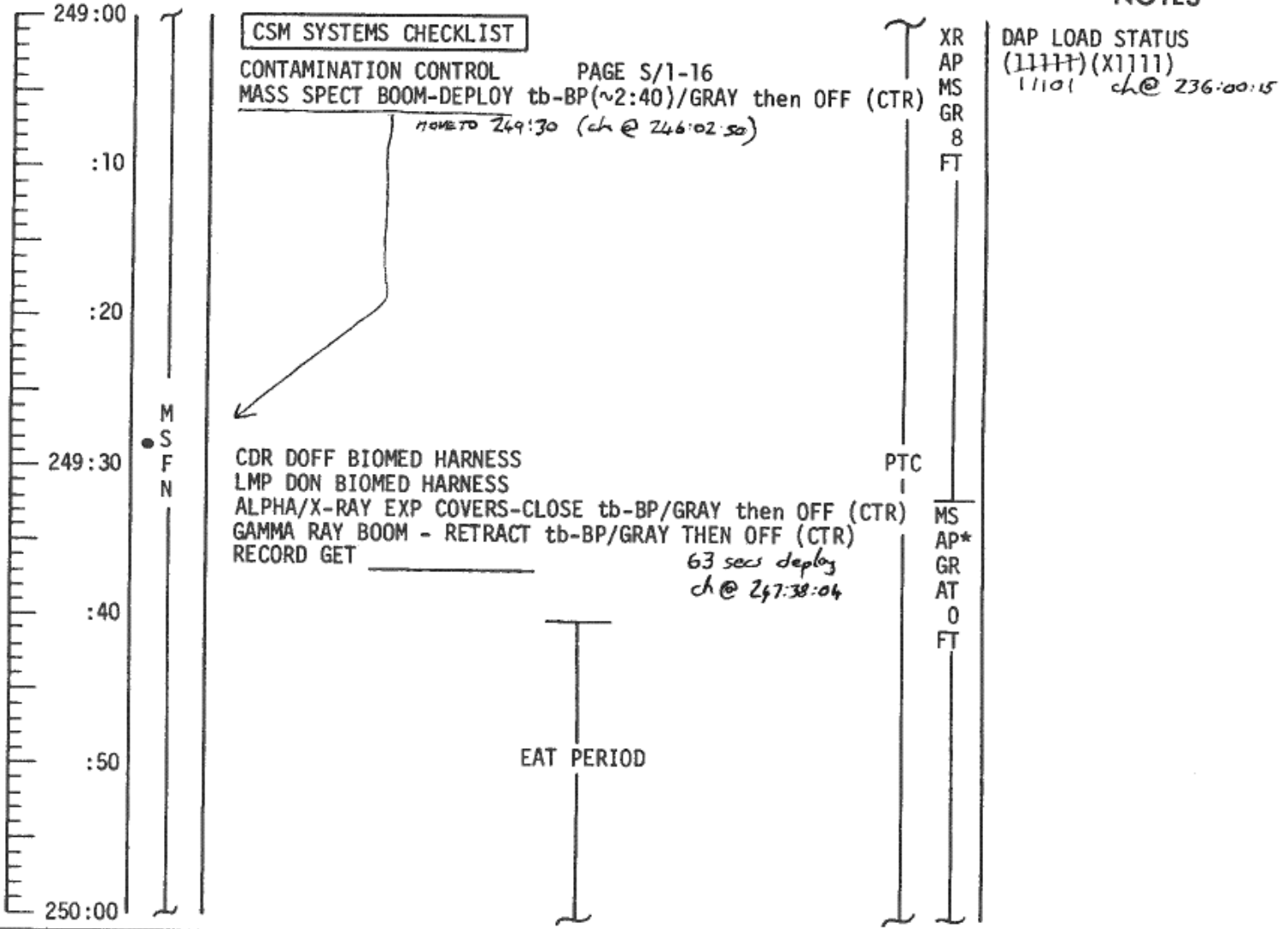
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	248:00 - 249:00	11/TEC	3-362

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1734 CDT



NOTES

DAP LOAD STATUS
(~~11111~~)(X1111)
11101 ch @ 236:00:15

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	249:00 - 250:00	11/TEC	3-363

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1834 CDT

250:00
:10
:20
250:30
:40
:50
251:00

MSFN

EAT PERIOD

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENTATION

REPORT: GYRO TORQUING ANGLES

PTC

MS
AP*
GR
AT
0
FT

NOTES

DAP LOAD STATUS
(~~11111~~)(X1111)
11101 ck @ 236:00:15

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

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	250:00 - 251:00	11/TEC	3-364

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1934 CDT

NOTES

251:00

~~(11101)~~
~~(X1111)~~

:10

:20

251:30

:40

~~(11111)~~
~~(X1111)~~

:50

252:00

MSFN

LiOH CANISTER CHANGE
(21 INTO B, STOW 19 IN A4)
~~V48 (11101)(X1111)~~ del @ 236:01:17
EXIT G&N PTC

V49 MNVR TO OPTICS CALIBRATION ATT
(066,152,350) HGA P -69, Y 301
P23 CALIBRATION STAR N70 (00020)
P00
V49 MNVR TO SIGHTING ATT
(084,141,330) HGA P -59, Y 001
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

1. N70 (00000) (00000) (00110)
   N88 (-38535)(+79355)(+47094)

2. N70 (00011) (00000) (00120)

3. N70 (00013) (00000) (00120)

del @ 236:01:38
~~V48 (11111)(X1111)~~

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2
COMM HGA REACQ MODE P -40, Y 90
V49 MNVR TO PTC ATTITUDE
(N20,090,000)

PTC

XR
AP*
MS
GR
AT
0
FT

DAP LOAD STATUS
(~~11111~~)(X1111)
11101 ch @ 236:00:15

EARTH DISTANCE
~ 154,731 NM

50 POLLUX (ENH)

11 ALDEBARAN (EFH)

13 CAPELLA (EFH)

QUADS C&D WILL BE
USED FOR PTC RATE
DAMPING, B2 & D2
FOR PTC SPINUP

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	251:00 - 252:00	11/TEC	3-365

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2034 CDT

252:00

:10

:20

252:30

:40

:50

253:00

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

MSFN

P20 OPT. 2, X-AXIS
N78 (0,0,0)
N79 (-0.3500, +000.50)
N34 (0,0,0)

GAMMA RAY BOOM - DEPLOY tb-BP (~2:45)/GRAY then OFF (CTR)
GAMMA RAY GAINSTEP - SHIELD OFF
RECORD GET
LOGIC POWER (2) - OFF

CSM SYSTEMS CHECKLIST

PRE-SLEEP CHECKLIST PAGE S/1-26
COMM - HGA
GAMMA RAY GAINSTEP - SHIELD ON (CTR)

REST PERIOD
(9 HOURS)

PTC

GR
XR
AP*
MS

GR
AP*
MS

NOTES

11101 dv @ 236:02:57

DAP LOAD STATUS
~~(11111)~~(X1111)

ONBOARD READOUT

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

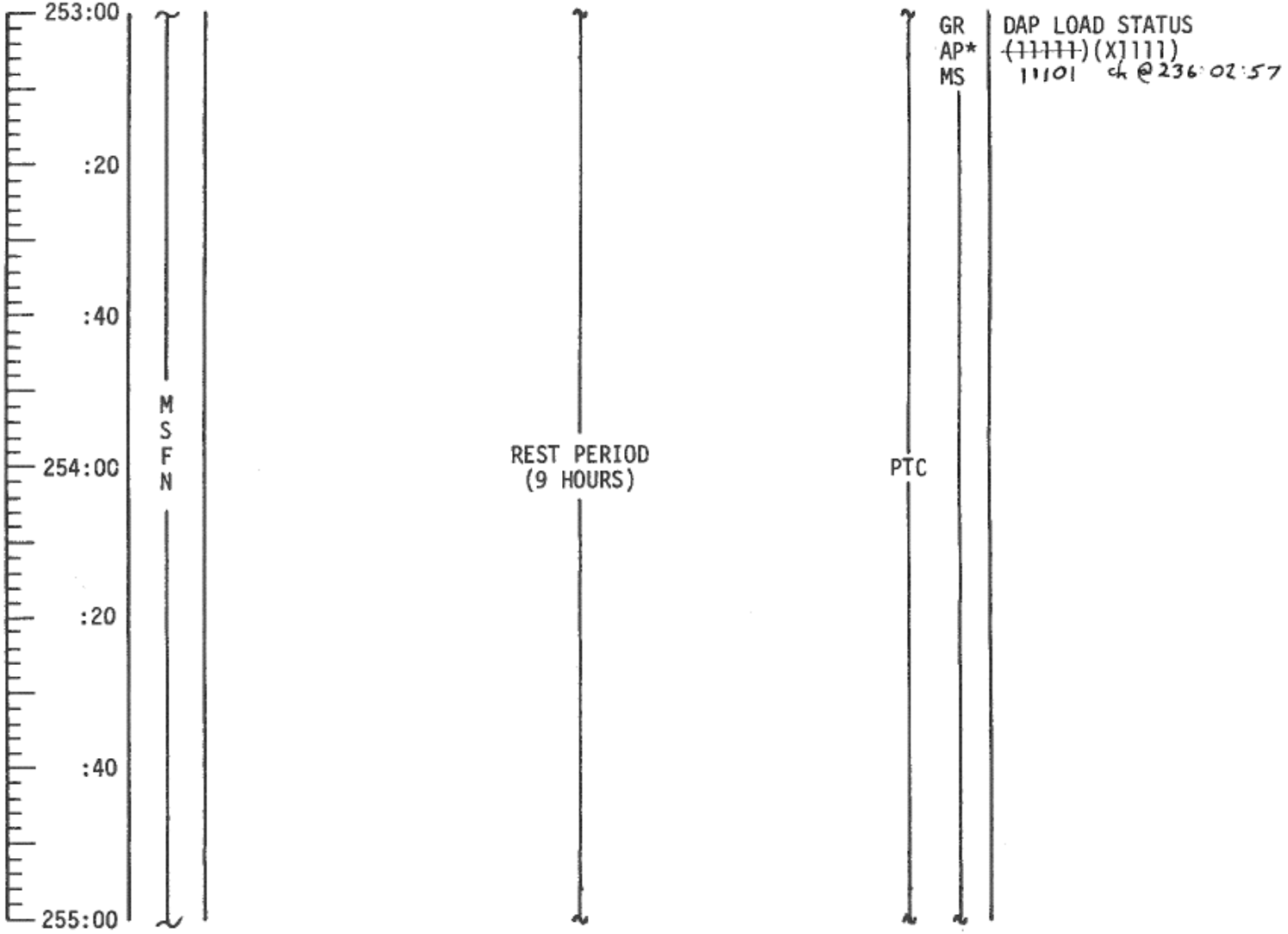
EARTH DISTANCE
~ 152,756 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	252:00 - 253:00	11/TEC	3-366

FLIGHT ANNING BRANCH

FLIGHT PLAN

MCC-H



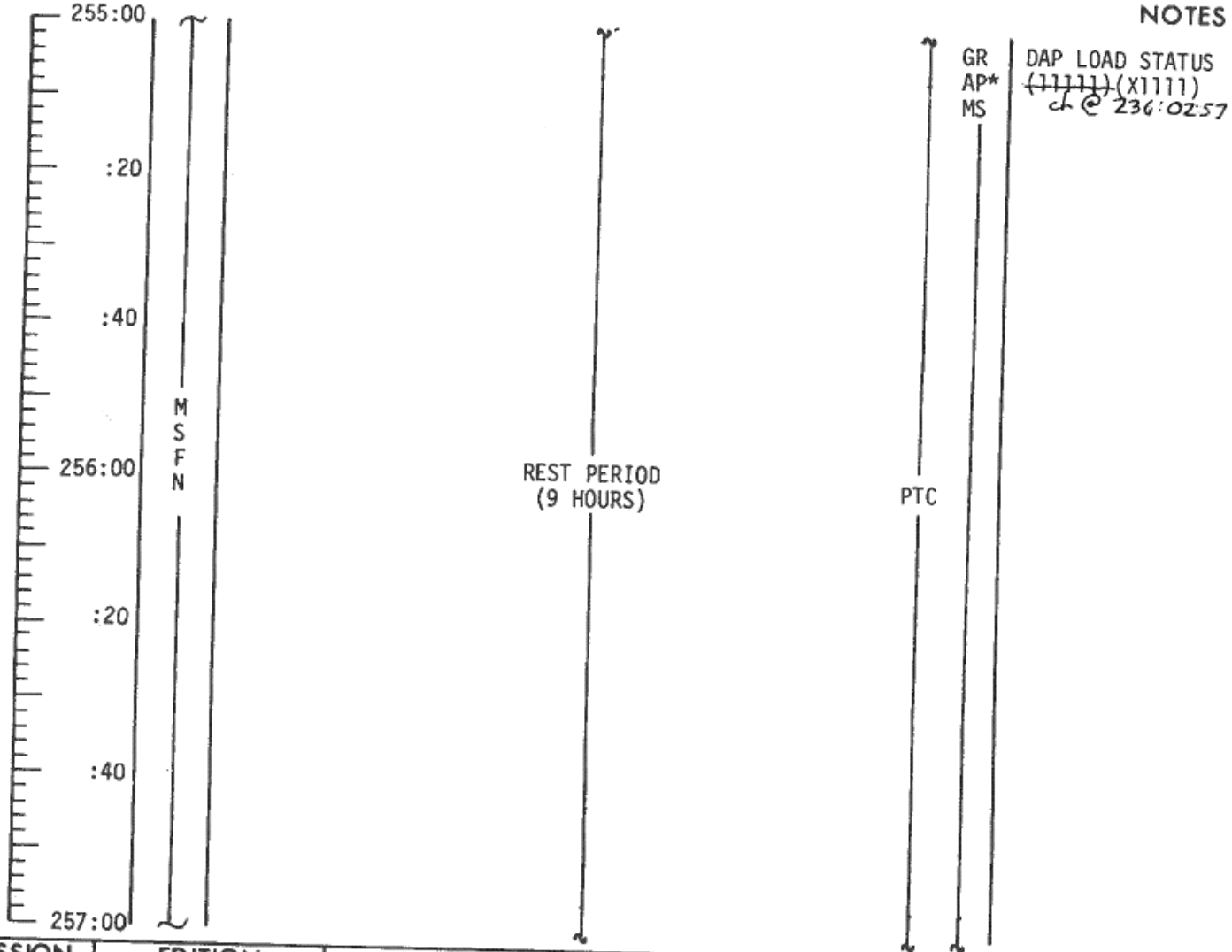
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	253:00 - 255:00	11/TEC	3-367

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2334 CDT



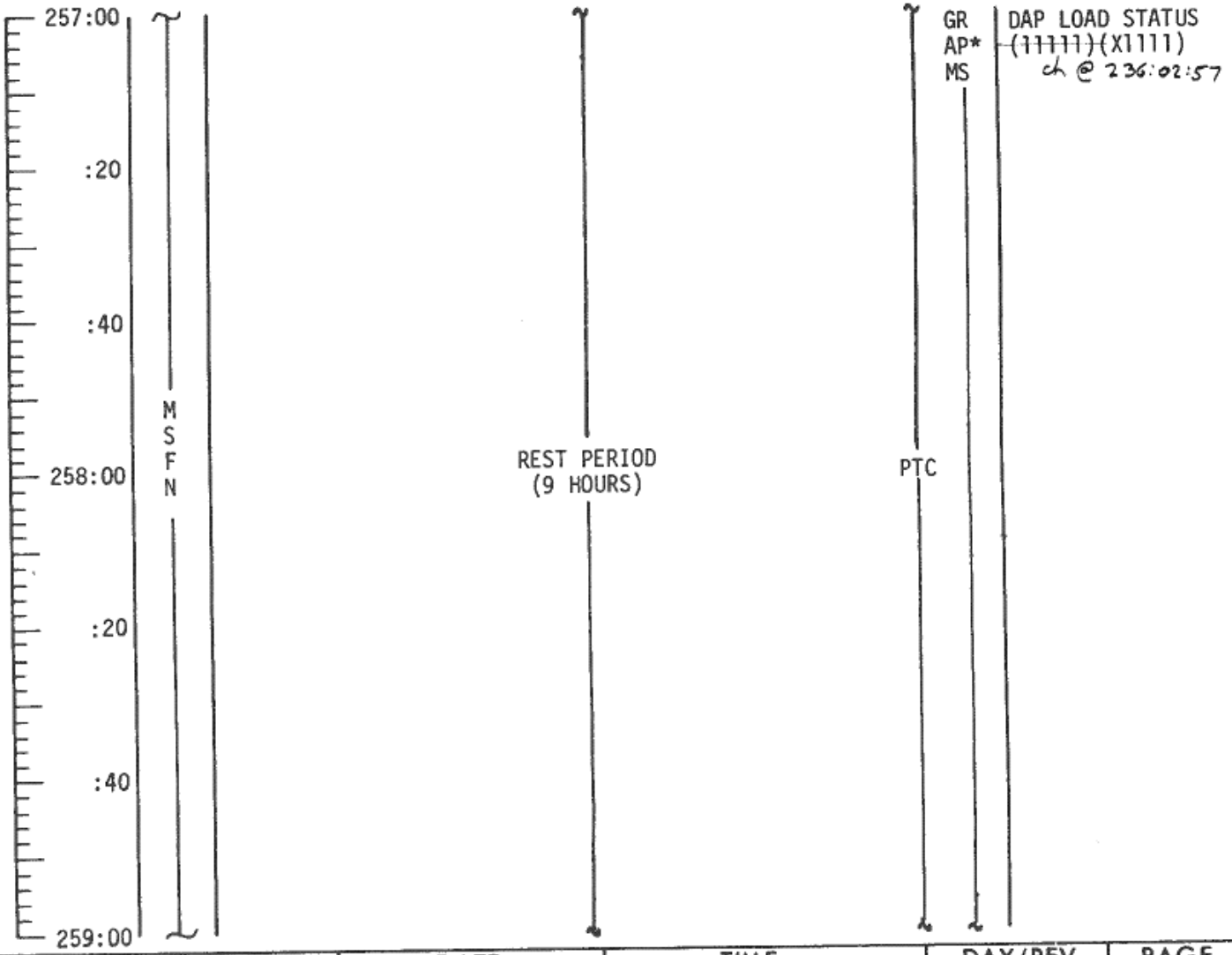
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	255:00 - 257:00	11/TEC	3-368

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0134 CDT



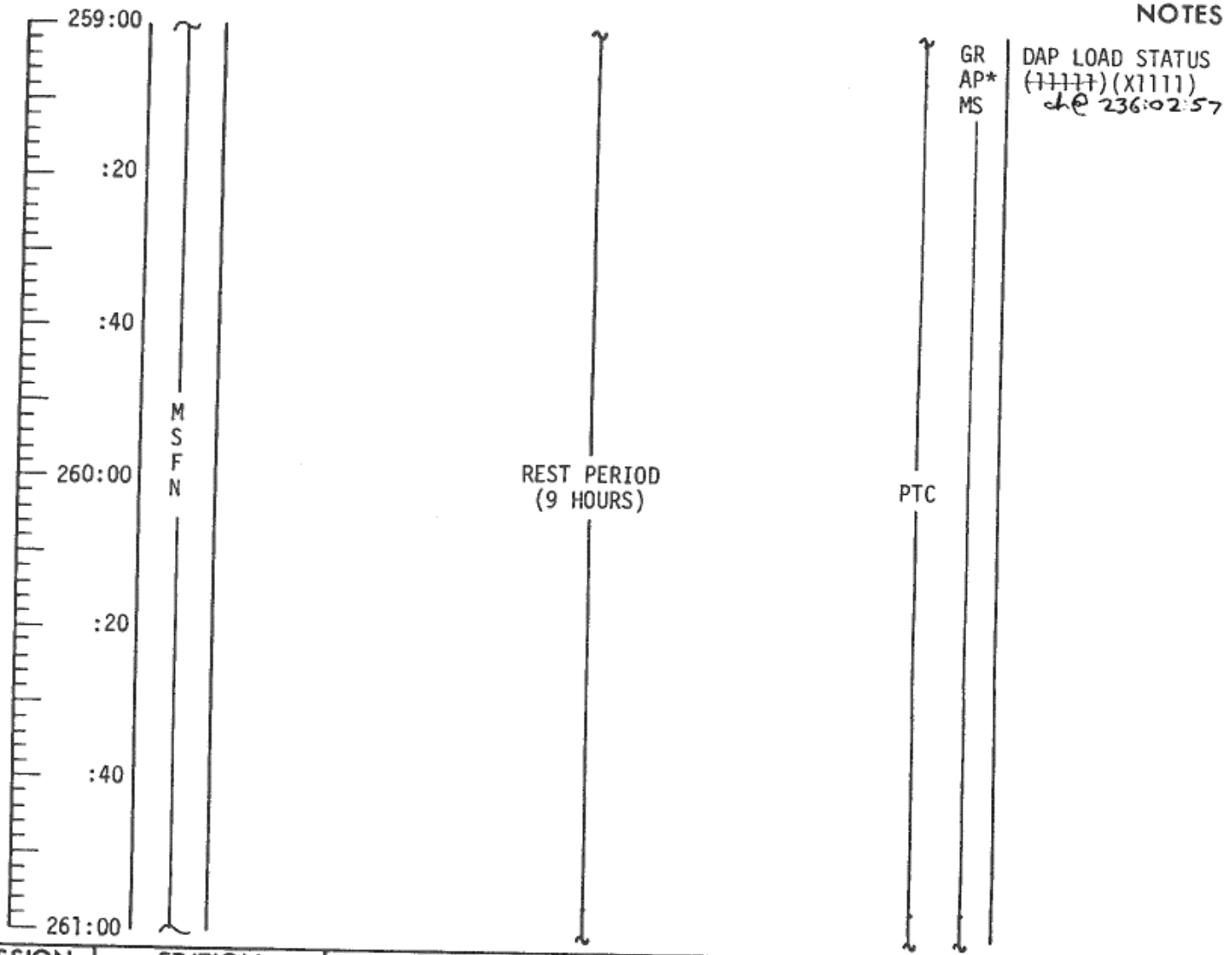
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	257:00 - 259:00	11/TEC	3-369

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0334 CDT



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	259:00 - 261:00	11/TEC	3-370

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0534 CDT

261:00

:10

:20

261:30

:40

:50

262:00

MSFN

PTC

GR
AP*
MS

NOTES

DAP LOAD STATUS
~~(11111)~~(X1111)
cl @ 236:02:57

EARTH DISTANCE
~ 133,473 NM

UPDATE TO CSM
CONSUMABLES
FLIGHT PLAN

REST PERIOD
(9 HOURS)

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST PAGE S/1-26
EXIT G&N PTC
V49 MNVR TO X-RAY POINTING ATTITUDE (261:50)
(, ,) HGA P ___, Y ___
CMP DON BIOMED HARNESS
LMP DOFF BIOMED HARNESS
LOGIC POWER (2) - DEPLOY/RETR
MAP CAMR/LASER EXP COVERS - OPEN tb BP/GRAY
then OFF (CTR)
ALPHA/X-RAY EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)
RECORD GET _____
GAMMA RAY GAINSTEP - SHIELD OFF

EAT PERIOD

cl @261:40 ~~(11111)~~ (X1111)

CSM CONSUMABLES UPDATE
GET: __ __ __:__ __
RCS TOTAL _____
QUAD A _____ B _____
C _____ D _____
H_2 TANK 1 ____ 2 ____ 3 ____
O_2 TANK 1 ____ 2 ____ 3 ____

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	261:00 - 262:00	11/TEC	3-371

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0634 CDT

262:00
(11111)
(X1111)
:10
:20
262:30
:40
:50
263:00

MSFN

GAMMA RAY GAINSTEP - SHIELD ON (CTR) 2 STEPS @ 261:50:37

EAT PERIOD

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENTATION

NOTES

GR
XR
AP
MS

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

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	262:00 - 263:00	11/TEC	3-372

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0734 CDT

NOTES

263:00
(11111)
(X1111)
(11101)
(X1111)
:10
:20
:30
:40
:50
(11111)
(X1111)
264:00

MSFN

REPORT: GYRO TORQUING ANGLES
LiOH CANISTER CHANGE
(22 INTO A, STOW 20 IN A4)

CYCLE CMC MODE - FREE/AUTO
V48 (11101)(X1111)

V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(066,152,350) HGA P -68, Y 307
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00020)
POO
V49 MNVR TO SIGHTING ATTITUDE
(082,166,330) HGA P -59, Y 000
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

1. N70 (00000) (00000) (00120)
   N88 (+09762)(+92766)(+36044)

2. N70 (00011) (00000) (00120)

3. N70 (00013) (00000) (00120)
ALPHA/X-RAY EXP COVERS - CLOSE tb BP/GRAY then OFF
RECORD GET X-RAY TO 5784
~~V48 (11111)(X1111)~~ changed @ 261:51:13

GR
XR
AP

EARTH DISTANCE
~ 128,773 NM

142 ZETA TAURI (EFH)

11 ALDEBARAN (EFH)

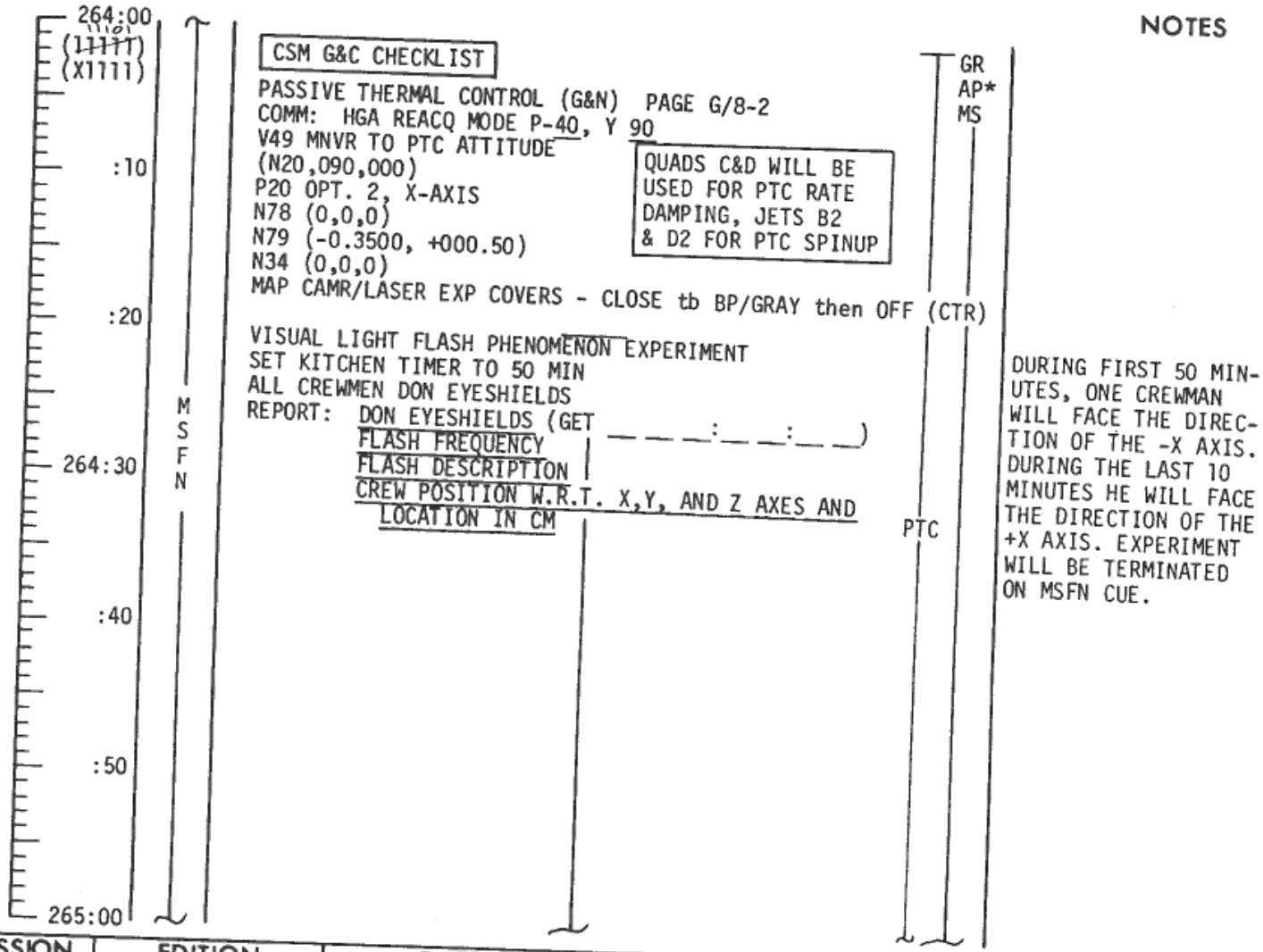
13 CAPELLA (EFH)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	263:00 - 264:00	12/TEC	3-373

FLIGHT PLANNING BRANCH

MCC-H 0834 CDT

FLIGHT PLAN



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	264:00 - 265:00	12/TEC	3-374

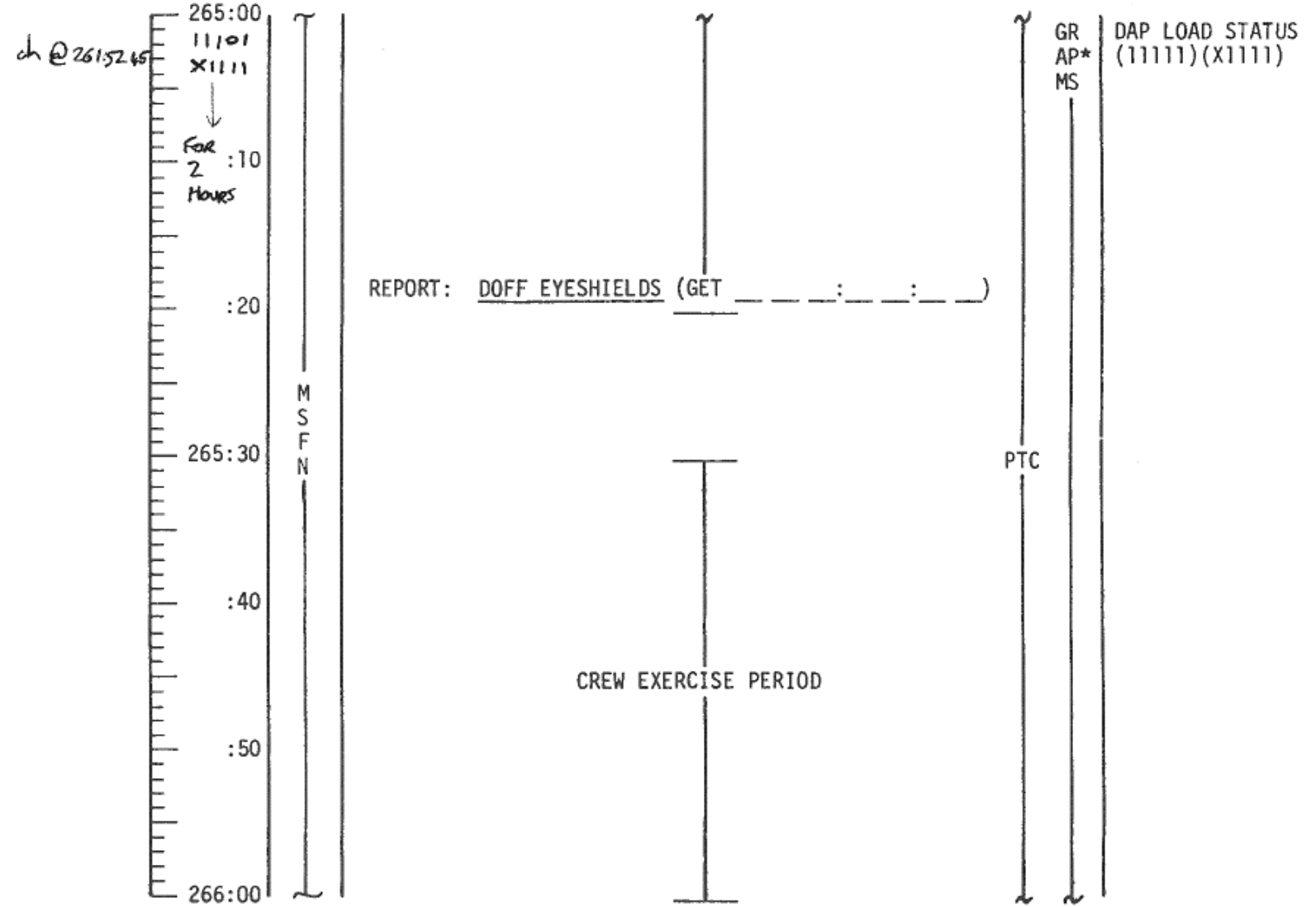
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0934 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	265:00 - 266:00	12/TEC	3-375

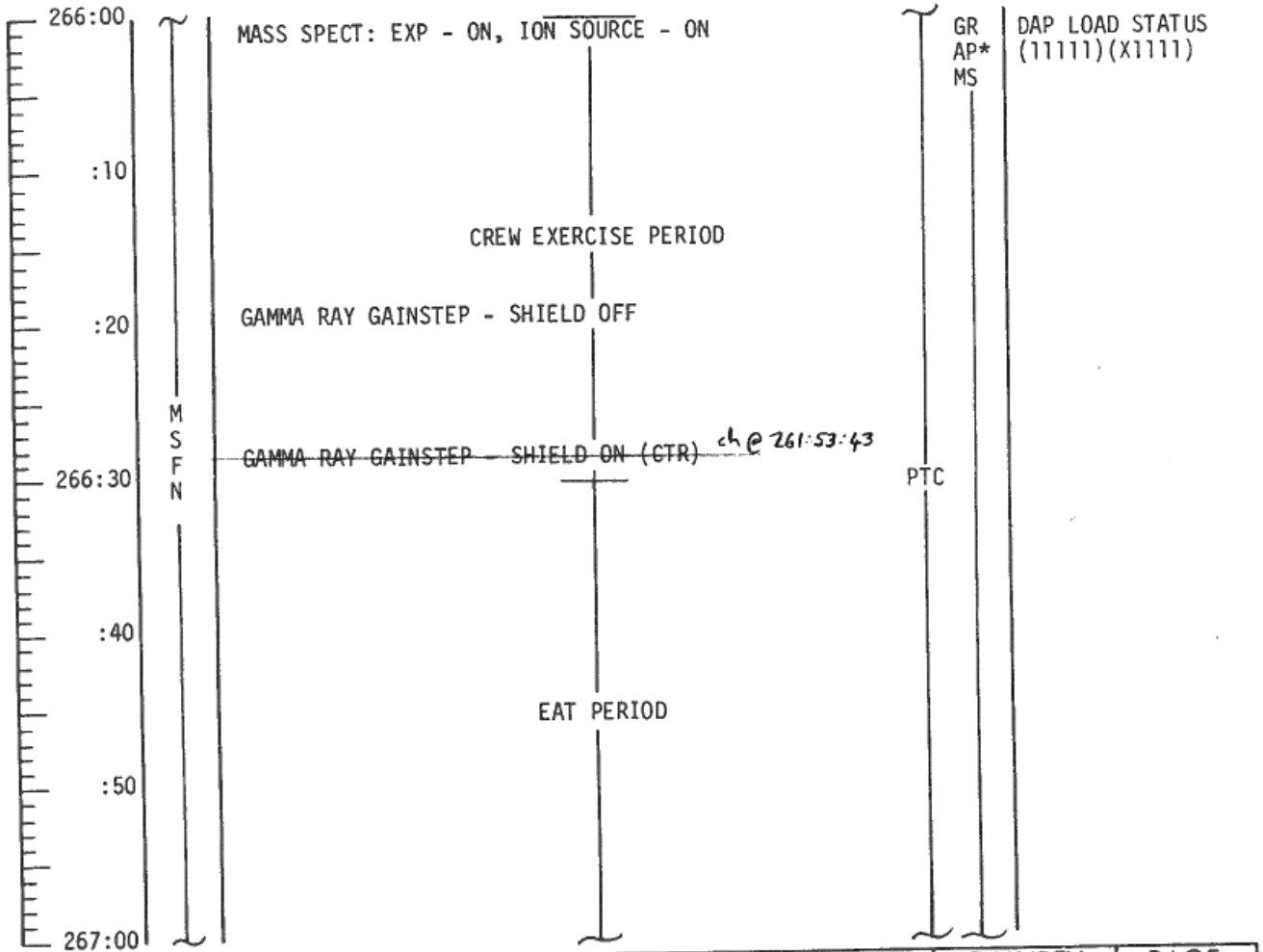
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1034 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	266:00 - 267:00	12/TEC	3-376

FLIGHT P' NNING BRANCH

FLIGHT PLAN

MCC-H

1134 CDT

267:00

:10

:20

267:30

:40

(11101)
(11111)
(X1111)

ch @ 261:55:17

:50

(11102)
(X1111)

268:00

MSFN

EAT PERIOD

GAMMA-RAY BOOM RETRACT, TB-BP 2.5 MINUTES - GRAY - OFF
GAMMA-RAY GAINSTEP - SHIELD OFF ch @ 261:57:10

P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENTATION)

REPORT: GYRO TORQUING ANGLES
EXIT G&N PTC, CYCLE CMC MODE - FREE/AUTO
V49 MNVR TO OPTICS CAL ATTITUDE
(066,152,350) HGA P -68, Y 310
ALPHA/X-RAY EXP COVERS-OPEN ~~tb~~-BP/GRAY then OFF (CTR)
RECORD GET
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00020)
P00, V48 (11102) (X1111)
V49 MNVR TO SIGHTING ATTITUDE
(081,176,330) HGA P -59, Y 000
P23 CISLUNAR NAVIGATION

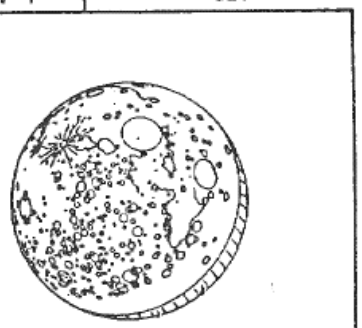
NOTES

GR
AP*
MS

DAP LOAD STATUS
(11111)(X1111)

FOV 4°

GET = 267



PTC

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

GR
XR
AP
MS

EARTH DISTANCE
~ 116,230 NM

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	267:00 - 268:00	12/TEC	3-377

FLIGHT PLANNING BRANCH

FLIGHT PLAN

UV PHOTOS - TRANSEARTH COAST

V49 MNVR TO EARTH UV PHOTO ATT (268:50)
(217,045,332) OMNI D

CONFIGURE CAMERA: (UV)
CM5/EL/105/UV, BRKT, CONT (f4.3,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____
REMOVE RT2 FLIGHT DATA FILE STOWAGE BOX
DAMP RATES
INHIBIT ALL JETS EXCEPT A1 & C2 or B2 & D1, A4, C3, B4, D3
VERIFY FDAI SCALE 5/1
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ARE <0.2°/SEC IN ALL AXES
REMOVE CM5 WINDOW COVER AND MOUNT UV CARDBOARD SHADE AND CAMERA

2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
12 FRAMES, FILTER 2, EXP TIME 20 SEC and 1@ 2sec exp.
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500 ch @ 11:40:01
2 FRAMES, FILTER 4
RECORD FR # _____

CONFIGURE CAMERA: (UV COLOR)
CM5/EL/105/CEX, BRKT, CONT (f8,1/250,∞) (1 FR)
RINGSLIDE
ch @ 241:57:49 MAG (M)P_____, FR # _____
1 FRAME, FILTER 4
RECORD FR # _____
REMOVE CAMERA AND UV CARDBOARD SHADE

NOTE: COMMENTS AS TO CONDITION OF WINDOW 5
REPLACE CM5 WINDOW COVER
ENABLE ALL JETS

FLIGHT PLAN

MCC-H

1234 CDT

NOTES

ch @ 261:55:43

268:00
(11102)
(11111)
11101
X1111
:10
:20
268:30
:40
:50
269:00

MSFN

3 MARKS ON EACH STAR

1. N70 (00000) (00000) (00120)
   N88 (+13540)(+86760)(+47847)

2. N70 (00013) (00000) (00120)

3. N70 (00021) (00000) (00110)

GAMMA-RAY GAINSTEP - 5 STEPS
ch @ 261:56:15

UV PHOTOS

GR
XR
AP
MS

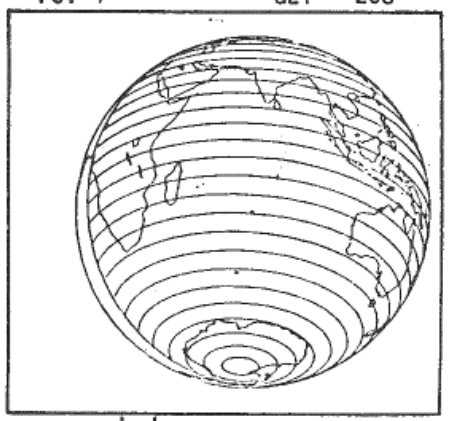
60 EL NATH (EFH)

13 CAPELLA (EFH)

21 ALPHARD (ENH)

FOV 4°

GET = 268



N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	268:00 - 269:00	12/TEC	3-379

FLIGHT PLANNING BRANCH

FLIGHT PLAN

LUNAR ECLIPSE PHOTOS

CONFIGURE CAMERA: (LUNAR ECLIPSE)
INSTALL CAMERA SHIELD
CM4/NK/55/VHBW, BRKT (f1.2,1/500,∞) (8 FR)
MAG ( ) _____, FR # _____

CM2/EL/250/CEX (f5.6,1/500,∞) (8 FR)
PCM CABLE
MAG (P) _____, FR # _____

V49 MNVR TO LUNAR ECLIPSE ATT (269:00)
(040,012,041) HGA P -22, Y 226

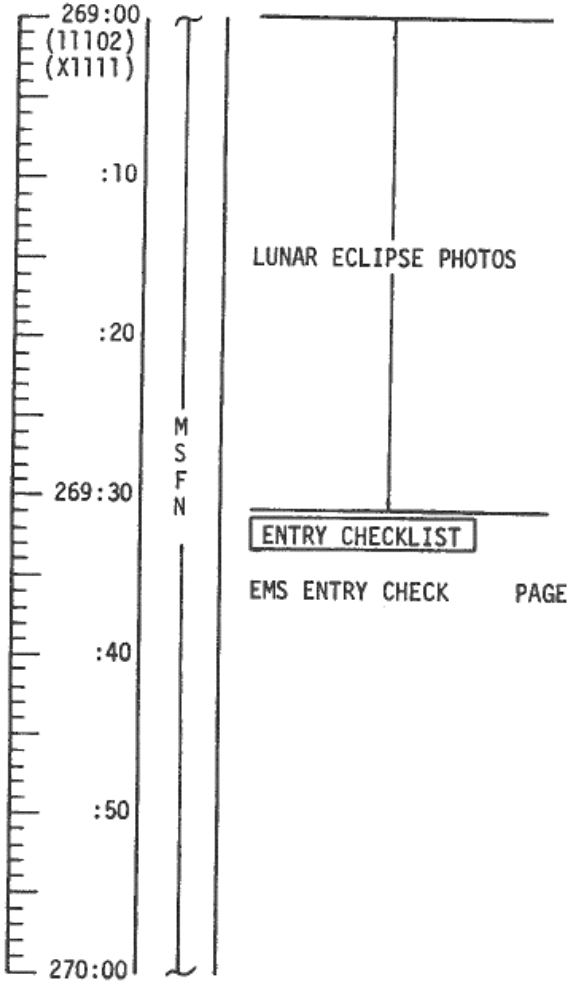
PHOTO SEQUENCE (for moon entering earth's umbra)

00:00 - MISSION TIMER, RESET/START (T START) (268:59:47) read up @ 268:24:31
DISABLE JETS A3, C4, B3, D4
DIM INTERIOR LIGHTS
COVER EL LENS, CYCLE 1 FRAME
CHANGE EL SHUTTER TO 1 SEC
05:00 - 1 FRAME EL
CHANGE EL SHUTTER TO B
08:00 - 1 FRAME EL, EXP TIME 2 SEC
CHANGE to 80mm LENS AND f2.8
CHANGE EL SHUTTER TO 1 SEC
11:00 - 1 FRAME EL
CHANGE EL SHUTTER TO B
14:00 - 1 FRAME EL, EXP TIME 2 SEC
17:00 - 1 FRAME EL, EXP TIME 10 SEC
CYCLE NK 1 FRAME, CHANGE NK SHUTTER TO T
19:00 - 1 FRAME EL, EXP TIME 2 MIN
1 FRAME NK, EXP TIME 2 SEC
20:00 - 1 FRAME NK, EXP TIME 4 SEC
21:00 - 1 FRAME NK, EXP TIME 8 SEC
22:00 - 1 FRAME NK, EXP TIME 15 SEC
23:00 - 1 FRAME NK, EXP TIME 30 SEC
24:00 - 1 FRAME NK, EXP TIME 60 SEC
CHANGE NK SHUTTER TO 1/500 SEC
CYCLE NK 1 FRAME
CHANGE EL SHUTTER TO 1/500
COVER EL LENS, CYCLE 1 FRAME
LIGHTS UP, ENABLE JETS
RECORD EL FR # _____
RECORD NK FR # _____

FLIGHT PLAN

MCC-H

1334 CDT



LUNAR ECLIPSE PHOTOS

ENTRY CHECKLIST

EMS ENTRY CHECK PAGE E/1-3

GR
XR
AP
MS

NOTES

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	269:00 - 270:00	12/TEC	3-381

FLIGHT PLANNING BRANCH

FLIGHT PLAN

SXT PHOTO TEST

CONFIGURE CAMERA

CM/DAC/SXT/VHBW (EXP 1/500) 24 fps (5% MAG)
MAG (H) ____, MAG % ____
~~PCM CABLE~~
UTILITY POWER - ON

DISABLE JETS A3,B3,C4,D4
P52 (NO MARKS)
N70 (00000)
N88 (+78378)(+47837)(+39604)
VERIFY THRU SXT THAT OPTICS BORESIGHTED ON STAR
G&N PWR (AC - PNL 5) - OFF
MOUNT DAC ON SXT
DIM INTERIOR LIGHTS, DAC - ON AT 24 fps FOR 2 SEC
CHANGE TO TIME & 1/60
1 FRAME - 60 SEC EXP TIME
1 FRAME - 20 SEC EXP TIME
1 FRAME - 5 SEC EXP TIME
1 FRAME - 1 SEC EXP TIME
CHANGE TO 24 fps & 1/500
RUN DAC FOR 2 SEC, LIGHTS UP

V49 MNVR TO SXT PHOTO TEST ATT (270:15)
(090,000,034) HGA P -54, Y 194

P52 (NO MARKS)
N70 (00000)
N88 (+78378)(+47837)(+39604)
REMOVE DAC

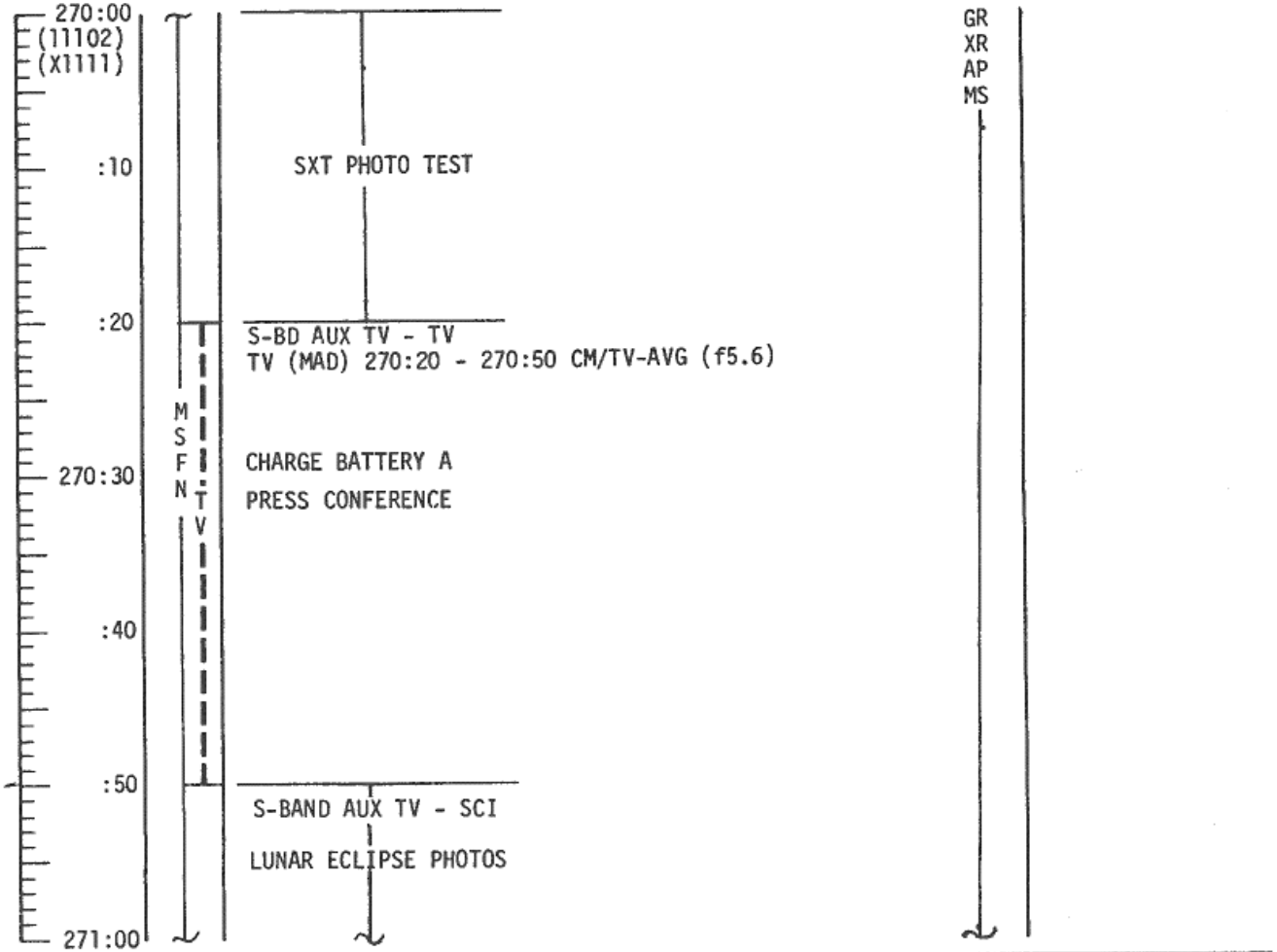
VERIFY THRU SXT THAT OPTICS BORESIGHTED ON STAR
MOUNT DAC ON SXT
DIM INTERIOR LIGHTS, DAC - ON AT 24 fps FOR 2 SEC
CHANGE TO T1 & 1/60
1 FRAME - 60 SEC EXP TIME
1 FRAME - 20 SEC EXP TIME
1 FRAME - 5 SEC EXP TIME
1 FRAME - 1 SEC EXP TIME
CHANGE TO 24 fps & 1/500
RUN DAC FOR 2 SEC, LIGHTS UP
RECORD MAG %
REMOVE AND STOW DAC
G&N PWR - AC1 or AC2 (PNL 5)
ENABLE JETS
V49 MNVR TO LUNAR ECLIPSE ATT (270:50)
(040,011,041) HGA P -22, Y 227

FLIGHT ..LAN

MCC-H

1434 CUT

NOTES



270:49:53
T-START
read y @ 269:49:21

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	270:00 - 271:00	12/TEC	3-383

FLIGHT PLANNING BRANCH

FLIGHT PLAN

LUNAR ECLIPSE PHOTOS

CONFIGURE CAMERA: (LUNAR ECLIPSE)
INSTALL CAMERA SHIELD
CM4/NK/55/VHBW, BRKT (f1.2,1/500,∞) (8 FR)
MAG ( ) _____, FR # _____

CM2/EL/250/CEX (f5.6,1/500,∞) (8 FR)
PCM CABLE
MAG (P) _____, FR # _____

V49 TRIM TO LUNAR ECLIPSE ATT (270:50)
(040,011,041) HGA P -22, Y 227

PHOTO SEQUENCE (for moon leaving earth's umbra)

00:00 - DET, RESET/START (T START) T-START 270:49:53
DISABLE JETS A3, C4, B3, D4
DIM INTERIOR LIGHTS
CYCLE NK 1 FRAME, CHANGE NK SHUTTER TO T
06:00 - 1 FRAME NK, EXP TIME 60 SEC
07:00 - 1 FRAME NK, EXP TIME 30 SEC
08:00 - 1 FRAME NK, EXP TIME 15 SEC
09:00 - 1 FRAME NK, EXP TIME 8 SEC
10:00 - 1 FRAME NK, EXP TIME 4 SEC
COVER EL LENS, CYCLE 1 FRAME
CHANGE EL SHUTTER TO B
11:00 - 1 FRAME NK, EXP TIME 2 SEC
1 FRAME EL, EXP TIME 2 MIN
13:00 - 1 FRAME EL, EXP TIME 10 SEC
16:00 - 1 FRAME EL, EXP TIME 2 SEC
CHANGE EL SHUTTER TO 1 SEC
19:00 - 1 FRAME EL
CHANGE TO 250mm LENS AND f5.6
CHANGE EL SHUTTER TO B
22:00 - 1 FRAME EL, EXP TIME 2 SEC
CHANGE EL SHUTTER TO 1 SEC
25:00 - 1 FRAME EL
CHANGE EL SHUTTER TO 1/500 SEC
COVER EL LENS, CYCLE 1 FRAME
CHANGE NK SHUTTER TO 1/500 SEC
CYCLE NK 1 FRAME
LIGHTS UP, ENABLE JETS
RECORD EL FR # _____
RECORD NK FR # _____
STOW CAMERAS
REMOVE CAMERA SHIELD

FLIGHT PLAN

MCC-H

1534 CDT

NOTES

271:00
(11102)
(X1111)

:10

LUNAR ECLIPSE PHOTOS

:20

~~MASS SPECT: EXP - STBY, ION SOURCE - OFF~~
CONFIGURE FOR URINE DUMP

ch @ 268:39:09

~~CAUTION: WAIT 5 MIN BEFORE MASS SPECT BOOM RETRACT~~
GAMMA RAY BOOM - RETRACT tb BP(~3:15)/GRAY then OFF (CTR)
MASS SPECT BOOM - RETRACT tb BP (~2:30)/GRAY then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb BP/GRAY then OFF (CTR)

271:30

~~RECORD GET~~ ch@ 268:39:32
GAMMA RAY GAINSTEP - SHIELD OFF
~~X-RAY EXP - OFF~~
α RAY/X DR - α OFF
MASS SPECT EXP - OFF
GAMMA RAY GAINSTEP - SHIELD ON (CTR)
GAMMA RAY EXP - OFF
DATA SYSTEMS ON - OFF
S-BD AUX TV - OFF (CTR)
cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE
ENABLE ALL JETS

:40

all deleted @ 268:39:48

:50

(11101)
(X1111)

V48 (11101)(X1111)
~~CONFIGURE FOR URINE DUMP~~

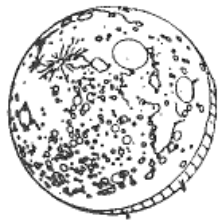
272:00

M S F N

GR
XR
AP
MS

FOV 2°

GET = 272



ch @ 268:39 02.
"Just under S-band Aux TV, Science add
"V49 - MNVR TO CONTAMINATION PHOTO ATT
016, 195, 016. HGA - -23, 252"

ch @ 268:39:48
V48 (11101, 01111)
P52, OPT 3
GAMMA RAY BOOM, DEPLOY, 41 SECS - OFF
GAMMA RAY GAINSTEP - CENTER
START CONTAMINATION PHOTOS
ch @ 268:40:32

UPDATE TO CSM
MCC-6 MNVR PAD
ENTRY PAD
(ASSUMES MCC-6)
UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	271:00 - 272:00	12/TEC	3-385

FLIGHT PLANNING BRANCH

FLIGHT PLAN

~~MCC-6~~ CANCELLED
~~BURN~~ TABLE

MANEUVER	P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
CORRIDOR CONTROL	10°/SEC COMPLETE	±10° COMPLETE	BT + 1 SEC AND $\Delta V_C = 0$	TRIM X AXIS ONLY TO 0.2 FPS
IP CONTROL	10°/SEC TERMINATE	±10° TERMINATE	BT + 1 SEC AND $\Delta V_C = 0$	TRIM X & Z AXIS TO 0.2 FPS

FLIGHT PLAN

MCC-H

1634 CDT

NOTES

272:00
(11101)
(X1111)

:10

:20

END CONTAMINATION PHOTOS
ch@ 268:43:03

272:30

:40

START MASS SPEC Boom TEST PROCS IN REAL TIME
ch@ 268:43:35

:50

273:00

MSFN

~~P52~~ IMU REALIGN
OPTION ~~3~~ ~~REFSMMAT~~
~~PTC ORIENTATION~~

REPORT: ~~GYRO TORQUING~~ ANGLES

H_2 PURGE LINE HEATER - ON
~~P30 EXTERNAL ΔV~~
~~V49 MNVR TO PAD ATT~~

ch@ 268:42:08
~~SXT STAR CHECK~~
~~URINE DUMP~~

~~SXT STAR CHECK~~
~~P40 SPS THRUSTING OR~~
~~P41 RCS THRUSTING~~

H_2 & O_2 FUEL CELL PURGE
~~WASTE WATER DUMP~~
(PART OF CONTAMINATION PHOTO PROCEDURES) ch @268:43:35

H_2 PURGE LINE HEATER - OFF

~~MCC-6~~ ch@ 268:43:35

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

FOV 5° GET = 272

TIG: 272:58:20
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: N/A
ORBIT: N/A

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 14	FINAL (7/26)	6/21/71	272:00 - 273:00	12/TEC	3-387

FLIGHT PLANNING BRANCH

FLIGHT PLAN

GR, XR, AP, MSO - ON (273:05)

DISABLE ALL JETS EXCEPT A1 & C2 OR B1 & D2, A3, C4, B3, D4
cb SCS CONTR DIR 1 MNB - OPEN
cb SCS CONTR DIR 2 MNA - OPEN
RHC PWR DIR (2) - OFF OR MNA/MNB

S-BD AUX TV - SCI
DATA SYSTEMS ON - ON
GAMMA RAY EXP - ON
α RAY/X DR - α ON
X-RAY EXP - ON

ALPHA/X-RAY EXP COVERS - OPEN tb - BP/GRAY then OFF (CTR)
GAMMA RAY BOOM - DEPLOY tb - BP (~2:45)/GRAY then OFF (CTR)
MASS SPECT BOOM - DEPLOY tb - BP (~2:40)/GRAY then OFF (CTR)
MASS SPECT: EXP - ON, ION SOURCE - STBY
RECORD GET _____

FLIGHT PLAN

MCC-H

1734 CDT

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

273:00
(11101)
(X1111)

~~BURN STATUS REPORT~~ X-RAY-ON, COVERS-OPEN, RECORD GET ch @ 268:44:25

~~GR, XR, AP, MSO ON~~

V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(066,152,350) HGA P -67, Y 314
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00020)
POO
V49 MNVR TO SIGHTING ATTITUDE
(079,185,330) HGA P -59, Y 359
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

:10

:20

1. N70 (00000) (00000) (00120)
   N88 (+13540)(+86760)(+47847)

MSFN

273:30

2. N70 (00013) (00000) (00120)

:40

3. N70 (00021) (00000) (00110)

— GAMMA-RAY Boom, DEPLOY ch @ 268:45:05

:50

(11111)
(X1111)

V48 (11111)(X1111)

274:00

GR
XR
AP
MSO

NOTES

EARTH DISTANCE
~ 102,349 NM

60 EL NATH (EFH)
BETA TAURI

13 CAPELLA (EFH)

21 ALPHARD (ENH)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	273:00 - 274:00	12/TEC	3-389

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1834 CDT

274:00
(11111)
(X1111)
:10
:20
274:30
:40
:50
275:00

MSFN

V49 MNVR TO X-RAY POINTING ATTITUDE (274:15)
(, ,)
~~MASS SPECT: MULT-LOW,DSCRM-HIGH,EXP-ON,ION SOURCE-ON~~ dd @ 274:05:21
RECORD GET Low
~~LOGIC POWER (2) - OFF~~ dd @ 268:45:47

ALPHA/X-RAY COVERS CLOSED
CDR DON BIOMED HARNESS
CMP DOFF BIOMED HARNESS
V49 MNVR TO X-RAY POINTING ATTITUDE (275:00)
(196,346,012) HGA P ____, Y ____ ch @ 274:37:43
REPORT: CM RCS INJECTOR VALVE TEMPS
(SYS TEST METER 5C, 5D, 6A, 6B, 6C, 6D)
ALPHA/X-RAY COVERS OPEN

LiOH CANISTER CHANGE
(23 INTO B, STOW 21 IN A5)

GR
XR
AP
MS

NOTES

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

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	274:00 - 275:00	12/TEC	3-390

FLIGHT PLA' 'NG BRANCH

FLIGHT PLAN

MCC-H

1934 CDT

275:00
(11111)
(X1111)
:10
:20
275:30
:40
:50
276:00

M
S
F
N

EAT PERIOD

CYCLE CMC MODE - FREE/AUTO
V48 (11101)(X1111)

NOTES

GR
XR
AP
MS

FOV 1°

GET = 276

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	275:00 - 276:00	12/TEC	3-391

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2034 CDT

276:00
(11101)
(X1111)

:10

:20

276:30

:40

:50

(11111)
(X1111)
277:00

MSFN

V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(066,152,350) HGA P -66, Y 317
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00020)
P00
V49 MNVR TO SIGHTING ATTITUDE
(078,191,330) HGA P -59, Y 359
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

1. N70 (00000) (00000) (00120)
   N88 (+13540)(+86760)(+47847)

2. N70 (00013) (00000) (00120)

3. N70 (00021) (00000) (00110)

GAMMA RAY GAINSTEP-SHIELD OFF

GAMMA RAY GAINSTEP - SHIELD ON (CTR)

V48 (11111)(X1111)

GR
XR
AP
MS

NOTES

EARTH DISTANCE
~ 93,233 NM

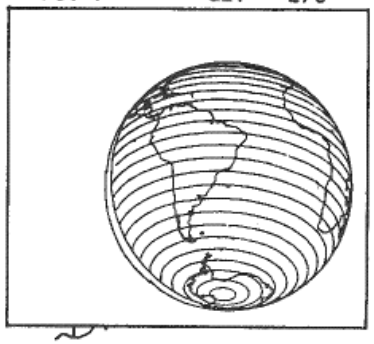
60 EL NATH (EFH)

13 CAPELLA (EFH)

21 ALPHARD (ENH)

FOV- 7°

GET = 276



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	276:00 - 277:00	12/TEC	3-392

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2134 CDT

277:00

:10

:20

277:30

:40

:50

278:00

MSFN

CSM G&C CHECKLIST

PASSIVE THERMAL CONTROL (G&N) PAGE G/8-2
COMM: HGA REACQ MODE P -40, Y 90
V49 MNVR TO PTC ATTITUDE
(N20,090,000)
P20 OPT. 2, X-AXIS
N78 (0,0,0)
N79 (-0.3500, +000.50)
N34 (0,0,0)

QUADS C&D WILL BE USED FOR PTC RATE DAMPING, JETS B2 & D2 FOR PTC SPINUP

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

CSM SYSTEMS CHECKLIST

PRE-SLEEP CHECKLIST PAGE S/1-26
COMM - HGA

REST PERIOD
(9 HOURS)

PTC

XR
AP
MS

NOTES

DAP LOAD STATUS
(11111)(X1111)

X-RAY & ALPHA
PARTICLE EXPERIMENT
COVERS WILL BE OPEN
CONTINUOUSLY UNTIL
GET 288:05

ONBOARD READOUT

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

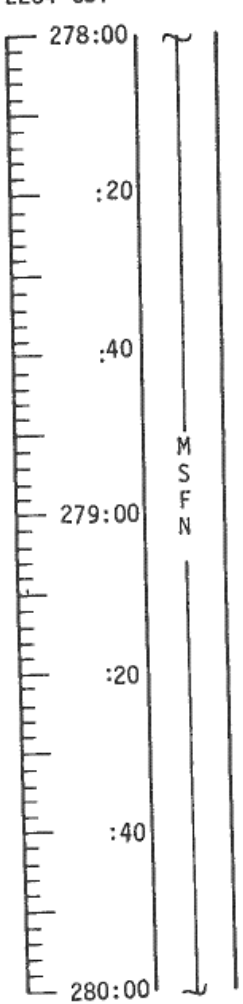
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	277:00 - 278:00	12/TEC	3-393

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2234 CDT



MSFN

REST PERIOD
(9 HOURS)

PTC

GR
XR
AP
MS

NOTES

DAP LOAD STATUS
(11111)(X1111)

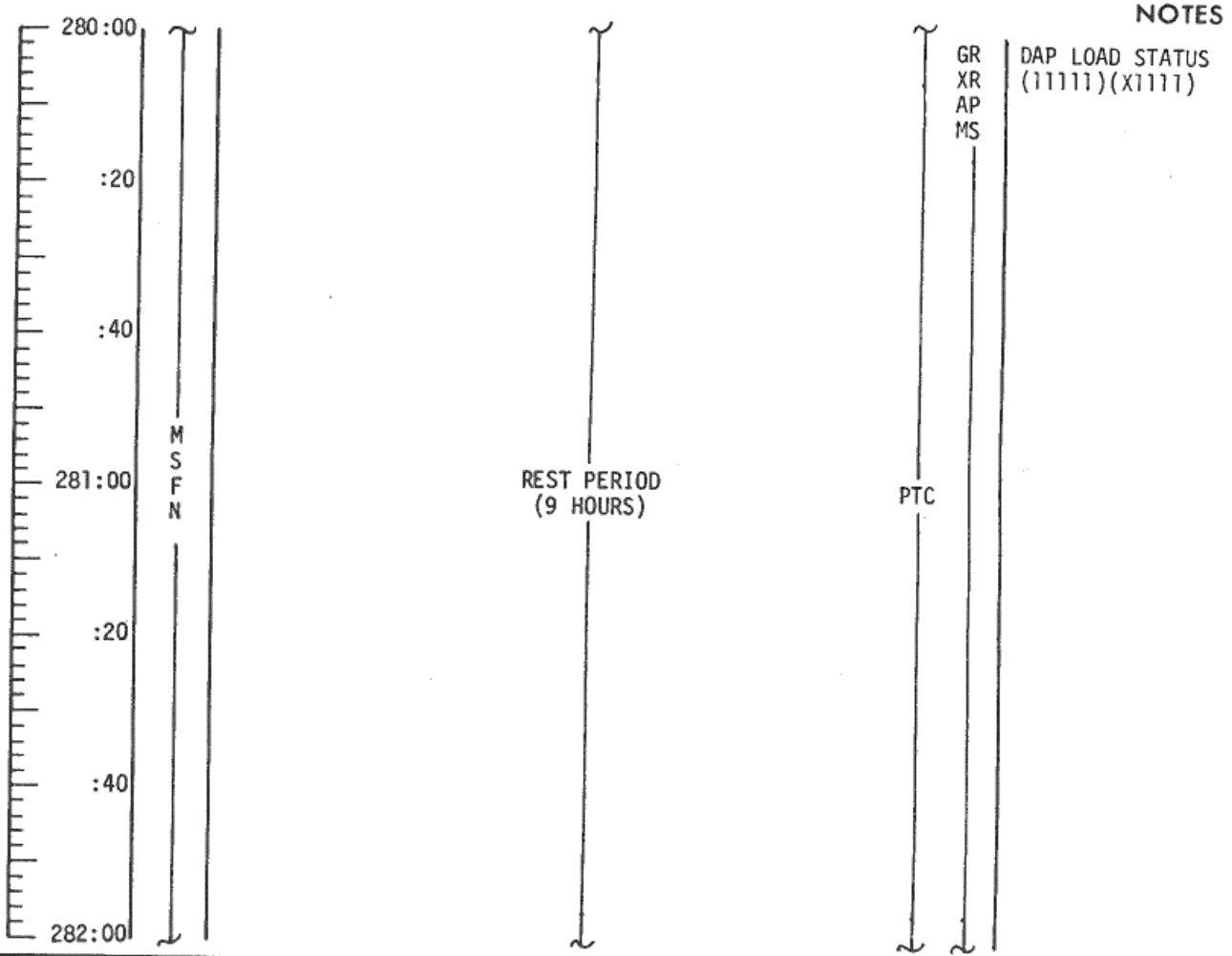
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	278:00 - 280:00	12/TEC	3-394

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0034 CDT



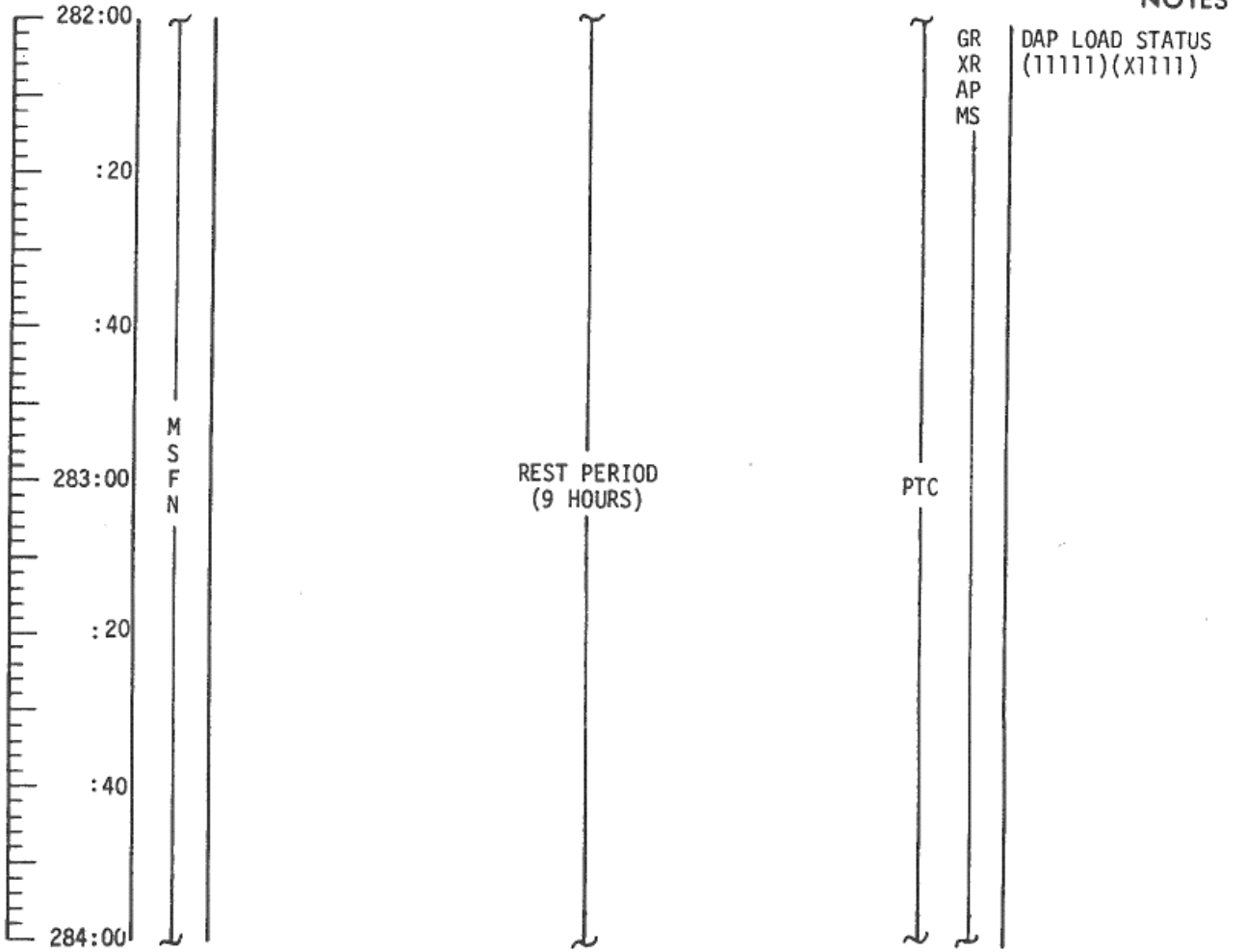
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	280:00 - 282:00	12/TEC	3-395

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0234 CDT



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	282:00 - 284:00	12/TEC	3-396

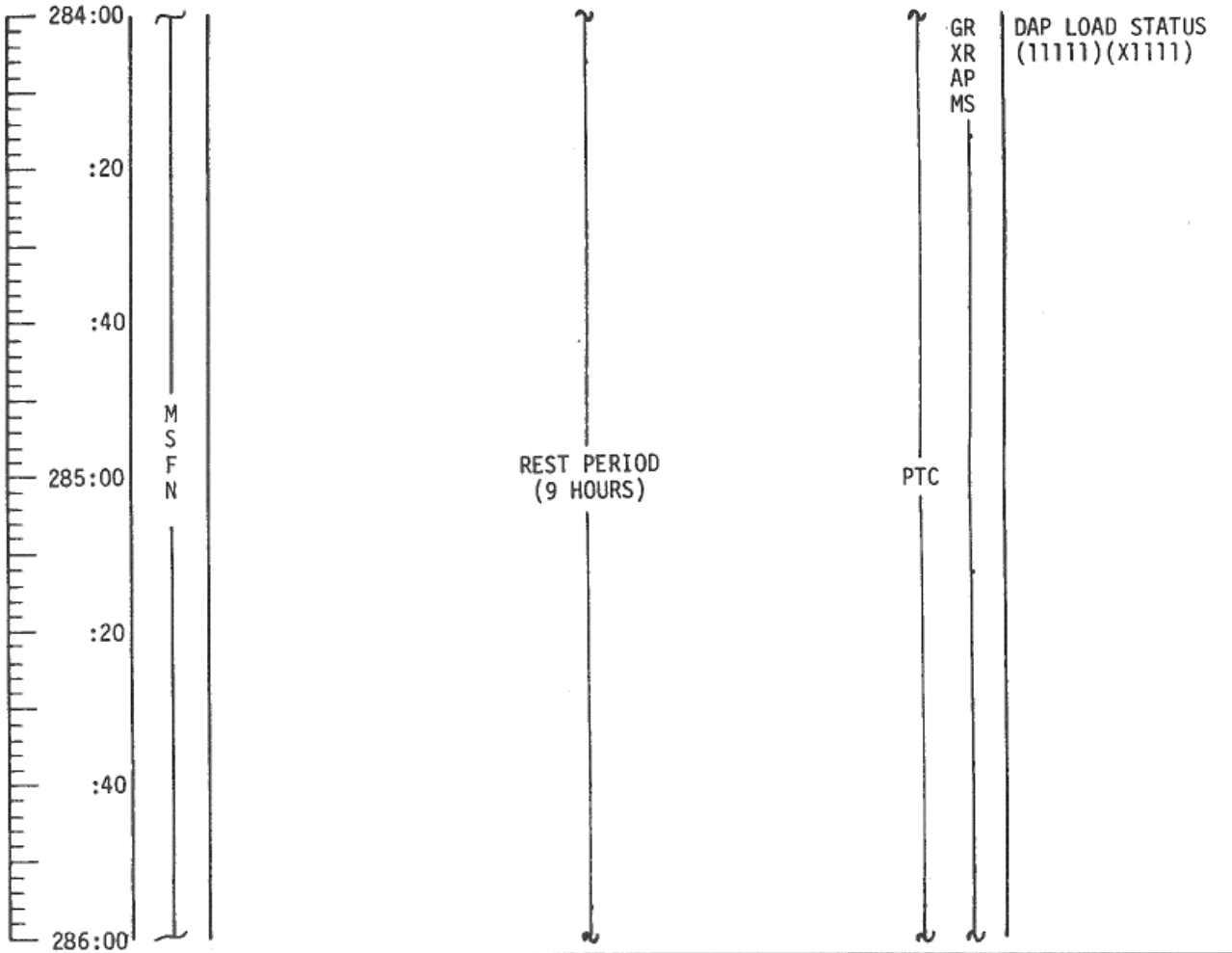
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0434 CDT

NOTES



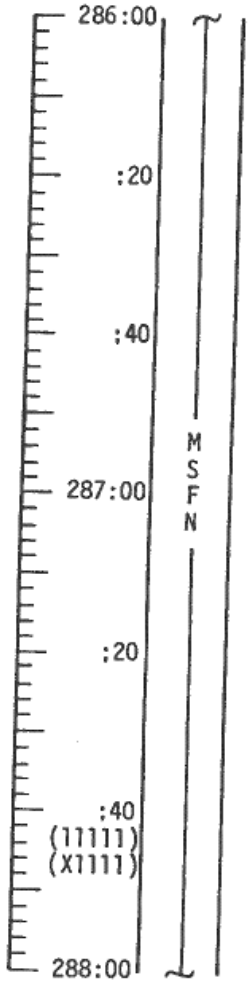
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	284:00 - 286:00	12/TEC	3-397

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0634 CDT



M S F N

REST PERIOD
(9 HOURS)

CSM SYSTEMS CHECKLIST
POST SLEEP CHECKLIST PAGE S/1-26

EAT PERIOD

UPDATE TO CSM CONSUMABLES FLIGHT PLAN

EXIT G&N PTC AT ROLL ANGLE 071
GAMMA RAY GAINSTEP - SHIELD OFF

GAMMA RAY GAINSTEP - SHIELD ON (CTR)

PTC

GR
XR
AP
MS

NOTES

DAP LOAD STATUS
(11111)(X1111)

CSM CONSUMABLES UPDATE
GET: ___:___
RCS TOTAL _____
QUAD A ____ B ____
C ____ D ____
H_2 TOTAL _____
O_2 TOTAL _____

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	286:00 - 288:00	12/TEC	3-398

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0834 CDT

288:00
(11111)
(X1111)
:10
:20
288:30
:40
(11102)
(01111)
:50
289:00

MSFN

LOGIC POWER (2) - DPLY/RETR
GAMMA RAY EXP - OFF
MASS SPECT: EXP - OFF, ION SOURCE - OFF
GAMMA RAY BOOM - RETRACT tb-BP(1:40) then OFF (CTR)
ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)
RECORD GET
LOGIC POWER (2) - JETT
GAMMA RAY BOOM - JETT tb-BP/GRAY
MASS SPECT BOOM - JETT tb-BP/GRAY
DATA SYSTEMS ON - OFF
LOGIC POWER (2) - OFF
S-BD AUX TV - OFF (CTR)
ENABLE ALL JETS
cb SCS CONTR DIR 1 MNB - CLOSE
cb SCS CONTR DIR 2 MNA - CLOSE

LMP DON BIOMED HARNESS
CDR DOFF BIOMED HARNESS
LiOH CANISTER CHANGE
(24 INTO A, STOW 22 IN A5)
REPORT: CM INJECTOR VALVE TEMPS
(SYS TEST METER 5C, 5D, 6A, 6B, 6C, 6D)
ENTRY CHECKLIST
CYCLE CMC MODE - FREE/AUTO
V48 (11102)(01111)
GO/NO-GO FOR MCC-7

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENTATION

REPORT: GYRO TORQUING ANGLES

GR
XR
AP
MS

X-RAY - OFF
ALPHA PART - OFF
ch @ 286:52:44

GO/NO-GO FOR MCC-7

EI-6 HR

CM RCS INJECTOR TEMP

5C	_____	5D	_____
6A	_____	6B	_____
6C	_____	6D	_____

NOTES

FOV 12° GET = 289

P52 IMU REALIGN

N71: __ __ , __ __

N05: __ __ __ . __ __

N93:

X __ __ __ . __ __ __

Y __ __ __ . __ __ __

Z __ __ __ . __ __ __

GET __ __ __ : __ __ : __ __

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL(7/26)	6/21/71	288:00 - 289:00	13/TEC	3-399

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0934 CDT

289:00
(11102)
(01111)

:10

:20

289:30

:40

:50

290:00

M
S
F
N

V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(330,073,330) OMNI D
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00001)
P00
V49 MNVR TO SIGHTING ATTITUDE
(297,044,000) OMNI D
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

1. N70 (00040) (00000) (00220)

2. N70 (00000) (00000) (00220)
   N88 (+79939)(-53163)(-27991)

3. N70 (00000) (00000) (00210)
   N88 (+85577)(-21967)(+46840)

4. N70 (00000) (00000) (00210)
   N88 (+93634)(-23622)(+25973)

5. N70 (00000) (00000) (00210)
   N88 (+96452)(+04966)(+25929)

NOTES

40 ALTAIR (MFH)

221 DELTA CAPRICORNI (MFH)

223 BETA PEGASI (MNH)

224 MARKAB (MNH)

126 GAMMA PEGASI (MNH)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	289:00 - 290:00	13/TEC	3-400

FLIGHT PLANNING BRANCH

THIS PAGE INTENTIONALLY BLANK

FLIGHT PLAN

UV PHOTOS - TRANSEARTH COAST

V49 MNVR TO EARTH UV PHOTO ATT (290:15)
(226,352,312) OMNI D

CONFIGURE CAMERA: (UV)
CM5/EL/105/UV, BRKT, CONT (f8,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____
REMOVE RT2 FLIGHT DATA FILE STOWAGE BOX

DAMP RATES
INHIBIT ALL JETS EXCEPT A1 & C2 or B2 & D1, A4, C3, B4, D3
VERIFY FDAI SCALE 5/1
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ARE <0.2°/SEC IN ALL AXES

REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE AND CAMERA

2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
2 FRAMES, FILTER 2, EXP TIME 20 SEC and 1@ 2sec exp.
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4
RECORD FR # _____

ch@ 11:40:01

CONFIGURE CAMERA: (UV COLOR)
CM5/EL/105/CEX,BRKT,CONT (f8,1/250,∞) (1 FR)
RINGSLIDE
MAG ~~(M)~~ P____, FR # _____
1 FRAME, FILTER 4
RECORD FR # _____

ch@ 286:53:29 (Q ACTUALLY USED)

V49 MNVR TO MOON PHOTO CALIBRATION ATT (290:40)
(002,333,000) HGA P 7, Y 250

CONFIGURE CAMERA: (UV CALIBRATION)
CM5/EL/105/UV, BRKT, CONT (f8,1/60,∞) (8 FR)
RINGSLIDE
MAG (N) _____, FR # _____

DAMP RATES
WAIT 5 MIN FOR RATES TO DAMP
VERIFY RATES ARE <0.2°/SEC IN ALL AXES

2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
2 FRAMES, FILTER 2, EXP TIME 20 SEC
CHANGE SHUTTER TO 1/250
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500
2 FRAMES, FILTER 4
RECORD FR # _____
REMOVE CAMERA AND UV CARDBOARD SHADE
NOTE: COMMENTS AS TO CONDITION OF WINDOW 5
REPLACE CM5 WINDOW COVER
ENABLE ALL JETS

FLIGHT PLAN

MCC-H

1034 CDT

290:00

(11102)
(01111)

:10

:20

290:30

:40

:50

291:00

MSFN

UPDATE TO CSM
MCC-7 MNVR PAD &
ENTRY PAD

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS
MCC-7 TGT LOAD
DESIRED ORIENT
(ENTRY)

EI-4 HR

UV PHOTOS

V49 MNVR TO P52 ATTITUDE
(081,036,054) HGA P -23, Y 217
ATT DEADBAND - MIN
RATE - LOW
BMAG (3) - ATT 1/RATE 2
SC CONT - SCS

NOTES

FOV 1°

GET = 290

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	290:00 - 291:00	13/TEC	3-403

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-7
BURN TABLE

MANEUVER	P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
CORRIDOR CONTROL	10°/SEC COMPLETE	±10° COMPLETE	BT + 1 SEC AND $\Delta C_c = 0$	TRIM X AXIS ONLY TO 0.2 FPS

FLIGHT PLAN

MCC-H

1134 CDT

291:00
(11102)
(01111)

:10

:20

291:30

:40

:50

292:00

MSFN

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENTATION

REPORT: GYRO TORQUING ANGLES

STARS ___, ___
SA ___, ___
TA ___, ___

P52 IMU REALIGN
OPTION 1 PREFERRED
ENTRY ORIENTATION

SC CONT - CMC
BMAG (3) - RATE 2
P30 EXTERNAL ΔV
V49 MNVR TO PAD BURN ATT

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

SXT STAR CHECK
P40 SPS THRUSTING OR
P41 RCS THRUSTING

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

TIG: 291:58:20
BT: NOM ZERO
ΔVT: NOM ZERO
ULLAGE: N/A
ORBIT: N/A

NOTES

EI - 3 HR

MCC-7

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	291:00 - 292:00	13/TEC	3-405

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1234 CDT

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

292:00
(11102)
(01111)

:10

:20

292:30

:40

:50

293:00

MSFN

BURN STATUS REPORT
V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(060,235,330) HGA P -12, Y 214
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00001)
POO
V49 MNVR TO SIGHTING ATTITUDE
(038,267,000) OMNI C
P23 CISLUNAR NAVIGATION
3 MARKS ON EACH STAR

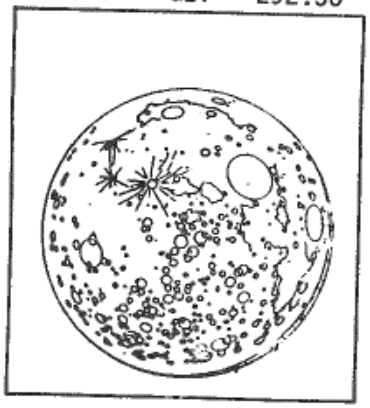
1. N70 (00000) (00000) (00210)
   N88 (+96452)(+04966)(+25929)

2. N70 (00000) (00000) (00220)
   N88 (+59893)(-32359)(-73251)

3. N70 (00040) (00000) (00220)

LOGIC SEQUENCE CHECK PAGE E/1-2
GO/NO-GO FOR PYRO ARM (CUE MSFN)
LOGIC ON

FOV 1° GET = 292:30



EI - 2 HR
GO/NO-GO FOR PYRO
ARM SEQUENCE

NOTES

EARTH DISTANCE
~ 24,776 NM

126 GAMMA PEGASI (MFH)

120 ALPHA GRUIS (MFH)

40 ALTAIR (MFH)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	292:00 - 293:00	13/TEC	3-406

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1334 CDT

293:00
(11102)
(01111)

:10

:20

293:30

:40

:50

294:00

MSFN

EI - 1 HR

P52 IMU REALIGN
OPTION 3 REFSMMAT
ENTRY ORIENTATION

REPORT: GYRO TORQUING ANGLES

GDC ALIGN
V49 MNVR TO HORIZON CHECK ATTITUDE
BORESIGHT & SXT STAR CHECK

EMS ENTRY CHECK	PAGE E/1-3
PRIMARY WATER EVAP ACTIVATION	PAGE E/1-4
SEC WATER EVAP ACTIVATION	PAGE E/1-4
CONFIGURE CAMERA EQUIP FOR FIREBALL AND CHUTES PHOTOS	
CM RCS PREHEAT (IF REQD)	PAGE E/1-4
FINAL STOWAGE	PAGE E/1-4

NOTES

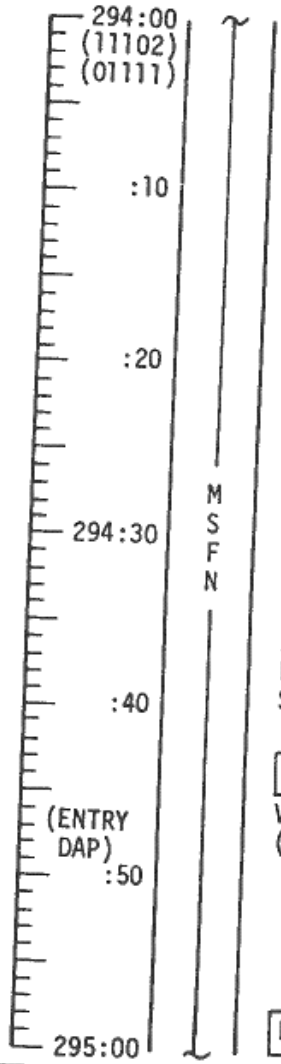
P52 IMU REALIGN
N71: __ __,__ __
N05: __ __ . __ __
N93:
X __ __ . __ __ __
Y __ __ . __ __ __
Z __ __ . __ __ __
GET __ __ __ : __ __ : __ __

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	293:00 - 294:00	13/TEC	3-407

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H 1434 CDT



GO/NO-GO FOR PYRO ARM
UPDATE TO CSM
ENTRY PAD
RECOVERY PAD
UPLINK TO CSM
CSM S.V. & V66

EI - 30 MIN
VHF-A SIMPLEX
COMM CHECK

TERMINATE RCS PREHEAT
CM RCS ACTIVATION — PAGE E/1-5
GO/NO-GO FOR PYRO ARM (CUE MSFN) — PAGE E/1-6
LOGIC ON
SET DET (UP, TO EI)
EMS INITIALIZATION — PAGE E/2-1
RSI ALIGNMENT — PAGE E/2-1
CM RCS CHECK — PAGE E/2-1
PAGE E/2-1

SEPARATION CHECKLIST

P61 ENTRY PREP PAGE E/2-2
P62 CM/SM SEP & PRE-ENTRY MNVR
SECS PYRO ARM

CM/SM SEP 294:43

V49 MNVR TO ENTRY ATT
(000,152,000)

EI 294:58:20

NOTES

TRAJECTORY EVENTS	TIME FROM 400K FT MIN:SEC
400K FT (GET 294:58:20)	00:00
ENTER S-BAND BLACKOUT	00:18
0.05G	00:29
KA-INITIATE CONSTANT DRAG	01:14
RDOT = -700 FPS	01:20
PEAK G	01:24
SUBCIRCULAR VELOCITY	02:10
P64 TO P67	02:12
EXIT S-BAND BLACKOUT	03:34
GUIDANCE TERMINATION	06:50
DROGUE DEPLOYMENT	07:47
MAIN DEPLOYMENT	08:36
SPLASHDOWN	13:26

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	294:00 - 295:00		3-408

FLIGHT PLANNING BRANCH

MSC