

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



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APOLLO 15 (JULY 26, 1971)
(AUGUST 24, 1971)
(SEPTEMBER 22, 1971)
(SEPTEMBER 23, 1971)

AS-510/CSM-112/LM-10
FINAL

FLIGHT PLAN

PREPARED BY

FLIGHT PLANNING SECTION
FLIGHT PLANNING BRANCH
CREW PROCEDURES DIVISION



MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

JUNE 21, 1971

ACKNOWLEDGMENTS

Acknowledgment is made to Messrs. Leonard Riche, Richard Shinkle, Wood Calvert, John Owen, Joe Shacter, Don Hutson, Thomas Johnson, Leon Vick, Elvin Pippert, Charles Stough, Brian Hurlburt, Mason Lancaster, Steve Pollock, and Richard Meckley for their technical support in the preparation of the Apollo 15 Flight Plan.

Acknowledgment is also made to Mike Cox, Marcy Kennedy, Anita Martinec, Evelyn Franks, David Johnson, Barbara Bolthouse, Christine Rizzo, Pat Dewey, Margaret Jones, Joan Keith, Linda Morrison, Lela Stewart, Bill Welch, Karen McPherson, and James Wilkinson for their support on this Flight Plan. Views of the earth and moon shown in the Flight Plan were taken from the document, "Views of the Earth and Moon in Support of the Apollo 15 (J-1) Flight Plan (July 26, 1971, Launch)" published April 8, 1971, MSC Internal Note No. 71-FM-127 by the Planetary Mission Analysis Branch of the Mission Planning and Analysis Division.

The CSM and LM attitude information was taken from the document, "Operational Lunar Orbit Attitude Sequence for Apollo 15, (Mission J-1)" to be published.

Consumable analysis data were prepared by the Consumables Analysis Section of the Mission Planning and Analysis Division.

APOLLO 15
(JULY 26, 1971)

FLIGHT PLAN

FINAL

JUNE 21, 1971

SUBMITTED BY: Spencer H. Gardner
SPENCER H. GARDNER
BOOK MANAGER

APPROVED BY: John W. O'Neill
JOHN W. O'NEILL, CHIEF
FLIGHT PLANNING BRANCH
CREW PROCEDURES DIVISION

James W. Bilodeau
JAMES W. BILODEAU, CHIEF
CREW PROCEDURES DIVISION

Donald K. Slayton
DONALD K. SLAYTON
DIRECTOR OF FLIGHT CREW OPERATIONS

CONCURRENCE: James A. McDivitt
JAMES A. MCDIVITT, MANAGER
APOLLO SPACECRAFT PROGRAM OFFICE

Sigurd A. Sjoberg
SIGURD A. SJOBERG
DIRECTOR OF FLIGHT OPERATIONS

It is requested that any organization having comments, questions, or suggestions concerning this document contact Spencer H. Gardner, Flight Planning Branch, CG52, Building 4, room 232, telephone 483-4271.

This document is under the configuration control of the Crew Procedures Control Board (CPCB). All proposed changes should be submitted to the Apollo Flight Data File Manager, T. W. Holloway, CG52, Building 4, room 230, telephone 483-4271.

Distribution of this document is controlled by Flight Data File Manager, T. W. Holloway, Flight Planning Branch, Crew Procedures Division.

FLIGHT PLAN

LIST OF EFFECTIVE PAGES

Preliminary	6/20/71
Change A	6/1/71
Change B	6/14/71
Final	6/21/71

PAGE	DATE	PAGE	DATE	PAGE	DATE
i	6/21/71	2-1	6/21/71	3-12	6/21/71
ii	6/21/71	2-2	6/21/71	3-13	6/21/71
iii	6/21/71	2-3	6/21/71	3-14	6/21/71
iv	6/21/71	2-4	6/21/71	3-15	6/21/71
v	6/21/71	2-5	6/21/71	3-16	6/21/71
vi	6/21/71	2-6	6/21/71	3-17	6/21/71
vii	6/21/71	2-7	6/21/71	3-18	6/21/71
viii	6/21/71	2-8	6/21/71	3-19	6/21/71
ix	6/21/71	2-9	6/21/71	3-20	6/21/71
x	6/21/71	2-10	6/21/71	3-21	6/21/71
xi	6/21/71	2-11	6/21/71	3-22	6/21/71
xii	6/21/71	2-12	6/21/71	3-23	6/21/71
xiii	6/21/71	2-13	6/21/71	3-24	6/21/71
xiv	6/21/71	2-14	6/21/71	3-25	6/21/71
xv	6/21/71	2-15	6/21/71	3-26	6/21/71
xvi	6/21/71	2-16	6/21/71	3-27	6/21/71
xvii	6/21/71	2-17	6/21/71	3-28	6/21/71
xviii	6/21/71	2-18	6/21/71	3-29	6/21/71
xix	6/21/71	2-19	6/21/71	3-30	6/21/71
xx	6/21/71	2-20	6/21/71	3-31	6/21/71
xxi	6/21/71	2-21	6/21/71	3-32	6/21/71
xxii	6/21/71	2-22	6/21/71	3-33	6/21/71
xxiii	6/21/71	2-23	6/21/71	3-34	6/21/71
xxiv	6/21/71	3-1	6/21/71	3-35	6/21/71
xxv	6/21/71	3-2	6/21/71	3-36	6/21/71
1-1	6/21/71	3-3	6/21/71	3-37	6/21/71
1-2	6/21/71	3-4	6/21/71	3-38	6/21/71
1-3	6/21/71	3-5	6/21/71	3-39	6/21/71
1-4	6/21/71	3-6	6/21/71	3-40	6/21/71
1-5	6/21/71	3-7	6/21/71	3-41	6/21/71
1-6	6/21/71	3-8	6/21/71	3-42	6/21/71
1-7	6/21/71	3-9	6/21/71	3-43	6/21/71
1-8	6/21/71	3-10	6/21/71	3-44	6/21/71
1-9	6/21/71	3-11	6/21/71	3-45	6/21/71

LIST OF EFFECTIVE PAGES (CONT)

PAGE	DATE	PAGE	DATE	PAGE	DATE
3-46 . . .	6/21/71	3-90 . . .	6/21/71	3-134 . . .	6/21/71
3-47 . . .	6/21/71	3-91 . . .	6/21/71	3-135 . . .	6/21/71
3-48 . . .	6/21/71	3-92 . . .	6/21/71	3-136 . . .	6/21/71
3-49 . . .	6/21/71	3-93 . . .	6/21/71	3-137 . . .	6/21/71
3-50 . . .	6/21/71	3-94 . . .	6/21/71	3-138 . . .	6/21/71
3-51 . . .	6/21/71	3-95 . . .	6/21/71	3-139 . . .	6/21/71
3-52 . . .	6/21/71	3-96 . . .	6/21/71	3-140 . . .	6/21/71
3-53 . . .	6/21/71	3-97 . . .	6/21/71	3-141 . . .	6/21/71
3-54 . . .	6/21/71	3-98 . . .	6/21/71	3-142 . . .	6/21/71
3-55 . . .	6/21/71	3-99 . . .	6/21/71	3-143 . . .	6/21/71
3-56 . . .	6/21/71	3-100 . . .	6/21/71	3-144 . . .	6/21/71
3-57 . . .	6/21/71	3-101 . . .	6/21/71	3-145 . . .	6/21/71
3-58 . . .	6/21/71	3-102 . . .	6/21/71	3-146 . . .	6/21/71
3-59 . . .	6/21/71	3-103 . . .	6/21/71	3-147 . . .	6/21/71
3-60 . . .	6/21/71	3-104 . . .	6/21/71	3-148 . . .	6/21/71
3-61 . . .	6/21/71	3-105 . . .	6/21/71	3-149 . . .	6/21/71
3-62 . . .	6/21/71	3-106 . . .	6/21/71	3-150 . . .	6/21/71
3-63 . . .	6/21/71	3-107 . . .	6/21/71	3-151 . . .	6/21/71
3-64 . . .	6/21/71	3-108 . . .	6/21/71	3-152 . . .	6/21/71
3-65 . . .	6/21/71	3-109 . . .	6/21/71	3-153 . . .	6/21/71
3-66 . . .	6/21/71	3-110 . . .	6/21/71	3-154 . . .	6/21/71
3-67 . . .	6/21/71	3-111 . . .	6/21/71	3-155 . . .	6/21/71
3-68 . . .	6/21/71	3-112 . . .	6/21/71	3-156 . . .	6/21/71
3-69 . . .	6/21/71	3-113 . . .	6/21/71	3-157 . . .	6/21/71
3-70 . . .	6/21/71	3-114 . . .	6/21/71	3-158 . . .	6/21/71
3-71 . . .	6/21/71	3-115 . . .	6/21/71	3-159 . . .	6/21/71
3-72 . . .	6/21/71	3-116 . . .	6/21/71	3-160 . . .	6/21/71
3-73 . . .	6/21/71	3-117 . . .	6/21/71	3-161 . . .	6/21/71
3-74 . . .	6/21/71	3-118 . . .	6/21/71	3-162 . . .	6/21/71
3-75 . . .	6/21/71	3-119 . . .	6/21/71	3-163 . . .	6/21/71
3-76 . . .	6/21/71	3-120 . . .	6/21/71	3-164 . . .	6/21/71
3-77 . . .	6/21/71	3-121 . . .	6/21/71	3-165 . . .	6/21/71
3-78 . . .	6/21/71	3-122 . . .	6/21/71	3-166 . . .	6/21/71
3-79 . . .	6/21/71	3-123 . . .	6/21/71	3-167 . . .	6/21/71
3-80 . . .	6/21/71	3-124 . . .	6/21/71	3-168 . . .	6/21/71
3-81 . . .	6/21/71	3-125 . . .	6/21/71	3-169 . . .	6/21/71
3-82 . . .	6/21/71	3-126 . . .	6/21/71	3-170 . . .	6/21/71
3-83 . . .	6/21/71	3-127 . . .	6/21/71	3-171 . . .	6/21/71
3-84 . . .	6/21/71	3-128 . . .	6/21/71	3-172 . . .	6/21/71
3-85 . . .	6/21/71	3-129 . . .	6/21/71	3-173 . . .	6/21/71
3-86 . . .	6/21/71	3-130 . . .	6/21/71	3-174 . . .	6/21/71
3-87 . . .	6/21/71	3-131 . . .	6/21/71	3-175 . . .	6/21/71
3-88 . . .	6/21/71	3-132 . . .	6/21/71	3-176 . . .	6/21/71
3-89 . . .	6/21/71	3-133 . . .	6/21/71	3-177 . . .	6/21/71

LIST OF EFFECTIVE PAGES (CONT)

PAGE	DATE	PAGE	DATE	PAGE	DATE
3-178 . . .	6/21/71	3-222 . . .	6/21/71	3-266 . . .	6/21/71
3-179 . . .	6/21/71	3-223 . . .	6/21/71	3-267 . . .	6/21/71
3-180 . . .	6/21/71	3-224 . . .	6/21/71	3-268 . . .	6/21/71
3-181 . . .	6/21/71	3-225 . . .	6/21/71	3-269 . . .	6/21/71
3-182 . . .	6/21/71	3-226 . . .	6/21/71	3-270 . . .	6/21/71
3-183 . . .	6/21/71	3-227 . . .	6/21/71	3-271 . . .	6/21/71
3-184 . . .	6/21/71	3-228 . . .	6/21/71	3-272 . . .	6/21/71
3-185 . . .	6/21/71	3-229 . . .	6/21/71	3-273 . . .	6/21/71
3-186 . . .	6/21/71	3-230 . . .	6/21/71	3-274 . . .	6/21/71
3-187 . . .	6/21/71	3-231 . . .	6/21/71	3-275 . . .	6/21/71
3-188 . . .	6/21/71	3-232 . . .	6/21/71	3-276 . . .	6/21/71
3-189 . . .	6/21/71	3-233 . . .	6/21/71	3-277 . . .	6/21/71
3-190 . . .	6/21/71	3-234 . . .	6/21/71	3-278 . . .	6/21/71
3-191 . . .	6/21/71	3-235 . . .	6/21/71	3-279 . . .	6/21/71
3-192 . . .	6/21/71	3-236 . . .	6/21/71	3-280 . . .	6/21/71
3-193 . . .	6/21/71	3-237 . . .	6/21/71	3-281 . . .	6/21/71
3-194 . . .	6/21/71	3-238 . . .	6/21/71	3-282 . . .	6/21/71
3-195 . . .	6/21/71	3-239 . . .	6/21/71	3-283 . . .	6/21/71
3-196 . . .	6/21/71	3-240 . . .	6/21/71	3-284 . . .	6/21/71
3-197 . . .	6/21/71	3-241 . . .	6/21/71	3-285 . . .	6/21/71
3-198 . . .	6/21/71	3-242 . . .	6/21/71	3-286 . . .	6/21/71
3-199 . . .	6/21/71	3-243 . . .	6/21/71	3-287 . . .	6/21/71
3-200 . . .	6/21/71	3-244 . . .	6/21/71	3-288 . . .	6/21/71
3-201 . . .	6/21/71	3-245 . . .	6/21/71	3-289 . . .	6/21/71
3-202 . . .	6/21/71	3-246 . . .	6/21/71	3-290 . . .	6/21/71
3-203 . . .	6/21/71	3-247 . . .	6/21/71	3-291 . . .	6/21/71
3-204 . . .	6/21/71	3-248 . . .	6/21/71	3-292 . . .	6/21/71
3-205 . . .	6/21/71	3-249 . . .	6/21/71	3-293 . . .	6/21/71
3-206 . . .	6/21/71	3-250 . . .	6/21/71	3-294 . . .	6/21/71
3-207 . . .	6/21/71	3-251 . . .	6/21/71	3-295 . . .	6/21/71
3-208 . . .	6/21/71	3-252 . . .	6/21/71	3-296 . . .	6/21/71
3-209 . . .	6/21/71	3-253 . . .	6/21/71	3-297 . . .	6/21/71
3-210 . . .	6/21/71	3-254 . . .	6/21/71	3-298 . . .	6/21/71
3-211 . . .	6/21/71	3-255 . . .	6/21/71	3-299 . . .	6/21/71
3-212 . . .	6/21/71	3-256 . . .	6/21/71	3-300 . . .	6/21/71
3-213 . . .	6/21/71	3-257 . . .	6/21/71	3-301 . . .	6/21/71
3-214 . . .	6/21/71	3-258 . . .	6/21/71	3-302 . . .	6/21/71
3-215 . . .	6/21/71	3-259 . . .	6/21/71	3-303 . . .	6/21/71
3-216 . . .	6/21/71	3-260 . . .	6/21/71	3-304 . . .	6/21/71
3-217 . . .	6/21/71	3-261 . . .	6/21/71	3-305 . . .	6/21/71
3-218 . . .	6/21/71	3-262 . . .	6/21/71	3-306 . . .	6/21/71
3-219 . . .	6/21/71	3-263 . . .	6/21/71	3-307 . . .	6/21/71
3-220 . . .	6/21/71	3-264 . . .	6/21/71	3-308 . . .	6/21/71
3-221 . . .	6/21/71	3-265 . . .	6/21/71	3-309 . . .	6/21/71

LIST OF EFFECTIVE PAGES (CONT)

PAGE	DATE	PAGE	DATE	PAGE	DATE
3-310 . . .	6/21/71	3-348 . . .	6/21/71	3-386 . . .	6/21/71
3-311 . . .	6/21/71	3-349 . . .	6/21/71	3-387 . . .	6/21/71
3-312 . . .	6/21/71	3-350 . . .	6/21/71	3-388 . . .	6/21/71
3-313 . . .	6/21/71	3-351 . . .	6/21/71	3-389 . . .	6/21/71
3-314 . . .	6/21/71	3-352 . . .	6/21/71	3-390 . . .	6/21/71
3-315 . . .	6/21/71	3-353 . . .	6/21/71	3-391 . . .	6/21/71
3-316 . . .	6/21/71	3-354 . . .	6/21/71	3-392 . . .	6/21/71
3-317 . . .	6/21/71	3-355 . . .	6/21/71	3-393 . . .	6/21/71
3-318 . . .	6/21/71	3-356 . . .	6/21/71	3-394 . . .	6/21/71
3-319 . . .	6/21/71	3-357 . . .	6/21/71	3-395 . . .	6/21/71
3-320 . . .	6/21/71	3-358 . . .	6/21/71	3-396 . . .	6/21/71
3-321 . . .	6/21/71	3-359 . . .	6/21/71	3-397 . . .	6/21/71
3-322 . . .	6/21/71	3-360 . . .	6/21/71	3-398 . . .	6/21/71
3-323 . . .	6/21/71	3-361 . . .	6/21/71	3-399 . . .	6/21/71
3-324 . . .	6/21/71	3-362 . . .	6/21/71	3-400 . . .	6/21/71
3-325 . . .	6/21/71	3-363 . . .	6/21/71	3-401 . . .	6/21/71
3-326 . . .	6/21/71	3-364 . . .	6/21/71	3-402 . . .	6/21/71
3-327 . . .	6/21/71	3-365 . . .	6/21/71	3-403 . . .	6/21/71
3-328 . . .	6/21/71	3-366 . . .	6/21/71	3-404 . . .	6/21/71
3-329 . . .	6/21/71	3-367 . . .	6/21/71	3-405 . . .	6/21/71
3-330 . . .	6/21/71	3-368 . . .	6/21/71	3-406 . . .	6/21/71
3-331 . . .	6/21/71	3-369 . . .	6/21/71	3-407 . . .	6/21/71
3-332 . . .	6/21/71	3-370 . . .	6/21/71	3-408 . . .	6/21/71
3-333 . . .	6/21/71	3-371 . . .	6/21/71	4-1 . . .	6/21/71
3-334 . . .	6/21/71	3-372 . . .	6/21/71	5-1 . . .	6/21/71
3-335 . . .	6/21/71	3-373 . . .	6/21/71	5-2 . . .	6/21/71
3-336 . . .	6/21/71	3-374 . . .	6/21/71	5-3 . . .	6/21/71
3-337 . . .	6/21/71	3-375 . . .	6/21/71	5-4 . . .	6/21/71
3-338 . . .	6/21/71	3-376 . . .	6/21/71	5-5 . . .	6/21/71
3-339 . . .	6/21/71	3-377 . . .	6/21/71	5-6 . . .	6/21/71
3-340 . . .	6/21/71	3-378 . . .	6/21/71	5-7 . . .	6/21/71
3-341 . . .	6/21/71	3-379 . . .	6/21/71	5-8 . . .	6/21/71
3-342 . . .	6/21/71	3-380 . . .	6/21/71	5-9 . . .	6/21/71
3-343 . . .	6/21/71	3-381 . . .	6/21/71	5-10 . . .	6/21/71
3-344 . . .	6/21/71	3-382 . . .	6/21/71	5-11 . . .	6/21/71
3-345 . . .	6/21/71	3-383 . . .	6/21/71	5-12 . . .	6/21/71
3-346 . . .	6/21/71	3-384 . . .	6/21/71	5-13 . . .	6/21/71
3-347 . . .	6/21/71	3-385 . . .	6/21/71	5-14 . . .	6/21/71

LIST OF EFFECTIVE PAGES (CONT)

PAGE	DATE
5-15 . . .	6/21/71
5-16 . . .	6/21/71
5-17 . . .	6/21/71
5-18 . . .	6/21/71
5-19 . . .	6/21/71
5-20 . . .	6/21/71
5-21 . . .	6/21/71
5-22 . . .	6/21/71
5-23 . . .	6/21/71
5-24 . . .	6/21/71
5-25 . . .	6/21/71
6-1 . . .	6/21/71

CONTENTS

	Page
1. LIST OF TABLES	viii
2. ABBREVIATIONS	xi
3. PHOTOGRAPHIC NOMENCLATURE	xxii
4. SYMBOL NOMENCLATURE	xxv
5. FLIGHT PLAN NOTES	1-1
6. CHARTS AND TABLES	2-1
7. EARTH ORBIT PHASE	3-1
8. TRANSLUNAR INJECTION	3-5
9. TRANSLUNAR COAST PHASE	3-6
a. Transposition, Docking, and Ejection	3-6
b. Cislunar Navigation	3-13
c. LM Familiarization	3-40
d. LM Housekeeping	3-62
e. Lunar Orbit Insertion	3-85
10. LUNAR ORBIT/DESCENT PHASE	
a. LM Activation and Checkout	3-106
b. Undocking and Separation	3-112
c. PDI and Touchdown	3-126
11. LUNAR ORBIT/LUNAR SURFACE PHASE	
a. Standup EVA	3-130
b. First EVA	3-158
c. Second EVA	3-202
d. Third EVA	3-242
e. Lunar Orbit Plane Change	3-253
f. LM Lift-off	3-270
12. RENDEZVOUS/LM JETTISON PHASE	
a. TPI	3-272
b. Docking	3-278
c. LM Jettison and CSM Separation	3-288

CONTENTS (CONT)

	Page
13. POST RENDEZVOUS SCIENCE PHASE	3-289
a. Orbit Shaping Burn	3-333
b. Subsatellite Jettison	3-336
14. TEI	3-338
15. CSM EVA	3-354
16. ENTRY INTERFACE	3-408
17. CONSUMABLES ANALYSIS.	4-1
18. ABBREVIATED TIMELINE	5-1
19. ALTERNATE MISSION TIMELINES	6-1

TABLES

Table	Page
2-1 SUIT WEARING SCHEDULE	2-1
2-2 CREW BIOMED HARNESS WEARING SCHEDULE	2-2
2-3 SC COVERAGE BY MSFN STATIONS USING 85FT/210FT DISH ANTENNA	2-3
2-4 APOLLO 15 TV SCHEDULE	2-7
2-5 FUEL CELL PURGE URINE DUMP AND WASTE WATER DUMP SCHEDULE.	2-8
2-6 BATTERY CHARGE SCHEDULE	2-9
2-7 LiOH CANISTER CHANGE SCHEDULE	2-10
2-8 LUNAR ORBIT NON-SIM BAY RCS JET CONFIGURATION PERIODS . .	2-11
2-9 CSM BURN/EVENT SCHEDULE	2-12
2-10 APOLLO 15/LM-10 DSEA SCHEDULE	2-13
2-11 LM BURN SCHEDULE	2-14

TABLES (CONT)

Table	Page
2-12 APOLLO 15 RETURN TO EARTH BLOCK DATA SCHEDULE	2-15
2-13 LANDMARK AND LANDING SITE DATA	2-17
2-14 P23 CISLUNAR NAVIGATION	2-18
2-15 MAPPING CAMERA FILM BUDGET	2-19
2-16 PANORAMIC CAMERA FILM BUDGET	2-20
2-17 CRYO MANAGEMENT SCHEDULE	2-21
2-18 PDI 2 ABORT PADS	2-22
2-19 FLIGHT PLAN CREW OPTION PHOTO CHARTS	2-23
TLI BURN TABLE	3-4
MCC-1 BURN TABLE	3-18
MCC-2 BURN TABLE	3-34
MCC-3 BURN TABLE	3-60
MCC-4 BURN TABLE	3-74
LOI BURN TABLE	3-82
DOI BURN TABLE	3-88
DOI TRIM BURN TABLE	3-104
CIRC BURN TABLE	3-117
CSM PLANE CHANGE BURN TABLE	3-253
SHAPE BURN TABLE	3-333
TEI BURN TABLE	3-338
MCC-5 BURN TABLE	3-350
MCC-6 BURN TABLE	3-386
MCC-7 BURN TABLE	3-404

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
BWT	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
DSCRN	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 transfer 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	Pericyynthion
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	subsattellite
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
TLH 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-axis
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 S0368 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 intervalometer. Ten frames have been allotted for this sequence.

PHOTOGRAPHIC NOMENCLATURE (CONT)

CAMERA LOCATIONSCOMMAND 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 MOUNTSCSM

Electric Hasselblad (EL) +X axis +12°

Electric Hasselblad (EL) normal to RH Side Window

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

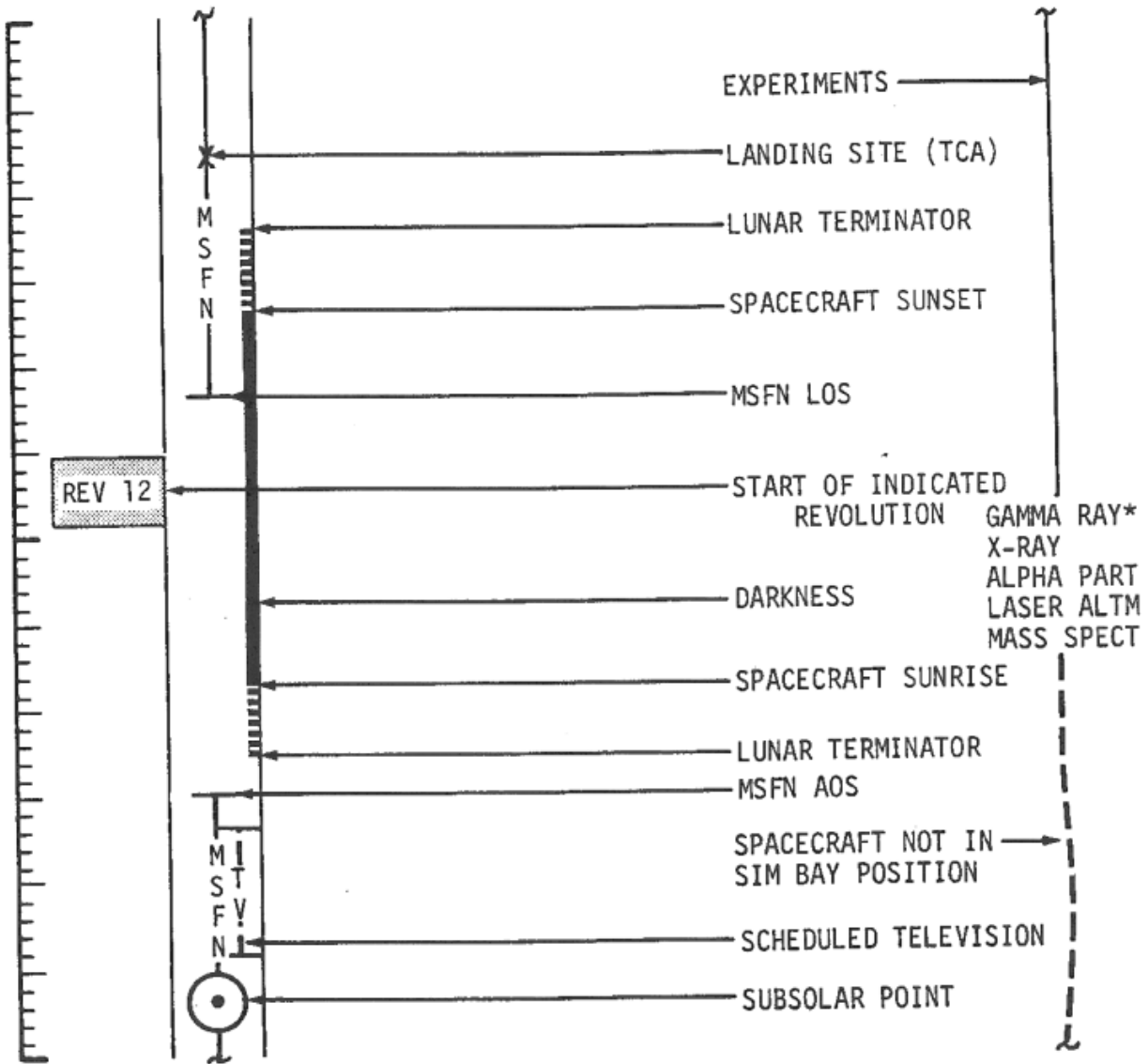
Data Acquisition Camera with SXT Adapter - same as SXT shaft & trunnion

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:

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

B. The nominal CM couch positions are:

<u>Activity</u>	<u>Left</u>	<u>Center</u>	<u>Right</u>
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 Udata)
 - (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 O₂ purges may be increased to coincide with water dump times. The O₂ 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 O_2 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% O₂ and 40% N₂. The CM is purged 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 O₂ 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 $0.2^\circ/\text{sec}$ ($0.5^\circ/\text{sec}$ after rendezvous and docking) unless other rates are required. LM maneuvers are normally performed at $2^\circ/\text{sec}$ 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 O2 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 O2 is used to pressurize the LM. This procedure insures a higher percentage of oxygen in the LM at the first EVA.
2. LM O2 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 overheating 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)

<u>Time, g.e.t.</u>	<u>CDR</u>	<u>CMP</u>	<u>LMP</u>
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						
TRANSLUNAR COAST							03:16	08:01
			13:15	21:21				
					10:45	23:49		
							22:27	32:47
	30:00	40:31						
					34:59	48:19		
			37:45	45:52				
	54:17	64:36					46:52	56:54
					59:03	72:29		
			61:35	70:03				
LOI (78:31)	78:20	78:23						
TEI (233:46)							223:58	229:18
TRANSEARTH COAST	227:58	237:05						
					231:34	246:11		
			234:18	243:30				
							244:55	253:13
	252:13	261:04						
					255:35	270:35		
			258:24	267:47				
							269:05	277:13
	276:56	285:12						
EI (294:58)					279:55	299:52		
				282:56	292:49			

TABLE 2-3 (CONT)

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

REV LOT	GET AT END OF REV	GOLDSTONE (GDS)		PARKS (PKS)		HONEYSUCKLE (HSK)		MADRID (MAD)	
		AOS	LOS	AOS	LOS	AOS	LOS	AOS	LOS
1	78:31							78:56	80:20
2	80:41	78:55	80:20						
3	82:49	81:03	82:28						
4	84:43	83:16	84:21			83:16	84:21		
5	86:39	85:09	86:14	85:43	86:14	85:09	86:14		
6	88:30	87:03	88:08	87:03	88:08	87:03	88:08		
7	90:23			88:57	90:02	88:57	90:02		
8	92:17			90:50	91:56	90:50	91:56		
9	94:11			92:44	93:49	92:44	93:49		
10	96:04					94:38	95:43	95:42	95:42
11	97:58					96:31	97:10	96:31	97:36
12	99:52							98:24	99:30
13	101:45							100:18	101:23
14	103:43	103:19	103:21					102:10	103:22
15	105:41	104:08	105:20					104:08	105:20
16	107:40	106:06	107:18						
17	109:38	108:04	109:16			108:04	109:16		
18	111:36	110:02	111:14	110:18	111:14	110:02	111:14		
19	113:34	112:01	113:13	112:00	113:13	112:00	113:13		
20	115:32			113:59	115:11	113:59	115:11		
21	117:30			115:56	117:09	115:56	117:09		
22	119:28			117:55	119:07	117:55	119:07		
23	121:27					119:53	121:06	120:46	121:05
24	123:25					121:51	122:09	121:51	123:03
25	125:23							123:49	125:01
26	127:21							125:47	126:59
27	129:19	128:18	128:58					127:46	128:58
28	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						
29	135:14	133:40	134:52			132:15	132:54		
30	137:12	135:38	136:50	135:38	136:50	133:40	134:52		
31	139:10	137:26	137:57	137:36	138:48	135:38	136:50		
32	141:08			139:34	140:47	137:36	138:48		
33	143:06			141:33	142:45	139:34	140:47		
34	145:04			143:31	144:28	141:32	142:45		
35	147:03					143:31	144:43		
36	149:01					145:28	146:41	145:48	146:40
37	150:59							147:27	148:39
38	152:57							149:25	150:37
39	154:55	153:21	154:33					151:23	152:35
40	156:53	155:19	156:31					153:21	154:33
41	158:51	157:17	158:29						
42	160:50	159:15	160:28	159:50	160:28	157:17	158:29		
43	162:48	161:14	162:26	161:13	162:26	159:15	160:28		
44	164:46			163:12	164:24	161:13	162:26		
45	166:44			165:10	166:22	163:12	164:24		
46	168:42			167:08	168:21	165:10	166:22		
47	170:40			169:06	169:24	167:08	168:21		
48	172:39					169:06	170:19		
49	174:37					171:04	172:14	171:04	172:16
50	176:35							173:00	174:14
51	178:33							175:00	176:13
52	180:31	178:56	180:09					176:58	178:11
53	182:29	180:54	182:07					178:57	179:29
54	184:27	182:53	184:05			181:53	182:07		
55	186:25	184:51	186:03	184:50	186:03	182:52	184:05		
56	188:23	186:49	187:40	186:48	187:59	184:50	186:03		
						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	TRANSPPOSITION & 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 ₂ O 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 H₂O 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 LIQH 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	26:30		4	B	2	B5
3	38:00	12	5	A	3	B5
4	51:00	13	6	B	4	B5
5	61:45	11	7	A	5	B6
6	75:55	14	8	B	6	B6
7	85:55	10	9	A	7	B6
8	98:08	12	10	B	8	B6
9	122:00	24	11	A	9	A9
10	146:00	24	12	B	10	A9
11	169:00	23	13	A	11	A9
12	179:38	11	15	B	12	A3
13	191:59	12	16	A	13	A3
14	203:30	12	17	B	15	A3
15	215:27	12	18	A	16	A3
16	226:35	11	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	12	23	B	21	A5
21	288:35	14	24	A	22	A5

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

TABLE 2-8

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

<u>REASON</u>	<u>FROM</u>	<u>TO</u>	<u>TOTAL</u>	<u>ULLAGE</u>
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	ΔV_T (FPS)	ULLAGE/ ΔV (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)

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

*END OF TAPE

TABLE 2-11
LM BURN SCHEDULE
(7/26)

BURN/ MNVR	GETI/ BURN TIME	ΔV_T (FPS)	ULLAGE/ ΔV (FPS)	REFSMAT	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
FLYBY			(docked)
PER+2	72:00	80:28:20.99	ABBRR-30
			(docked)
			ABBRR-30
TEI-4	76:50	87:12:24.45	
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.			
TEI-74	220:22	223:43:57.86	Complete P-30
NOM			
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 (TEI₇₄) is to EOM target ($\lambda = 158^\circ W$).
 - c. TEI₇₅ is also to EOM target ($\lambda = 158^\circ W$).

TABLE 2-12 (CONT)

2. Pass flyby early if pericyynthion 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 MCC₄.
5. TEI₄ assumes LOI and no DOI.
6. TEI₅ assumes DOI.
7. TEI₁₂ assumes no circ.
8. TEI₁₉ assumes circ but no LOPC.
9. TEI₄₅ assumes no LOPC.
10. TEI₅₂ assumes LOPC.
11. TEI₇₃ 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 45/EFH 131/ENH 224/EFH	ALPHERATZ FOMALHAUT BETA ARIETIS MARKAB
236:20	57/EFH 50/ENH 13/EFH	BELLA TRIX POLLUX CAPELLA
251:10	50/ENH 11/EFH 13/EFH	POLLUX ALDEBARAN CAPELLA
263:15	142/EFH 11/EFH 13/EFH	ZETA TAURI ALDEBARAN CAPELLA
267:48	60/EFH 13/EFH 21/ENH	EL NATH CAPELLA ALPHARD
273:05	60/EFH 13/EFH 21/ENH	EL NATH CAPELLA ALPHARD
276:00	60/EFH 13/EFH 21/ENH	EL NATH CAPELLA ALPHARD
289:00	40/MFH 221/MFH 223/MNH 224/MNH 126/MNH	ALTAIR DELTA CAPRICORNI BETA PEGASI MARKAB GAMMA PEGASI
292:02	126/MNH 120/MFH 40/MFH	GAMMA PEGASI ALPHA GRUIS 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				
GETI N33	HRS	+	0	0		
	MIN	+	0	0	0	
	SEC	+	0			
NB4 LOCAL VERT	ΔVX					
	ΔVY					
	ΔVZ					
GETI CSI N11	HRS	+	0	0		
	MIN	+	0	0	0	
	SEC	+	0			
GETI TPI N37	HRS	+	0	0		
	MIN	+	0	0	0	
	SEC	+	0			

L

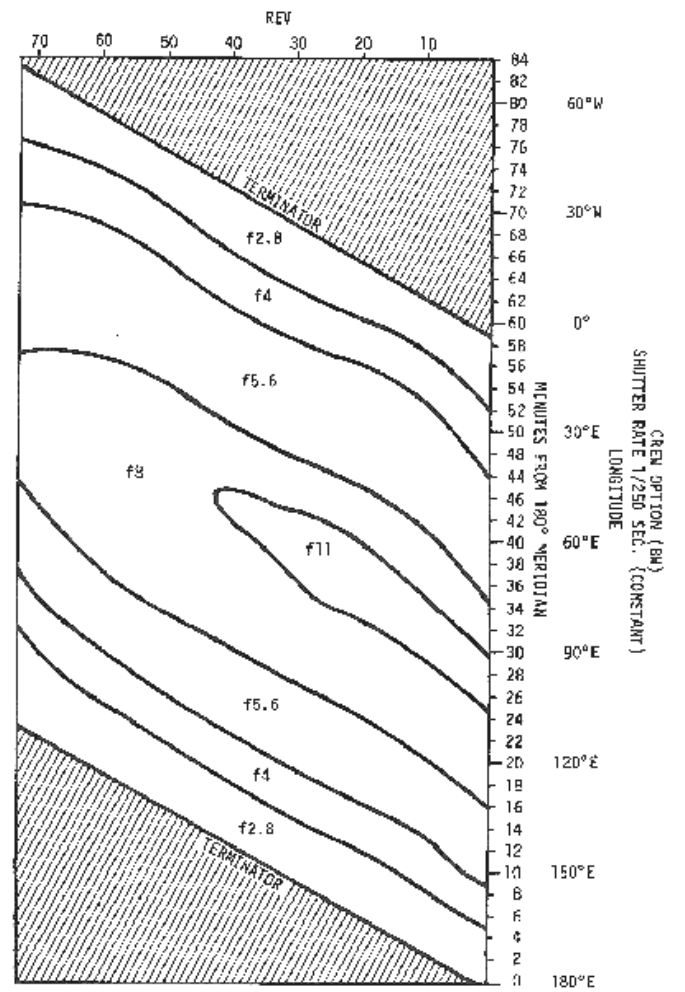
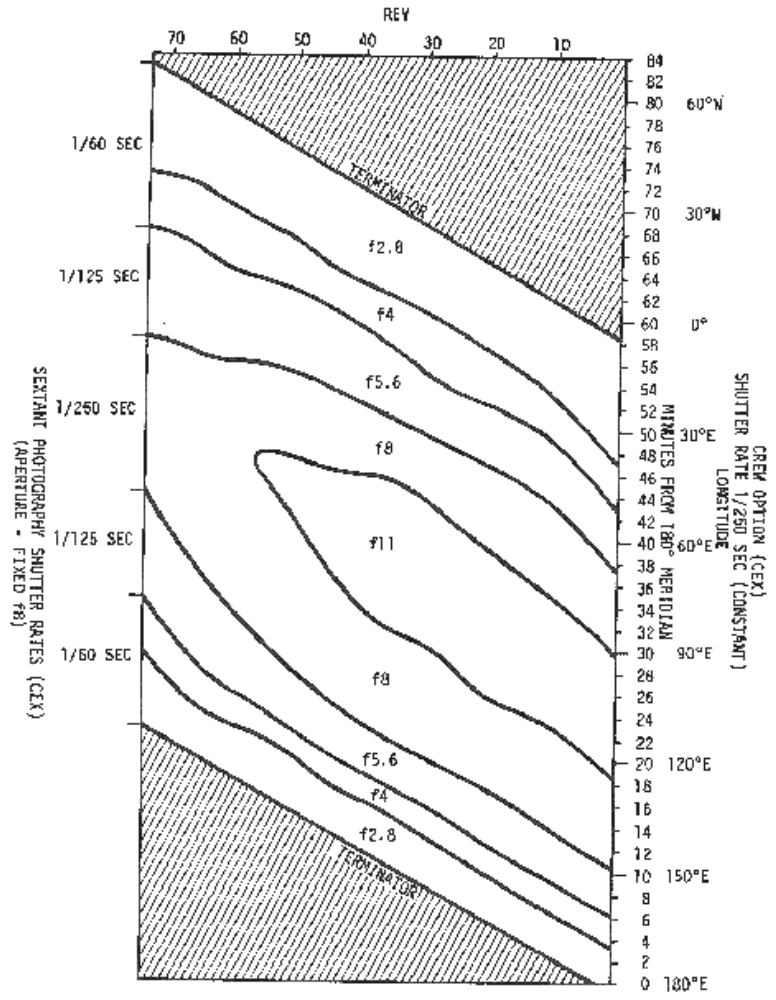
M

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

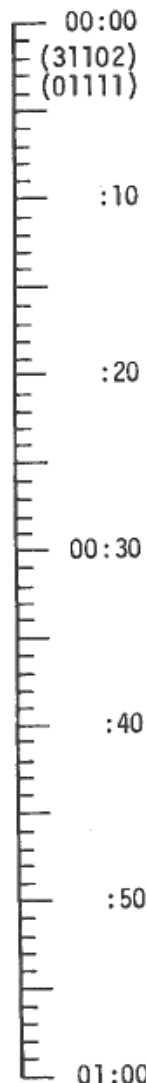


FLIGHT PLAN

MCC-H

0834 CDT

NOTES



M
S
F
N

C
Y
I

T
O
R
C

LIFT-OFF JULY 26, 1971 CSM LAUNCH CHECKLIST

SECO
INSERTION AND SYSTEM CHECKS PAGE L/2-11

P52 IMU REALIGN
OPTION 3 REFSMMAT
(LAUNCH ORIENT)

REPORT: GYRO TORQUING ANGLES

P52 IMU REALIGN

N71: _____

N05: _____

N93: _____

X _____

Y _____

Z _____

GET _____

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 RE-
SPECTIVELY FOR LAUNCH
THROUGH TD&E, AND ALL
SPS BURNS.

UPDATE TO CSM
Z TORQUING ANGLE

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

MCC-H

0934 CDT

FLIGHT PLAN

NOTES

01:00
 (31102)
 (01111)
 :10
 :20
 01:30
 :40
 :50
 02:00



M
S
F
N

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

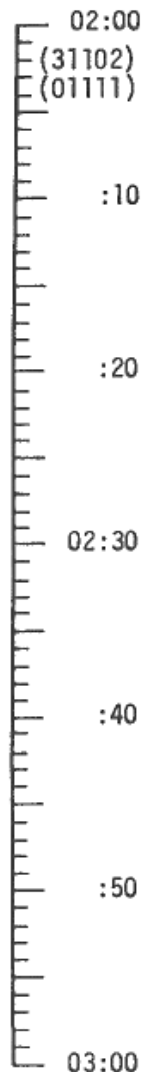
FLIGHT PLANNING BRANCH

FLIGHT LAN

MCC-H

1034 CDT

NOTES



T
C
R
O

A
R
I
A

A
R
I
A

T
H
A
W

TLI, NOMINAL & MANUAL CHECKLIST PAGE L/2-30

TB6 02:40:20

GO/NO-GO FOR TLI

TLI

POO CMC IDLING
 V66 SET CSM S.V. INTO LM S.V.
 TLI BURN STATUS REPORT
 CDR - TRANS TO CENTER COUCH, CMP - LEFT COUCH
 LMP - RIGHT COUCH

TIG: 02:49:58
 BT: 5 MIN 56 SEC
 ΔVT: 10421 FPS

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

GO/NO-GO FOR TLI

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

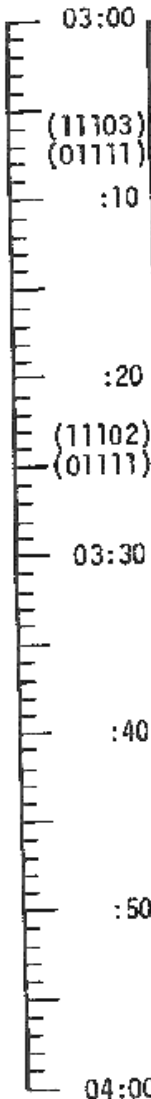
NOTES

MCC-H

1134 CDT

DUMP DSE

GO/NO-GO FOR T&D



M
S
F
N

T
V

L

WASTE STOWAGE VENT - CLOSED PAGE L/2-26
 NORMAL SC/BOOSTER SEPARATIONS PAGE L/3-1
 DIRECT O₂ VLV - OPEN, UNTIL CABIN IS 5.7 PSI, THEN CLOSE
 V48 (11103)(01111)

S-IVB MNVRS TO SEP ATT 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)

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, CAM-
 ERA 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

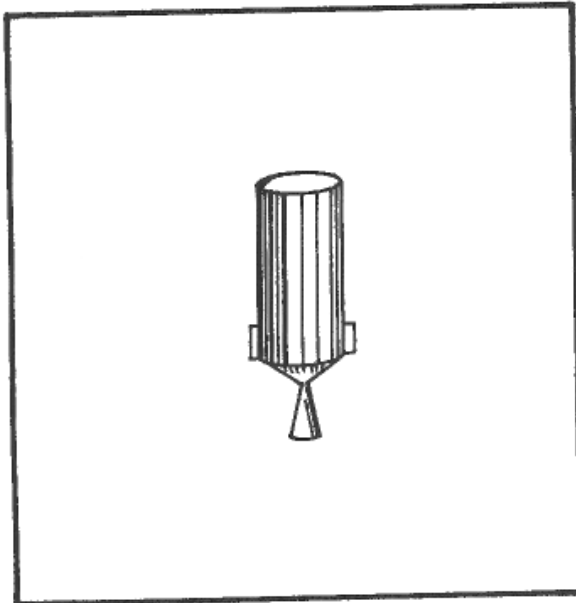
FLIGHT MANAGING BRANCH

THIS PAGE INTENTIONALLY BLANK

FLIGHT PLAN

GET 04:39

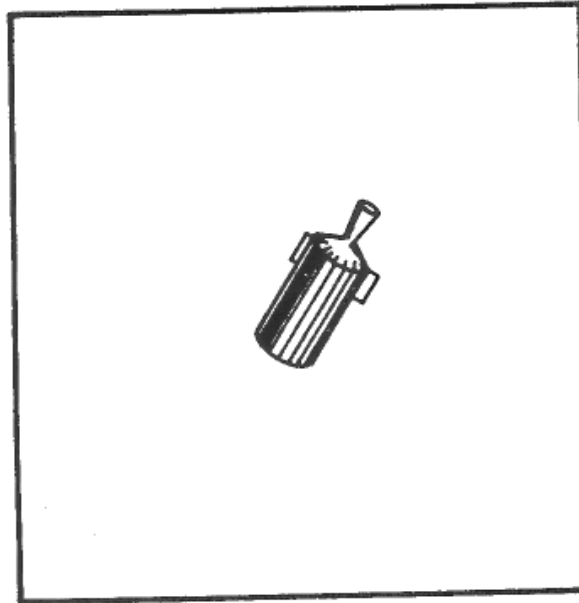
FOV 5°



S-IVB APS EVASIVE INITIATION

GET 05:00

FOV 1°



S-IVB LOX DUMP INITIATION

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
S-IVB NON-PROPULSIVE VENT COMPLETE (04:10:54)

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

TLI CUTOFF +
1 HR 20 MIN

:10

PHOTOGRAPH LM EJECTION

CSM/LM EJECTION

TIG: 04:16
BT: 3 SEC
 ΔVT : 0.4 FPS
ULLAGE: NONE
ORBIT: N/A

POO, 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/ID THERMAL SHROUD

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

GO FOR S-IVB YAW
MNVR INITIATION

04:30

S-IVB YAW MNVR 04:29 (GROUND COMMAND)

GO FOR S-IVB YAW MNVR
INDICATES THAT THE
S-IVB IS IN THE CREW
FIELD OF VIEW AND
ADEQUATE SPACECRAFT
SEPARATION HAS BEEN
ACHIEVED.
THE S-IVB YAW MNVR
WILL BE PERFORMED
NOMINALLY AT LM
EJECTION +13 MIN

GO/NO-GO FOR S-IVB
EVASIVE BURN

:20

CHARGE BATTERY B

REPORT: GO FOR S-IVB EVASIVE BURN

S-IVB APS EVASIVE BURN 04:39 (GROUND COMMAND)

DUMP DSE

:40

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

S-IVB MNVRS TO PROPELLANT DUMP ATT (04:49)
REPORT: LM/CM ΔP

S-IVB CONTINUOUS H₂ VENT-ON (04:56)

EVASIVE BURN ΔV
~ 9.4 FPS

05:00

M
S
F
N

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

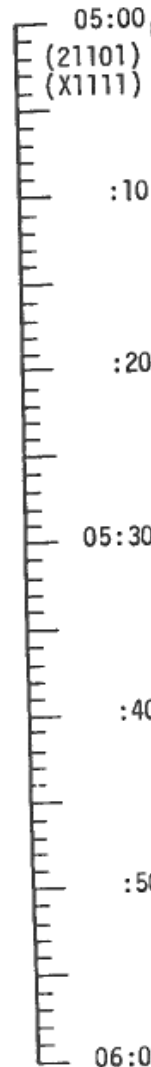
FLIGHT PLAN

MCC-H

1334 CDT

NOTES

UPLINK TO CSM
DESIRED ORIENTATION
(PTC)
ZERO TRUNNION BIAS



S-IVB LOX DUMP (05:00)

LOX DUMP $\Delta V \sim 28$ FPS

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

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

STARS _____,
SA _____,
TA _____,

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

P52 IMU REALIGN
OPTION 3 REFSMMAT
(LAUNCH ORIENT)

REPORT: GYRO TORQUING ANGLES

P52 IMU REALIGN
OPTION 1 PREFERRED
(PTC ORIENT)

S-IVB APS MCC-1
GET $\sim 05:45$
 $\Delta V \sim 30$ FPS

SC CONT - CMC
BMAG (3) - RATE 2

P37 PAD ASSUMES
NO MCC-1

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

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

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

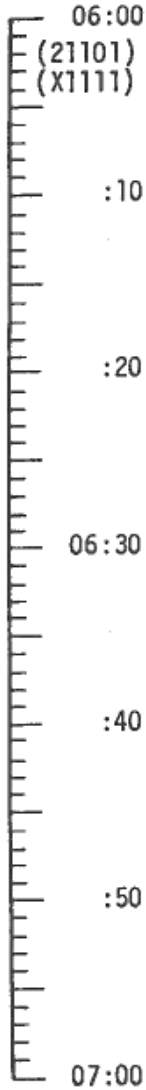
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1434 CDT

NOTES



M
S
F
N

EAT PERIOD

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
 07:00
 (21101)
 (X1111)
 :10
 :20
 07:30
 :40
 :50
 08:00

M
S
F
N

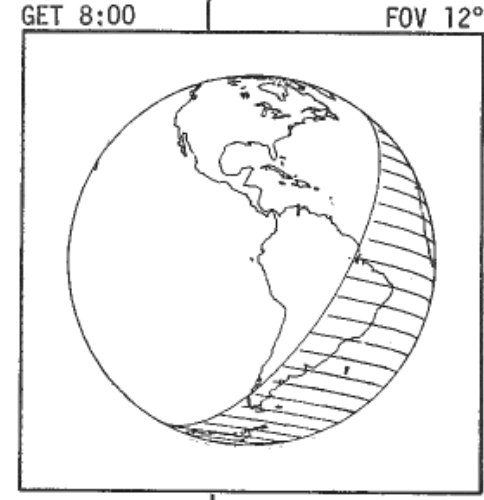
CSM SYSTEMS CHECKLIST

DEACTIVATE PRIMARY EVAP PAGE S/1-13

CSM G&C CHECKLIST

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

NOTES



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

MCC-H

1634 CDT

FLIGHT PLAN

NOTES

08:00
 (21101)
 (X1111)
 :10
 :20
 08:30
 :40
 :50
 09:00

M
S
F
N

V49 MNVR TO OPTICS CALIBRATION ATTITUDE (08:06)
 (210,339,330)

P23 CISLUNAR NAVIGATION
 OPTICS CALIBRATION STAR N70 (00001)
 P00

V49 MNVR TO SIGHTING ATTITUDE (08:20)
 (221,327,330)
 V67 (+80000) (+00070) (+00003)

P23 CISLUNAR NAVIGATION
 5 MARKS ON EACH STAR, UPDATE STATE VECTOR
 1. N70 (00001) (00000) (00110)

2. N70 (00045) (00000) (00120)

3. N70 (00000) (00000) (00110)
 N88 (+82401)(+44316)(+35301)

EARTH DISTANCE
 ~ 37,581 NM

LOAD W MATRIX

001 ALPHERATZ
 (ENH)

045 FOMALHAUT
 (EFH)

131 BETA ARIETIS
 (ENH)

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

NOTES



(21101)
(X1111)

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

224 MARKAB (EFH)

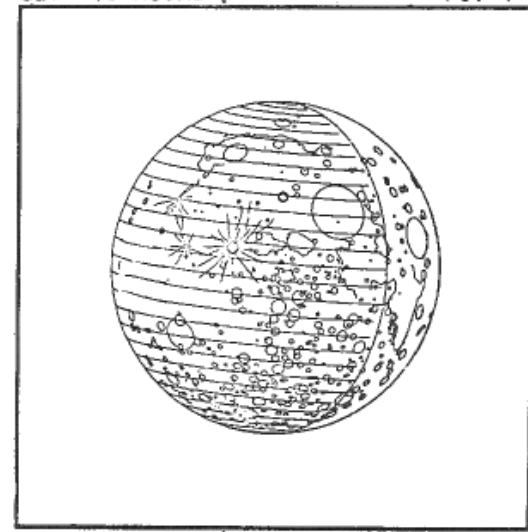
P00
V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(210,339,330)
P23 CISLUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00001)

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

M
S
F
N

GET= 10 HOURS

FOV=1°



UV PHOTOS

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
1 2 FRAMES, FILTER 2, EXP TIME 20 SEC (Another for
CHANGE SHUTTER TO 1/250 2 secs
2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500 exp)
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 # _____

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

for
2 secs
exp)
ch@9:23:00

THIS PAGE INTENTIONALLY BLANK

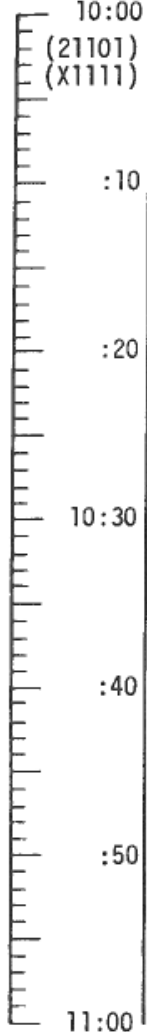
FLIGHT PLAN

MCC-H

1834 CDT

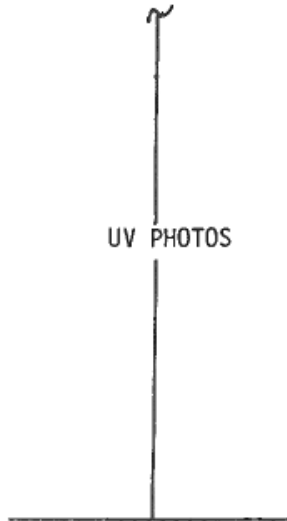
NOTES

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



M
S
F
N

UV PHOTOS



EARTH DISTANCE
~ 51,571 NM

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

FLIGHT PLAN

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

NOTES



M
S
F
N

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENT

REPORT: GYRO TORQUING ANGLES

WASTE STORAGE 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

O₂ FUEL CELL PURGE
WASTE WATER DUMP

TLI CUTOFF +9 HR

~~MCC-1~~
V66 SET CSM S.V. INTO LM S.V.
BURN STATUS REPORT

P52 IMU REALIGN

N71: _____

N05: _____

N93: _____

X _____

Y _____

Z _____

GET _____

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

MCC-1 CANCELLED

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

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

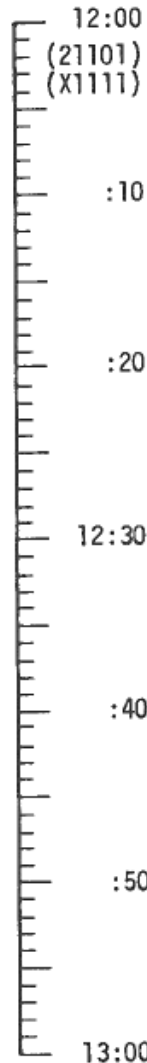
FLIGHT PLAN

MCC-H

2034 CDT

NOTES

UPDATE TO CSM
QUADS TO ENABLE
FOR PTC SPINUP



M
S
F
N

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)

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

PTC

EARTH DISTANCE
~ 57,281 NM

DAP LOAD STATUS
(21101)(X1111)

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

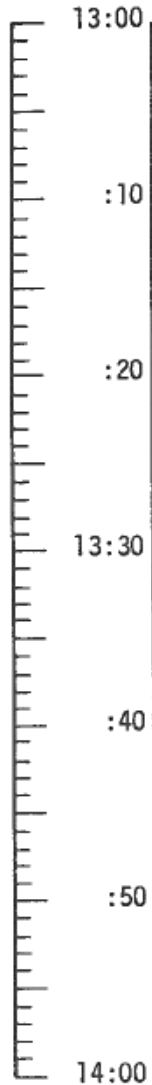
FLIGHT PLANNING BRANCH

FLIGHT PLAN

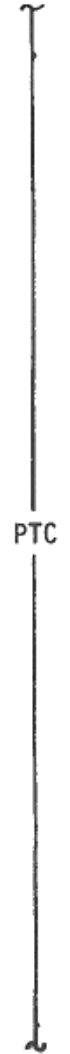
MCC-H

2134 CDT

NOTES



H₂ HEATERS 1,2&3 (3) - AUTO
 O₂ HEATERS 1&2 (2) - OFF
 O₂ HEATERS 3 (1) - AUTO
 CDR AND CMP DOFF BIOMED HARNESSSES



DAP LOAD STATUS
 (21101) (X1111)

UPDATE TO CSM
 P37 PADS (LAUNCH
 +25,35,45, & 60)

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



M
S
F
N

CSM SYSTEMS CHECKLIST
PRE-SLEEP CHECKLIST
COMM - OMNI

EAT PERIOD

PAGE S/1-26

REST PERIOD
(10 HOURS)

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

PTC

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

MCC-H

0034 CDT

FLIGHT PLAN

NOTES

16:00
:20
:40
17:00
:20
:40
18:00

M
S
F
N

REST PERIOD
(10 HOURS)

PTC

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

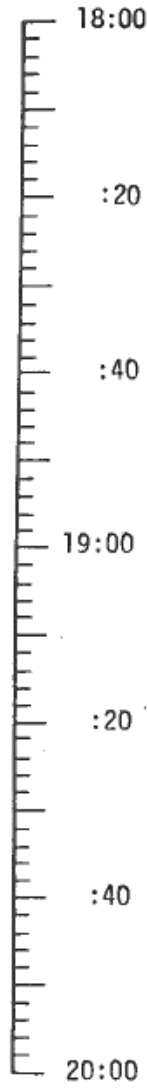
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0234 CDT

NOTES



M
S
F
N

REST PERIOD
(10 HOURS)

PTC

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

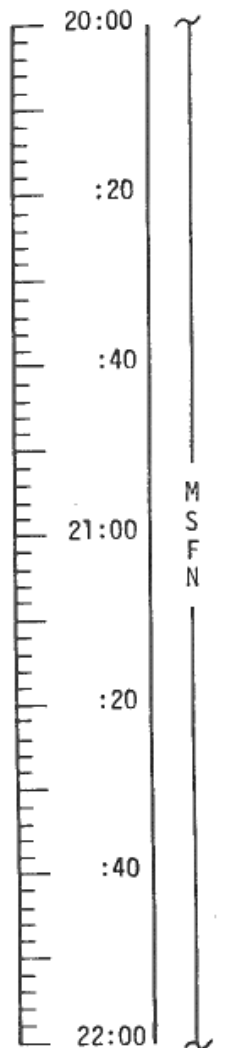
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0434 CDT

NOTES



REST PERIOD
(10 HOURS)

PTC

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

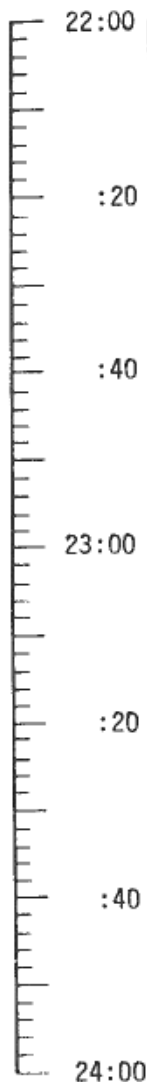
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0634 CDT

NOTES



M
S
F
N

REST PERIOD
(10 HOURS)

PTC

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

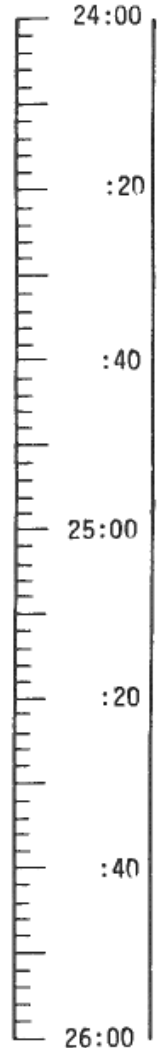
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0834 CDT

NOTES



M
S
F
N

REST PERIOD
(10 HOURS)

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST
~~CHARGE BATTERY A~~ ch 25:46:51 (retrospective)
 H₂ HEATERS 1&2 (2) - OFF

PAGE S/1-26

EAT PERIOD

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

UPDATE TO CSM
CONSUMABLES
FLIGHT PLAN

REPORT: LM/CM ΔP

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

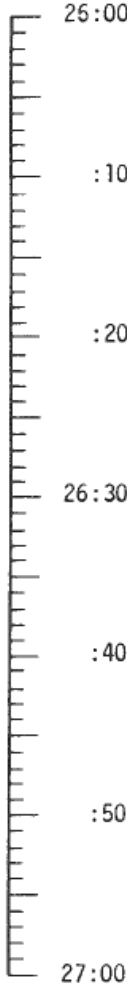
FLIGHT PLAN

MCC-H

1034 CDT

NOTES

UPDATE TO CSM
HGA ANGLES FOR
FILM CYCLE



M
S
F
N

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

CDR DON BIOMED HARNESS
LMP DOFF BIOMED HARNESS

PTC

DAP LOAD STATUS
(21101)(X1111)

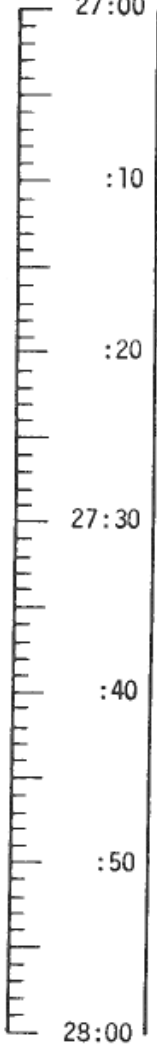
PS2 IMU realign OPT 3 (ch at 25:46:51)

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

MCC-H

1134 CDT
27:00



M
S
F
N

FLIGHT PLAN

ch @ 25:47:31

PTC

NOTES

DAP LOAD STATUS
(21101)(X1111)

CSM G&C CHECKLIST

ΔV TEST & NULL BIAS CHECK
REPORT: BIAS

PAGE G/2-5

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

FLIGHT PLAN BRANCH

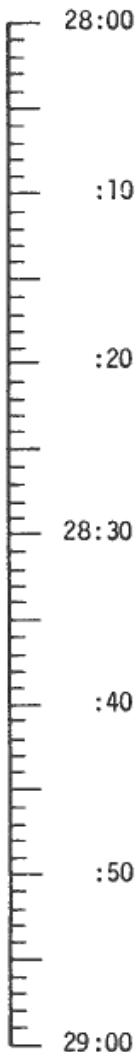
FLIGHT PLAN

MCC-H

1234 CDT

UPLINK TO CSM
CSM SV and YERB 66

UPDATE TO CSM
SPS TEST MNVR PAD



M
S
F
N

H₂ Purge Line Heaters - ON
EXIT GAN 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 MTW - OFF (VERIFY)
MAP CAMERA ON - STANDBY
H₂O₂ FUEL CELL PURGE
WASTE WATER DUMP

MOVED FROM 30:30
ch @ 25:53:01

H₂ PURGE LINE HEATERS - OFF

SPS BURN TEST
Y66, 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

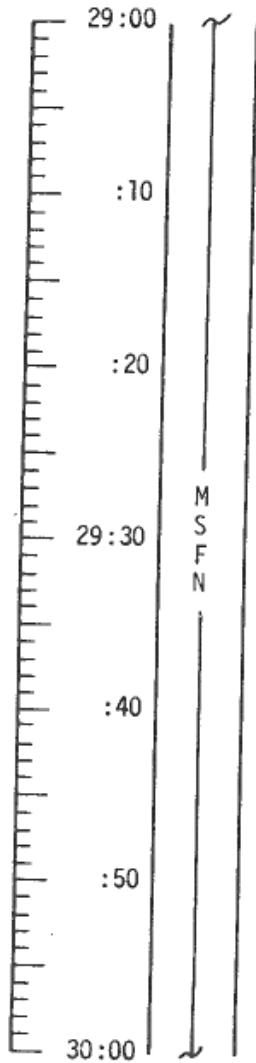
MCC-H

1334 CDT

NOTES

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

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



PTC

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

THIS PAGE INTENTIONALLY BLANK

FLIGHT PLAN

MCC-2
BURN TABLE

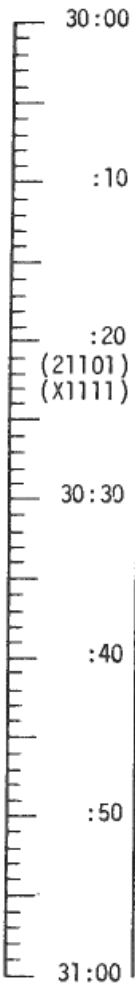
P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10"/SEC 11 MIN 11	110" 11 MIN 11	11 11 11	IF 2 FPS, TRIM X AXIS 10 0 11 11 : 11, 11 11 11

FLIGHT PLAN

MCC-H

1434 CDT

NOTES



P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENT)

REPORT: GYRO TORQUING ANGLES

~~TERMINATE BATTERY CHARGE A IF MCC-2 REQUIRED~~

~~H₂ PURGE LINE HEATERS - ON~~

~~EXIT C&N PTC PAGE 6/8-3~~

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

~~H₂ & O₂ FUEL CELL PURGE~~

~~WASTE WATER DUMP~~ *(ch@) (delete; read up @)*
SEVEN LINES MOVED TO 28:20 *(25:53:01) (25:54:55)*

~~H₂ PURGE LINE HEATERS - OFF~~

MCC-2

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

DAP LOAD STATUS
(21101)(X1111)

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

PTC

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

TLI CUTOFF +28 HR

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

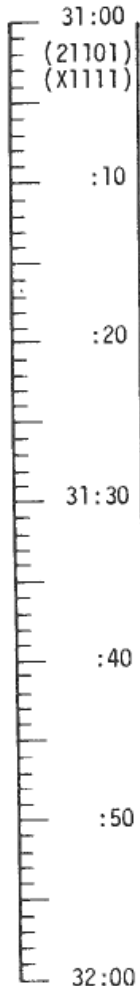
FLIGHT PLANNING BRANCH

MCC-H

1534 CDT

FLIGHT PLAN

NOTES



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 $\Delta P < 2.7$ PSID, TUNNEL VENT VLV - VENT
 UNTIL $\Delta P > 2.7$ PSID

BURN STATUS REPORT

X X	<input type="checkbox"/>	•	ΔTIG
X X		•	BT
<input type="checkbox"/>		•	V_{gx}
TRIM			
X X X			R
X X X			P
X X X			Y
<input type="checkbox"/>		•	V_{gx}
<input type="checkbox"/>		•	V_{gy}
<input type="checkbox"/>		•	V_{gz}
<input type="checkbox"/>		•	ΔV_c
X X X			FUEL
X X X			OX
X X X			UNBAL

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

THIS PAGE INTENTIONALLY BLANK

FINAL(7/26)

6/21/71

3-37

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 & 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 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

FINAL (7/26)

6/21/71

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 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
1 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

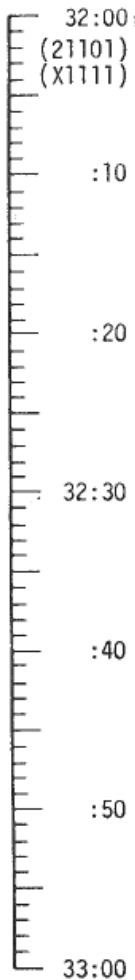
3-38

MCC-H

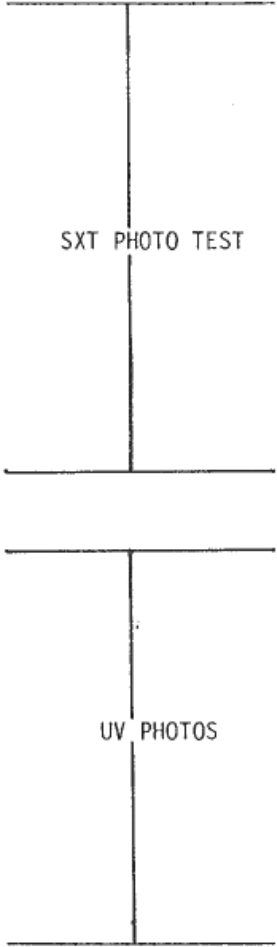
1634 CDT

FLIGHT PLAN

NOTES



M
S
F
N



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

MCC-H

1734 CDT

FLIGHT PLAN

NOTES

33:00
 (21111)
 (X1111)
 :10
 :20
 33:30
 :40
 :50
 34:00

MSFN
 TITV

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 PLANNING BRANCH

FLIGHT PLAN

F'IG T PLAN

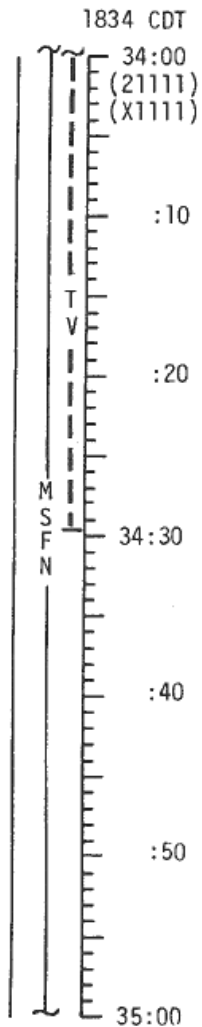
CSM

CMP

REPORT: DOCKING
TUNNEL INDEX ANGLE

LM

MCC-H



CDR

LMP

ACTIVATION CHECKLIST

PAGE 1-1

	IVT TO LM
IVT TO LM	ENTRY STATUS CHECK
HOUSEKEEPING	HOUSEKEEPING

UPDATE TO CSM
LOI -5 HR FLYBY

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
CMP**

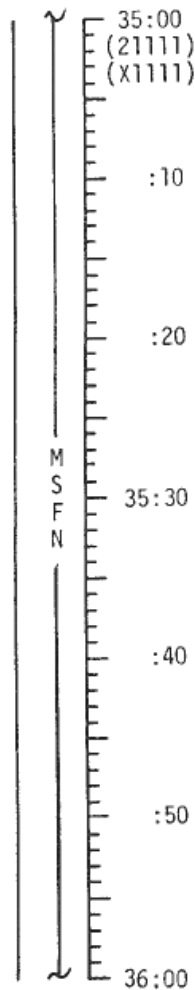
LM

MCC-H

1934 CDT

CDR

LMP



CSM POWER TO LM-OFF
(AT LMP REQUEST)
GET (: :)

CSM POWER TO LM - ON
(AT LMP REQUEST)
GET (: :)

HOUSEKEEPING	HOUSEKEEPING
COMM ACTIVATION	COMM ACTIVATION
	S-BAND/VHF SIMPLEX VOICE TEST
OPS CHECKOUT	OPS CHECKOUT
COMM DEACTIVATION	COMM DEACTIVATION

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

FLIGHT PLAN

MCC-H

2034 CDT

36:00

(21111)

(X1111)

:10

(21101)

(X1111)

:20

36:30

:40

:50

37:00

M
S
F
N

UPDATE TO CSM
QUADS TO ENABLE
FOR PTC SPINUP

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)

NOTES

DAP LOAD STATUS
(21101)(X1111)

PTC

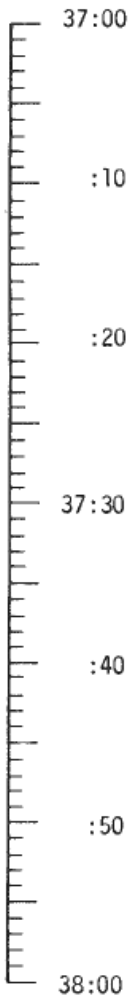
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	36:00 - 37:00	2/TLC	3-43

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2134 CDT



M
S
F
N

CMP DON BIOMED HARNESS
CDR DOFF BIOMED HARNESS

CREW EXERCISE PERIOD

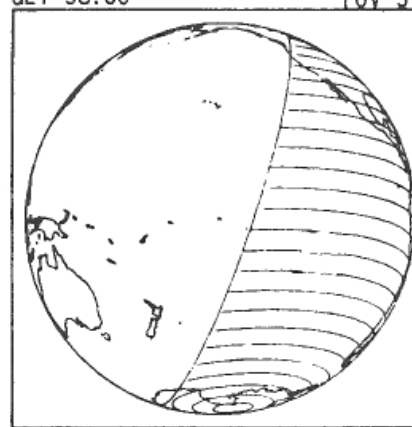
LiOH CANISTER CHANGE
(5 INTO A, 3 INTO B5)

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

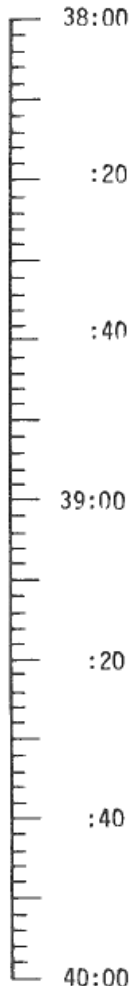
FLIGHT PLAN ENGINEERING BRANCH

MCC-H

2234 CDT

FLIGHT PLAN

NOTES



M
S
F
N

CSM SYSTEMS CHECKLIST
PRE-SLEEP CHECKLIST
COMM-OMNI

EAT PERIOD

PAGE S/1-26

REST PERIOD
(9 HOURS)

PTC

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

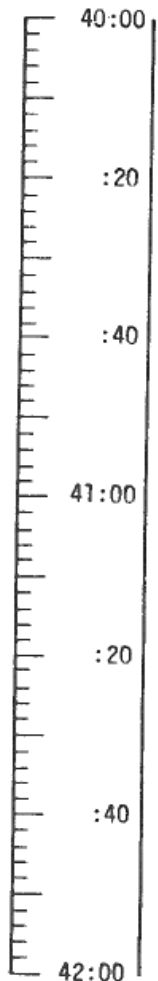
FLIGHT PLANNING BRANCH

MCC-H

0034 CDT

FLIGHT PLAN

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

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

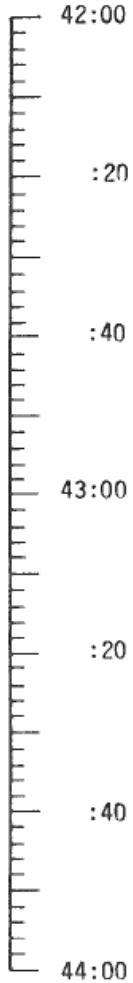
FLIGHT PLAN TRAINING BRANCH

FLIGHT PLAN

MCC-H

0234 CDT

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

DAP LOAD STATUS
(21101)(X1111)

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

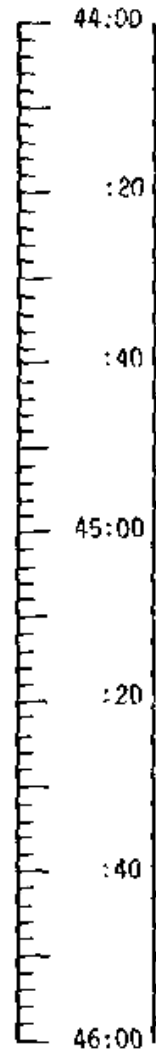
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0434 CDT

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

DAP LOAD STATUS
(21101)(X1111)

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

FLIGHT PLAN TRAINING BRANCH

FLIGHT PLAN

MCC-H

0634 CDT

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

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

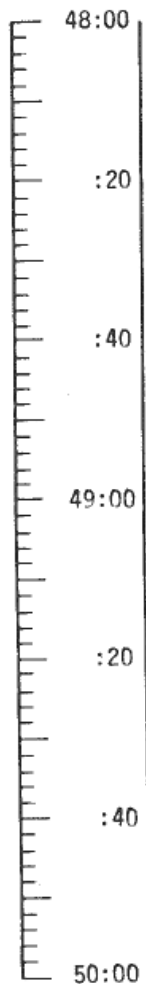
FLIGHT PLANNING BRANCH

MCC-H
 UPDATE TO CSM
 CONSUMABLES
 FLIGHT PLAN

0834 CDT

FLIGHT PLAN

NOTES



CSM SYSTEMS CHECKLIST
 POST-SLEEP CHECKLIST

PAGE S/1-26

EAT PERIOD

LMP DON BIOMED HARNESS
 CMP DOFF BIOMED HARNESS

CHARGE BATTERY B

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

M
S
F
N

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

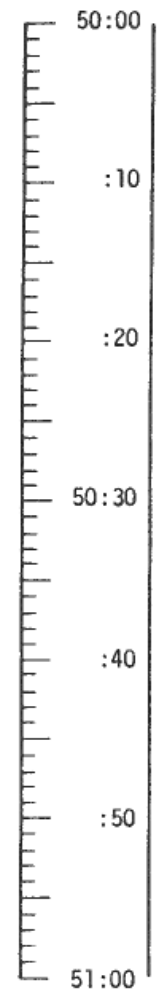
FLIGHT PLANNING BRANCH

MCC-H

1034 CDT

FLIGHT PLAN

NOTES



M
S
F
N

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

PTC

DAP LOAD STATUS
 (21101)(X1111)

DURING FIRST 50
 MINUTES ONE CREW-
 MAN WILL FACE THE
 DIRECTION OF THE
 -X AXIS. DURING
 THE LAST 10 MINUTES
 HE WILL FACE THE
 DIRECTION OF THE
 +X AXIS. EXPERI-
 MENT WILL BE TER-
 MINATED ON MSFN
 CUE.

REPORT: DOFF EYESHIELDS (GET __:__:__)

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

NOTES

51:00

LiOH CANISTER CHANGE
(6 INTO B, 4 INTO B5)

DAP LOAD STATUS
(21101)(X1111)

:10

:20

51:30

M
S
F
N

PTC

:40

ACTUAL
START
OF LIGHT RUSH
EXPT →

:50

52:00

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

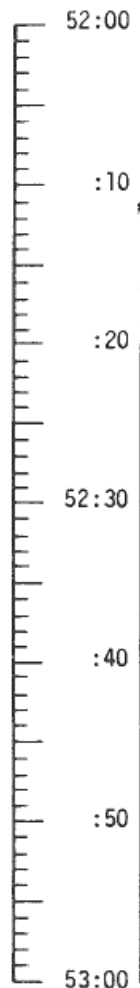
FLIGHT PLANNING BRANCH

MCC-H

1234 CDT

FLIGHT PLAN

NOTES



M
S
F
N

CREW EXERCISE PERIOD

PTC

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

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~~

MAPPING CAMERA ON - STBY/tb-GRAY

ch4 @ 49:35:59

OMNI B

SECURE HGA, TRACK-MAN HGA P -52, Y 270

S-BD AUX TV - OFF (CTR)

PCM BIT RATE - LOW

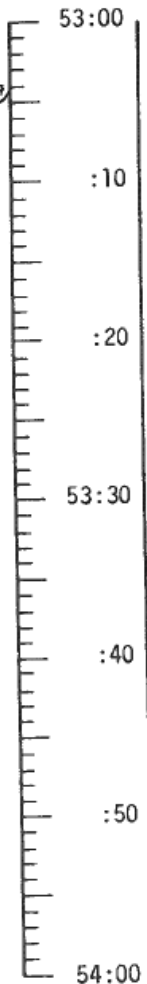
FLIGHT PLAN

MCC-H

1334 CDT

UPLINK TO CSM
LIFT-OFF TIME
(IF REQUIRED) } NOT READ
(52-6679)

UPDATE TO CSM
T EPHEM
(IF REQUIRED)



M
S
F
N

SYNCHRONIZE MISSION TIMER TO CMC CLOCK (IF REQUIRED)
V05NOTE, 1706E

DAP LOAD STATUS
(21101)(X1111)

T EPHEM UPDATE	
OID	LOAD B
03	-----
04	-----
05	-----

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

PTC

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

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

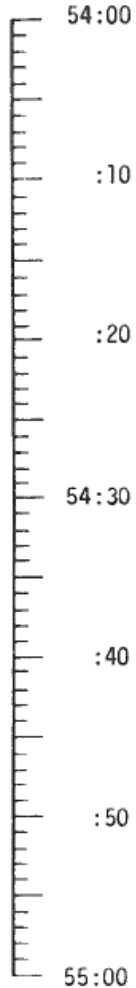
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1434 CDT

NOTES



M
S
F
N

EAT PERIOD

PTC

DAP LOAD STATUS
(21101)(X1111)

EARTH DISTANCE
~ 173,355 NM

IF LM/CM DP < 2.7 psid, LM TUNNEL VENT VALVE, PANEL 12,
VENT UNTIL DP > 2.7 psid

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 PLANNING BRANCH

FLIGHT PLAN

UV PHOTOS - CISELUNAR 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 $<0.2^\circ/\text{SEC}$ IN ALL AXES

REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE AND CAMERA
2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
1 ~~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) (*takeo ?*)
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

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

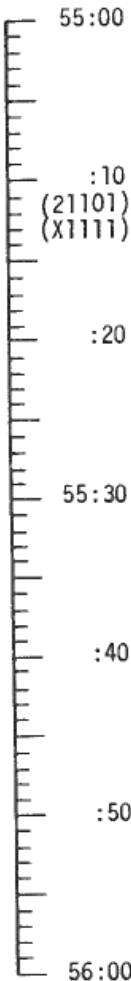
cb SCI EQUIP SEB 1 & 2 - CLOSE (VERIFY)
NON ESS BUS - MNA (VERIFY)
cb SM SECTOR 1 SM/AC2 (3) - CLOSE (VERIFY)
SM SECTOR 1 SM/AC PWR - ON (UP)
PANORAMIC CAMERA POWER - OFF (VERIFY)
PANORAMIC CAMERA MODE - STBY
PANORAMIC CAMERA SELF TEST - HTRS

FLIGHT PLAN

MCC-H

1534 CDT

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



P52 IMU REALIGN
OPTION 3 REFSMMAT
(PTC ORIENT)

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

STOP PTC @ ROLL 50° HGA ANGLES: PITCH -48, YAW + 82
MAPPING CAMERA TO STBY MODE chd @ 49:34:51
PANORAMIC CAMERA TO HTRS MODE
chd @ 49:37:22

UV PHOTOS

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

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

MCC-H

1634 CDT

FLIGHT PLAN

NOTES

56:00
(21101)
(X1111)

:10

:20

56:30

:40

:50

57:00

M
S
F
N

- ~~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~~
- O₂ FUEL CELL PURGE
- WASTE WATER DUMP

chd @ 49:37:51

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

EARTH DISTANCE
~ 177,000 NM

DIRECT O₂ OPEN UNTIL CABIN PRESSURE EQUALS 5.7 psia
ch @ 50:02:03

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

MCC-3

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

chd @ 49:38:16

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

CSM SYS CHMLIST IVT TO LM PAGE 5/2-1 ch @ 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

LOI - 22 HR

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

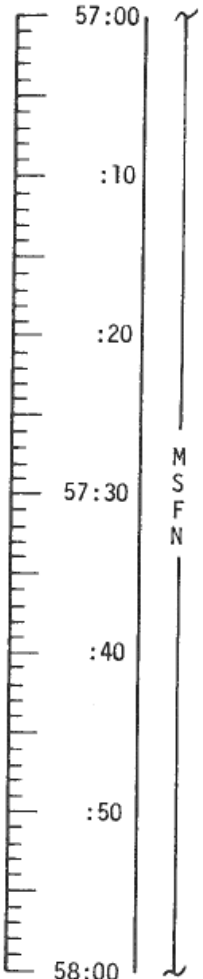
MCC-H

1734 CDT

FLIGHT PLAN

NOTES

UPDATE TO CSM
QUADS TO ENABLE
FOR PTC SPINUP



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-T
START AT COUCH CONFIGURATION

ch@d 49:42:54
moved to 56:50

M
S
F
N

PTC

S-BND AUX TV - SCIENCE PAN CAMERA PWR - ON

LM HOUSEKEEPING ch@d 49:49:38 (5 MIN/OFF)

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

S-BND AUX TV - OFF

CSM - PROCEED WITH
PTC ACTIVATION

about here

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

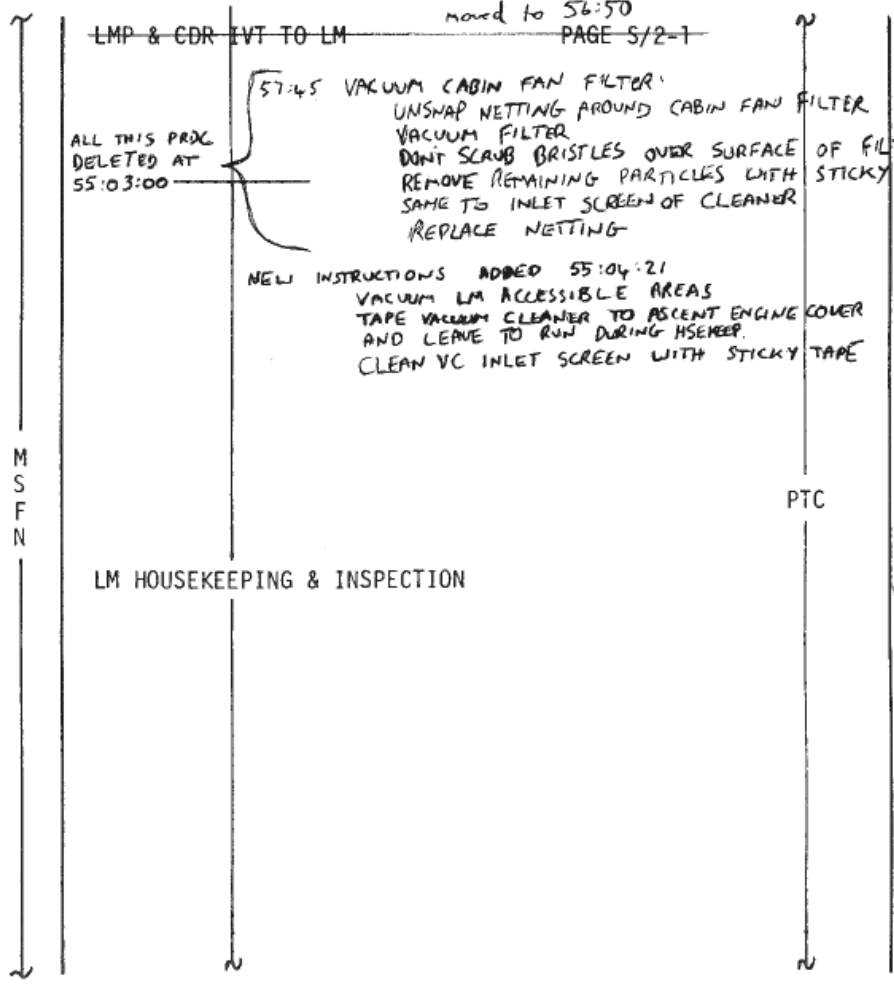
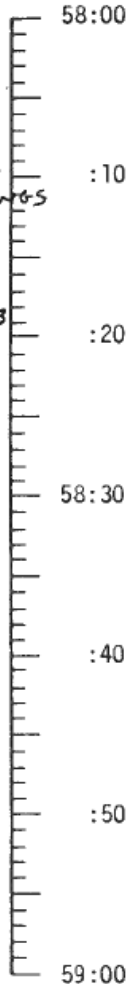
FLIGHT PLAN

MCC-H

1834 CDT

NOTES

Note given up at 50:01:02
 FOR SUBSEQUENT P23 SIGHTINGS
 REDUCE TRIM TO < 10°
 BEFORE ZEROING OPTICS
 ALWAYS DO OPTICS CAL
 AFTER OPTICS ZERO IN P23



DAP LOAD STATUS
 (21101)(X1111)

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

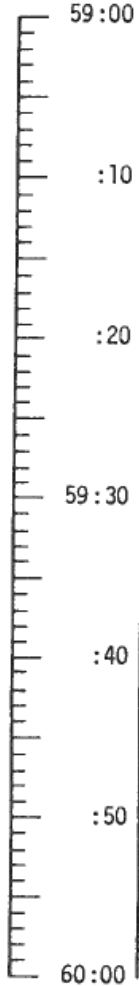
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1934 CDT

NOTES



M
S
F
N

LM HOUSEKEEPING & INSPECTION

PTC

LMP & CDR IVT TO CSM & CLOSE LM HATCH
 INSTALL PROBE, DROGUE AND CM HATCH
 LM TUNNEL VENT VALVE - LM/CM ΔP

DAP LOAD STATUS
(21101)(X1111)

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

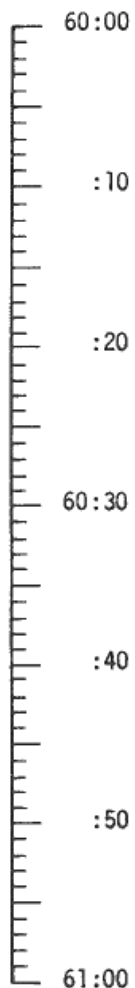
FLIGHT PLAN - LUNAR LANDING BRANCH

FLIGHT PLAN

MCC-H

2034 CDT

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



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

ch@ 49:58:10
60:00 after S-BAND 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

M
S
F
N

P
T
C

NOTES

DAP LOAD STATUS
(21101)(X1111)

further ch @ 59:48:56
60:00 S-BAND AUX TV - SCIENCE
PAN CAM PLUR - ON (FOR 5 min)/OFF
WAIT FOR MSFN @
PAN CAM SELF TEST - OFF
MAP CAM, ON - OFF
S-BAND AUX, TV - OFF

FOR THIS TASK
HGA P₁-30 Y₉₀

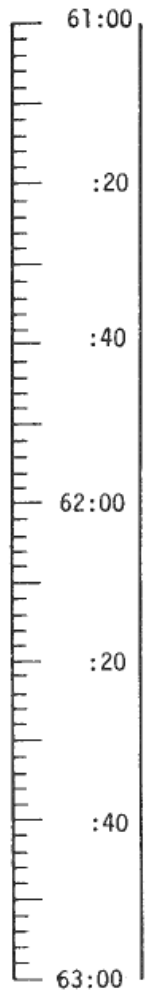
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	60:00 - 61:00	3/TLC	3-65

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2134 CDT



M
S
F
N

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

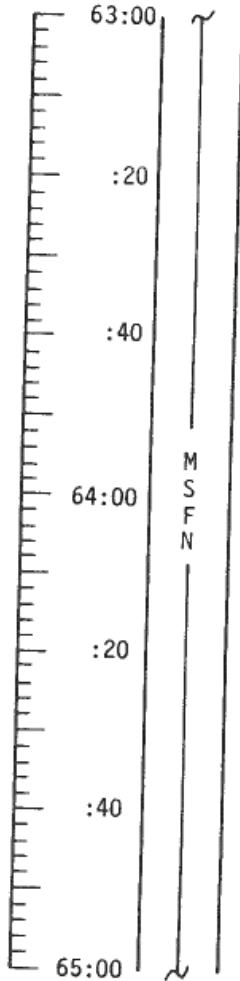
FLIGHT PLANNING BRANCH

MCC-H

2334 CDT

FLIGHT PLAN

NOTES



REST PERIOD
(8 HOURS)

PTC

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

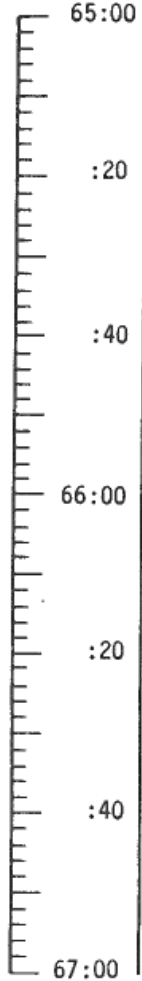
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0134 CDT

NOTES



M
S
F
N

REST PERIOD
(8 HOURS)

PTC

DAP LOAD STATUS
(21101)(X1111)

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

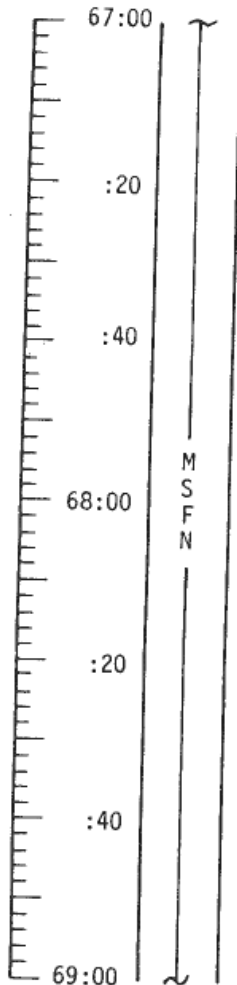
FLIGHT PLAN TRAINING BRANCH

MCC-H

0334 CDT

FLIGHT PLAN

NOTES



REST PERIOD
(8 HOURS)

PTC

DAP LOAD STATUS
(21101)(X1111)

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

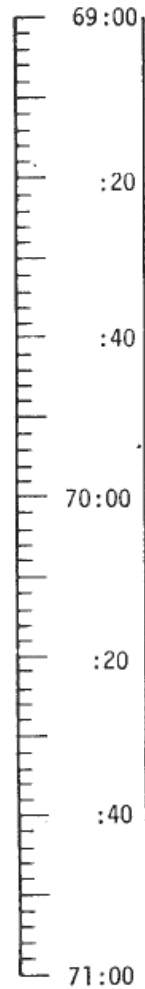
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0534 CDT.

NOTES



M
S
F
N

REST PERIOD
(8 HOURS)

CSM SYSTEMS CHECKLIST
POST-SLEEP CHECKLIST

PAGE S/1-26

EAT PERIOD

DAP LOAD STATUS
(21101)(X1111)

PTC

CSM CONSUMABLES UPDATE			
GET:	_____	:	_____
RCS TOTAL	_____		
QUAD A	_____	B	_____
	C	D	_____
H ₂ TANK 1	_____	2	_____ 3
O ₂ TANK 1	_____	2	_____ 3

UPDATE TO CSM
FLIGHT PLAN
CONSUMABLES

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

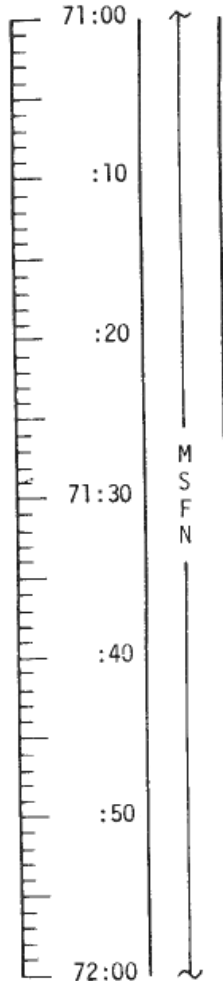
FLIGHT TRAINING BRANCH

MCC-H

0734 CDT

FLIGHT PLAN

NOTES



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

ch @ 70:32:39
 HGR ON MSFN EUE
 S-BND AUX. TV - SCIENCE
 PAN CAMERA MODE - STBY (VERIFY)
 PAN CAMERA PWR - ON
 PAN CAMERA SEL TEST - HEATERS
 MAP CAMERA ON - STBY
 WAIT 5 MINS
 PAN CAMERA PWR - OFF
 S-BND AUX. TV - OFF
 PAGE S/2-3

DAP LOAD STATUS
 (21101)(X1111)

PTC

GET 72 HOURS FOV 3°

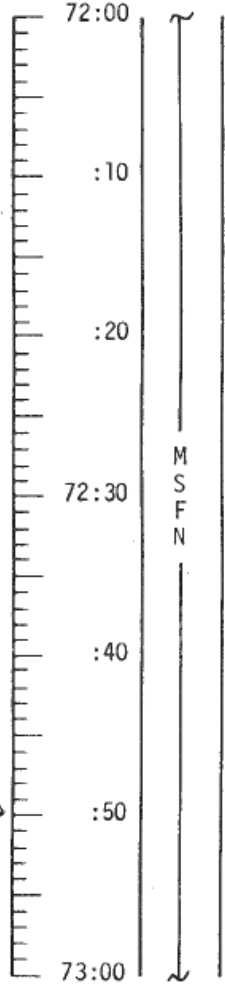


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	71:00 - 72:00	4/TLC	3-71

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H 0834 CDT



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

M
S
F
N

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

MAG (E) _____, MAG % _____

H₂ 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 TRAINING 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 $< 10^\circ$
BEFORE 'ZERO' SWITCH - ON

THIS PAGE INTENTIONALLY BLANK

FLIGHT PLAN

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

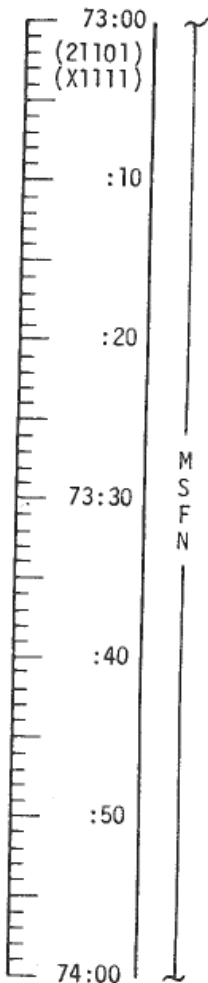
MCC-H

0934 CDT

FLIGHT PLAN

NOTES

EARTH DISTANCE
~ 206,000 NM



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
 H₂ & O₂ FUEL CELL PURGE
~~WASTE WATER DUMP~~

H₂ 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)

LOI -5 HR

GO/NO-GO FOR
SIM DOOR JETT

BURN STATUS REPORT			
X	X	<input type="checkbox"/>	•
X	X	<input type="checkbox"/>	•
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•
TRIM			
X	X	X	•
X	X	X	•
X	X	X	•
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•
X	X	X	•
X	X	X	•
X	X	X	•

ΔTIG
BT
V_{gx}
R
P
Y
V_{gx}
V_{gy}
V_{gz}
ΔV_c
FUEL
OX
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)
 - 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

LEXAN SHIELD IN CM5

FINAL (7/26)

6/21/71

4/TLC

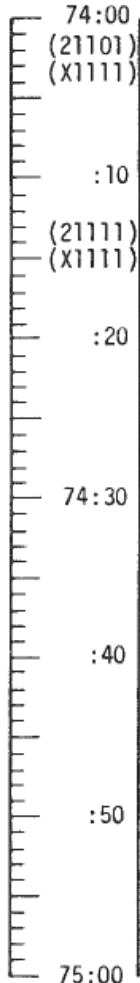
3-76

FLIGHT PLAN

MCC-H

1034 CDT

NOTES



SIM DOOR JETTISON 74:01

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

V48 (21111)(X1111)
DOFF & STOW PGA'S
H₂ HEATERS 1&2 (2) - AUTO
H₂ HEATERS 3 (1) - OFF
O₂ HEATERS 1&2 (2) - AUTO
O₂ HEATERS 3 (1) - OFF

AP*

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

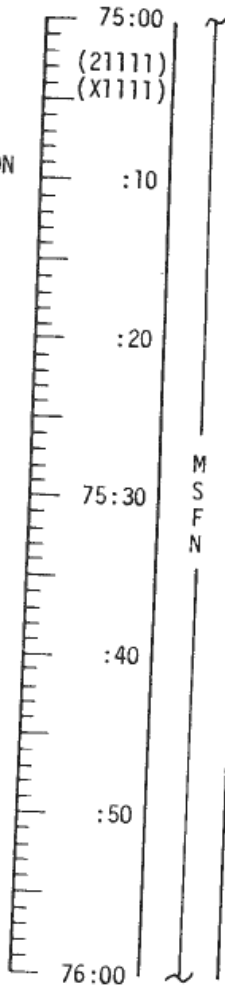
FLIGHT PLANNING BRANCH

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)



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

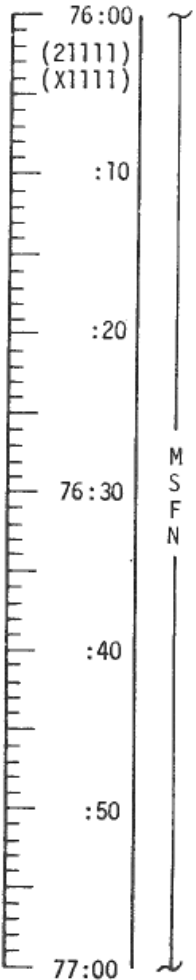
FLIC PLANNING BRANCH

MCC-H

1234 CDT

FLIGHT PLAN

NOTES



CSM G&C CHECKLIST

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

CREW EXERCISE PERIOD

CSM SYSTEMS CHECKLIST

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

GR*
AP*

TEI 4 PAD
ASSUMES NO DOI

UPDATE TO CSM
TEI 4 PAD

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

MCC-H

1334 CDT

FLIGHT PLAN

NOTES

77:00
 (21111)
 (X1111)

:10

:20

77:30

(21101)
 (X1111)

:40

:50

78:00

M
S
F
N

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

MAP UPDATE REV	<u>1</u>
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 GREEN BAND (0 + 100 LBS). THE APPROXIMATE TIME OF CROSSOVER IS 04:22 TO 04:29 MINUTES INTO THE LOI BURN.

UPDATE TO CSM
 LOI MNVR PAD
 MAP UPDATE REV 1

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

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

FLIGHT ANNING BRANCH

P30 MANEUVER

VEGA DENEK	L	O	I			PURPOSE
SET STARS	S	P	S	G	N	PROP/GUID
R ALIGN 2 6 4	+ 6	6	2	2	4	WT N47
P ALIGN 0 9 0	0	0	0	1	2	P TRIM N48
Y ALIGN 3 4 9	0	0	0	1	2	Y TRIM
	+ 0	0	0	7	8	HRS GETI
	+ 0	0	0	3	1	MIN N33
	+ 0	4	5	9	1	SEC
ULLAGE NONE		2	8	9	7.5	ΔV _X N81
		0	7	7	6.4	ΔV _Y
		0	0	4	4.1	ΔV _Z
	X	X	X	0	0	R
	X	X	X	0	0	P
	X	X	X	0	0	Y
	+ 0	1	6	9	6	H _A N44
		0	0	5	8.4	H _P
	+ 3	0	0	0	1	ΔVT
	X	X	X	6	4	BT
	X	2	9	9	3.9	ΔVC
	X	X	X	X	25	SXTS
	+ 2	6	7	1	0	SFT
	+ 2	2	8	0	0	TRN
	X	X	X			BSS
	X	X				SPA
	X	X	X			SXP

Preliminary (74:51:56) ^{red. up dt.}

LOI
 SPS/G+N SET STARS
 66244 VEGA DENEK
 +1.21 GDC ALIGN
 -012 R 264
 78 P 90
 31 Y 349
 3448
 2894.5 NO ULLAGE
 766.4
 112.3
 0
 0
 0
 169.5
 58.3
 2996.4
 6.40
 2990.2
 25
 267.1
 228

FLIGHT PLAN

LOI
BURN TABLE

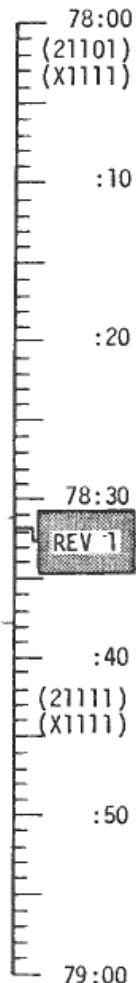
P OR Y RATES	ATT DEVIATION	SHUTDOWN TIME	RESIDUALS
10°/SEC TAKEOVER & COMPLETE	±10° TAKEOVER & COMPLETE	BT + 10 SEC	DO NOT TRIM

FLIGHT PLAN

MCC-H

1434 CDT

RECORD VG_{IMU} DATA
GO/NO-GO FOR LOI



78:00
(21101)
(X1111)

SXT STAR CHECK
P40 SPS THRUSTING

GO/NO-GO FOR LOI

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

EARTH DISTANCE
~ 215,089 NM

TIG: 78:31:14.7
BT: 6 MIN 32 SECS
ΔVT: 2997.9 FPS
ULLAGE: NONE
ORBIT: 170 x 58.3 NM

78:30

LOI

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

V48 (21111)(X1111)
V49 MNVR TO COMM ATT (78:55)
(167,048,020)

78:40
(21111)
(X1111)

78:50

ACQ MSFN HGA P -46, Y 25
BURN STATUS REPORT

DUMP DSE

NOTES

BURN STATUS REPORT	
X X <input type="checkbox"/>	•••
X X	••
<input type="checkbox"/>	•
TRIM	
X X X	•
X X X	•
X X X	•
<input type="checkbox"/>	•
<input type="checkbox"/>	•
<input type="checkbox"/>	•
<input type="checkbox"/>	•
X X X	•
X X X	•
X X X	•

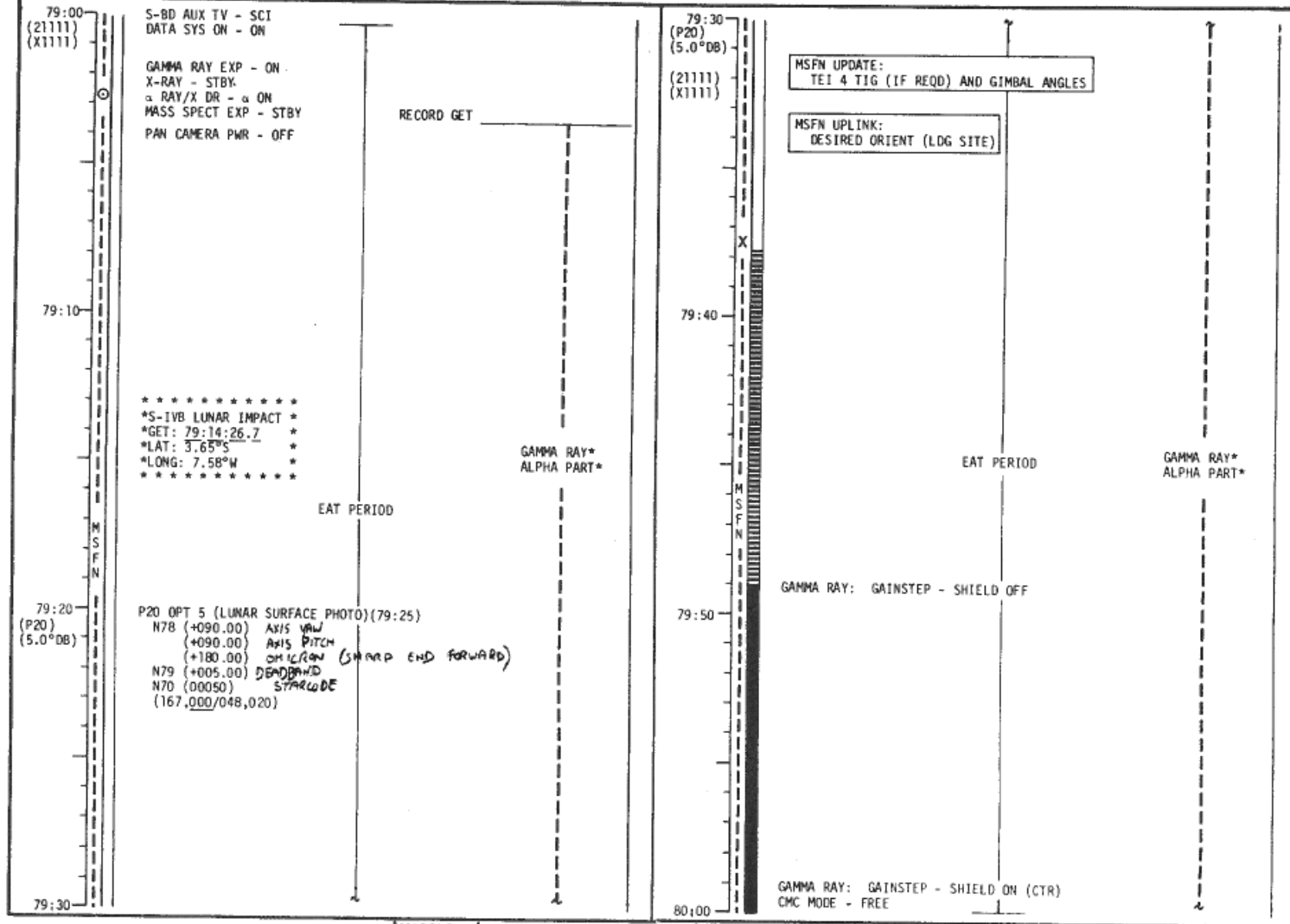
ΔTIG
BT
V_{gx}
R
P
Y
V_{gx}
V_{gy}
V_{gz}
ΔV_c
FUEL
OX
UNBAL

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

FLIGHT PLANNING BRANCH

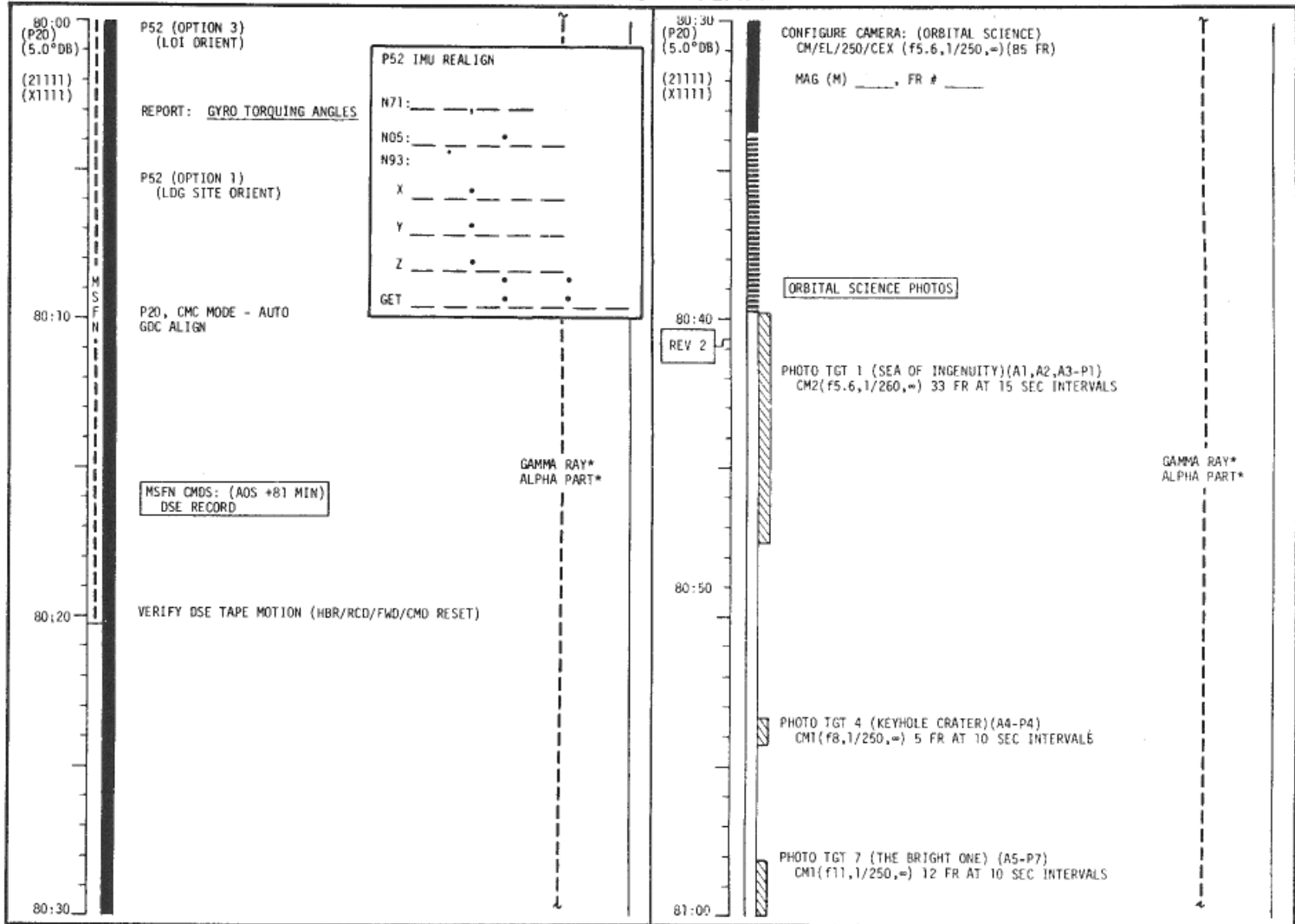
1534 CDT

CSM FLIGHT PLAN



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

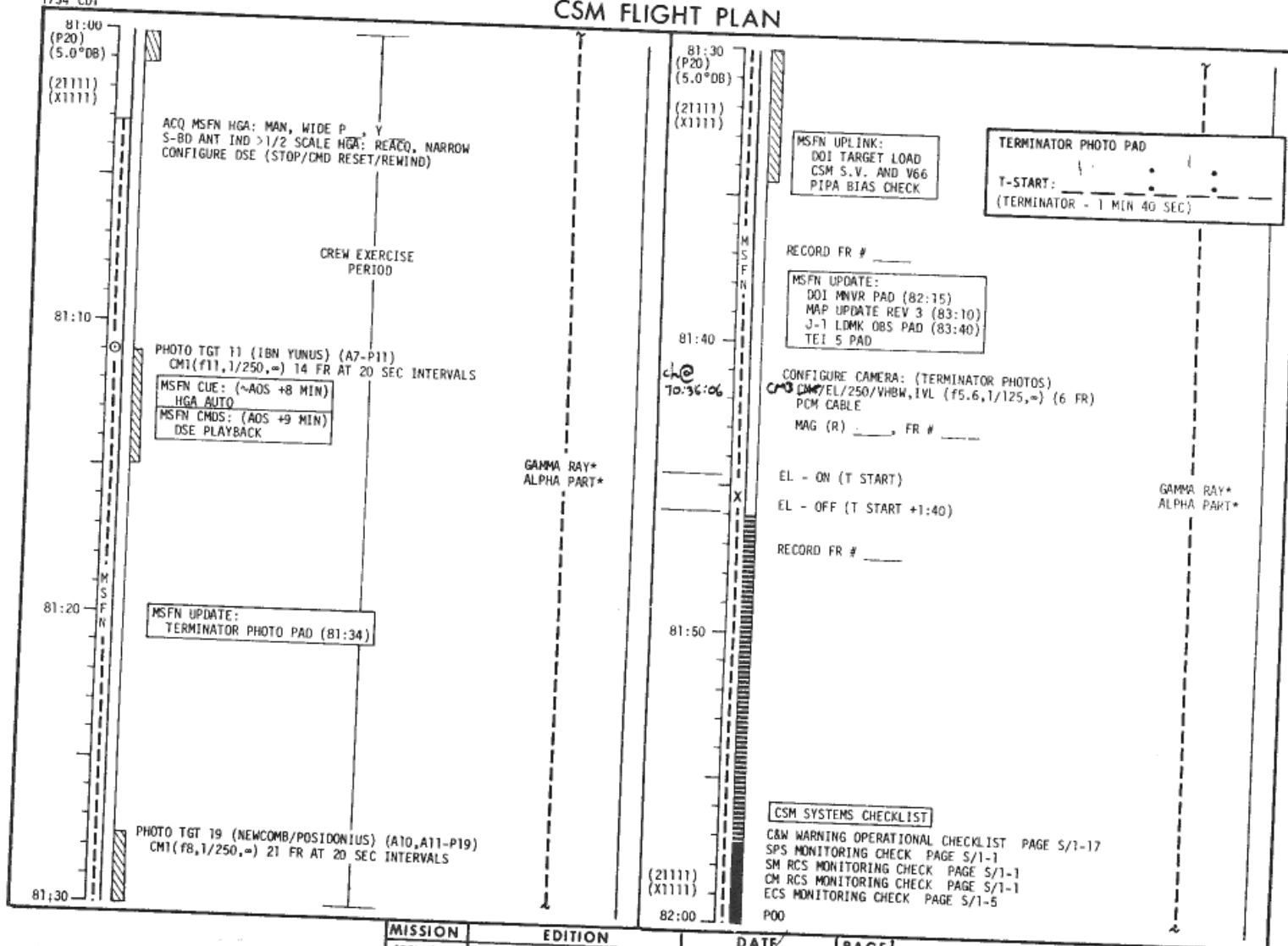
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-85

1734 CDT

CSM FLIGHT PLAN



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

1834

CSM FLIGHT PLAN

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

MSFN RECORD:
VG IMU DATA

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)

MSFN UPDATE:
GO/NO-GO FOR DOI

MSFN CMDS:
DSE RECORD

SXT STAR CHECK
P40 (TRIM)

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

82:10
M
S
F
N

P52 IMU REALIGN

N71: _____

N05: _____

N93: _____

X _____

Y _____

Z _____

GET _____

GAMMA RAY*
ALPHA PART*

RECORD GET _____

82:20

(P40)
(0.5°DB)

82:30

P30 MANEUVER

	D O I					PURPOSE
	S	P	S	G	& N	
SET STARS	+					WT N47
R ALIGN _____		0	0			P TRIM N48
P ALIGN _____		0	0			Y TRIM
Y ALIGN _____	+	0	0			HRS GET1
	+	0	0	0		MIN N33
	+	0				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
	+				0	SFT
	+				0	TRN
	X	X	X			BSS
	X	X				SPA
	X	X	X			SXP

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/74	3-87

CSM FLIGHT PLAN

1904 CDT

82:30
(P40)
(0.5°DB)

(21101)
(X1111)

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
P00; V66 SET CSM S.V. INTO LM S.V.	ORBIT: 58.4 x 9.6

82:40
(21101)
(X1111)

REV 3

82:50

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

83:00

BURN STATUS REPORT				
X	X	X	X	ΔTIG
X	X	X	X	BT
X	X	X	X	V _{gx}
TRIM				
X	X	X	X	R
X	X	X	X	P
X	X	X	X	Y
X	X	X	X	V _{gx}
X	X	X	X	V _{gy}
X	X	X	X	V _{gz}
X	X	X	X	ΔV _c
X	X	X	X	FUEL
X	X	X	X	OX
X	X	X	X	UNBAL

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26/77)	6/21/77	3-88

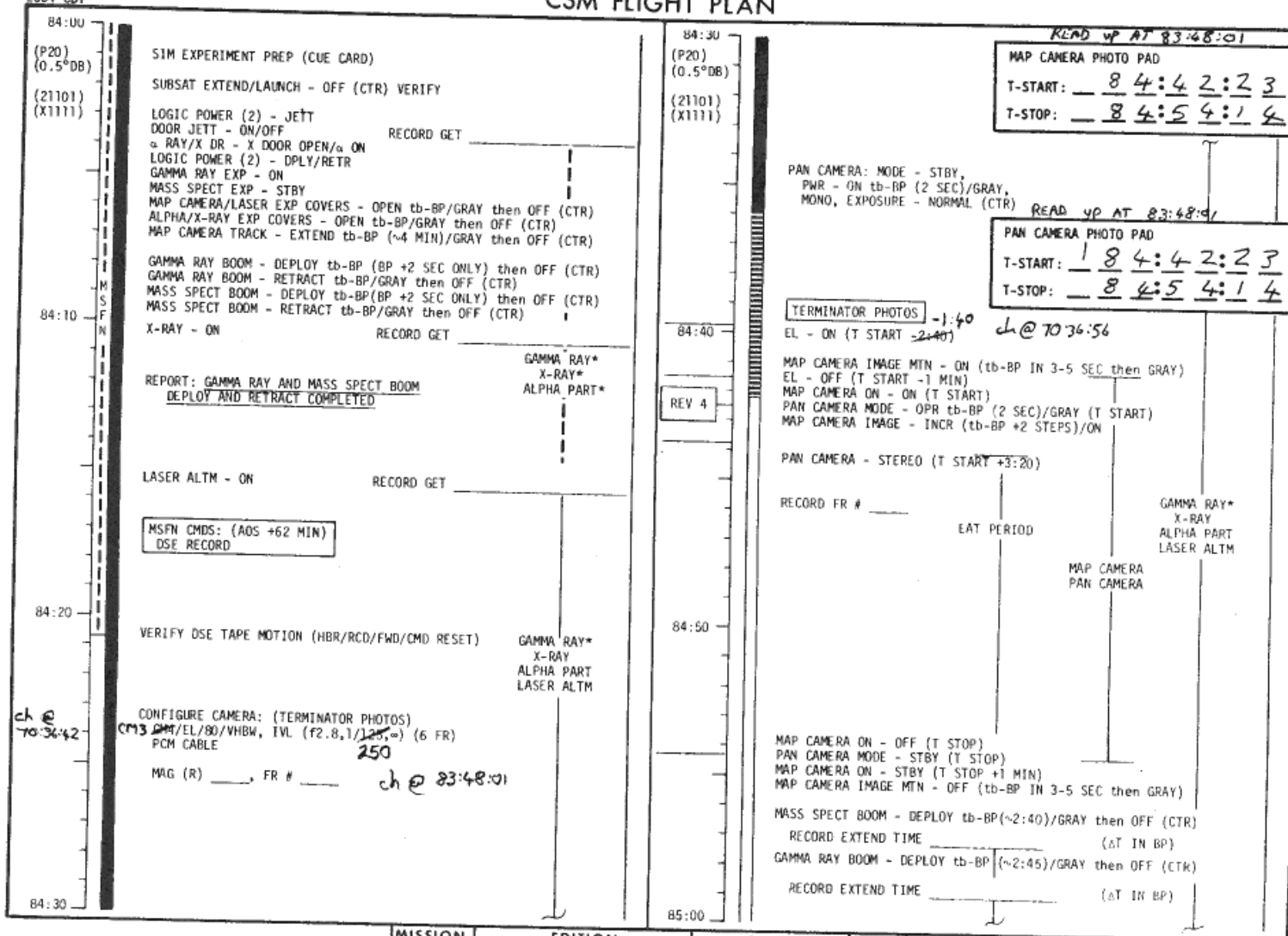
CDJ
1934 CDT

CSM FLIGHT PLAN

<p>83:00 (21101) (X1111)</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> MAP UPDATE REV <u>3</u> LOS : _____ 180°: _____ AOS : _____ </div> <p>***** * AOS - NO UP VOICE PROCEDURE * * 1. WAIT 30 SEC, CHECK HGA * * 2. SELECT OMNI B * * 3. SELECT SEC XPDR * * 4. AFTER 3 MIN GO TO LOSS * * OF COMM CUE CARD * *****</p> <p>ACQ MSFN HGA P -37, Y 318 MSFN CMDS: DSE STOP REPORT: BURN STATUS</p>	<p>83:30 (21101) (X1111)</p>	<p>MSFN CMDS: DSE REWIND</p> <p>V48 (21102)(X1111) V49 MNVR TO LDMK OBS ATT (83:40)(IF NO BAILOUT REQD) (015,291,000) OMNI <u>C</u></p> <p>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</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> LDMK J-1 OBS T HOR: <u>83:39:33</u> TCA -20 SEC: <u>83:41:25</u> LAT: +25.958 LONG/2: +05.664 ALT: +00000 </div> <p>LDMK ACQUISITION</p> <p>TCA</p> <p>V48 (21101)(X1111)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> MSFN UPDATE: MAP CAMERA PHOTO PAD (84:32) PAN CAMERA PHOTO PAD (84:39) </div> <p>S-BD AUX TV - SCI PCM BIT RATE - HIGH (VERIFY) DATA SYS ON - ON PAN CAMERA PWR - OFF</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> P52(IMU REALIGN) N71: _____ N05: _____ N93: _____ X _____ Y _____ Z _____ GET _____ </div> <p>P52 (OPTION 3) (LDG SITE ORIENT)</p> <p>REPORT: <u>GYRO TORQUING ANGLES</u></p> <p>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) <u>mean</u> (143,000/163,000) HGA P -12, Y 167</p>																
<p>83:10</p>	<p>83:20</p>	<p>83:40</p>	<p>83:50</p>																
<p>83:30</p>	<p>84:00</p>	<p>(P20) (0.5°DB)</p>	<p>84:00</p>																
<p>MSFN CMDS: DSE REWIND</p> <p>MSFN CMDS: DSE PLAYBACK</p> <p>MSFN UPDATE: STAY/BAILOUT</p> <p>SC CONT - SCS P47 THRUST MONITOR</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">BAILOUT BURN (340,074/032,000)</td> <td style="width: 50%;">TIG: 83:26:16.9</td> </tr> <tr> <td></td> <td>BT: 10.2 SEC</td> </tr> <tr> <td></td> <td>ΔVT: 94.0 FPS</td> </tr> <tr> <td></td> <td>ULLAGE: 4 JET, 16 SEC</td> </tr> <tr> <td></td> <td>ORBIT: 71.0 x 3.9</td> </tr> </table> <p>P00; V66 SET CSM S.V. INTO LM S.V.</p>	BAILOUT BURN (340,074/032,000)	TIG: 83:26:16.9		BT: 10.2 SEC		ΔVT: 94.0 FPS		ULLAGE: 4 JET, 16 SEC		ORBIT: 71.0 x 3.9	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>MISSION</th> <th>EDITION</th> <th>DATE</th> <th>PAGE</th> </tr> </thead> <tbody> <tr> <td>APOLLO 15</td> <td>FINAL (7/26)</td> <td>6/21/71</td> <td>3-89</td> </tr> </tbody> </table>	MISSION	EDITION	DATE	PAGE	APOLLO 15	FINAL (7/26)	6/21/71	3-89
BAILOUT BURN (340,074/032,000)	TIG: 83:26:16.9																		
	BT: 10.2 SEC																		
	ΔVT: 94.0 FPS																		
	ULLAGE: 4 JET, 16 SEC																		
	ORBIT: 71.0 x 3.9																		
MISSION	EDITION	DATE	PAGE																
APOLLO 15	FINAL (7/26)	6/21/71	3-89																

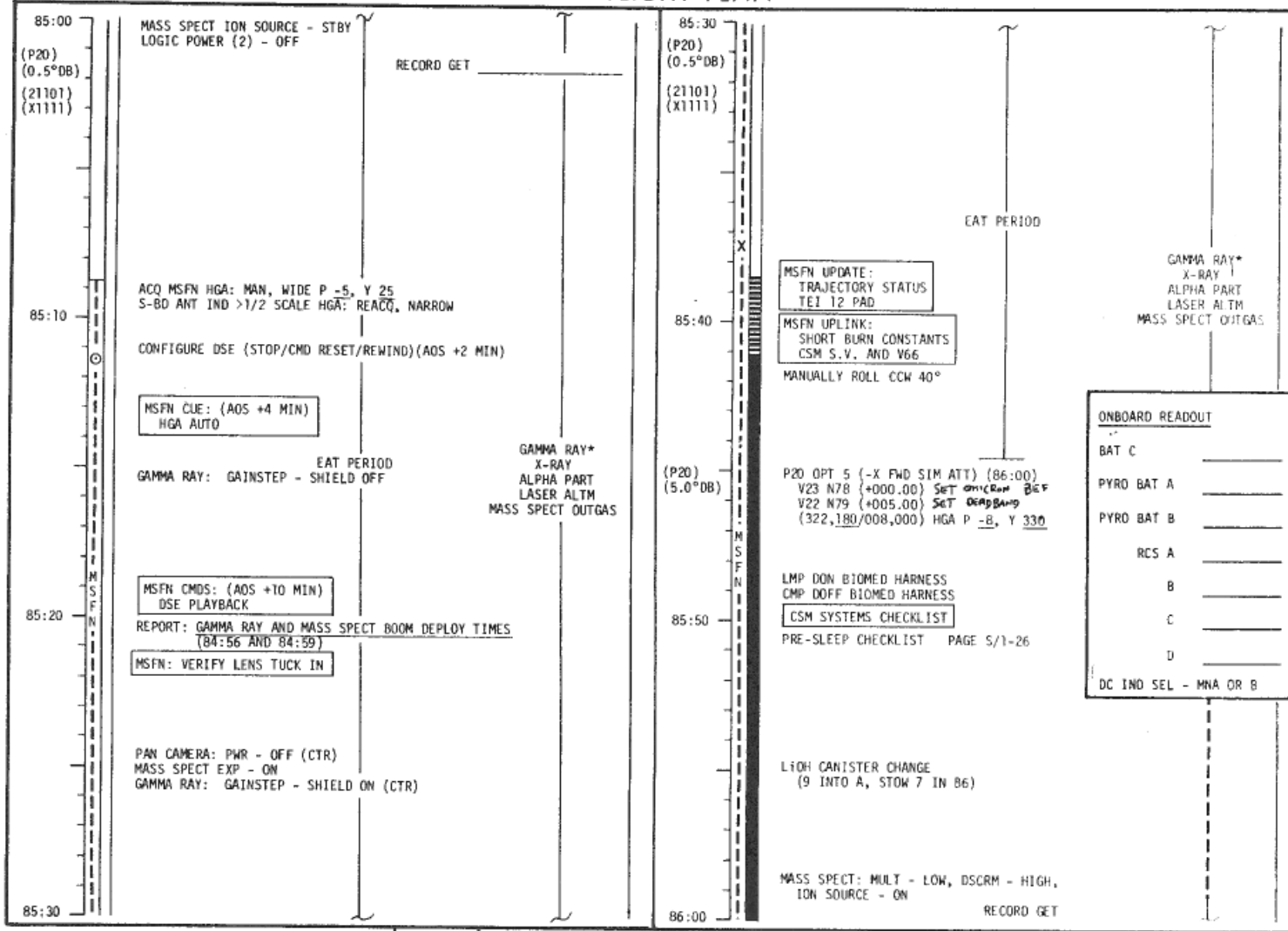
2034 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/77	3-90

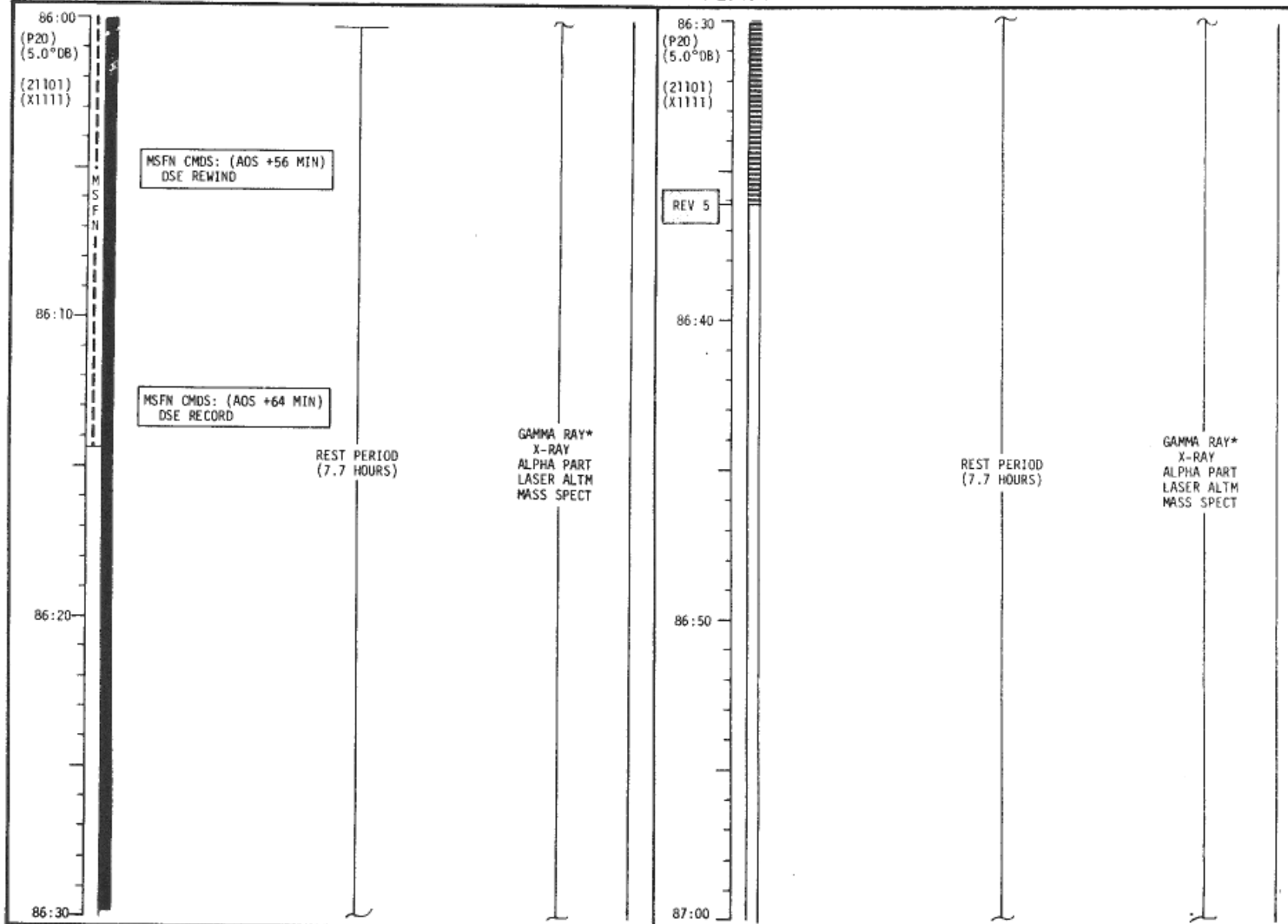
CSM FLIGHT PLAN



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

2234 CDT

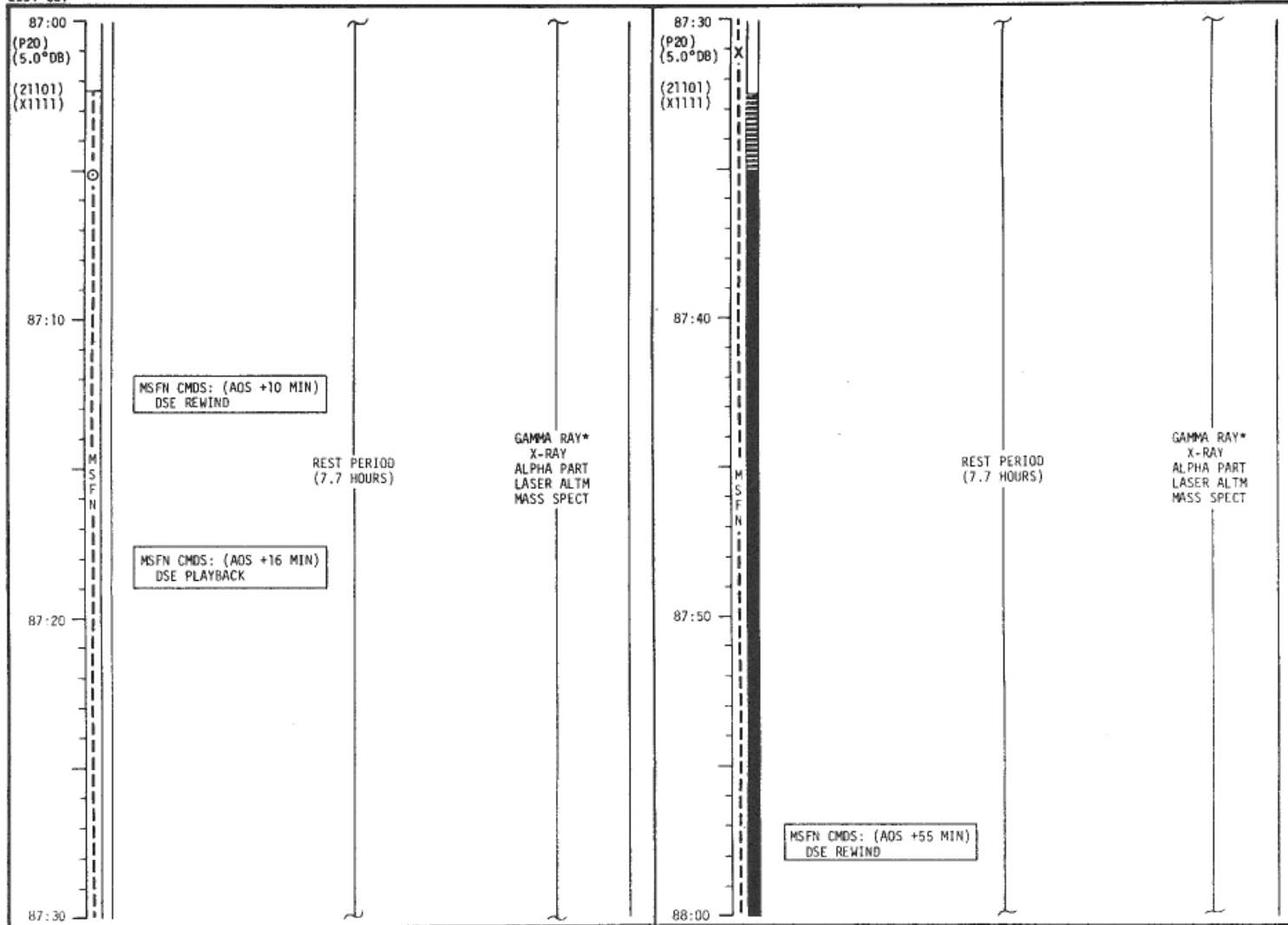
CSM FLIGHT PLAN



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

2334 Cur

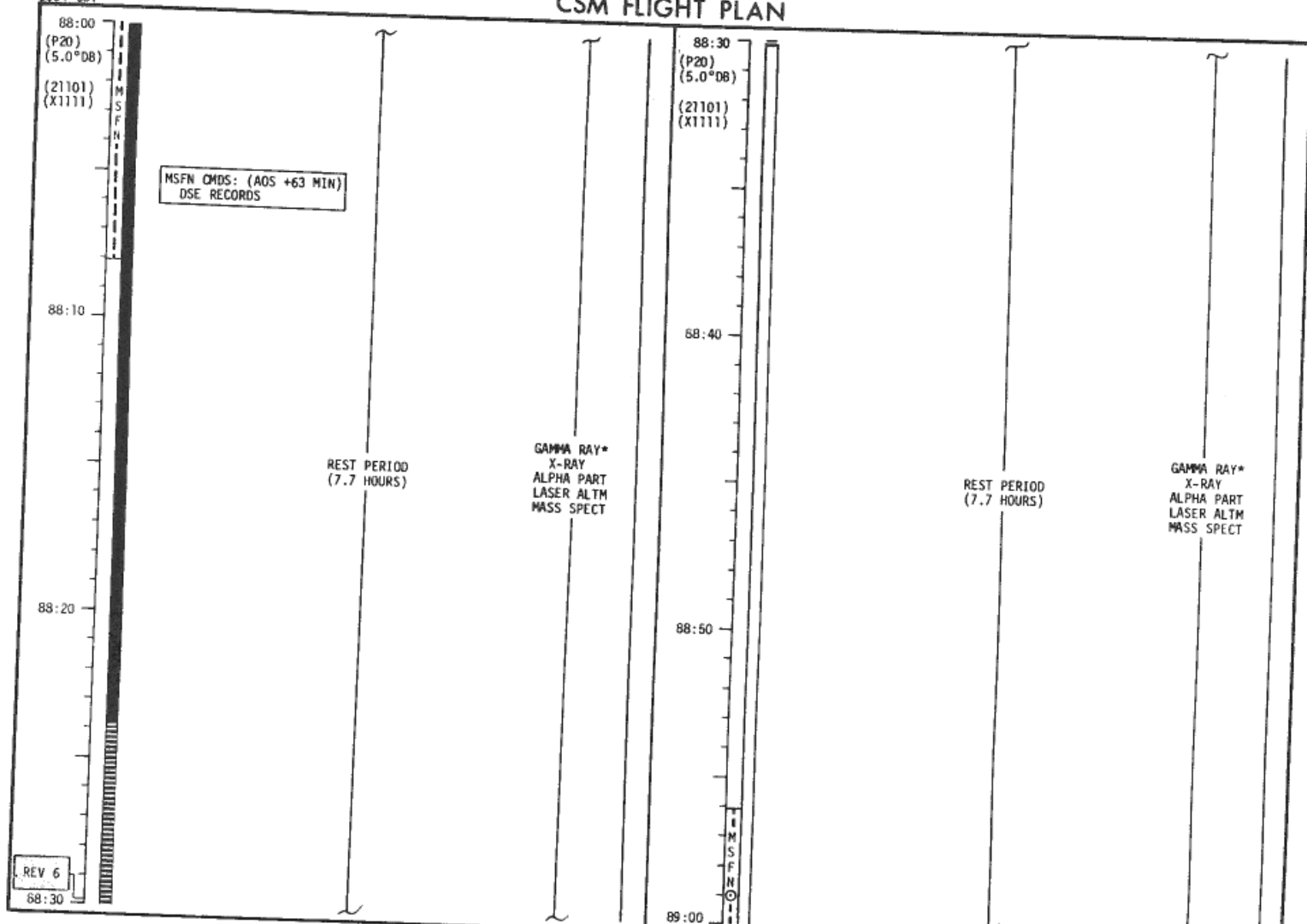
CSM FLIGHT PLAN



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

0034 CDT

CSM FLIGHT PLAN

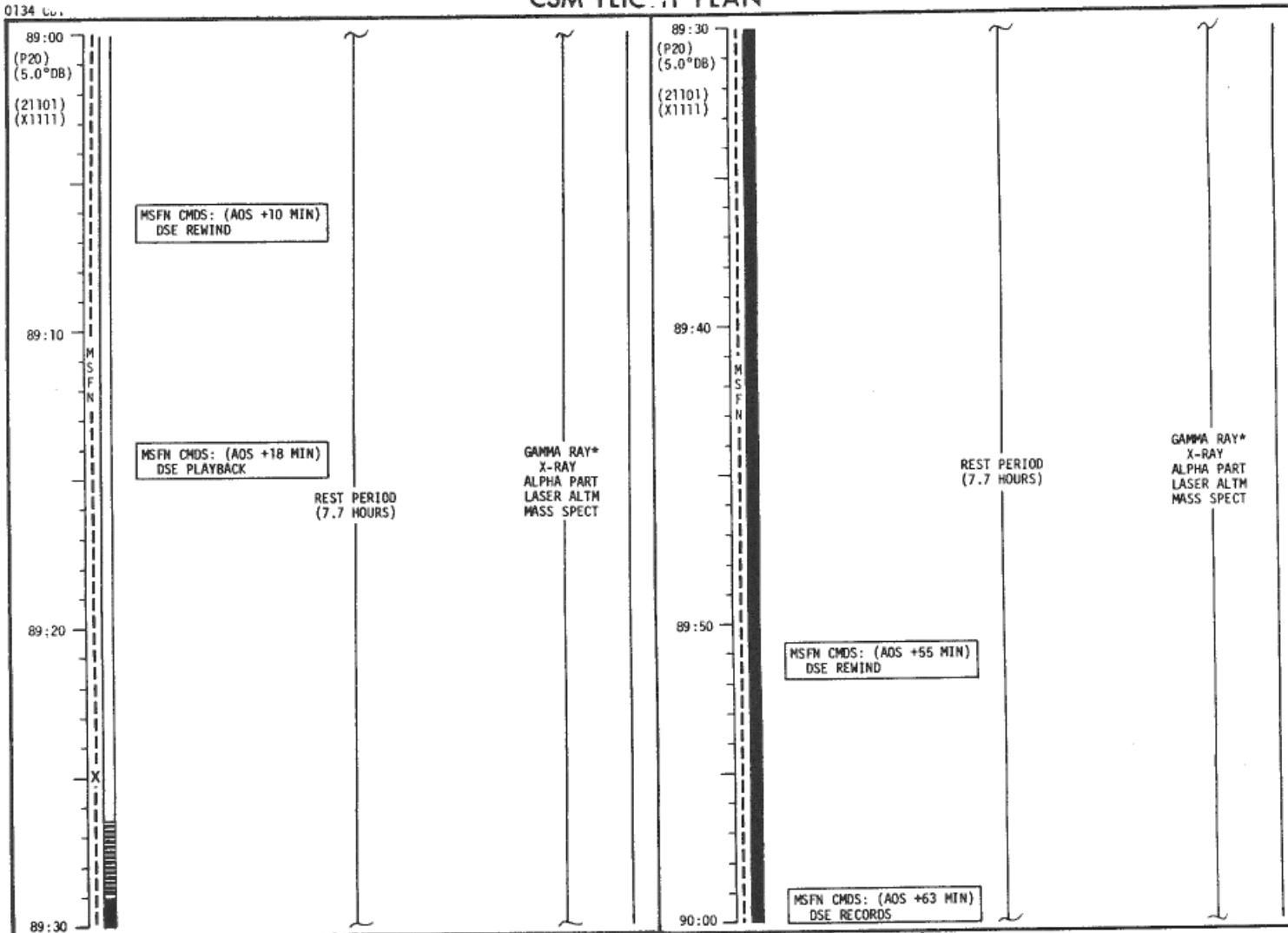


REV 6
88:30

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

CSM FLIGHT PLAN

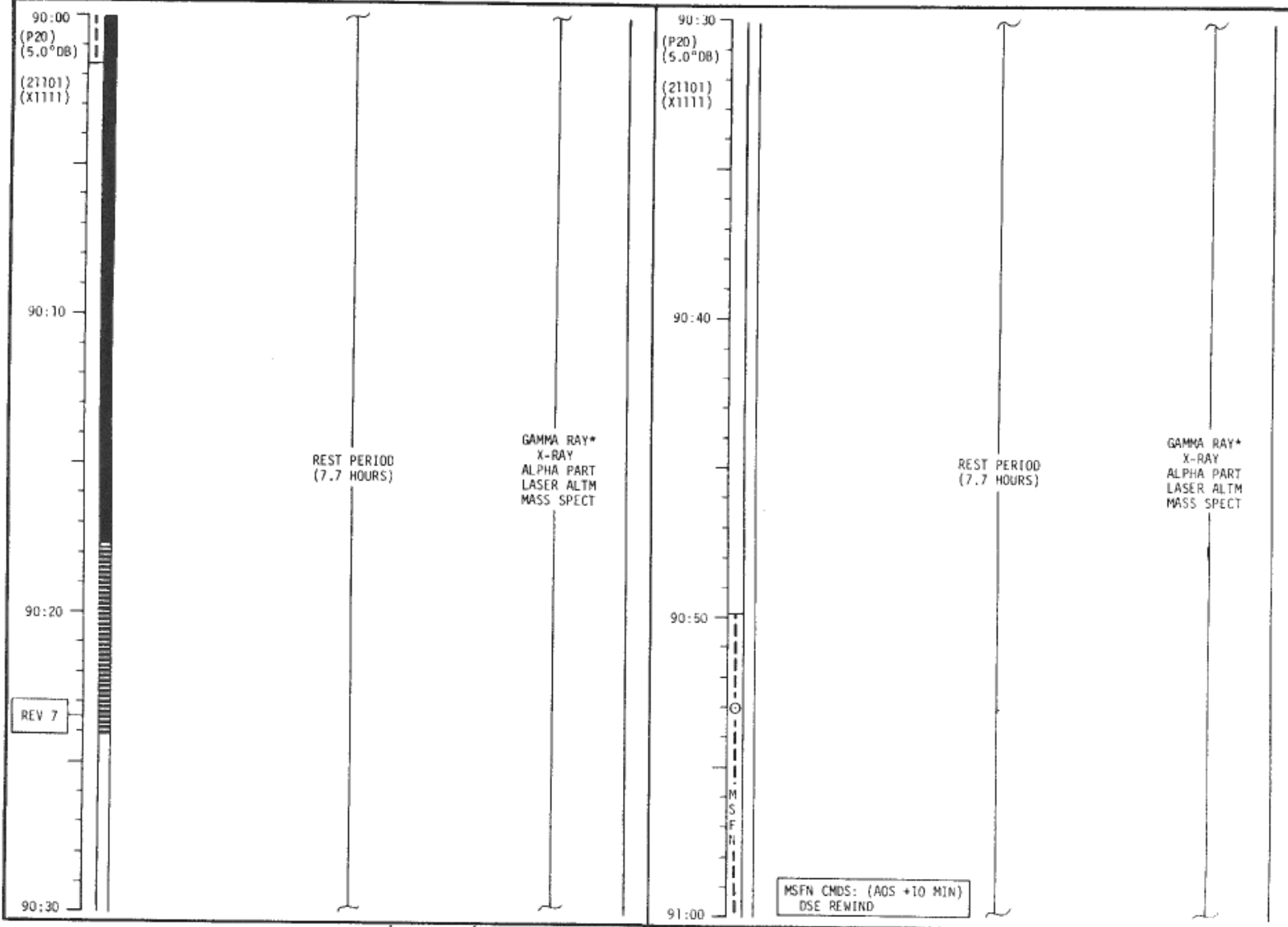
0134 (U)



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

0234 CDT

CSM FLIGHT PLAN



90:00
(P20)
(5.0°DB)
(21101)
(X1111)

90:30
(P20)
(5.0°DB)
(21101)
(X1111)

REST PERIOD
(7.7 HOURS)

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

REST PERIOD
(7.7 HOURS)

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

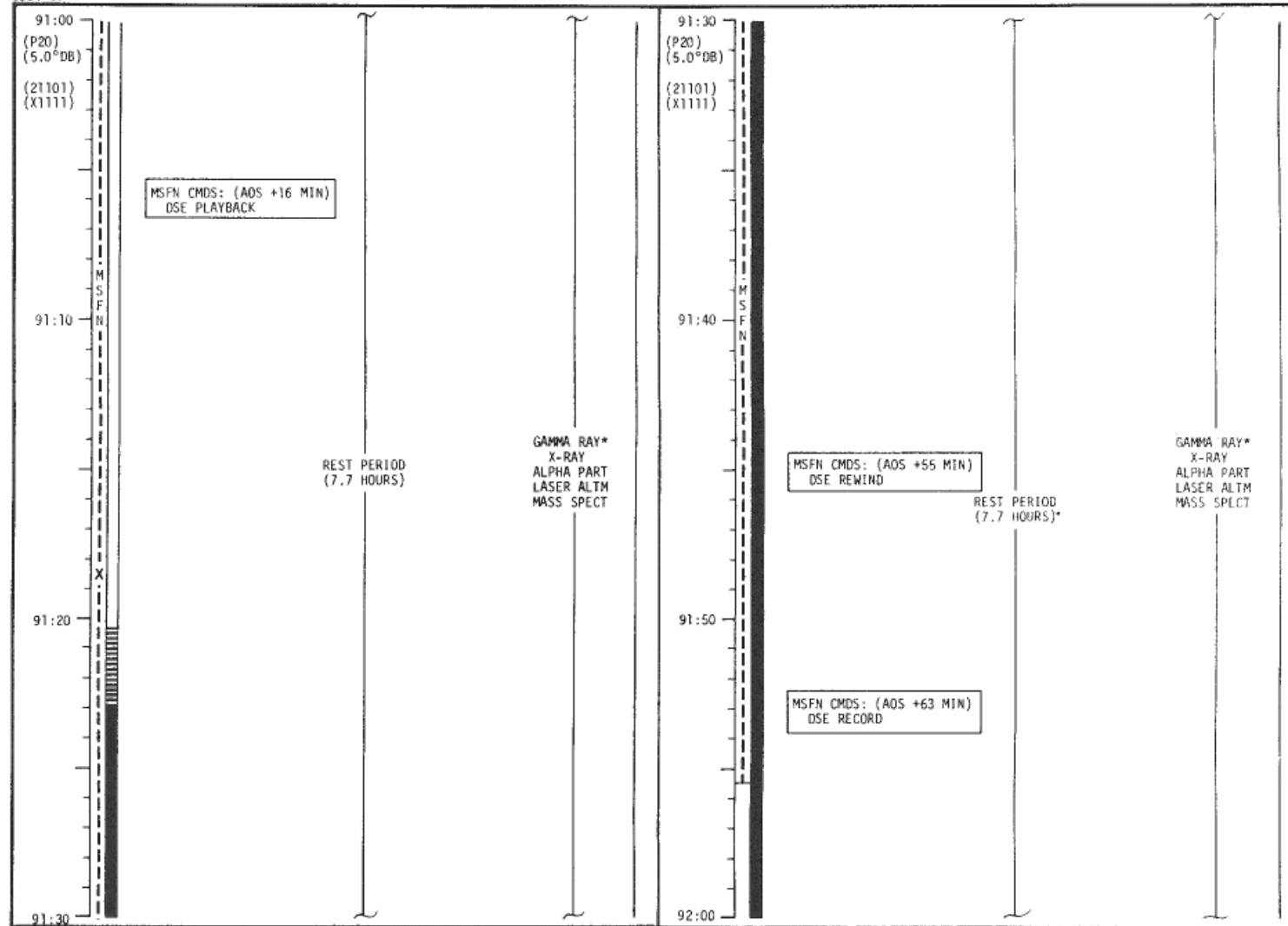
REV 7

MSFN CMDS: (AOS +10 MIN)
DSE REWIND

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

0334 CDT

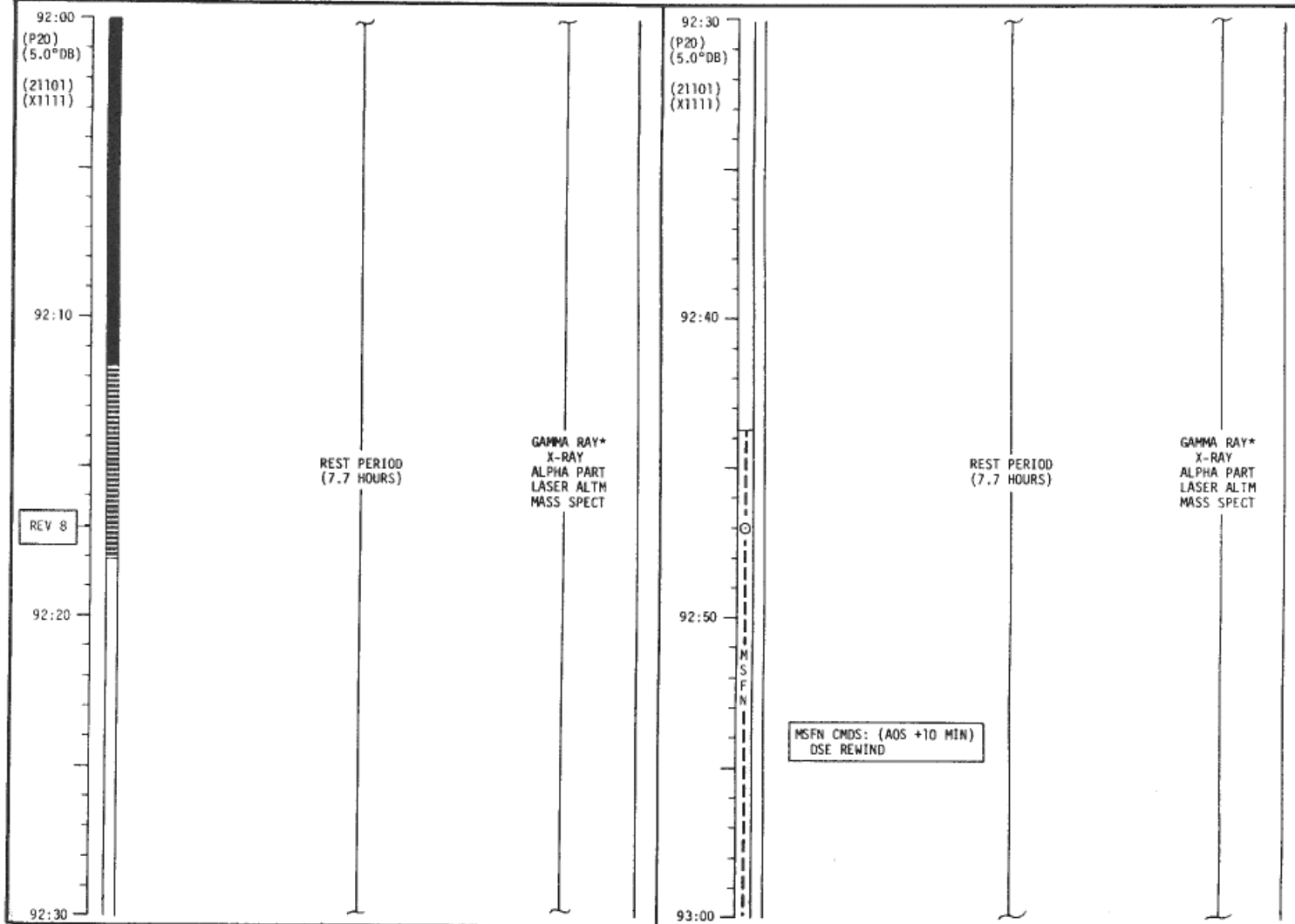
CSM FLIGHT PLAN



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

0434 CDT

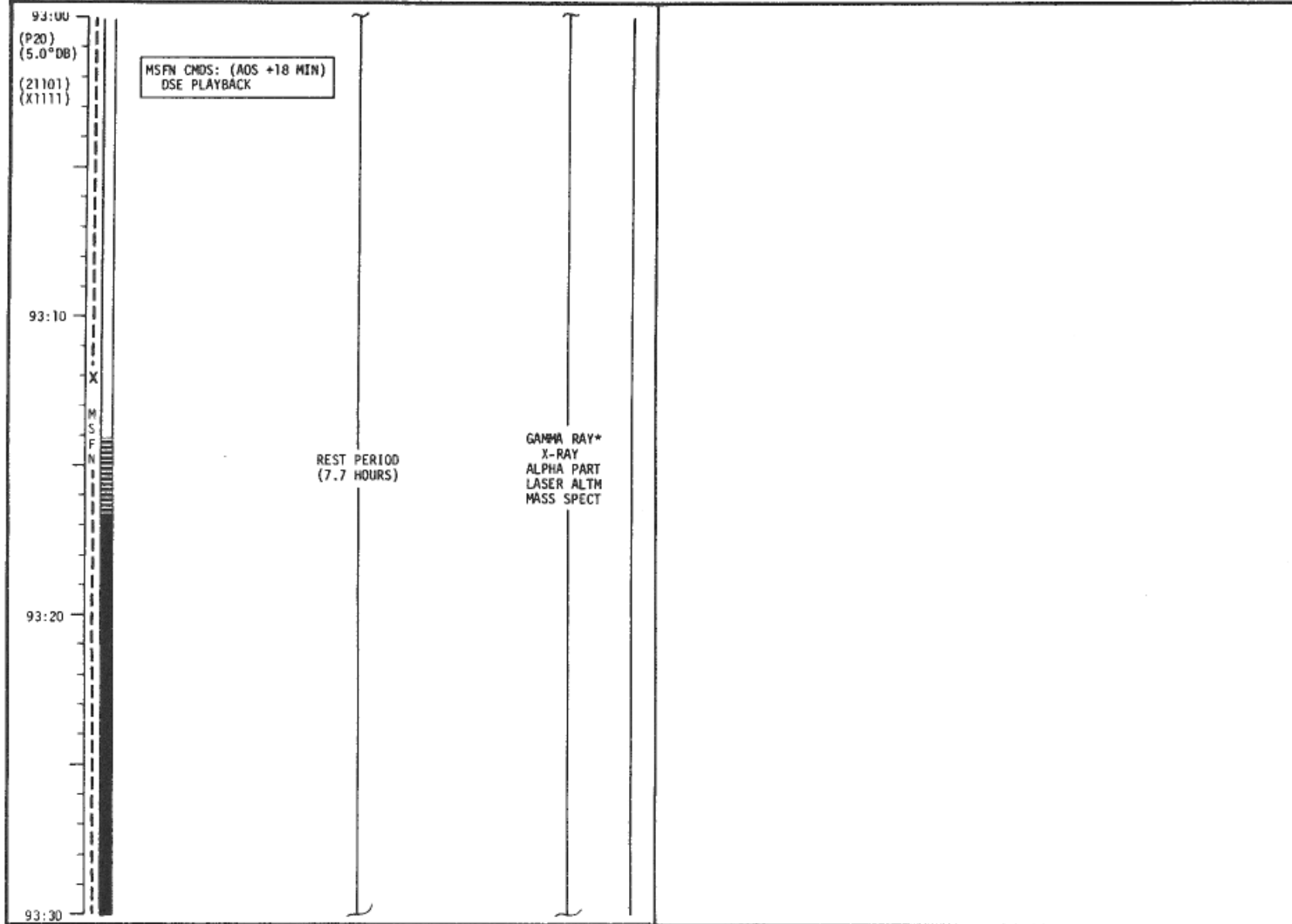
CSM FLIGHT PLAN



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

0534 Cd

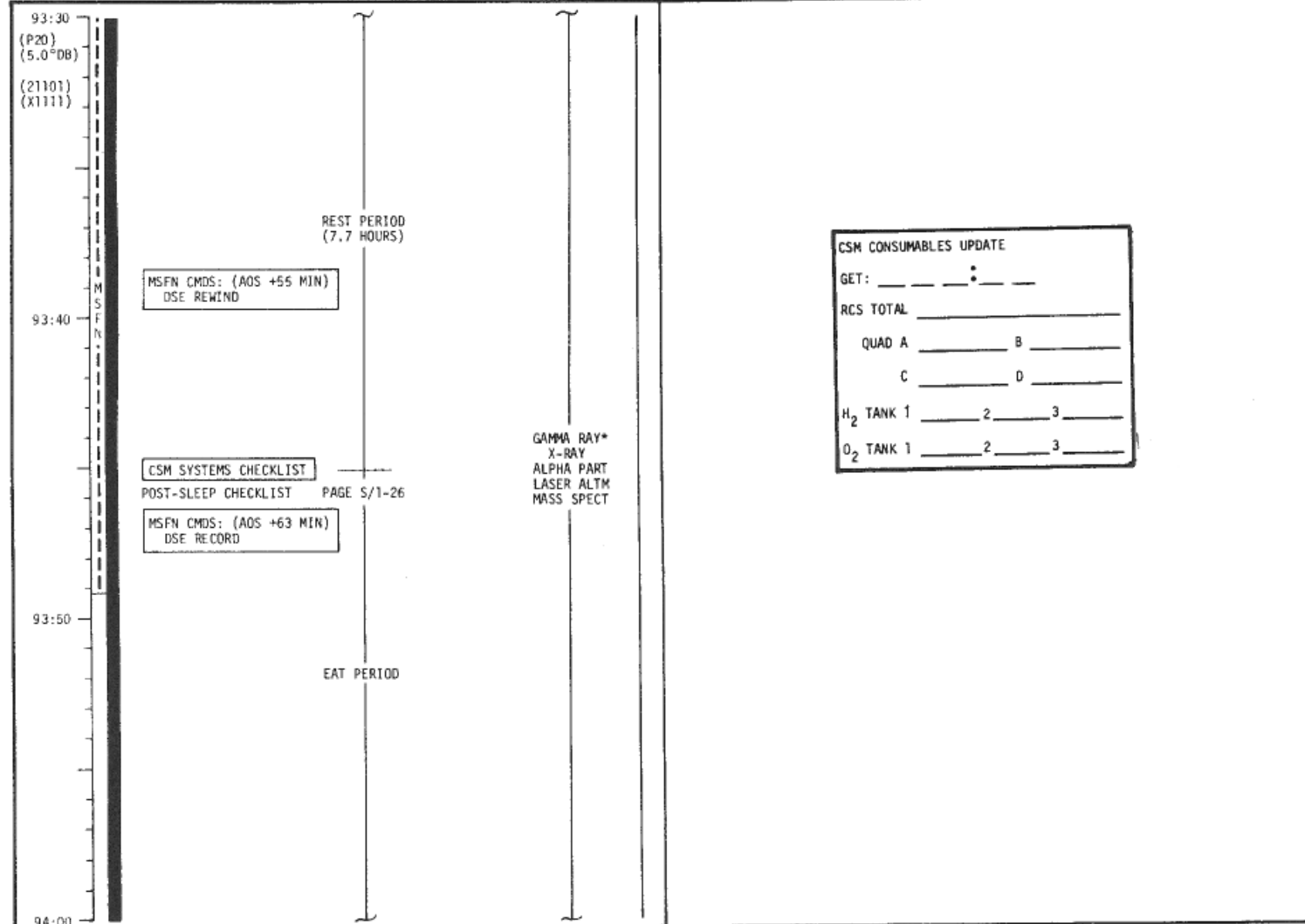
CSM FLIGHT PLAN



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

CSM FLIGHT PLAN

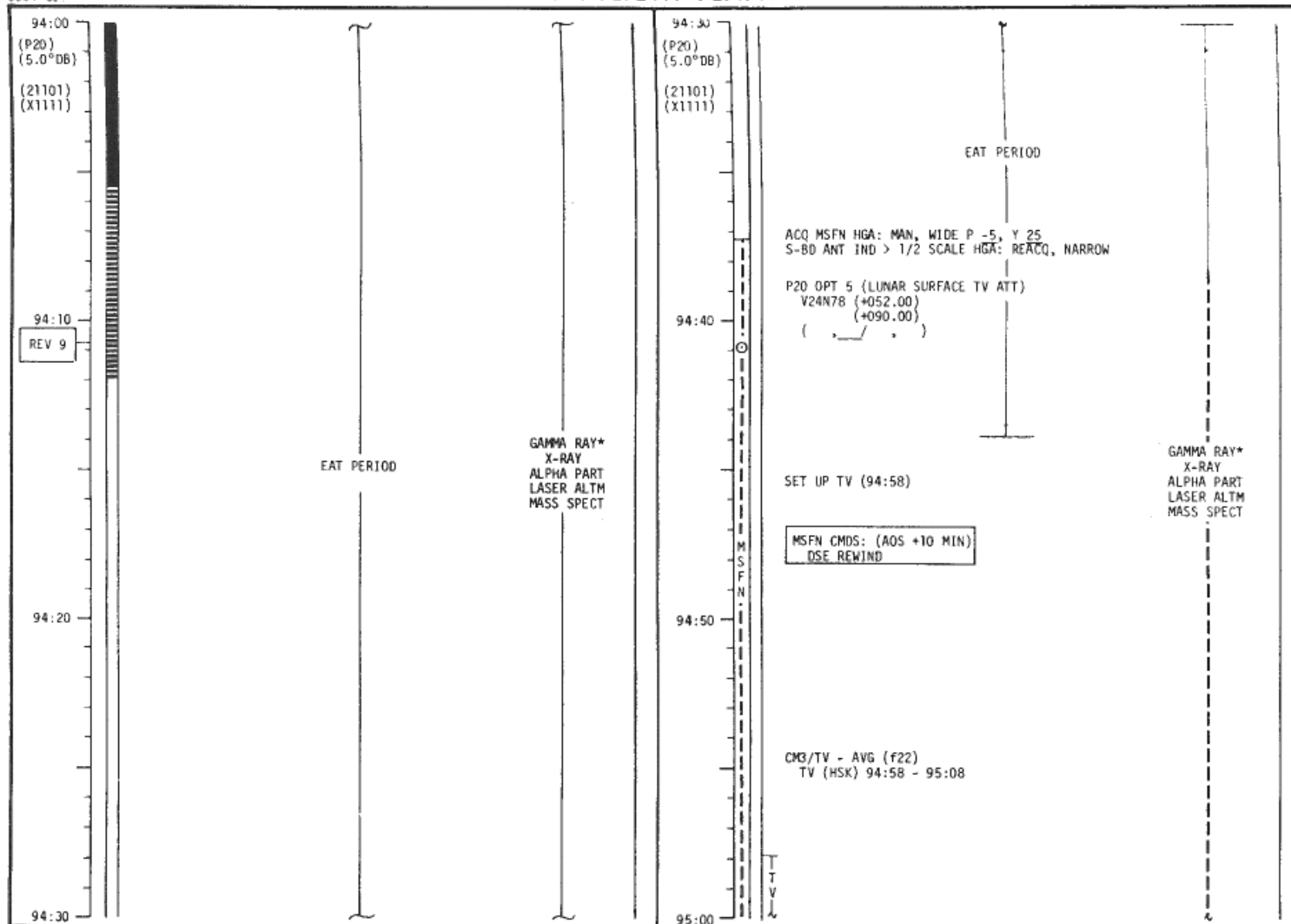
0604 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-100

0634

CSM FLIGHT 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)

95:10

95:20

95:30

O₂ HEATERS 1&2 (2) - OFF
 O₂ HEATERS 3 (1) - AUTO
 CB O₂ TANK 100W HTPS - 3 MAIN B, OPEN (PWL 226)
 (ch@96:39:05)

MSFN CMDS: (AOS +31 MIN)
 DSE PLAYBACK

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)
 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

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)

GAMMA RAY*
ALPHA PART*

P52 opt 3
ch@96:48:30

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

CSM FLIG... PLAN

95:30
(P20)
(5.0°DB)
(21101)
(X1111)

~~P00 @ PITCH 053~~
deleted @ 94:48:51

~~P52 (OPTION 3) (IF DOI TRIM REQD)
(LOG SITE ORIENT)~~
deleted @ 94:49:09
(now 7 mins earlier)

REPORT: GYRO TORQUING ANGLES

MSFN CMDS: (AOS +63 MIN)
DSE REWIND

~~P52 (OPTION 1) (IF DOI TRIM REQD)
(DOI TRIM ORIENT)~~ deleted @ 94:49:21

GAMMA RAY*
ALPHA PART*

THESE ACTIVITIES MOVED UP TO 95:30
ch @ 94:49:35

GDC ALIGN (IF DOI TRIM REQD)
CONFIGURE DSE (LBR/RCD/FWD/CMD RESET)(AOS +71 MIN)
P30; VERIFY DOI TRIM TIG AND ΔV'S (IF DOI TRIM REQD)

95:50

S-BD AUX TV - OFF (CTR)
DATA SYS ON - OFF
V49 MNVR TO DOI TRIM BURN PAD ATT (96:07)(IF DOI TRIM REQD)

PAN CAMERA PWR - BOOST (IF DOI TRIM REQD)
MAP CAMERA ON - STBY (IF DOI TRIM REQD)
MAP CAMERA IMAGE MTN - OFF (VERIFY) (IF DOI TRIM REQD)
X-RAY - OFF (IF DOI TRIM REQD)
α RAY/X DR - α OFF (IF DOI TRIM REQD)
GAMMA RAY EXP - OFF (IF DOI TRIM REQD)
MASS SPECT EXP - OFF (IF DOI TRIM REQD)

DOI TRIM BURN (ch @ 94:42:41)

96:00

P30 MANEUVER

	D	O	I	T	R	M	PURPOSE:
SET STARS	S	P	S	C	&	N	PROP/GUID
R ALIGN	+						WT N47
P ALIGN		O	O				P TRIM N48
Y ALIGN							Y TRIM
	+	O	O				HRS GET1
	+	O	O	O			MIN N33
	+	O					SEC
ULLAGE							ΔV _X N81
							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	TRN
	X	X	X				BSS
	X	X					SPA
	X	X	X				SXP

CSM FLIGHT PLAN

0904 CD1

96:30
(P20)
(5.0°DB)

(21101)
(X1111)

96:40

M
S
F
N

96:50

97:00

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

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)
REFSMAT 00 TIME COPY AT (97:25)
TEI 12 TIG (IF REQD)
TEI 19 TIG (IF REQD)

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

CSM TO LM TRANSFER ITEMS:

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

OID	LOAD B
03	-----
04	-----
05	-----

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

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-105

LM FLIGHT PLAN

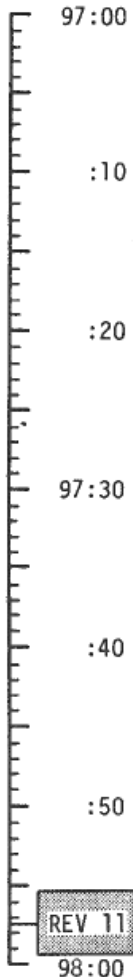
MCC-H

0934 CDT

CDR

LMP

NOTES



LM ACTIVATION CHECKLIST PAGE 2-1

IVT TO LM
OPEN HATCH
VERIFY DOCKING ANGLE
TRANSFER POWER

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 LOT

<p>97:00 (P20) (5.0°DB)</p> <p>(21101) (X1111)</p> <p>97:10</p> <p>(21111) (X1111)</p> <p>97:20</p> <p>97:30</p>	<p>SYNCHRONIZE MISSION TIME TO CMC (IF REQD) V05N01E, 1706 E</p> <p>VERIFY LM/CM ΔP < 2.4 PSID IF ΔP > 2.4 PSID PRESSURIZE CSM TO 5.7 PSIA REPORT ΔP TO MSFN</p> <p>CDR DON BIOMED HARNESS, PGA WITHOUT HELMET AND GLOVES</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">P52 IMU REALIGN</p> <p>N71: _____</p> <p>N05: _____</p> <p>N93: _____</p> <p>X _____</p> <p>Y _____</p> <p>Z _____</p> <p>GET _____</p> </div> <p>CONFIGURE FOR URINE DUMP</p> <p>V48 (21111) (X1111) P00</p> <p>P52 (OPTION 3) (IF DOI TRIM NOT PERFORMED) (LDG SITE ORIENT)</p> <p>REPORT: GYRO TORQUING ANGLES</p> <p>P52 (OPTION 1) (LDG SITE ORIENT)</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th colspan="6">REFSMMAT 00 TIME</th> </tr> </thead> <tbody> <tr> <td>+</td><td>0</td><td>0</td><td>10</td><td>6</td><td>HRS</td> </tr> <tr> <td>+</td><td>0</td><td>0</td><td>0</td><td>41</td><td>MIN</td> </tr> <tr> <td>+</td><td>0</td><td>6</td><td>3</td><td>00</td><td>SEC</td> </tr> </tbody> </table> <p>GDC ALIGN</p>	REFSMMAT 00 TIME						+	0	0	10	6	HRS	+	0	0	0	41	MIN	+	0	6	3	00	SEC	<p>97:30 (21111) (X1111)</p> <p>97:40</p> <p>97:50</p> <p>98:00</p>	<p>CMP DON BIOMED HARNESS, PGA WITHOUT HELMET AND GLOVES</p> <p>LMP VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)</p> <p>O₂ FUEL CELL PURGE WASTE WATER DUMP URINE DUMP</p> <p>V49 MNVR TO UNDOCK ATT (97:55) (000,106,000)</p> <p>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</p> <p>RECORD DOCKING TUNNEL INDEX ANGLE _____</p> <p>LMP IVT TO LM</p> <p style="text-align: right;">GAMMA RAY* ALPHA PART*</p> <p>AT LMP REQUEST: LM PWR - RESET/OFF GET _____:_____:_____(RECORD) SYS TEST - 7D SYS TEST ind - 0 volts</p>
REFSMMAT 00 TIME																											
+	0	0	10	6	HRS																						
+	0	0	0	41	MIN																						
+	0	6	3	00	SEC																						

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

LM FLIGHT PLAN

MCC-H

1034 CDT

CDR

LMP

NOTES

98:00			LIGHTS ON DES O ₂ AND H ₂ O - OPEN
:10		IVT TO LM TRANSFER HELMETS & GLOVES MISSION TIMER ACTIVATION	EPS ACTIVATION CONNECT TO LM COMM CONFIGURE S-BAND
			PRIMARY GLYCOL LOOP ACT
			CAUTION/WARNING CHECKOUT
:20		CONNECT TO LM ECS CB ACTIVATION ACTIVATE RCS HEATERS PGNS TURN-ON & SELF TEST	ECS ACTIVATION & CHECKOUT CONNECT TO LM ECS CB ACTIVATION TB VERIFICATION
	98:30		VHF CHECKOUT RECORDER - ON
	(32022)		
	:40	LGC/CMC CLOCK SYNC T EPHEM UPDATE V48 (32022) E-MEMORY DUMP DEPLOY LDG GEAR	PRIM S-BAND VOICE CHECK SEC S-BAND VOICE CHECK STEERABLE ANT. ACTIVATION P +134, Y +6 BIOMED - RIGHT
	:50	DOCKED IMU COARSE ALIGN	SUIT FAN/H ₂ O SEP CHECK GLYCOL PUMP CHECK
99:00			ASCENT BATTERY ACTIVATION AND CHECKOUT

UPDATE TO LM
DAP LOAD
AGS ABORT CONSTANTS

UPLINK TO LM
L/S REFSMMAT
LM S.V. & V66
LGC ABORT CONST
LGC ΔT CLOCK SYNC
(IF REQD)



M
S
F
N

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 Cu

CSM FLIGHT PLAN

<p>98:00 (21111) (X1111)</p>	<p>CONFIGURE CAMERAS: (UNDOCKING) CM2/EL/80/CEX (f8,1/250,FOCUS) (10 FR)</p> <p>MAG (M) _____, FR # _____ CM2/DAC/T8/CEX-BRKT,MTR (T8,1/250,7) 12 fps (100% MAG)</p> <p>MAG (B) _____, MAG % _____ UTILITY PWR - ON</p> <p>CDR IVT TO LM</p> <p>L10H CANISTER CHANGE (10 INTO B, STOW 8 IN B6)</p> <p>98:10</p> <p>MARK TO LM FOR LM MISSION TIMER SYNC AT CDR REQUEST</p> <p>SWITCH TO CDR COMM UMB</p> <p>98:20</p> <p>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</p> <p>REPORT: DOCKING TUNNEL INDEX ANGLE AND LM PWR - RESET/OFF</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> <p>MSFN CMDS: DSE DUMP</p> </div> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> <p>MSFN UPLINK: CSM S.V. AND V66</p> </div>	<p>~</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>~</p>	<p>98:30 (21111) (X1111)</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> <p>MSFN UPDATE: DAP DATA (99:45) UNDOCK/SEP PAD COPY AT (99:50) P24 TRK PAD: (L/S LDMK 15-X)(100:50)</p> </div> <p>LM CLOCK SYNC: V16N65E ON CDR MARK - V06N65E</p> <p>LM T EPHEM UPDATE: V05N01E, 1706E</p> <p>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)</p> <p>98:40</p> <p>LM LANDING GEAR DEPLOY</p> <p>MAN ATT (3) RATE CMD ATT DB - MIN RATE - LOW SC CONT - SCS BMAG (3) - ATT 1/RATE 2</p> <p>98:50</p> <p>LM DOCKED IMU COARSE ALIGN</p> <p>99:00</p>	<p>~</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>~</p>
--------------------------------------	---	--	--	--

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

LM FLIGHT PLAN

MCC-H

1134 CDT

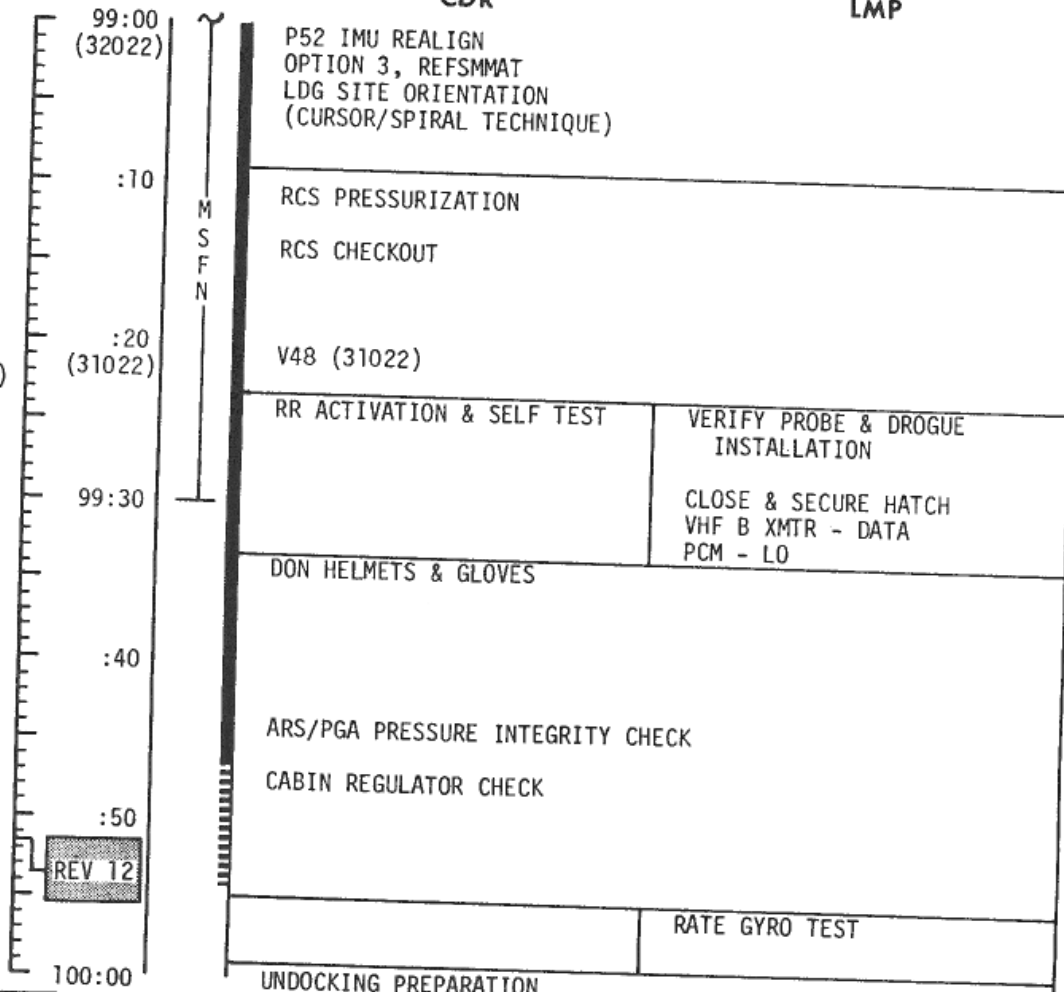
CDR

LMP

NOTES

UPLINK TO LM
E-MEMORY (IF REQD)
PIPA BIAS (IF REQD)

GO/NO-GO FOR
UNDOCKING &
SEPARATION



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

CSM FLIGHT PLAN

1134 C2.

<p>99:00 (21111) (X1111)</p>	<p>DON HELMET AND GLOVES</p> <p>SUIT CKT INTEGRITY CHECK (DECAL)</p> <p>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</p> <p>99:10</p> <p>PANEL 10</p> <p>MODE - VOX VOX SENS <i>tw</i> - 5 S-BD - OFF INTERCOM - OFF VHF AM T/R - T/R (VERIFY)</p> <p>GAMMA RAY* ALPHA PART*</p> <p>AFTER LM RCS CHECKOUT CMC MODE - AUTO LM RR SELF-TEST RNDZ XPNDR - OFF (VERIFY) AUTO RCS SEL B3 - OFF</p> <p>99:20</p> <p>PRE-LOAD PROBE (DECAL) DOCKING LATCH RELEASE (DECAL) HATCH INSTALLATION (DECAL)</p> <p>HATCH INTEGRITY CHECK (DECAL)</p> <p>MSFN UPDATE: GO/NO-GO FOR UNDOCK/SEP</p> <p>99:30</p> <p>VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)</p>	<p>99:30 (21111) (X1111)</p>	<p>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</p> <p>RR XPNDR ACTIVATION AND SELF-TEST (DECAL)</p> <p>99:40</p> <p>VERIFY: CM2/EL/80/CEX (f8,1/250,FOCUS) CM2/DAC/18/CEX-BRKT, MIR (T8,1/250,7) 12 fps UTILITY PWR - ON</p> <p>GAMMA RAY* ALPHA PART*</p> <table border="1" style="float: right; margin-top: 10px;"> <tr> <td>+</td><td>3</td><td>7</td><td>6</td><td>7</td><td>9</td><td>WT</td><td>N47</td> </tr> <tr> <td>+</td><td>0</td><td>0</td><td>0</td><td>4</td><td>9</td><td>P</td><td>TRIM N48</td> </tr> <tr> <td>+</td><td>0</td><td>0</td><td>1</td><td>0</td><td>4</td><td>Y</td><td>TRIM</td> </tr> </table> <p>99:50</p> <p>REV 12</p> <p>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) <i>read up @ 198-4243</i></p> <p>SET DET COUNTING UP TO UNDOCK/SEP UNDOCK CUE CARD</p> <p>P30; LOAD CSM SEP</p> <p>100:00</p>	+	3	7	6	7	9	WT	N47	+	0	0	0	4	9	P	TRIM N48	+	0	0	1	0	4	Y	TRIM
+	3	7	6	7	9	WT	N47																				
+	0	0	0	4	9	P	TRIM N48																				
+	0	0	1	0	4	Y	TRIM																				

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

MCC-H

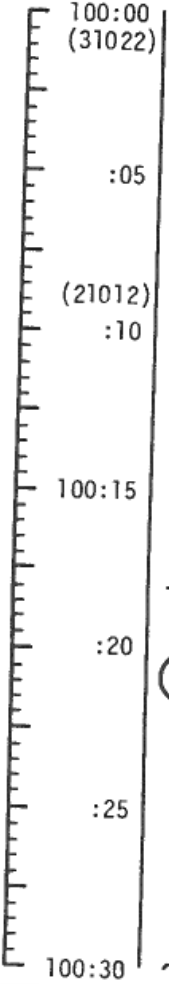
1234 CDT

LM FLIGHT PLAN

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
:20	REPORT V06 N20 ANGLES TO MCC-H	STEERABLE P +41, Y -55 BIOMED - LEFT, PCM - HI
	DOFF HELMET & GLOVES (OPT)	DOFF HELMET & GLOVES (OPT)
:25		CAMERA PREP FOR LANDING SITE OBSERVATIONS
100:30		

GET: 100:13:56

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 PLAN BRANCH

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
VOGNZDE (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

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

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 - OR

100:20

M S F N

100:30

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
POD
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	S	M	S	E	P	PURPOSE
	R	C	S	G	&	N	PROP/GUID
	+			N	/	A	WT N47
P ALIGN		0	0	N	/	A	P TRIM N48
P ALIGN		0	0	N	/	A	Y TRIM
Y ALIGN	+	0	0				HRS GET1
	+	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)

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-113

LM FLIGHT PLAN

MCC-H

1304 CDT

CDR

LMP

NOTES

<p>100:30 (21012)</p> <p style="text-align: center;">:35</p> <p style="text-align: center;">:40</p> <p style="text-align: center;">100:45</p> <p style="text-align: center;">:50</p> <p style="text-align: center;">:55</p> <p style="text-align: center;">101:00</p>	<p>M S F N</p>	<p>DPS THROTTLE CHECK</p>	
		<p>PITCH TO OBSERVE LANDING SITE (100:43), SET ORDEAL (000,340/350,000)</p> <p>PHOTOGRAPH LANDING SITE LM3/DC LM3/DAC</p>	
		<p>V49 MNVR TO RR CHECKOUT ATT (100:50) (000,344/331,000) RR & VHF RNG CHECKOUT</p>	<p>STEERABLE P <u>+126</u>, Y <u>-60</u></p>
		<p>P52 IMU REALIGN OPTION 3, REFSMMAT (LDG SITE ORIENTATION)</p>	

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

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

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

MSFN CMDS:
DSE DUMP

RECORD MAG &
REMOVE & STOW DAC

GAMMA RAY: GAINSTEP - SHIELD OFF

P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

MSFN UPLINK:
CSM S.V.
CIRC TARGET LOAD

GAMMA RAY: GAINSTEP - SHIELD ON (CTR)

CSM LOW ALTITUDE LANDMARK TRACKING PROFILE

GAMMA RAY*
ALPHA PART*

P24 LDMK TRACKING

TGT: ()

T₁ 1 0 0:4 6:29

T₂ : 4 7:0 7

TCA : 4 7:3 7

T₃ : 4 7:5 9

R 8°p 296°y 0°(T2 ACQ)

N or S NM N 3.7 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

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-115

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 (TRIM)

GAMMA RAY*
ALPHA PART*

GDC ALIGN
VERIFY ORDEAL
ALT SET = 50 NM

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

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)

CIRC
BURN TABLE

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

P30 MANEUVER

SET STARS	C	I	R	C	PURPOSE
	S	P	S	G & N	
	+				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	SATS
	+			O	SFT
	+			O O	TRN
	X	X	X		BSS
	X	X			SPA
	X	X	X		SXP

LM FLIGHT PLAN

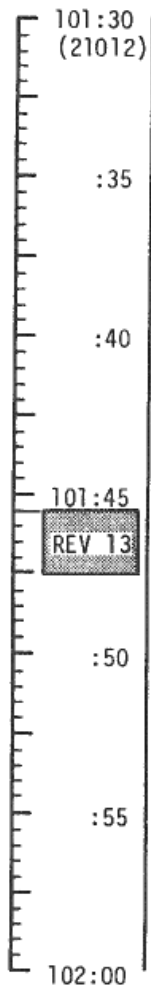
MCC-H

1404 CDT

CDR

LMP

NOTES



P76 TARGET CSM ΔV

AGS CALIBRATION

CSM CIRC 101:34:55

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 PLANING BRANCH

LM FLIGHT PLAN

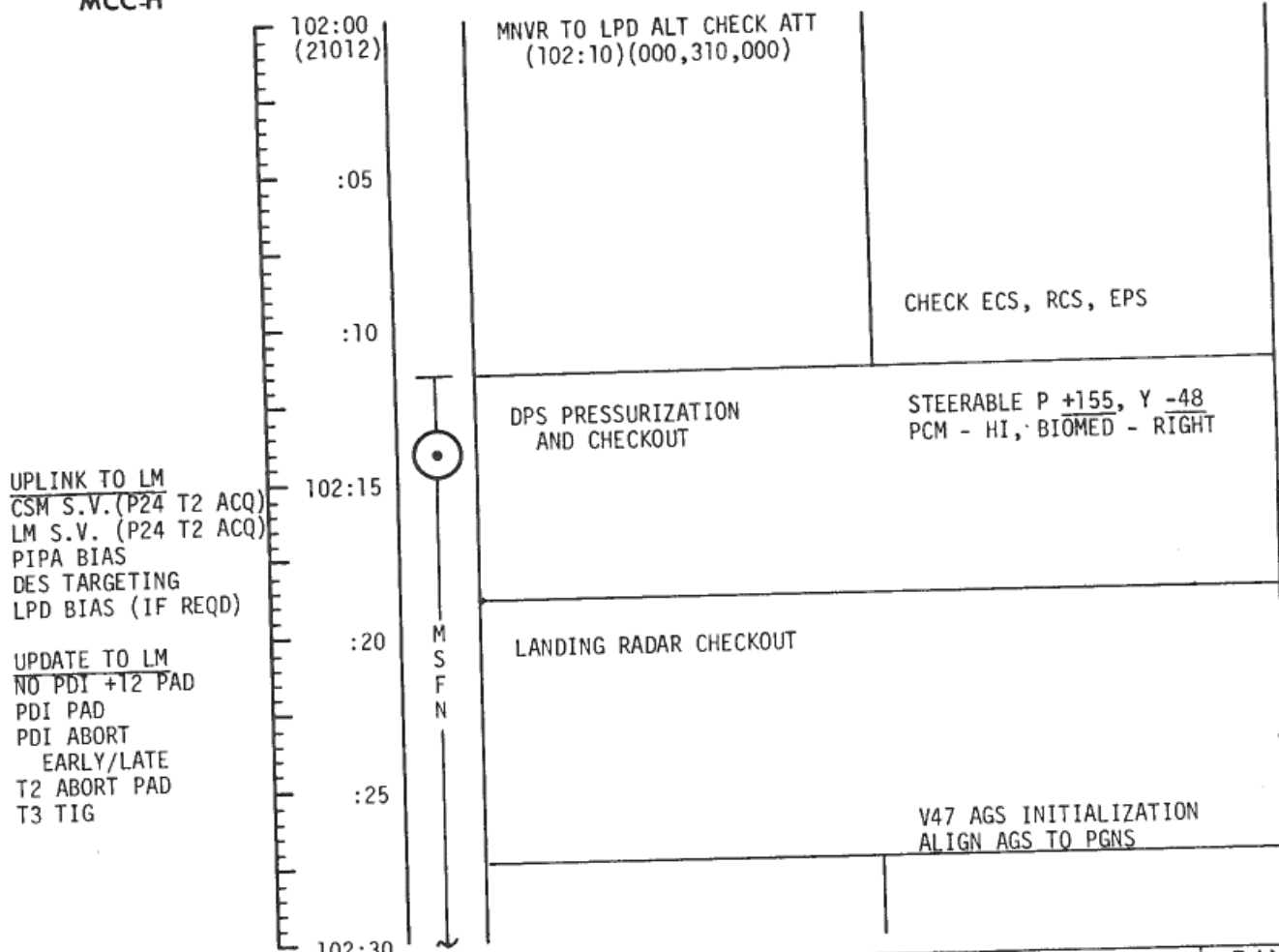
MCC-H

1434 CDT

CDR

LMP

NOTES



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

1434

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

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

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

102:10

102:20

(P20)
(0.5°DB)

102:30

GAMMA RAY*
ALPHA PART*

PURPOSE		PDI ₀ ABORT PAD			
A	GETI N33	HRS	+ 0 0	1 0 2	
		MIN	+ 0 0 0	3 9	
		SEC	+ 0 3 5	3 5	
B	N84 LOCAL	ΔVX	+ 0 1 0	0 0	
	VERT	ΔVY	+ 0 0 0	0 0	
		ΔVZ	+ 0 0 0	1 8	
C	GETI CSI N11	HRS	+ 0 0	1 0 3	
		MIN	+ 0 0 0	4 0	
		SEC	+ 0 2 4	0 0	
D	GETI TPI N37	HRS	+ 0 0	1 0 5	
		MIN	+ 0 0 0	2 2	
		SEC	+ 0 3 0	0 0	

PURPOSE		PDI ₁ PAD			
I	GETI PDI N33	HRS	+ 0 0		
		MIN	+ 0 0 0		
		SEC	+ 0		

PURPOSE		PDI ₁ ABORT EARLY PAD			
J	GETI TPI N37	HRS	+ 0 0		
		MIN	+ 0 0 0		
		SEC	+ 0		

PURPOSE		PDI ₁ ABORT LATE PAD			
K	GETI TPI N37	HRS	+ 0 0		
		MIN	+ 0 0 0		
		SEC	+ 0		

PURPOSE		NO PDI ₁ +T2 ABORT			
E	GETI N33	HRS	+ 0 0		
		MIN	+ 0 0 0		
		SEC	+ 0		
F	N84 LOCAL	ΔVX			
	VERT	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		

PURPOSE		T2-1 ABORT PAD			
L	GETI T2	HRS	+ 0 0		
		MIN	+ 0 0 0		
		SEC	+ 0		

PURPOSE		T2-1 ABORT PAD			
M	GETI TPI N37	HRS	+ 0 0		
		MIN	+ 0 0 0		
		SEC	+ 0		

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

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-121

LM FLIGHT PLAN

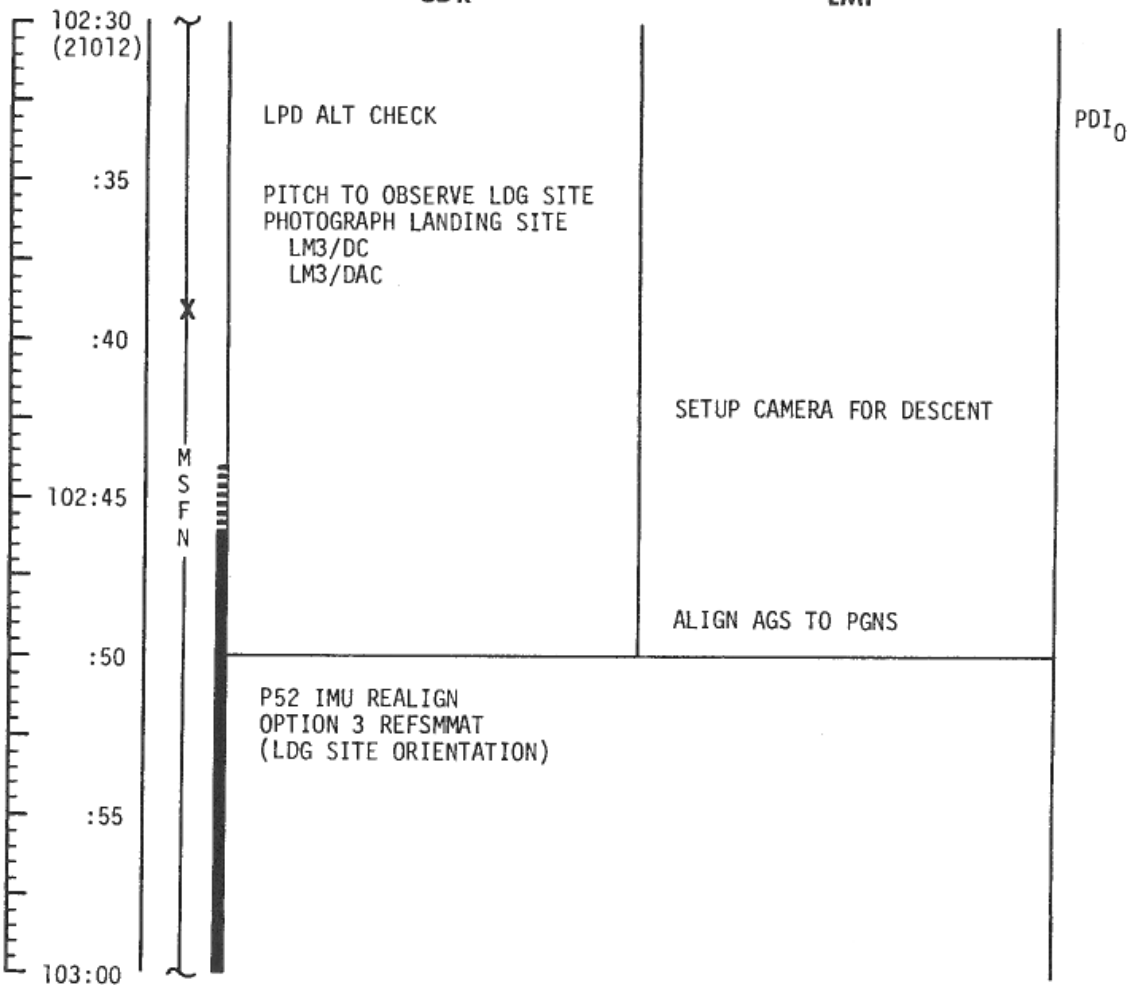
MCC-H

1504 CDT

CDR

LMP

NOTES



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

CSM FLIGHT PLAN

102:30
(P20)
(0.5°DB)
(11111)
(X1111)

102:40

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

102:50
M
S
F
N

103:00

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

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

MSFN CMDS:
DSE RECORD

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

P00
V46 (11112)
(X1111)
V49 MNVR TO P52 AND COAS CALIB ATT (102:54)
(180,257,012) HGA P -69, Y 114

GAMMA RAY*
ALPHA PART*

MSFN CMDS:
DSE DUMP

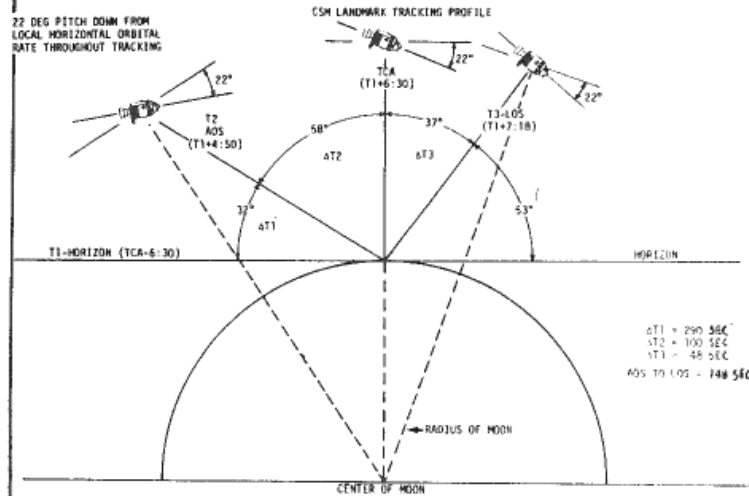
P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

P52 IMU REALIGN

N71:	_____
N05:	_____
N93:	_____
X	_____
Y	_____
Z	_____
GET	_____

22 DEG PITCH DOWN FROM
LOCAL HORIZONTAL ORBITAL
RATE THROUGHOUT TRACKING



ΔT1 = 290 SEC
ΔT2 = 100 SEC
ΔT3 = 48 SEC
ΔT4 TO LOS = 144 SEC

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

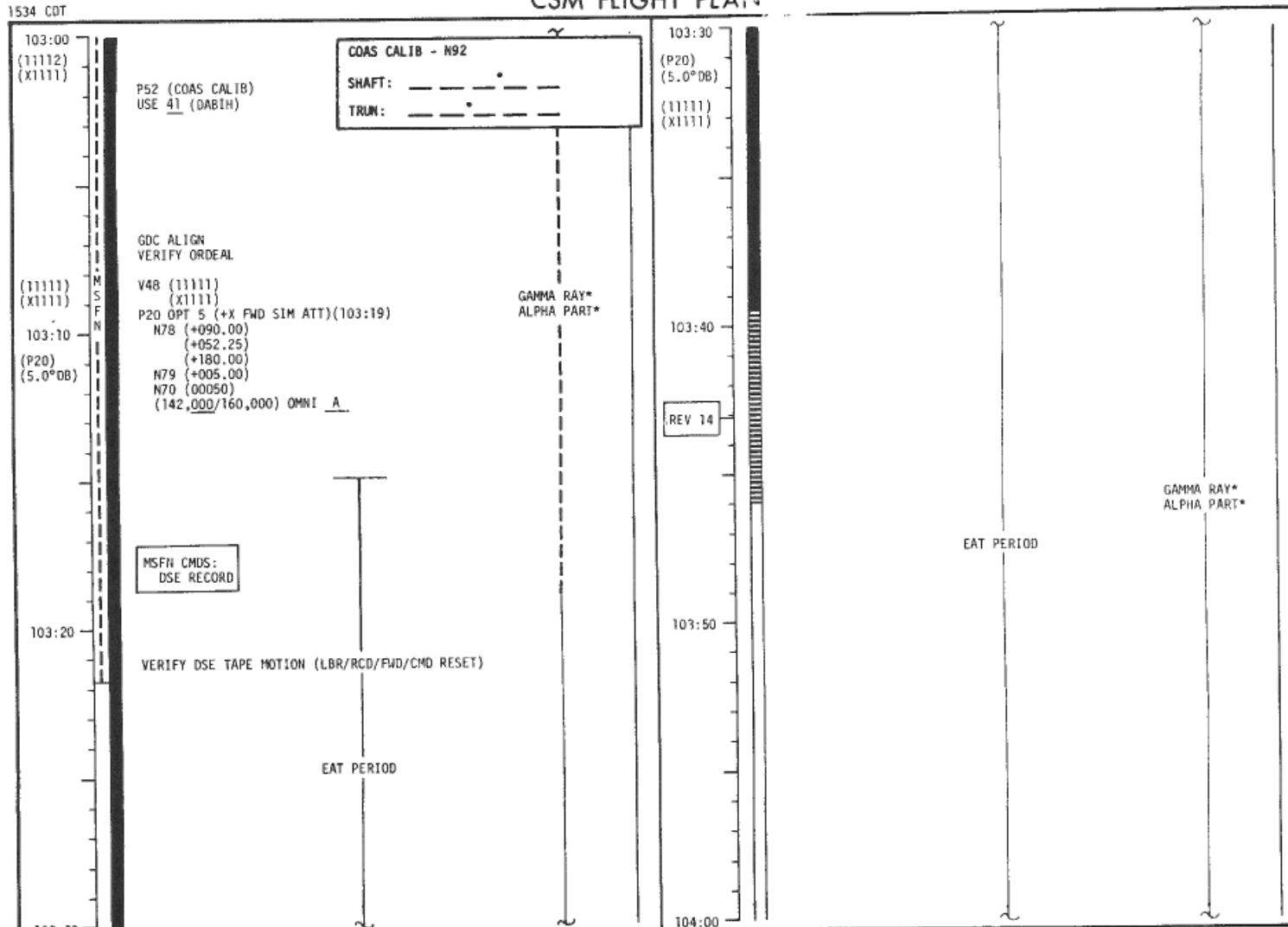
UPLINK TO LM
GYRO DRIFT COMP
(IF REQD)

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

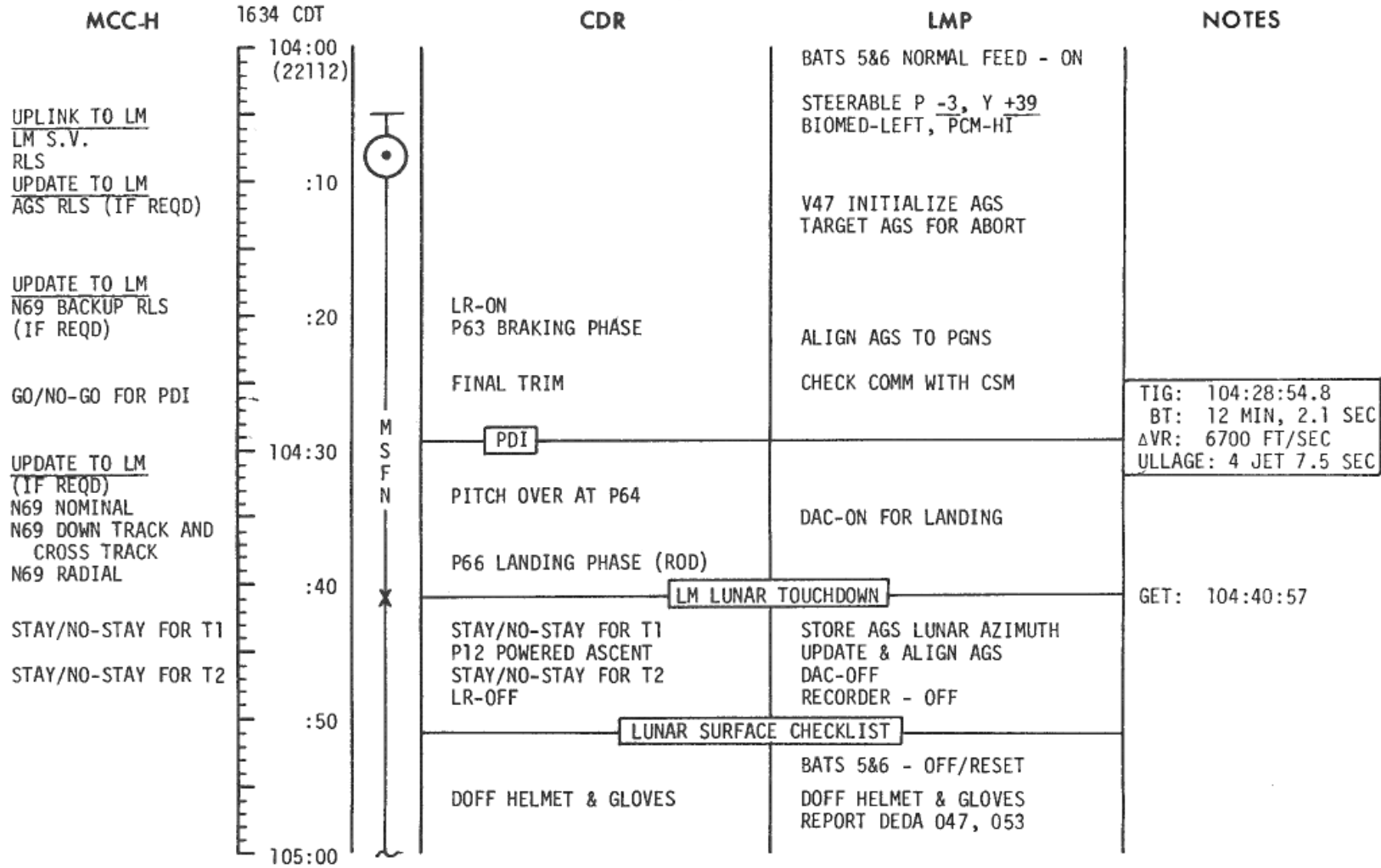
FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-125

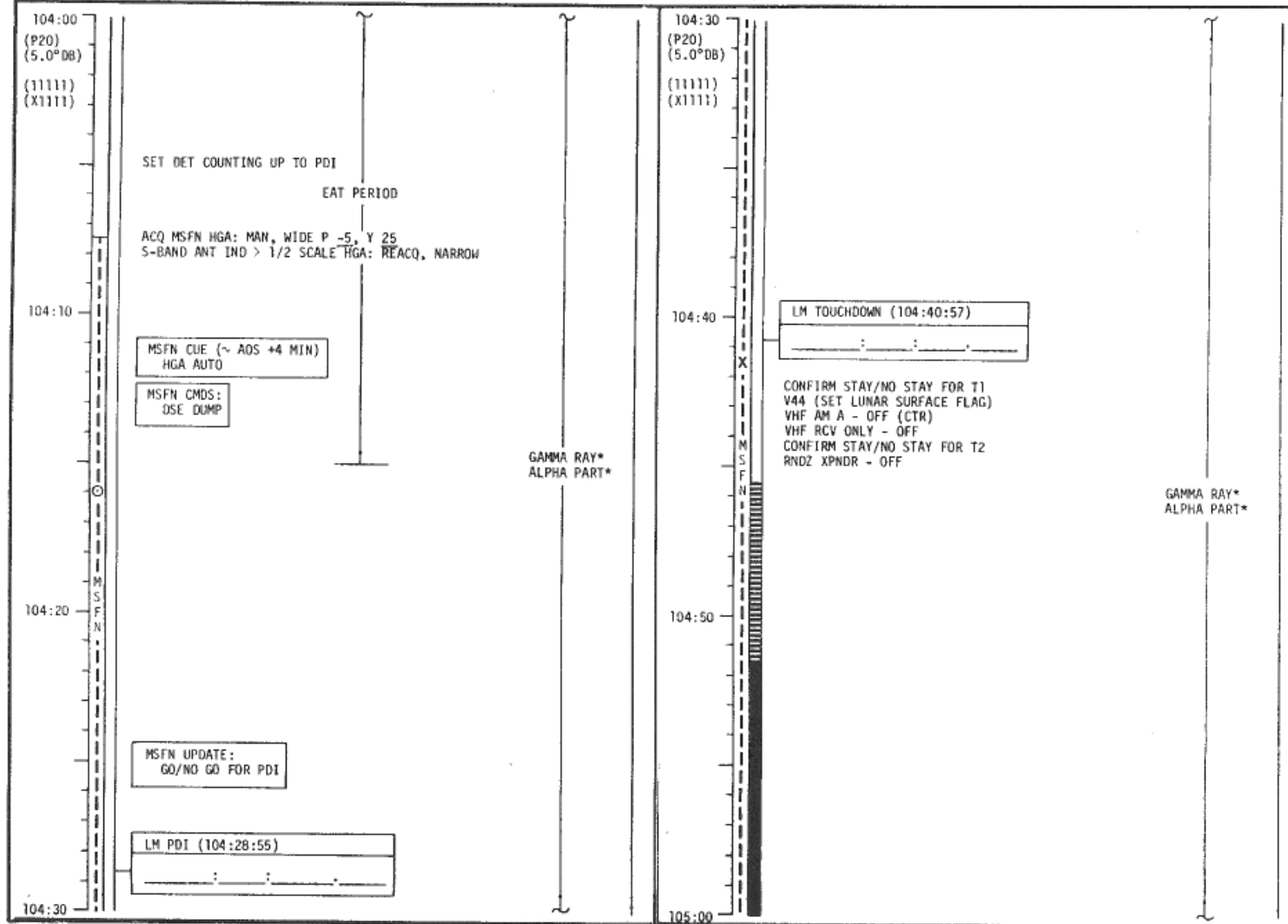
LM FLIGHT PLAN



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

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

<p>105:00 (22112)</p>		P57 LUNAR SURFACE ALIGN OPTION 3 REFSMMAT A/T-1 GRAVITY & LM Z-AXIS (LANDING SITE ORIENT)	AGS LUNAR SURFACE GYRO CALIBRATION
:10		INSTALL WINDOW SHADES	STEERABLE P <u>+73</u> , Y <u>-62</u>
		PARTIAL POWER DOWN	
:20		P57 LUNAR SURFACE ALIGN OPTION 3, REFSMMAT A/T-2, TWO CELESTIAL BODIES (LANDING SITE ORIENT)	
105:30	M S F N	P57 LUNAR SURFACE ALIGN OPTION 3, REFSMMAT A/T-2, TWO CELESTIAL BODIES (LANDING SITE ORIENT)	
		E-MEMORY DUMP, POO	AGS/PGNS ALIGN AGS STANDBY
:40		CONFIGURE TO POWER DOWN	BATS 3&4 - OFF/RESET LUNAR BAT (CDR) - ON. CHECK BUS VOLTS
		LGC TO STANDBY, IMU PWR DN	
:50		SEVA PREP EQUIPMENT PREP FOR SEVA	
		HELMET/GLOVE DONNING	
106:00		PRESSURE INTEGRITY CHECK	

STAY/NO-STAY FOR T3

UPDATE TO LM
LIFT-OFF TIMES FOR
REVS 16 THRU 20

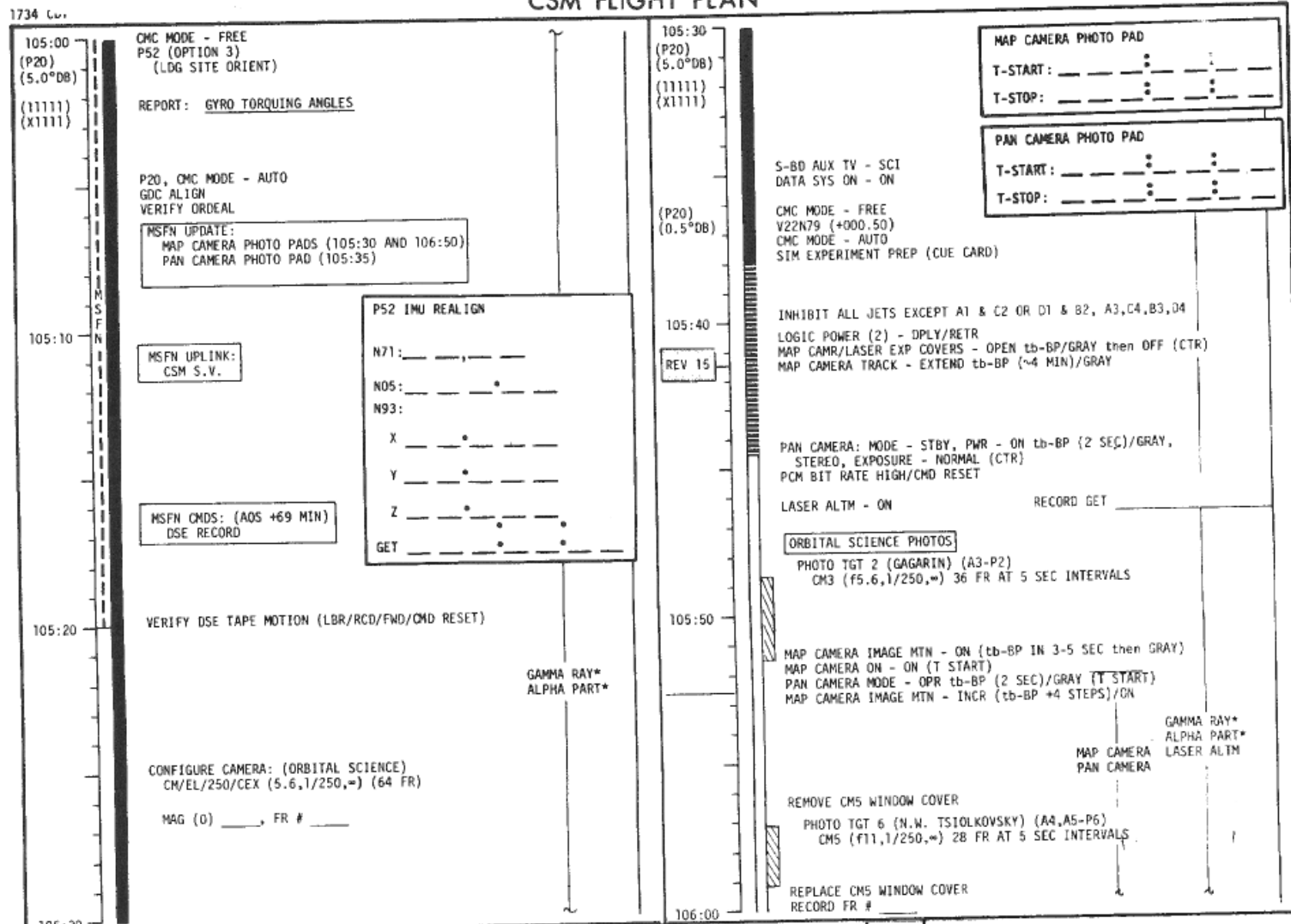
CSM REV 15

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 PLANNING BRANCH

CSM FLIGHT PLAN

1734 C.W.



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

LM FLIGHT PLAN

MCC-H

1834 CDT

CDR

LMP

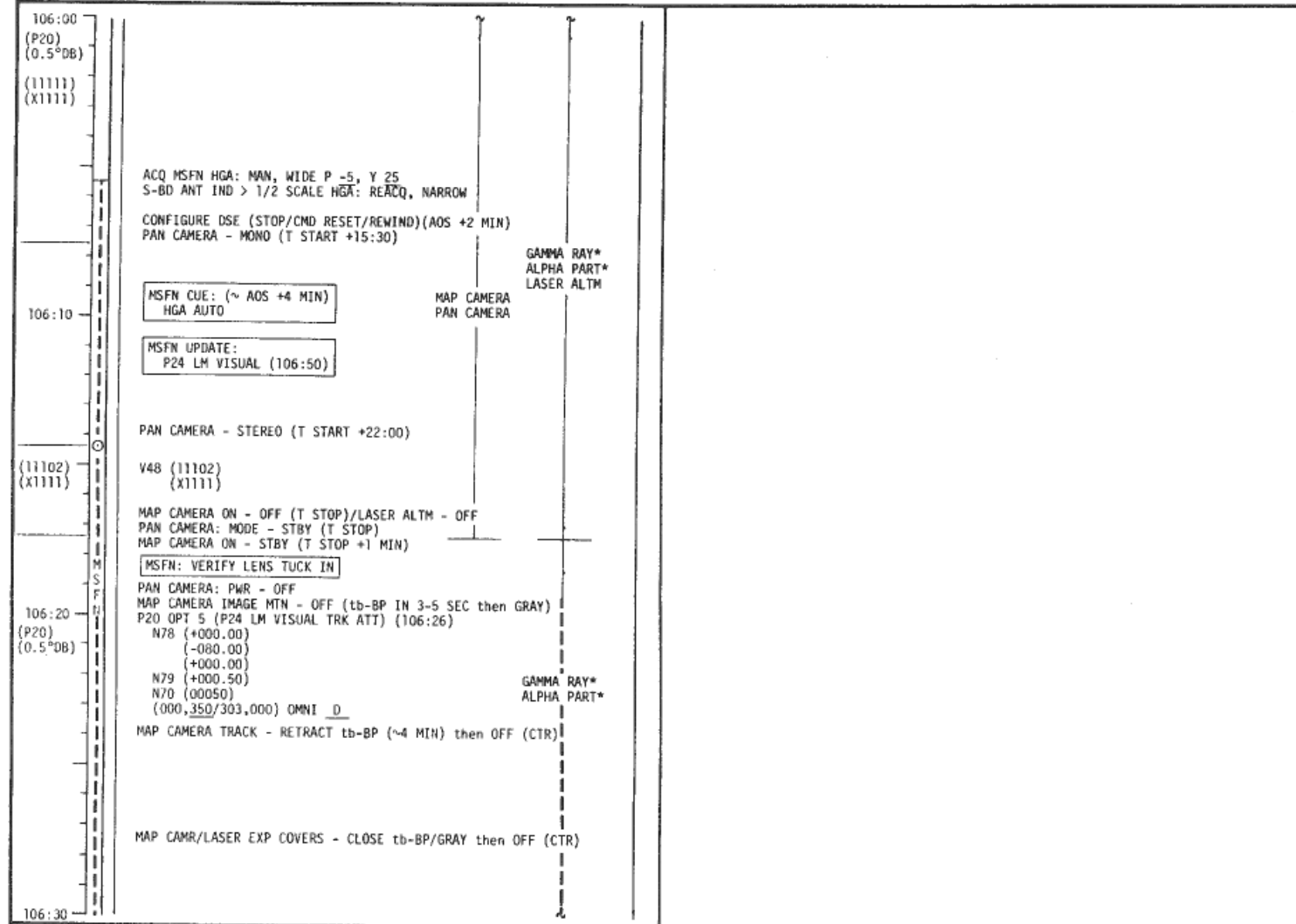
NOTES

106:00		CABIN DEPRESS		
:05		HATCH OPENING		
:10		STANDUP IN HATCH IDENTIFY LANDMARKS FOR LANDED LM LOCATION		START SEVA
106:15	M S F N	360° PAN DC/60MM (22 FR)	HAND DC/60MM TO CDR	
:20		CHECK TRAVERSE ROUTES FOR TRAFFICABILITY AND LANDMARKS, ALSEP LOCATION		0:10
:25		FAR FIELD GEOLOGY FRONT, RILLE, NORTH COMPLEX, MARE SURFACE & BOULDER FIELDS LONG LENS PHOTOGRAPHY	HAND DC/500MM TO CDR	
106:30				0:20

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



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-131

LM FLIGHT PLAN

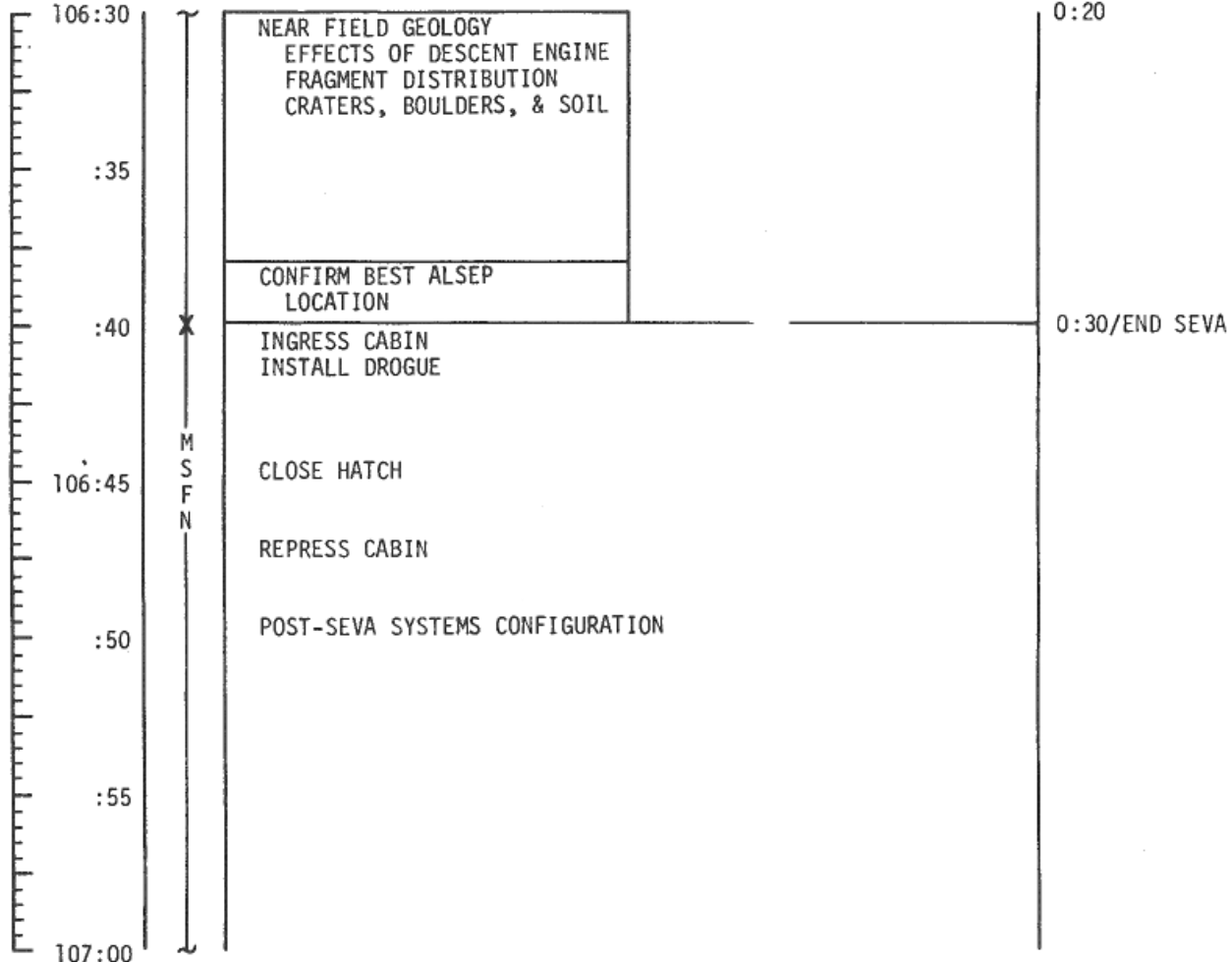
MCC-H

1904 CDT

CDR

LMP

NOTES



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)

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

GAMMA RAY: GAINSTEP - SHIELD OFF INCREASE ONE STEP 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)

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

CSM LM TRACKING PROFILE

10 DEG PITCH DOWN FROM LOCAL HORIZONTAL
ORBITAL RATE THROUGHOUT TRACKING

T2-AOS (T1+4:07) 10°
TCA (T1+6:30) 22.5°
T3-LOS (T1+6:58) 67.5°
T1-HORIZON(TCA-6:30) 22.5°
HORIZON
ΔT1 = 300 SEC
ΔT2 = 143 SEC
ΔT3 = 28 SEC
AOS TO LOS = 171 SEC

CENTER OF MOON

P24 LDMK TRACKING
TGT: LM VISUAL ()

T1 106:33:59
T2 106:38:06
TCA 106:40:29
T3 106:40:57

R _____ °P _____ °Y _____ (T2 ACQ)
W or S NM 03 / SA _____ TA _____ (T2 ACQ)
NB9
LAT +26.074
LONG/2 +01.827
ALT -01.917

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

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

LM FLIGHT PLAN

MCC-H

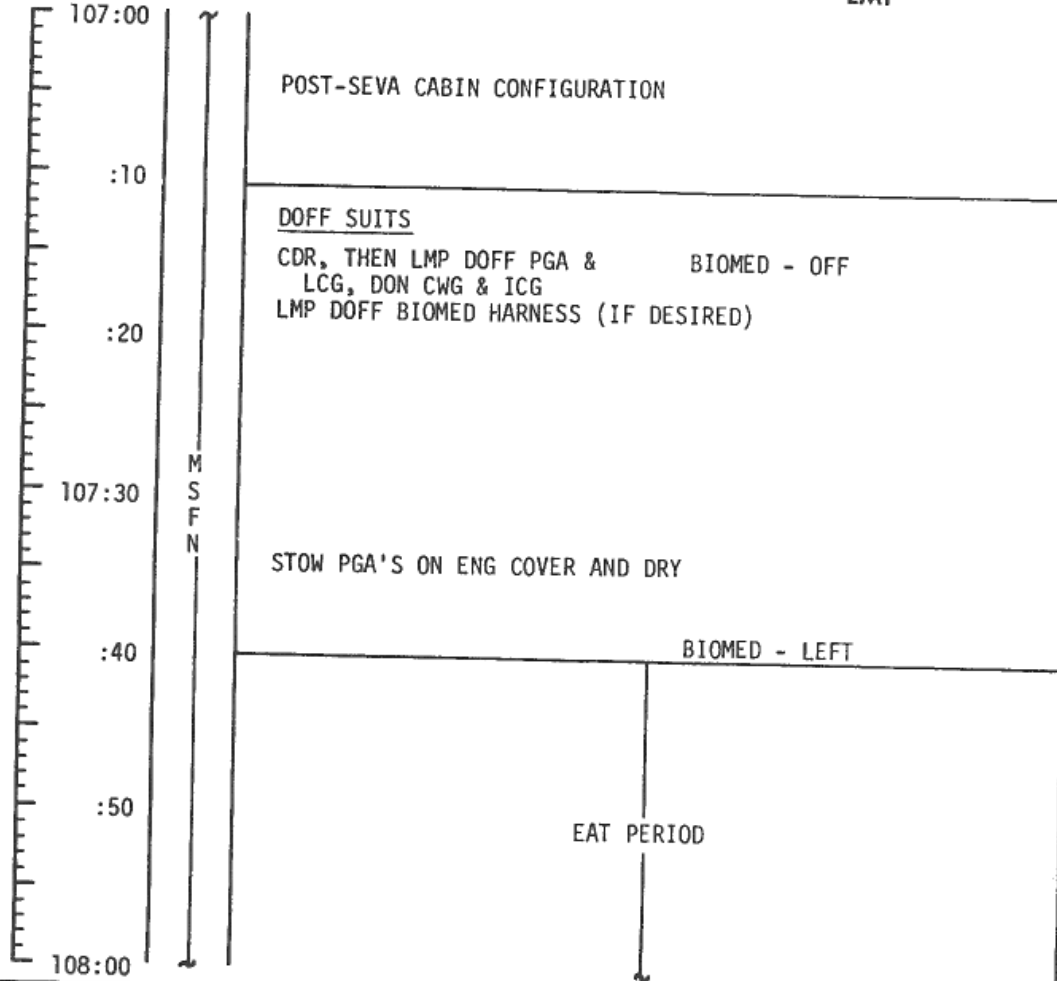
1934 CDT

CDR

LMP

NOTES

UPDATE TO LM
LM CONSUMABLES

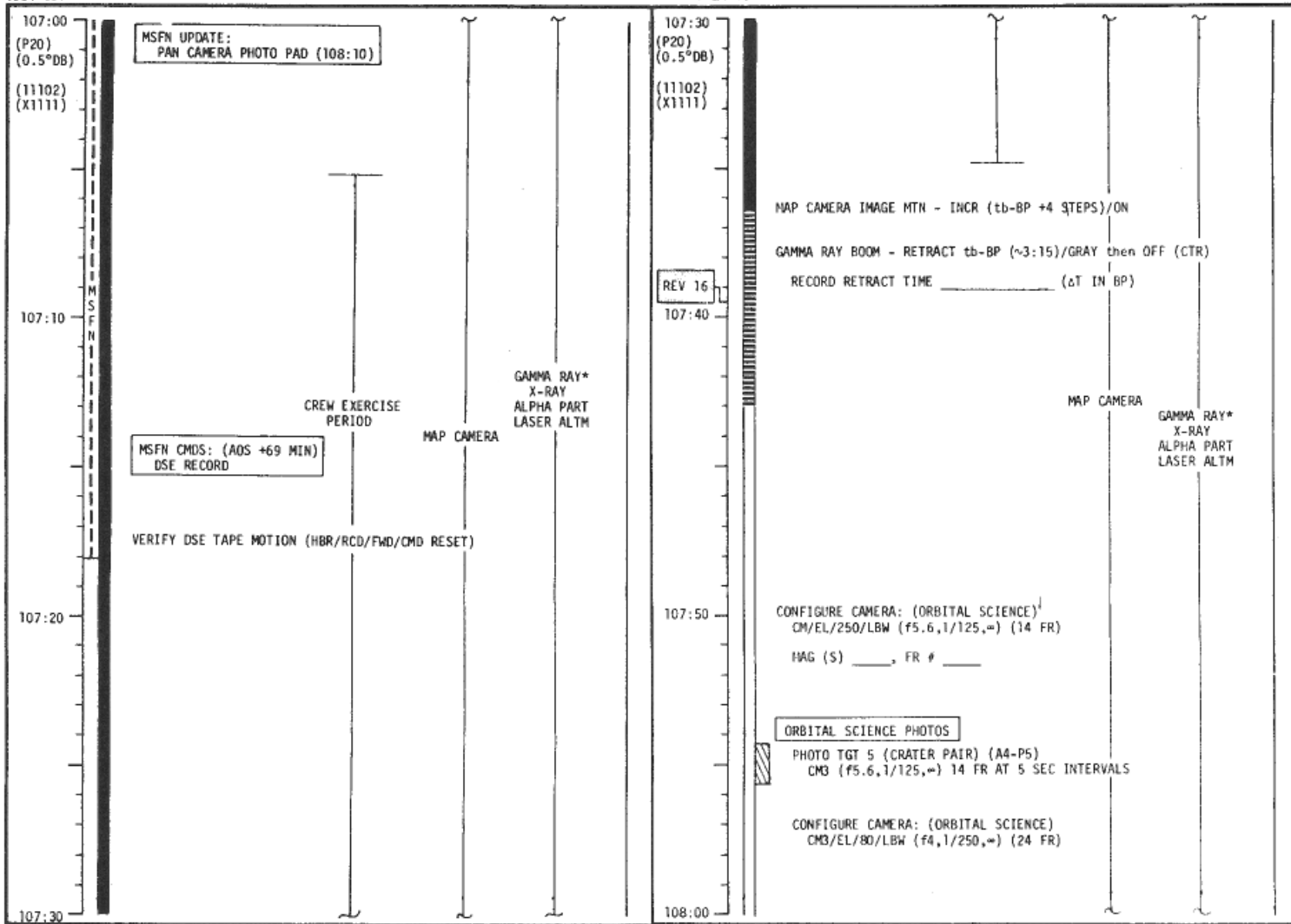


CSM REV 16

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 TRAINING BRANCH

CSM FLIGHT PLAN



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

MCC-H

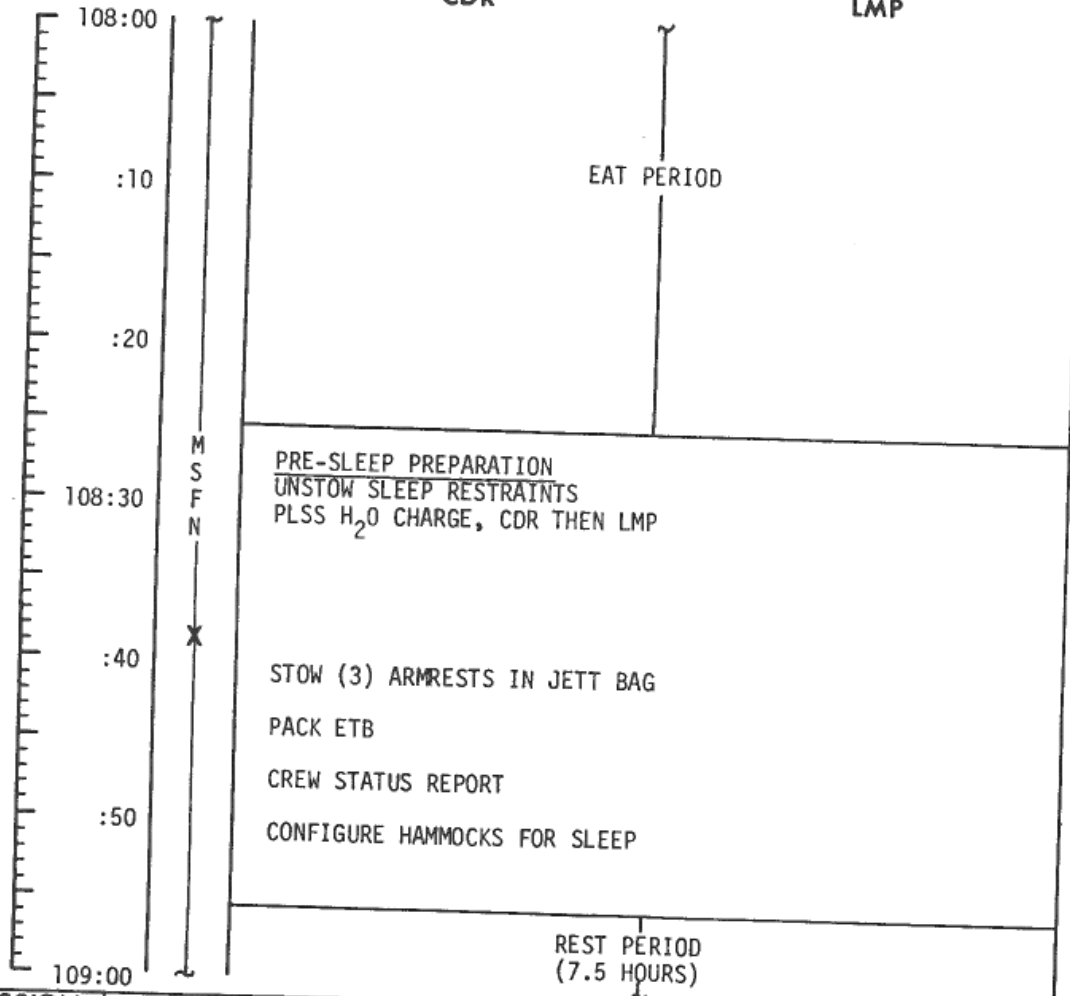
2034 CDT

LM FLIGHT PLAN

CDR

LMP

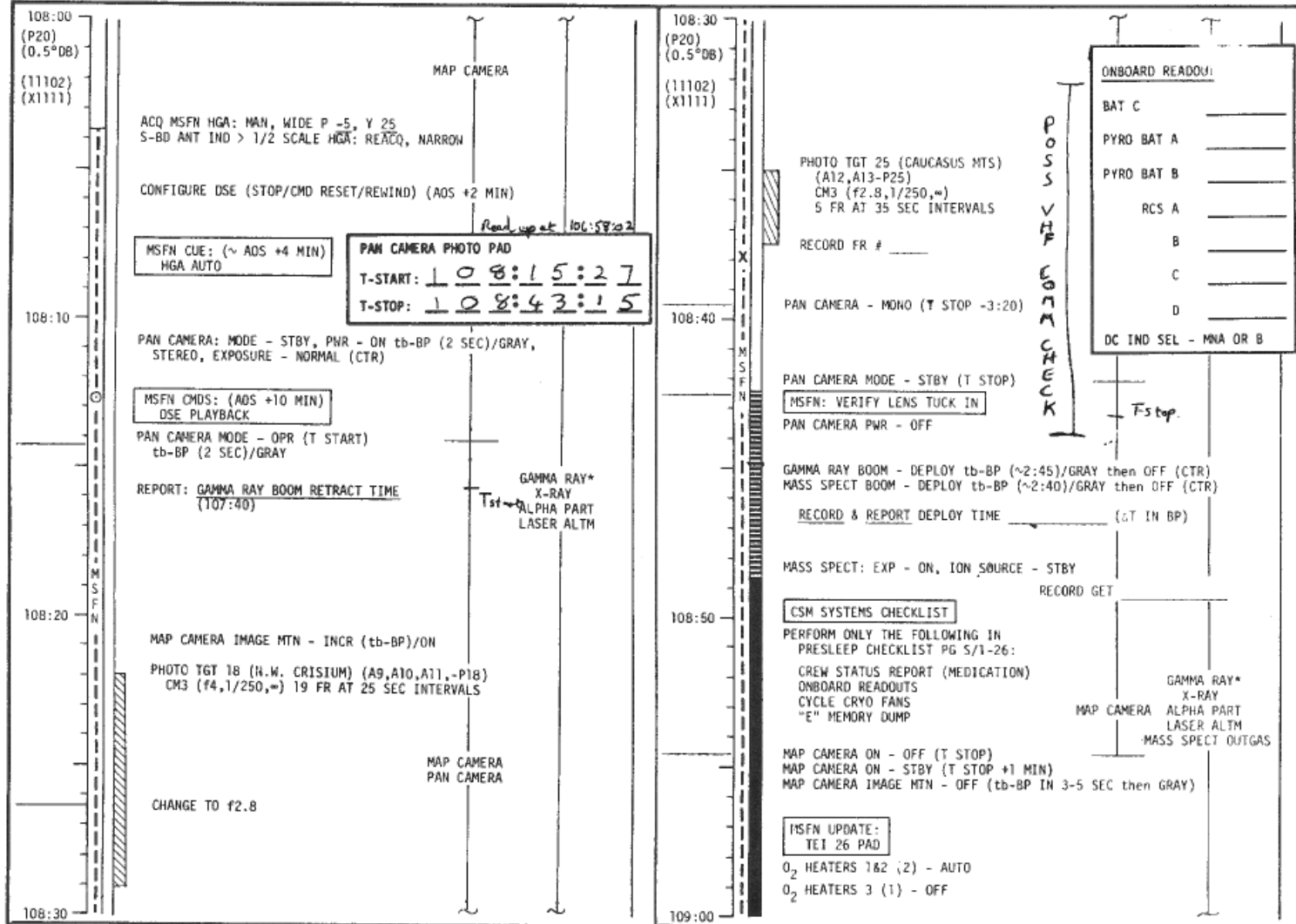
NOTES



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



ONBOARD READOUT:

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

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

LM FLIGHT PLAN

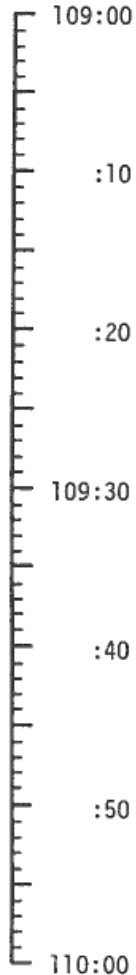
MCC-H

2134 CDT

CDR

LMP

NOTES



M
S
F
N

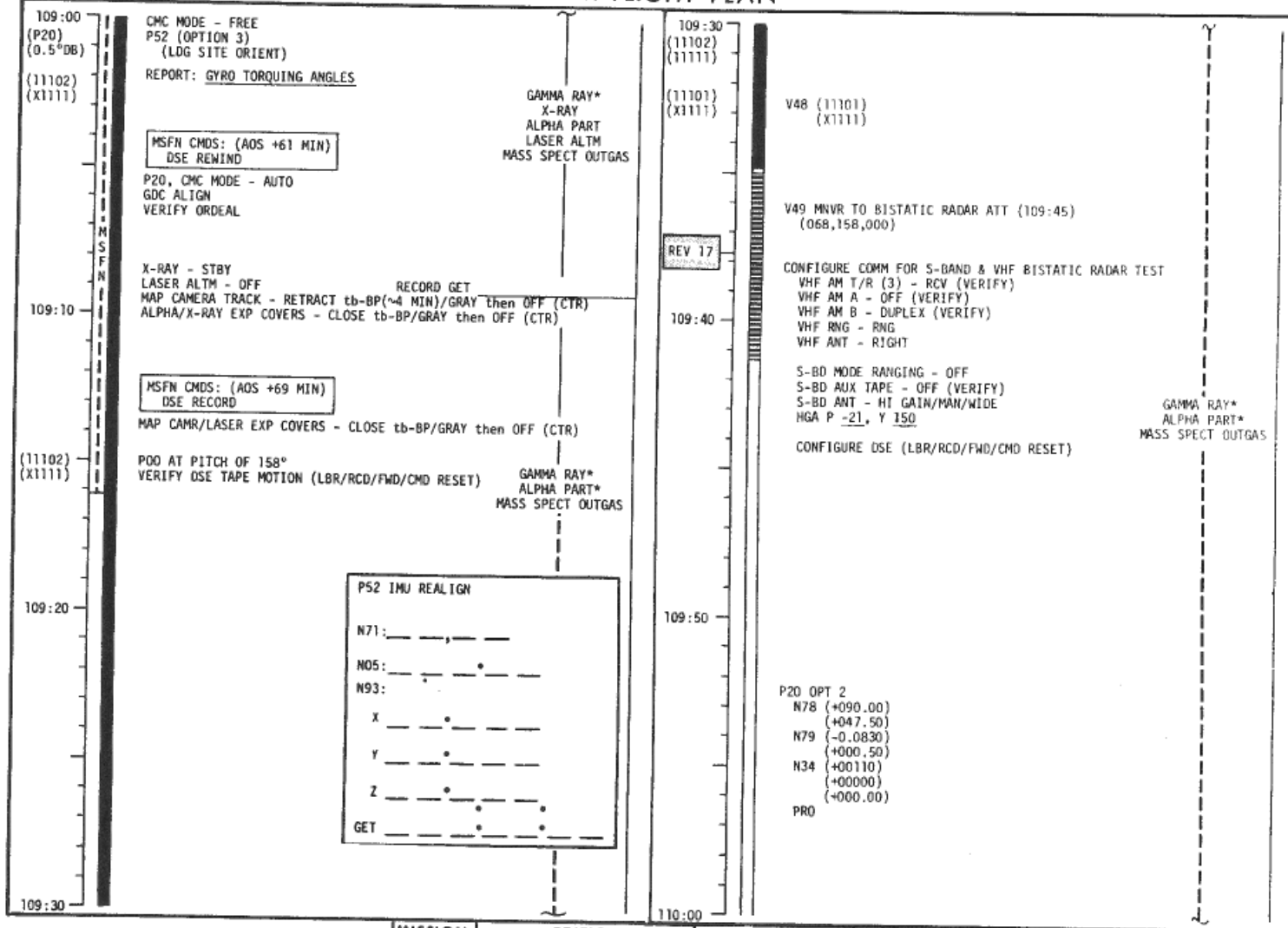
REST PERIOD
(7.5 HOURS)

CSM REV 17

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

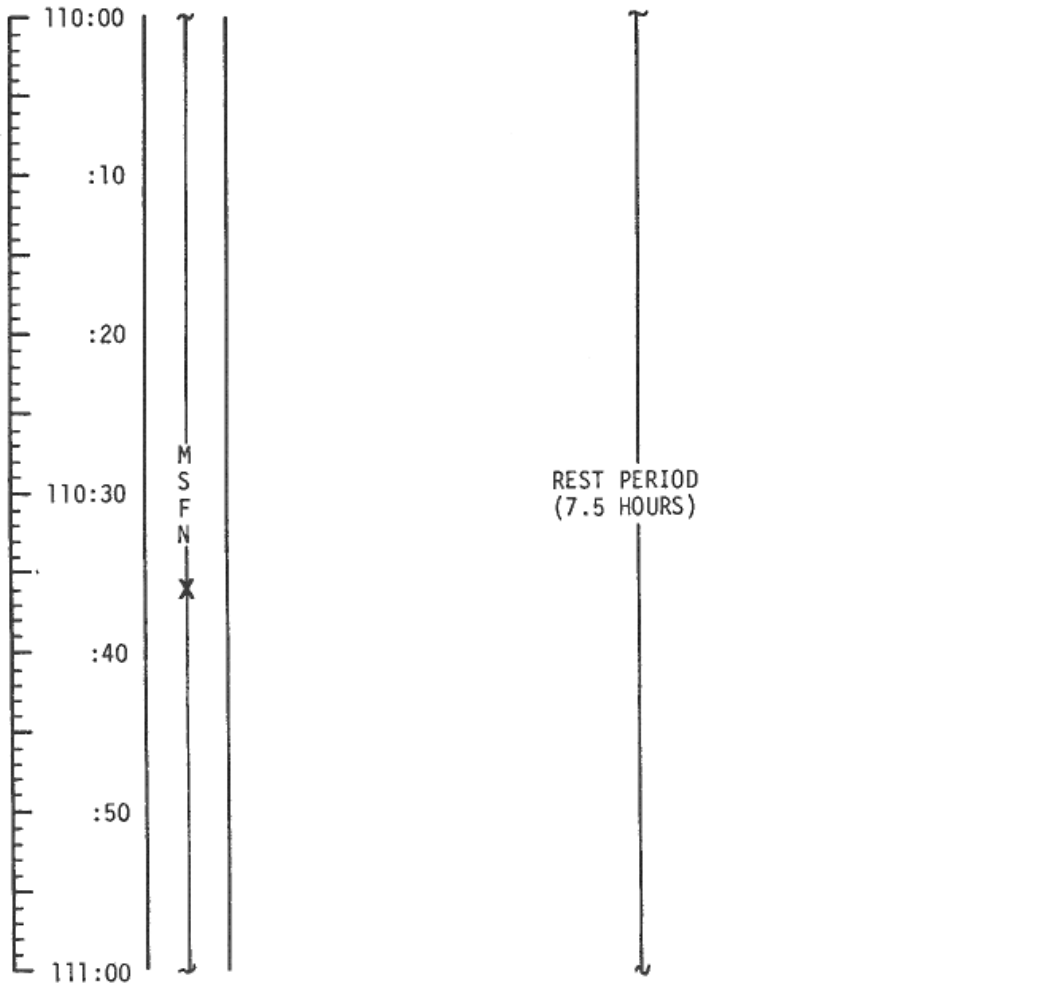
MCC-H

2234 CDT

CDR

LMP

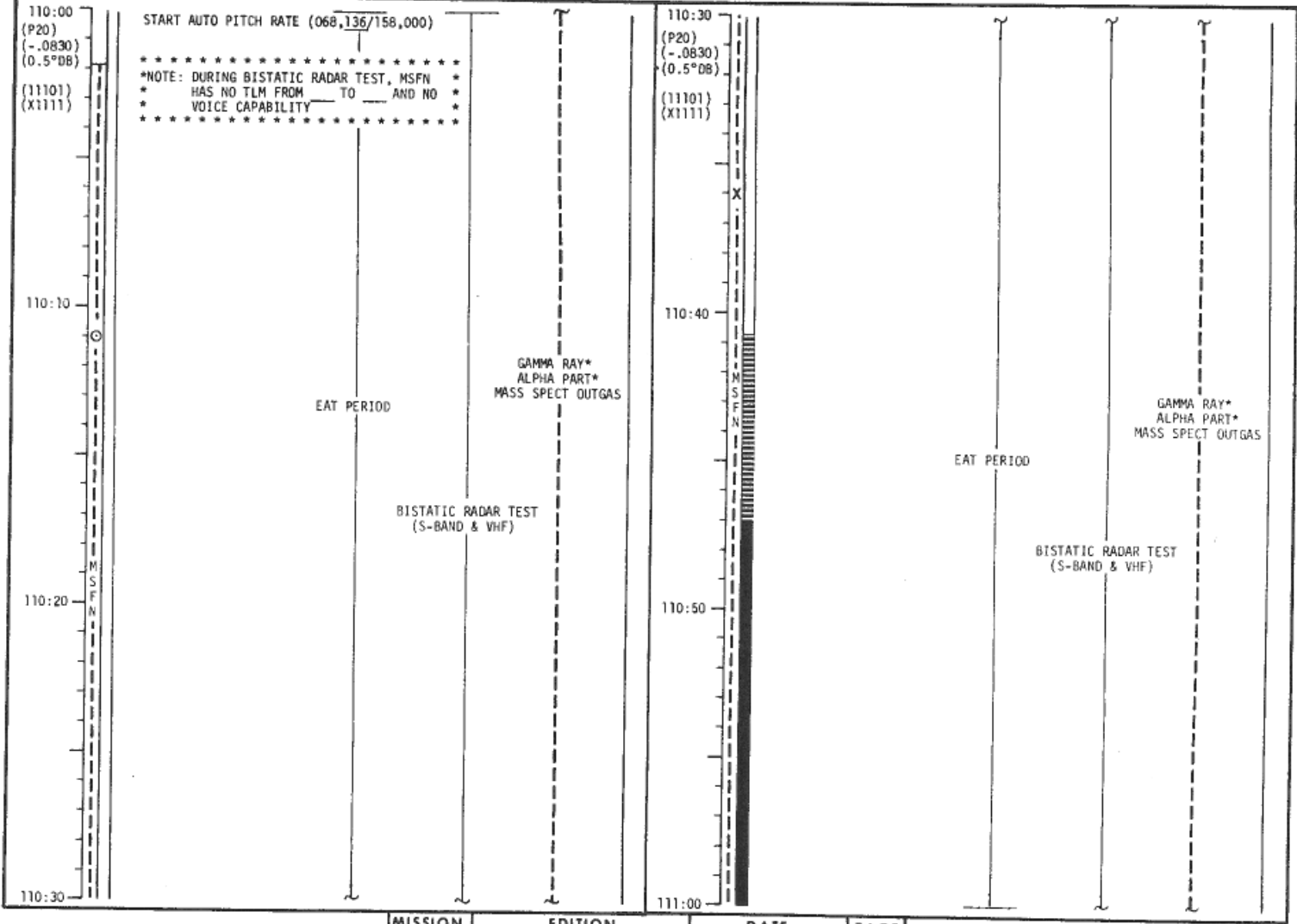
NOTES



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

FLIGHT PLAN BRANCH

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

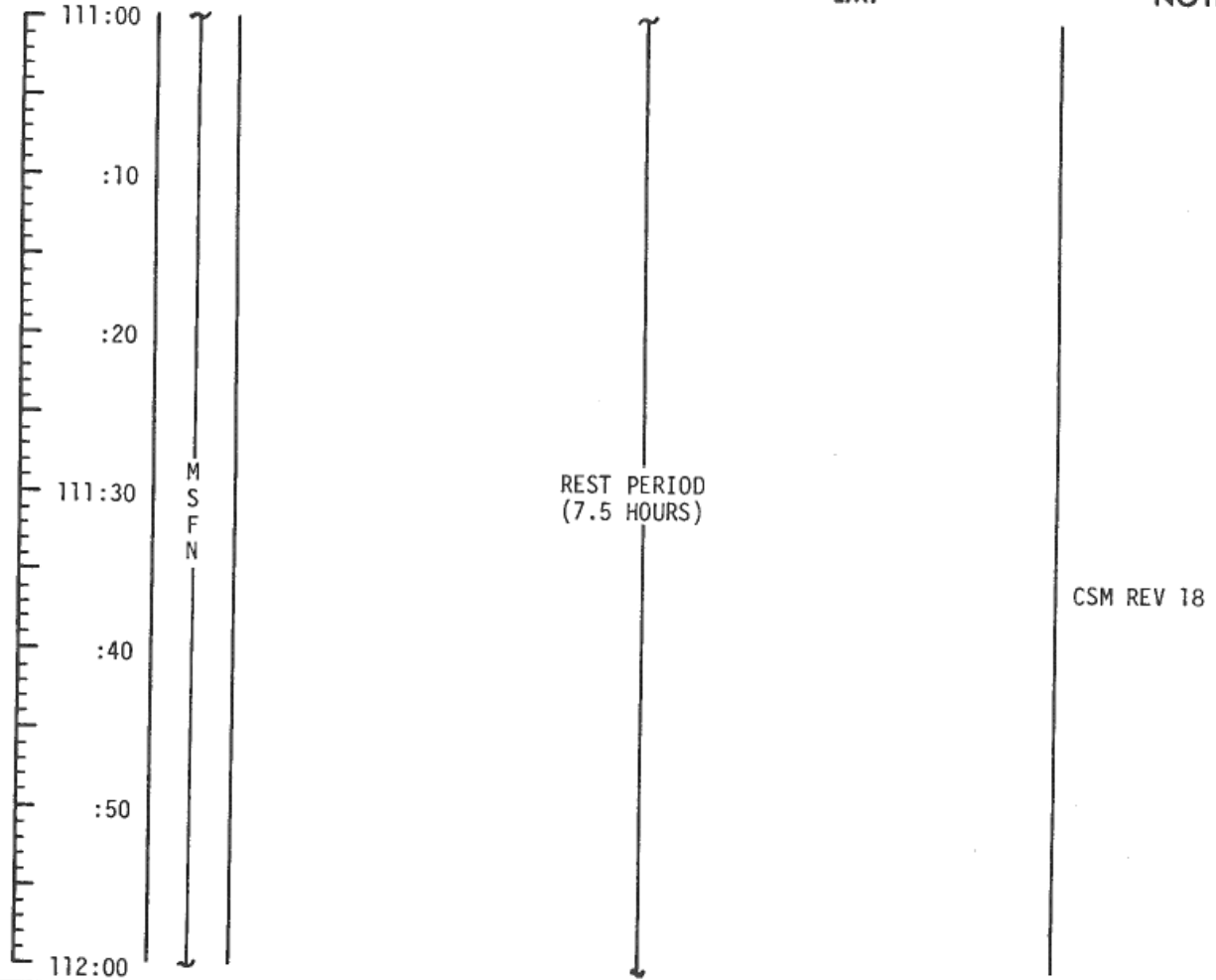
MCC-H

2334 CDT

CDR

LMP

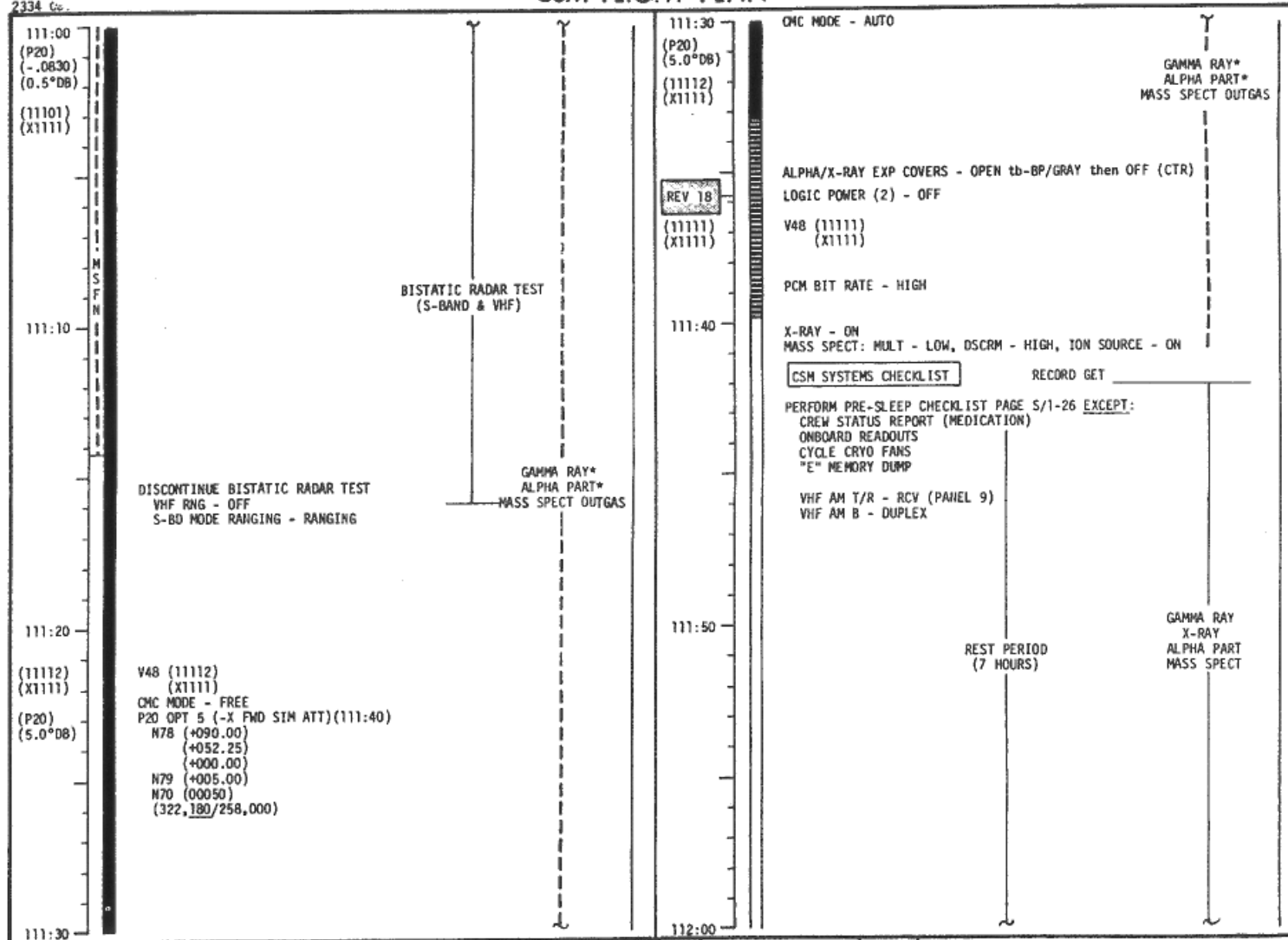
NOTES



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 PLANING BRANCH

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

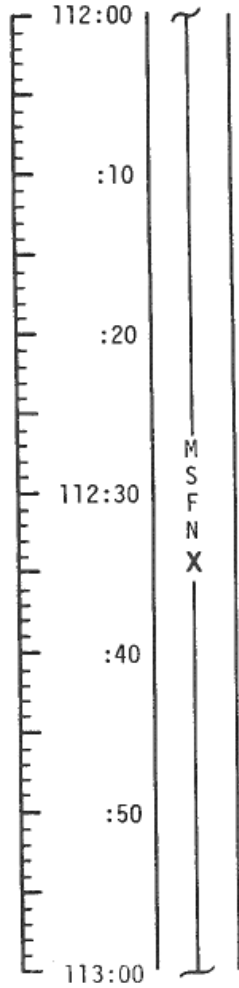
MCC-H

0034 CDT

CDR

LMP

NOTES



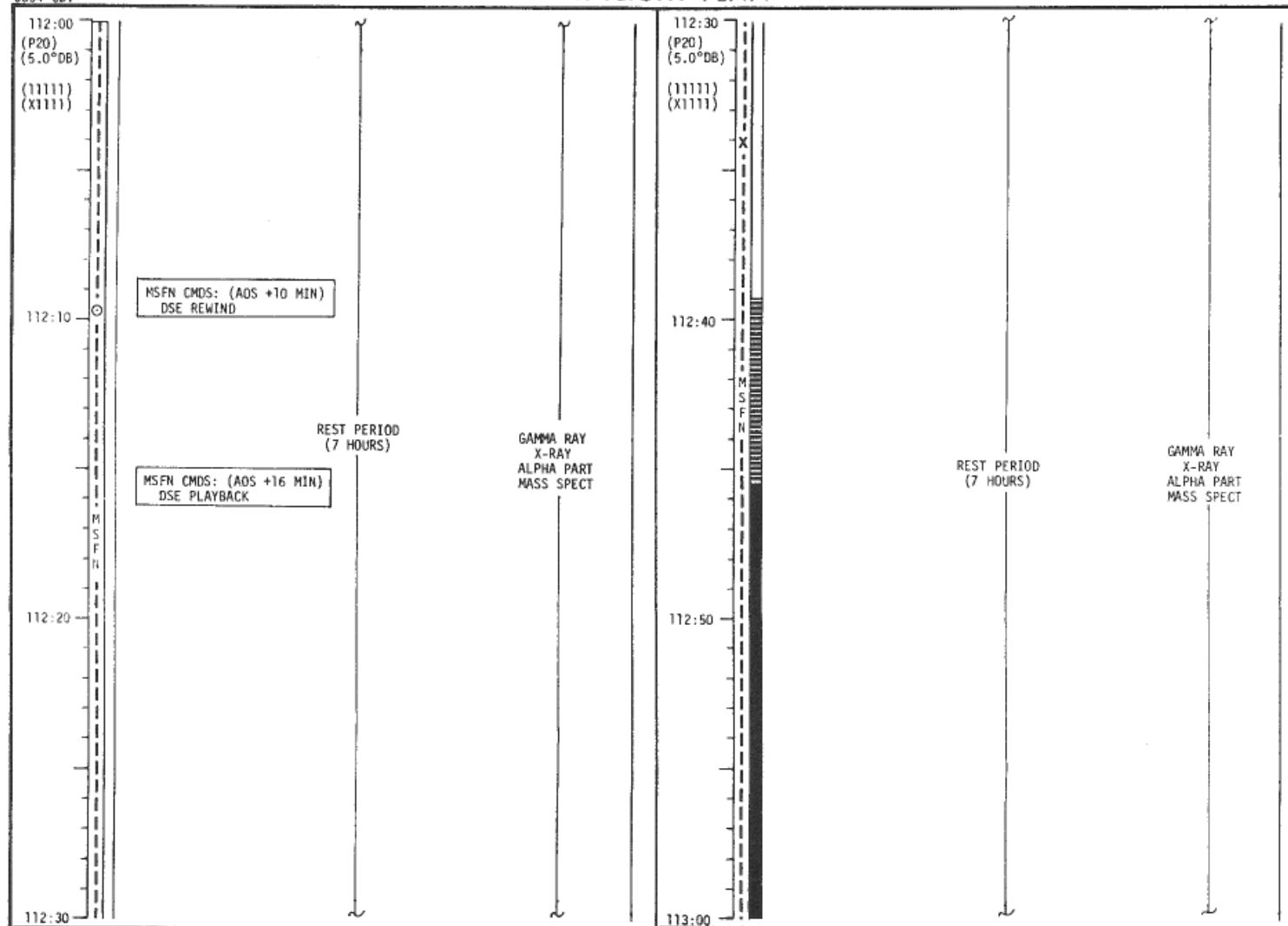
REST PERIOD
(7.5 HOURS)

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

FLIGHT PLANING BRANCH

CSM FLIGHT PLAN

0034 Cui



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

LM FLIGHT PLAN

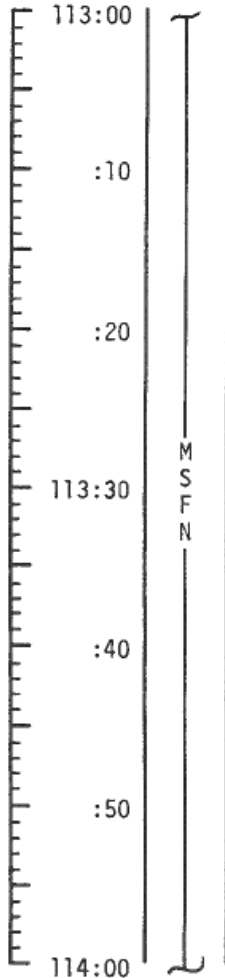
MCC-H

0134 CDT

CDR

LMP

NOTES



REST PERIOD
(7.5 HOURS)

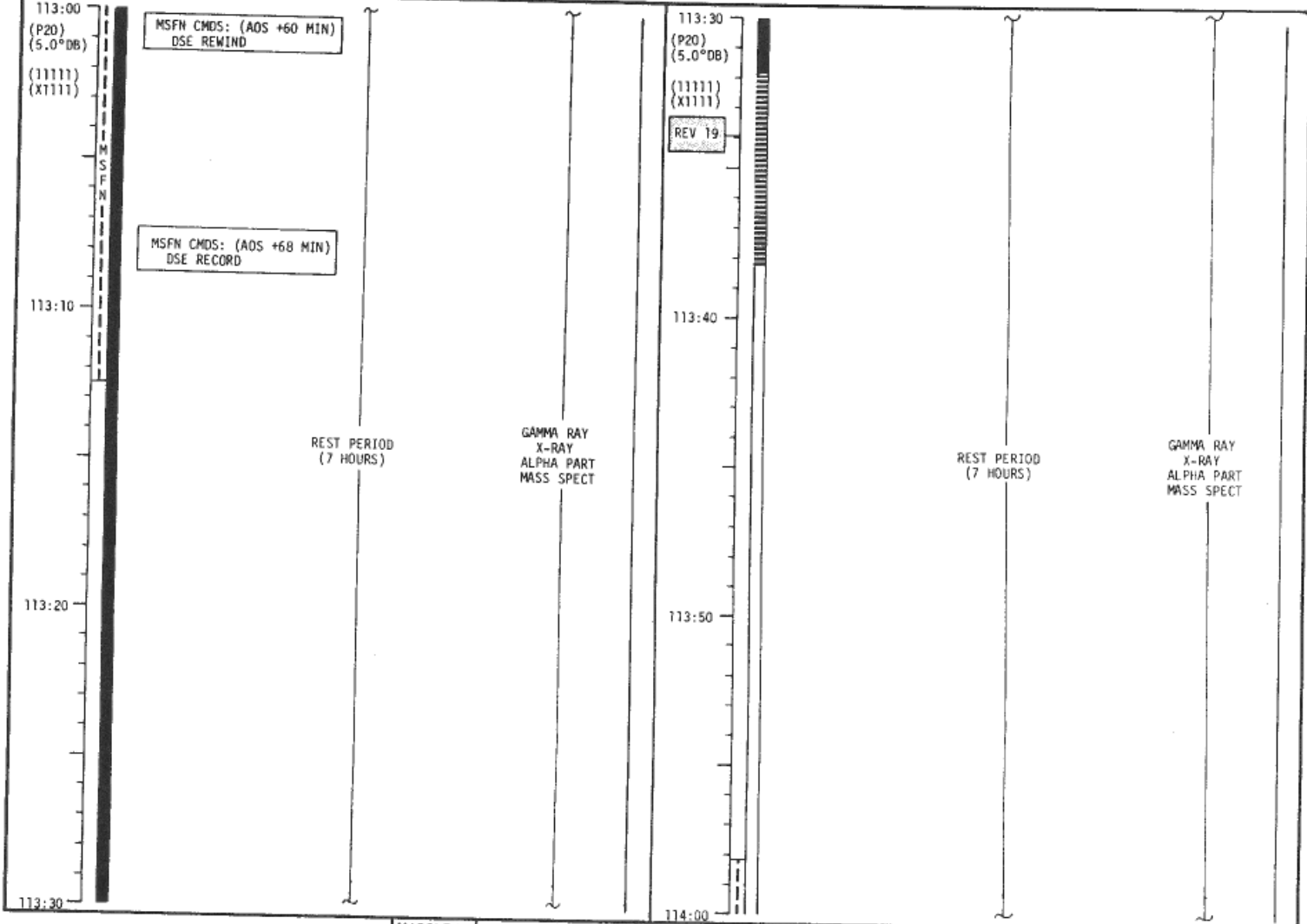
CSM REV 19

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



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-147

LM FLIGHT PLAN

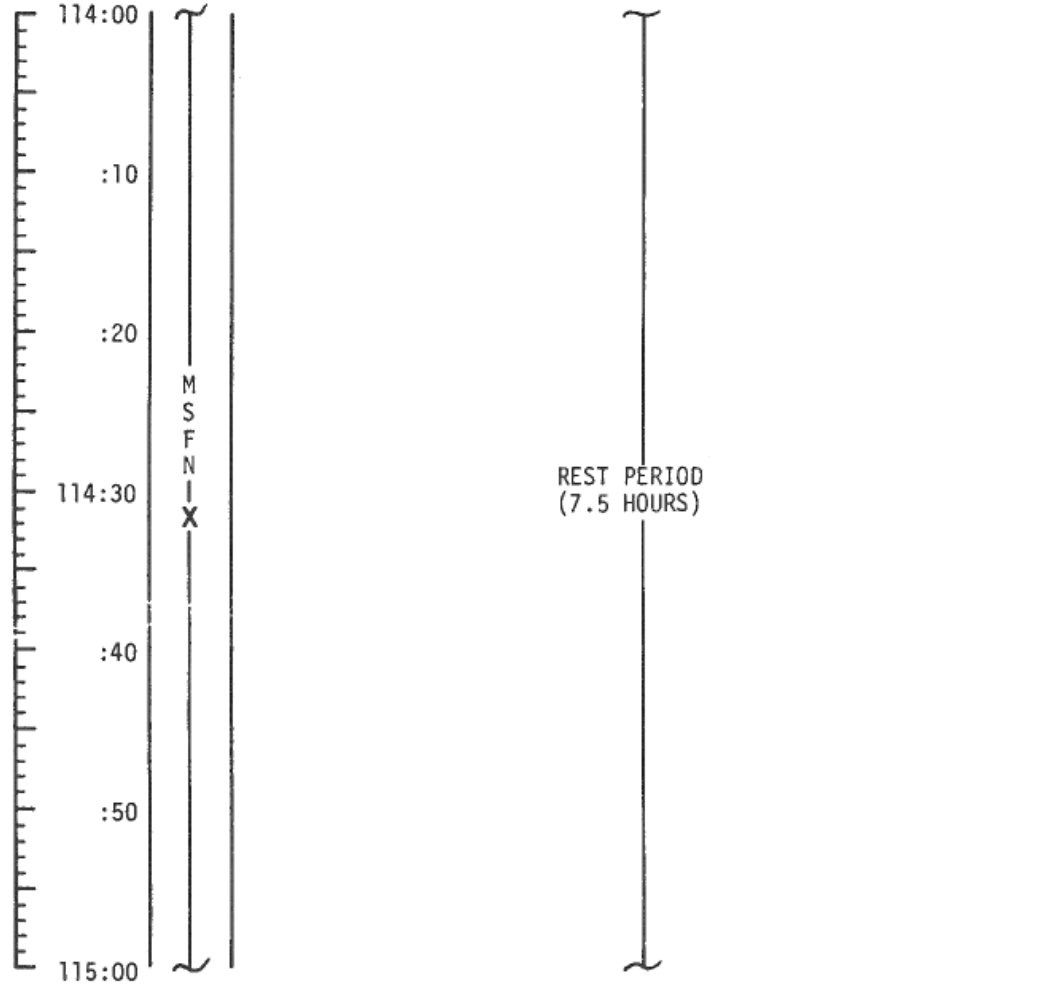
MCC-H

0234 CDT

CDR

LMP

NOTES

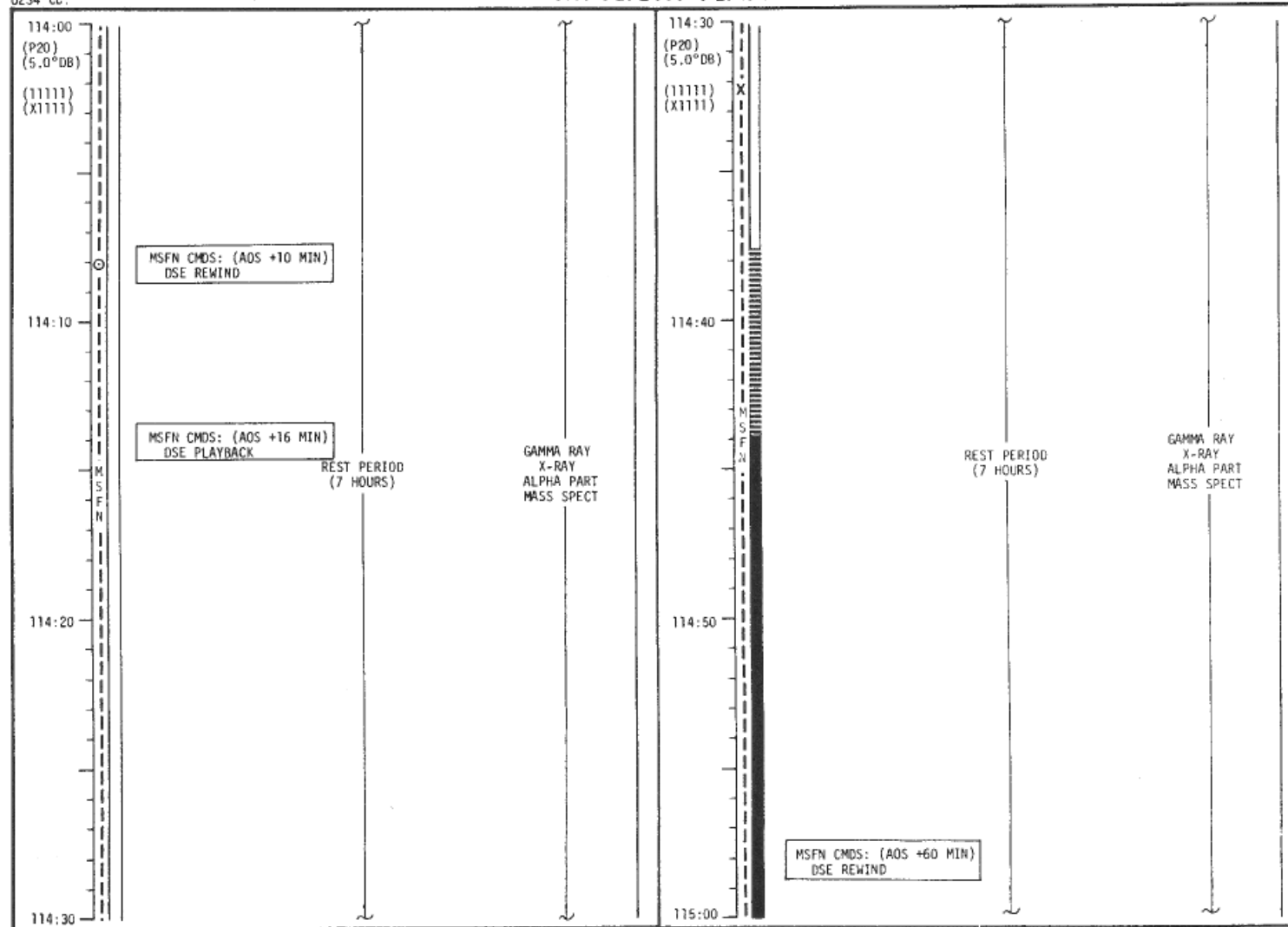


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	114:00 - 115:00	5/19	3-148

FLIGHT PLANNING BRANCH

0234 G.

CSM FLIGHT PLAN



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

MCC-H

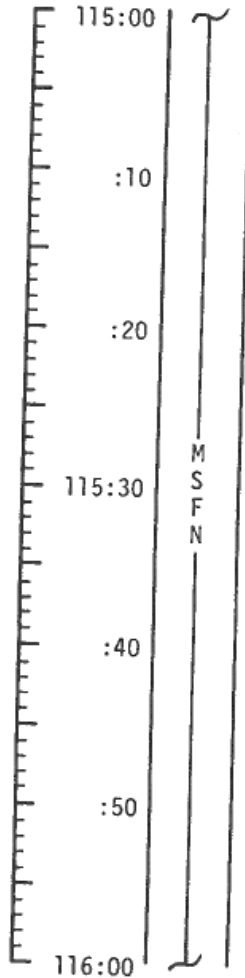
0334 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES



M
S
F
N

REST PERIOD
(7.5 HOURS)

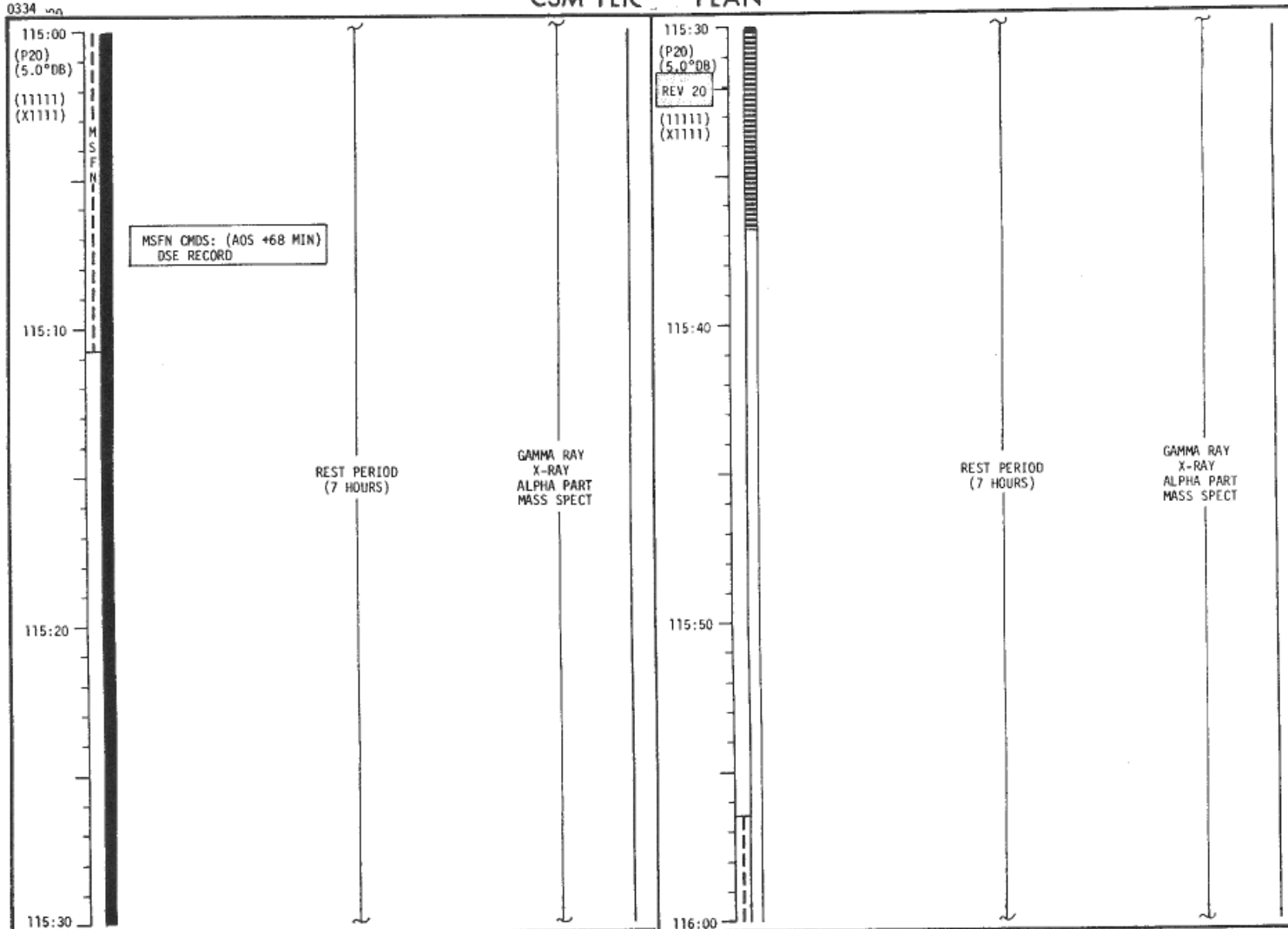
CSM REV 20

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 PLAN ENGINEERING BRANCH

CSM FLIGHT PLAN

0334



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-151

LM FLIGHT PLAN

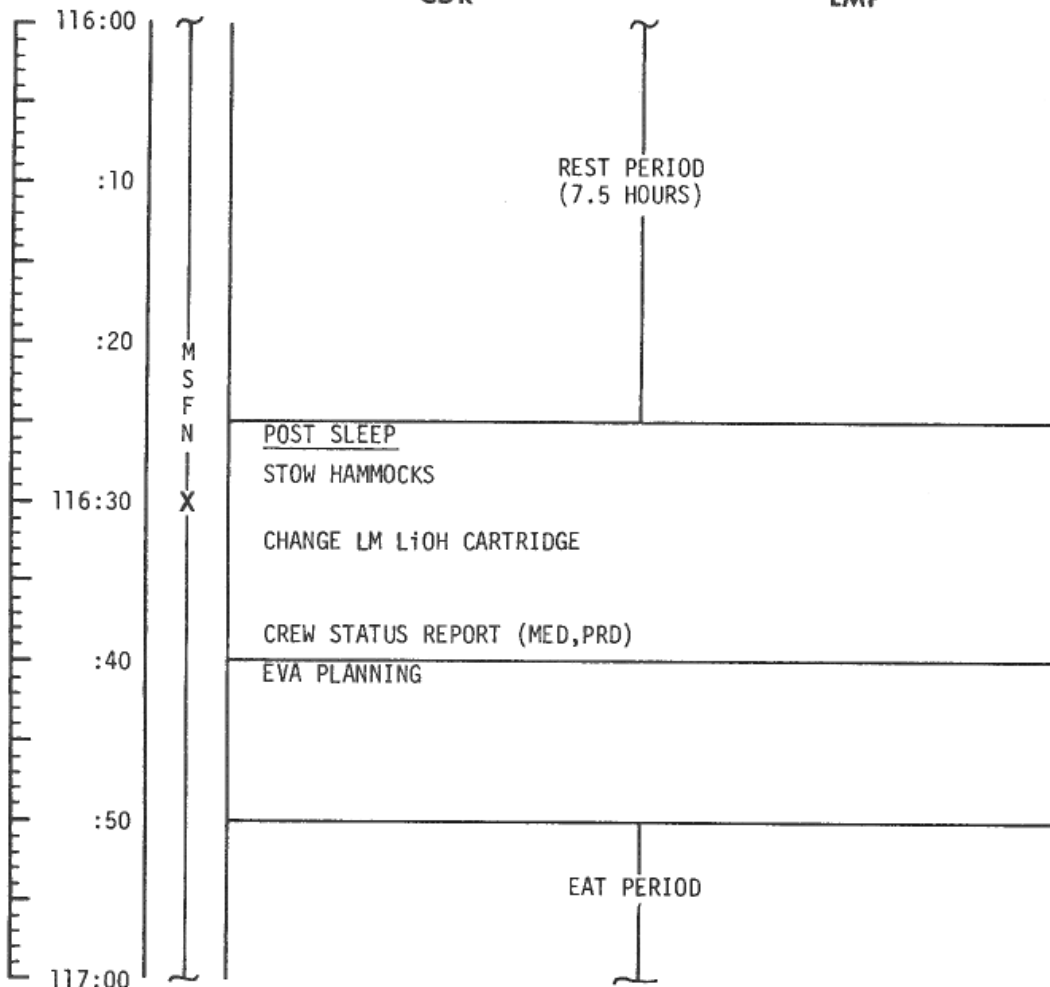
MCC-H

0434 CDT

CDR

LMP

NOTES



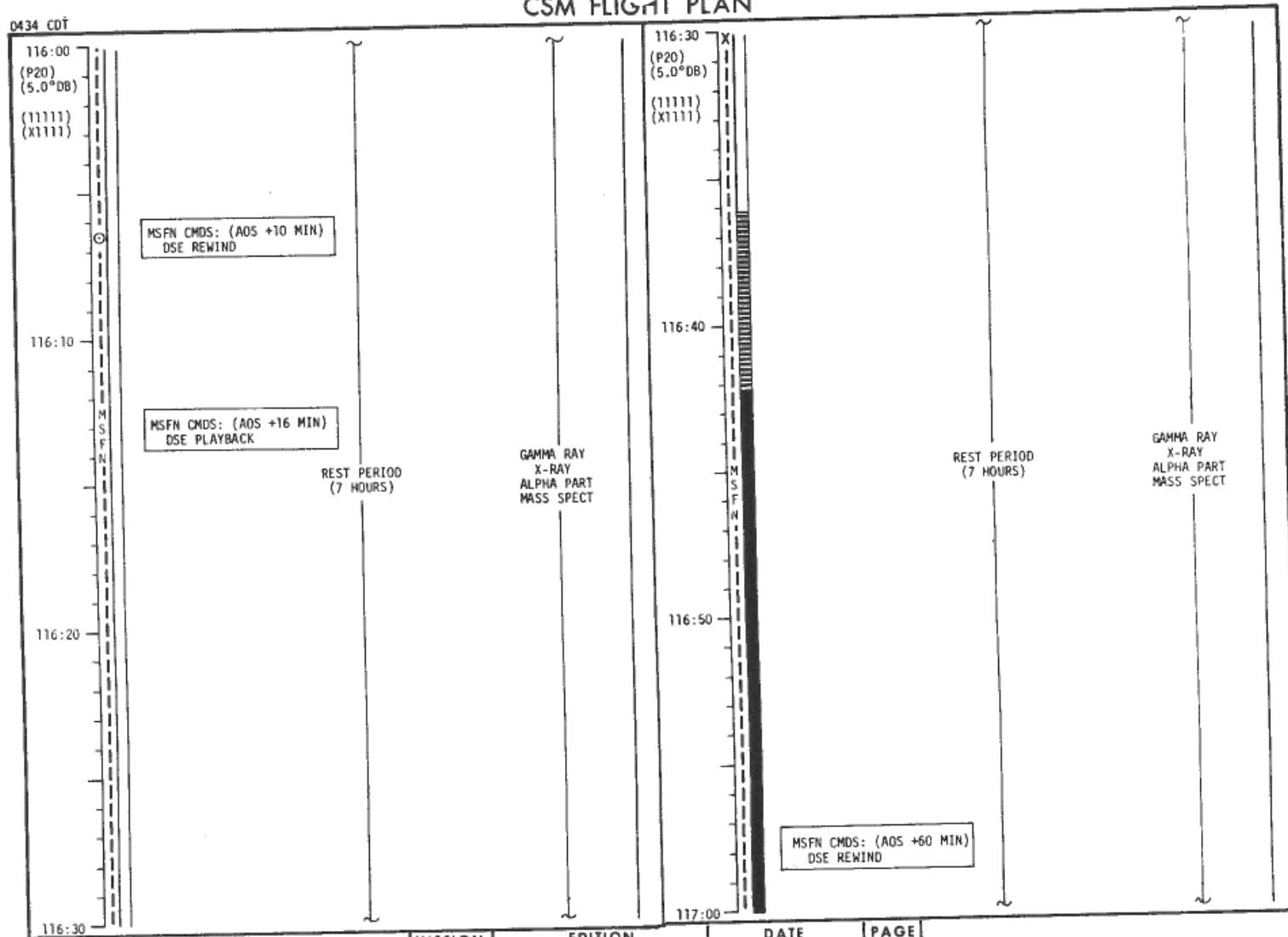
STAY/NO-STAY FOR
EVA-1
UPDATE TO LM
LM CONSUMABLES
L/O TIMES REVS
21 THRU 27

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

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

0434 CD1



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

LM FLIGHT PLAN

MCC-H

0534 CDT

CDR

LMP

NOTES

117:00
:10
:20
117:30
:40
:50
118:00

M
S
F
N

EAT PERIOD

PRO, RESET LGC CLOCK, P06

DON SUITS

BIOMED - OFF

FILL DRINK BAGS

LMP, THEN CDR DOFF ICG & CWG, DON LCG & PGA

LMP DON BIOMED HARNESS

CONNECT HOSES

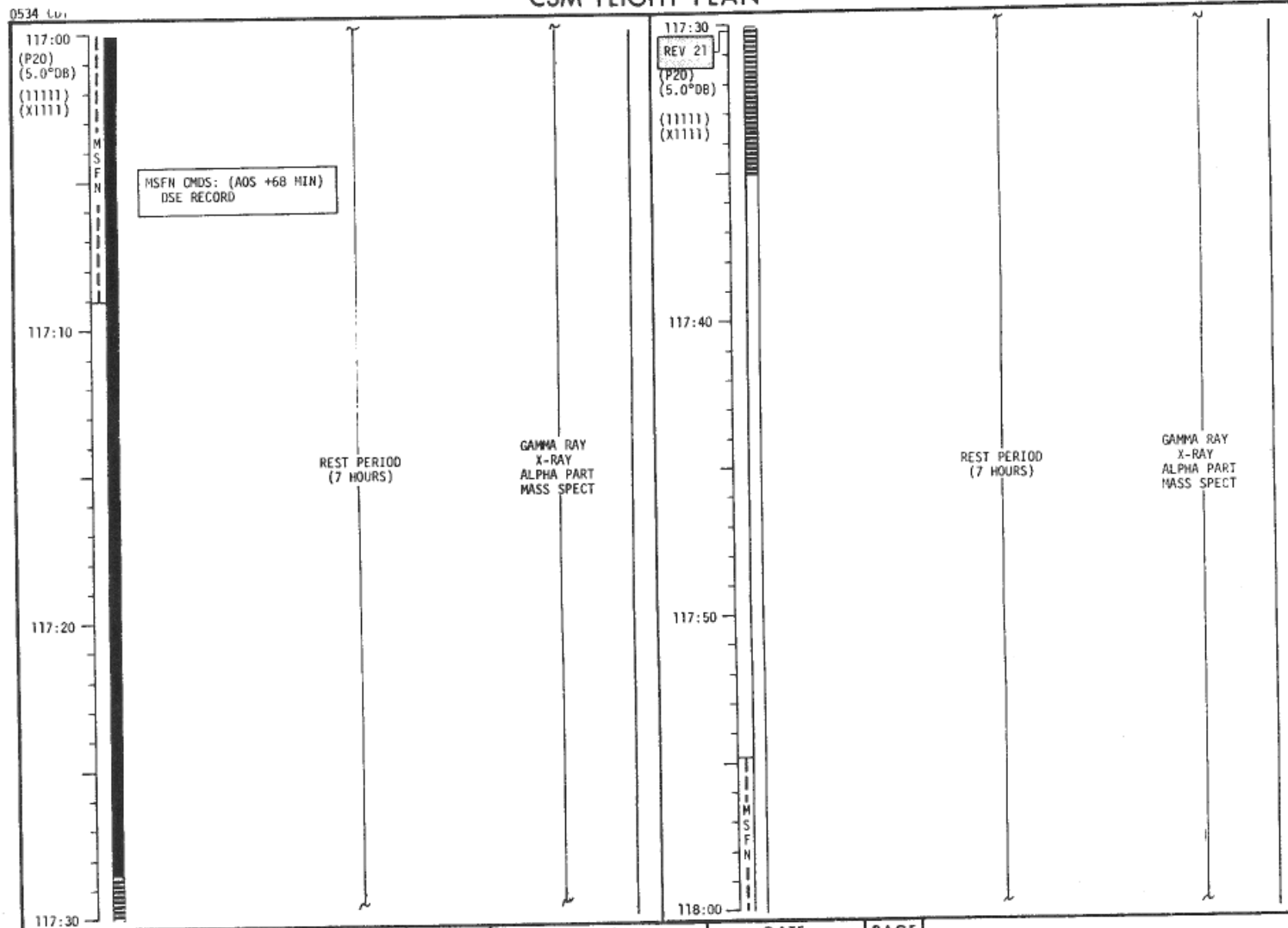
CSM REV 21

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

0534 (L)



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

LM FLIGHT PLAN

MCC-H

0634 CDT

CDR

LMP

NOTES

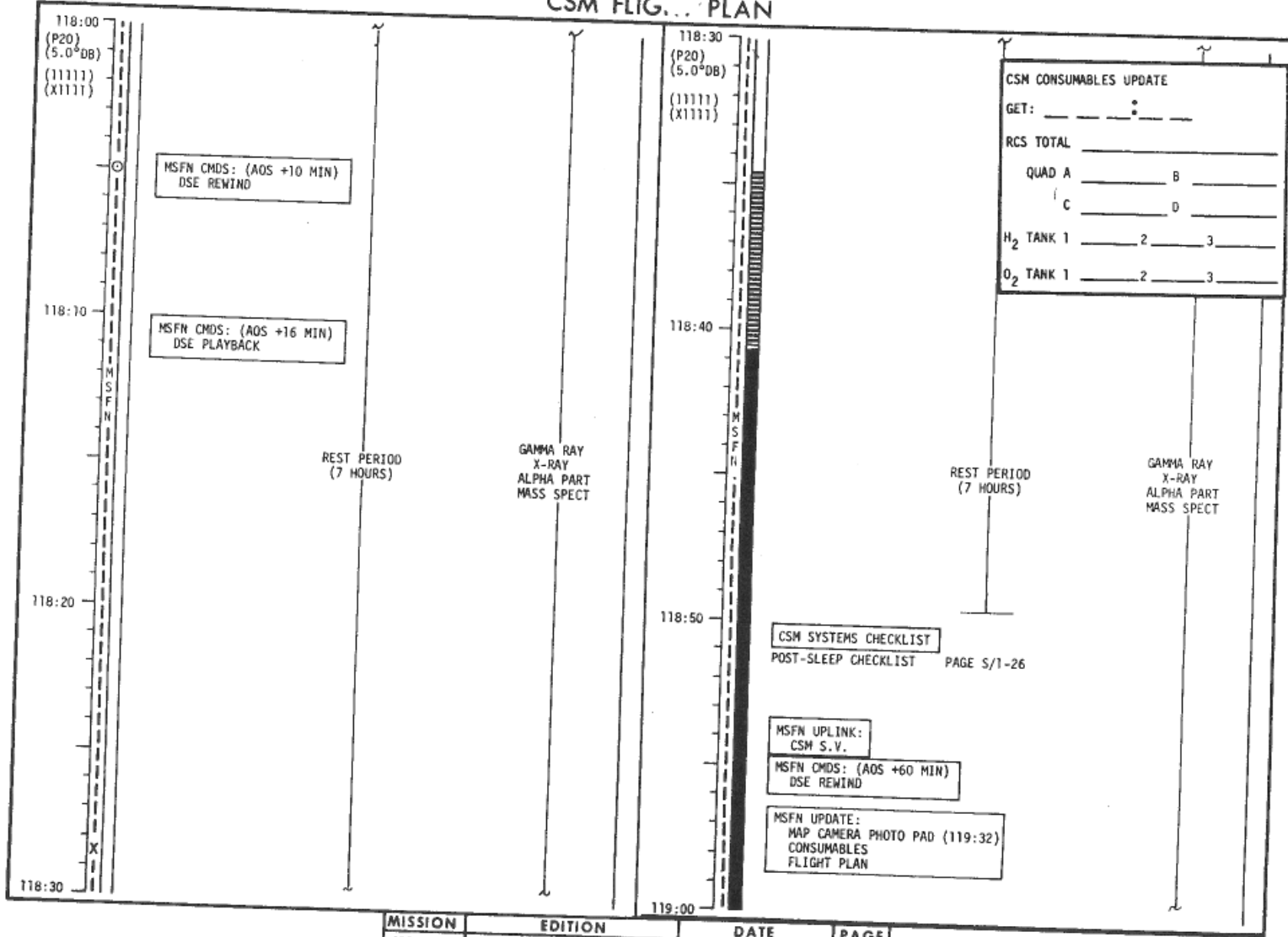
118:00			VERIFY COMM <div style="text-align: right;">BIOMED - RIGHT</div>	
:10			CABIN PREP FOR EVA-1 STOW ALL LOOSE ITEMS NOT REQUIRED FOR EVA UNSTOW EVA-1 PREP & POST CARD STOW LUNAR SURFACE CHECKLIST	
:20			EQUIPMENT PREP FOR EVA-1 CDR, THEN LMP DON BOOTS CHECK & RESTOW OPS CHECK & RESTOW RCU'S, HELMETS, GLOVES STOW PALLETS IN JETT BAG, TIE & STOW BAG UNLOCK FWD HATCH HANDLE	-1:30
118:30	X	M S F N		-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

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

FLIGHT PLAN TRAINING BRANCH

0634 CD.

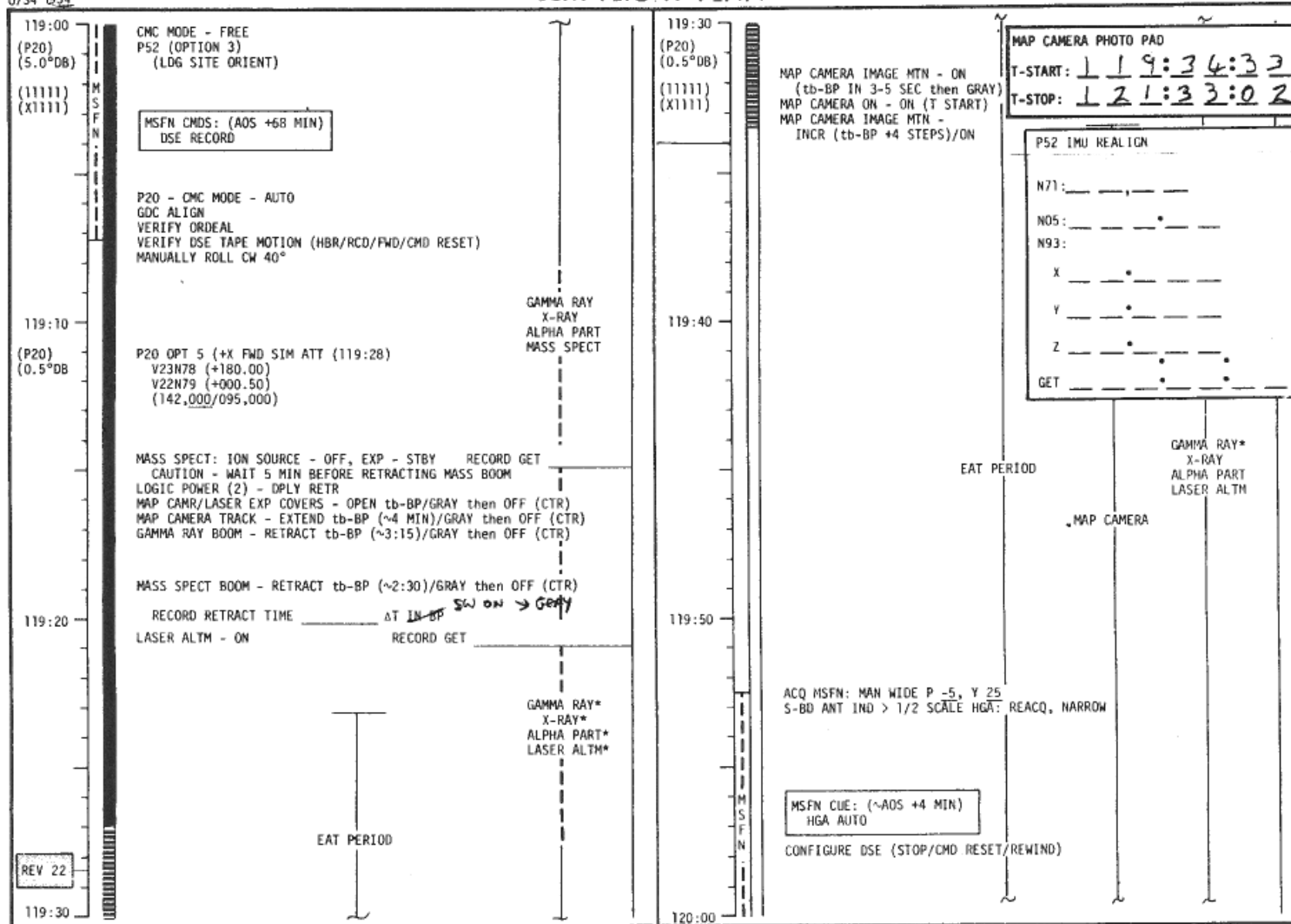
CSM FLIGHT PLAN



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

0734 1934

CSM FLIGHT PLAN



ck @
118:55:44
119:31:33
MAP CAM
START

FROM
118:56:27

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

LM FLIGHT PLAN

MCC-H

0834 CDT

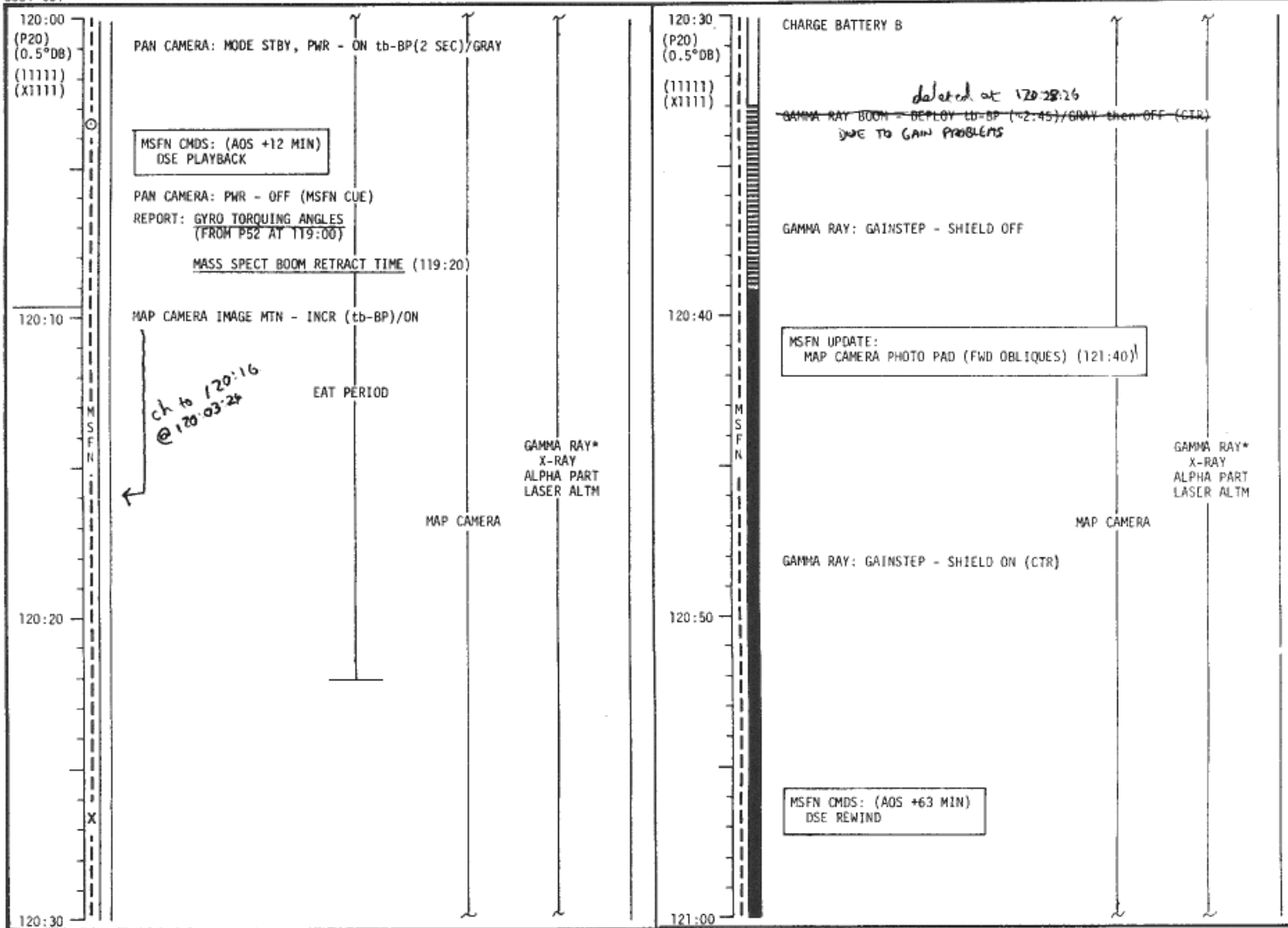
	CDR	LMP	NOTES
120:00 :10 :20 120:30 :40 :50 121:00	EGRESS DEPLOY MESA DEPLOY LEC DESCEND TO SURFACE TRANSFER ETB TV DEPLOY RELEASE LMP PLSS ANTENNA LRV DEPLOY LRV SETUP LRV CHECKOUT LCRU DEPLOY TRANSFER TV TO LRV	ASSIST CDR EGRESS RELEASE CDR PLSS ANTENNA LEC TO CDR RECORDER - OFF VERIFY CB & SW CONFIGURATION TRANSFER ETB EGRESS, CLOSE HATCH DESCEND TO SURFACE COLLECT CONTINGENCY SAMPLE ASSIST CDR LRV EQUIPMENT PREP INGRESS LM WITH CONTINGENCY SAMPLE CONFIGURE COMM	+:10 +:20 +:30 +:40 +:50 +1:00 +1:10

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

FLIGHT PLAN ENGINEERING BRANCH

CSM FLIGHT PLAN

0834 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-161

MCC-H

0934 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

121:00	TRANSFER PALLET MOUNT LRV DRIVE LRV TO NAV SITE	TRANSFER PALLET	+1:10
:10	INITIALIZE LRV NAV	EGRESS LM DISCARD PALLET CLOSE HATCH	+1:20
:20	DRIVE TO CHECK POINT OBSERVE & DESCRIBE TRAVERSE	MOUNT LRV	+1:30
121:30	DESCRIBE SURFACE FEATURES NOTE MARE AND RIM MATERIALS DIFFERENCES		+1:40
:40	CHECK POINT DRIVE TO STATION 1 OBSERVE SCARP AROUND ELBOW CRATER OBSERVE EJECTA DISTRIBUTION		+1:50
:50	STATION #1 RADIAL SAMPLE OF ELBOW CRATER PAN		+2:00
122:00	DRIVE TO STATION 2 COMPARE MARE & RIM MATERIALS TO FRONT		+2:10

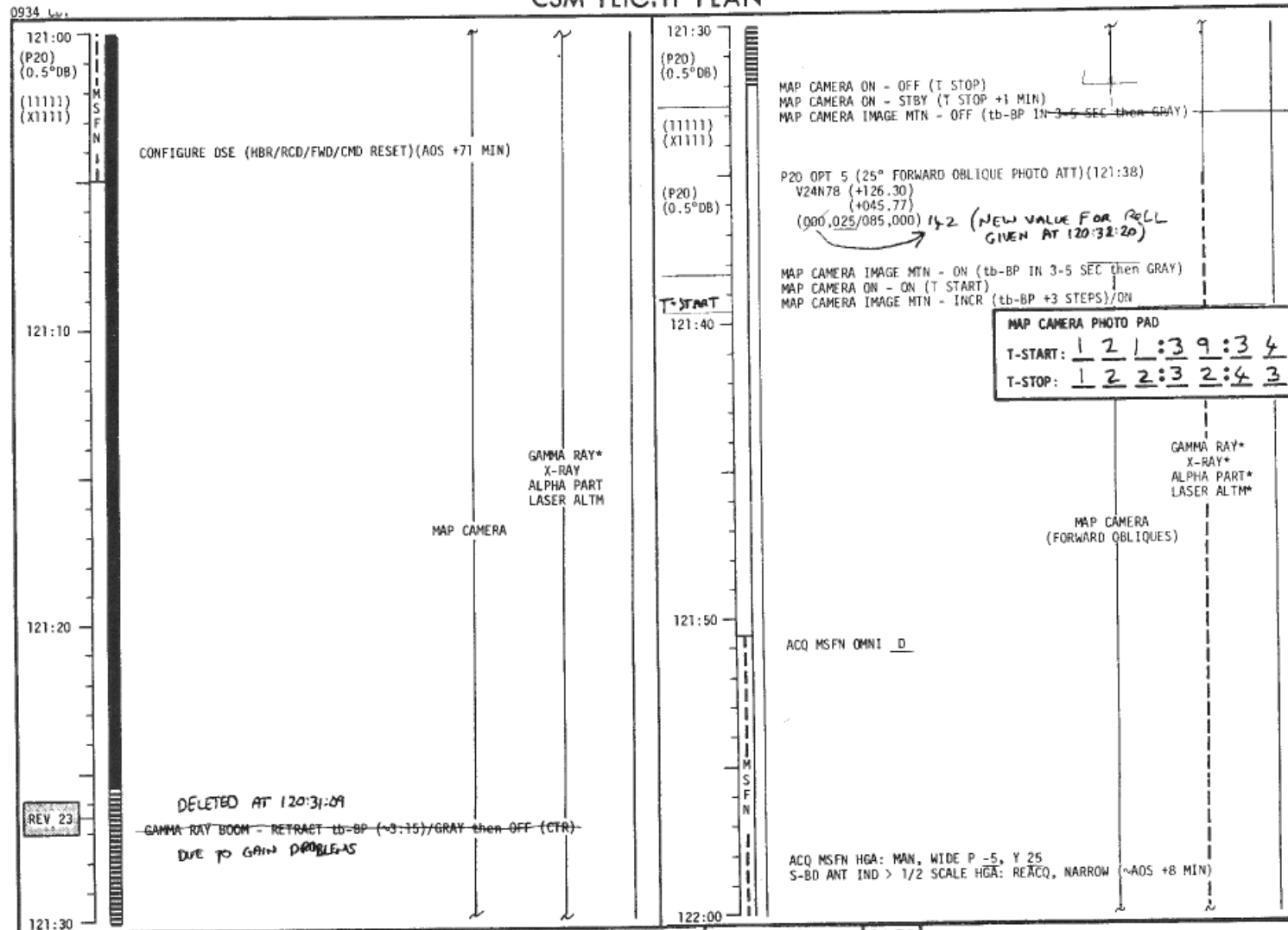
M
F
S
N

T
V

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

121:00
(P20)
(0.5°DB)
(11111)
(X1111)

121:10

121:20

121:30

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

MAP CAMERA

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

REV 23

DELETED AT 120:31:09
GAMMA RAY BOOM - RETRACT LB-BP (~3.15)/GRAY then OFF (CTR)
DUE TO GAMMA PROBLEMS

121:30
(P20)
(0.5°DB)
(11111)
(X1111)

(P20)
(0.5°DB)

T-START
121:40

121:50

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)

P20 OPT 5 (25° FORWARD OBLIQUE PHOTO ATT)(121:38)
V24N78 (+126.30)
(+045.77)
(000,025/085,000) 142 (NEW VALUE FOR ROLL 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

121:33:02
MAPCAM STOP

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: REFCQ, NARROW (~AOS +8 MIN)

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

LM FLIGHT PLAN

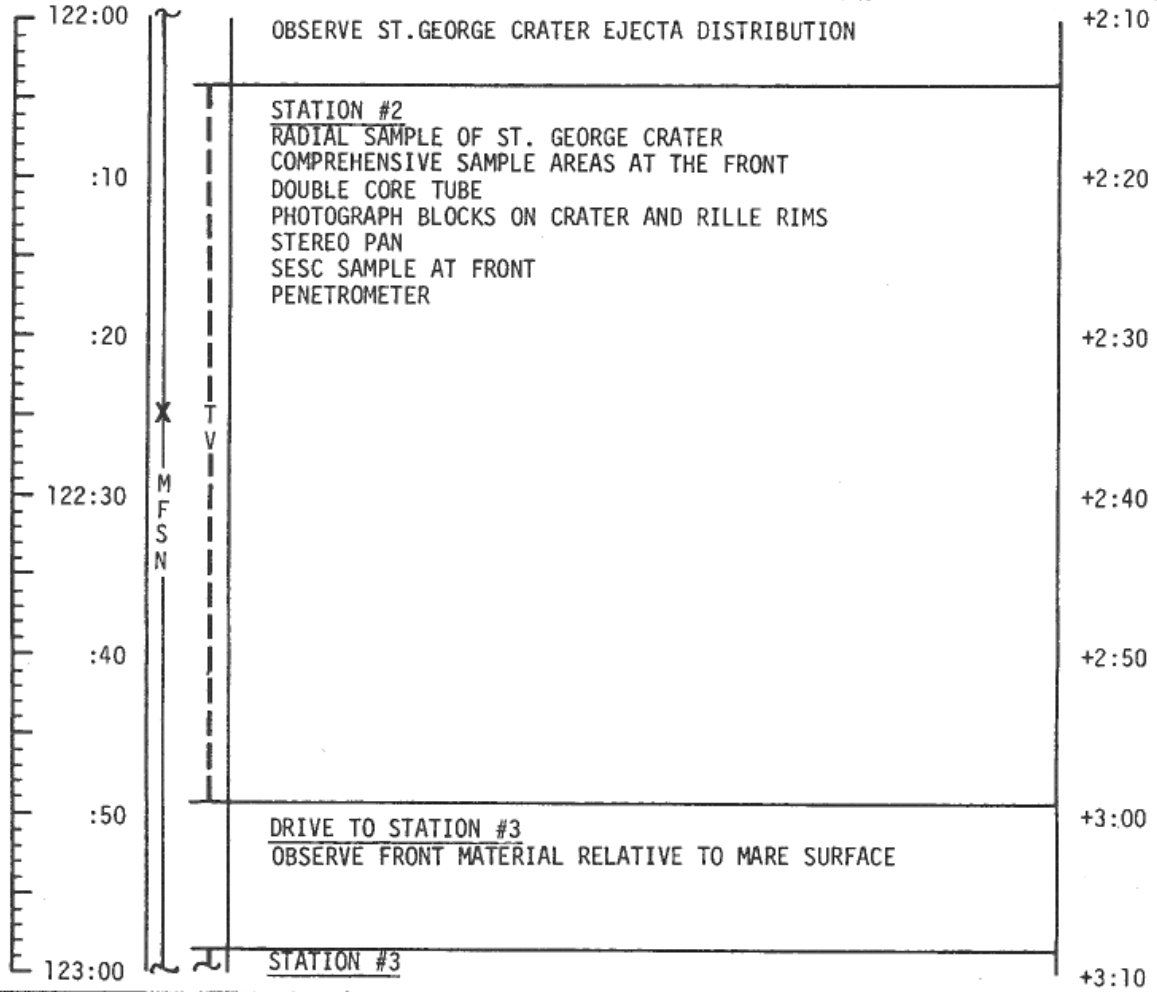
MCC-H

1034 CDT

CDR

LMP

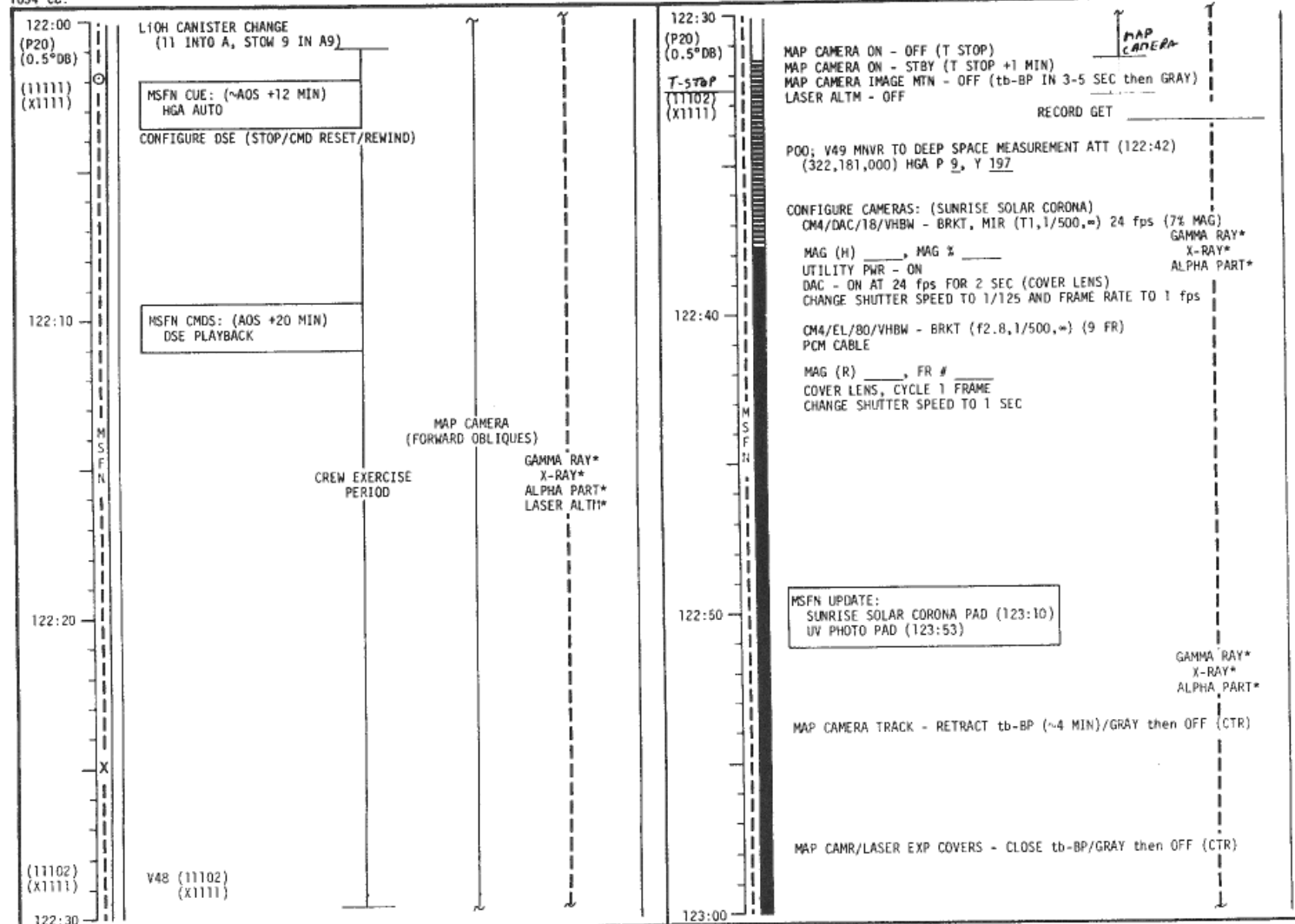
NOTES



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



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-165

MCC-H

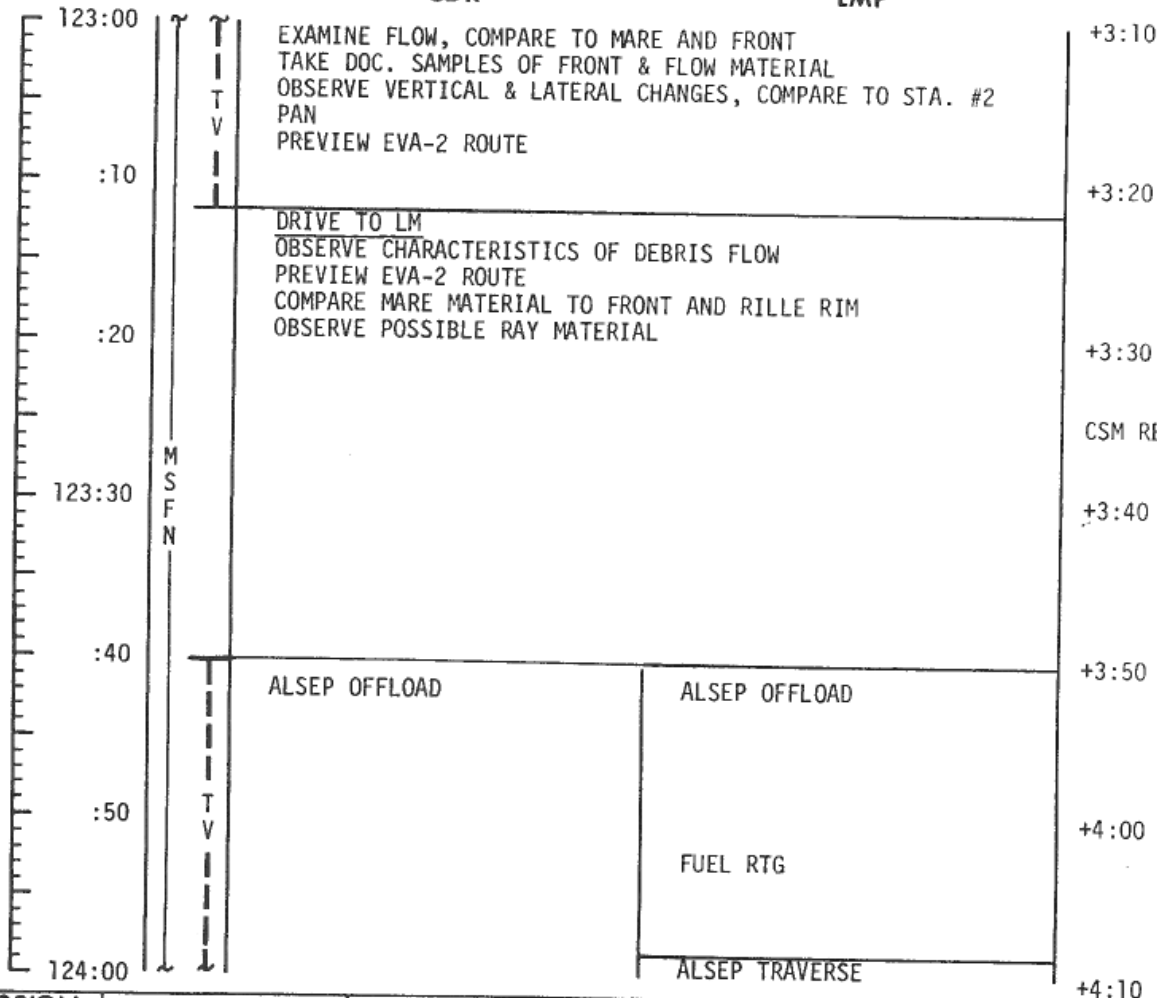
1134 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES



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 PLAN DRAFTING BRANCH

CSM FLIGHT PLAN

1134 L...

<p>123:00 (11102) (X1111)</p> <p>(P20) (5.0°DB)</p> <p>123:10</p> <p>123:16:50</p> <p>123:20</p> <p>REV 24</p> <p>123:30</p>	<p>ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)</p> <div style="border: 1px solid black; padding: 2px; margin: 5px;"> <p>MSFN CMDS: (AOS +71 MIN) DSE REWIND</p> </div> <p>P20 OPT 5 (SR SOLAR CORONA ATT)(123:12)</p> <p>N78 (+000.00) {-082.00) {+000.00)</p> <p>N79 (+005.00) N70 (00050) (000,352,127,000)</p> <p>CONFIGURE DSE (LBR/RCD/FWD/CMD RESET) (AOS +79 MIN)</p> <div style="border: 1px solid black; padding: 5px; margin: 10px;"> <p style="text-align: center;">SOLAR CORONA PHOTO PAD (SR)</p> <p style="text-align: center;">T-START: <u>1 2 3:1 6:5 0</u></p> <p style="text-align: center;">START MISSION TIMER AT SUNRISE -8 MIN</p> </div> <div style="border: 1px solid black; padding: 2px; margin: 5px;"> <p>SR SOLAR CORONA</p> </div> <p>INHIBIT ALL JETS EXCEPT - A1&C2 OR D1&B2,A4,C3,B4,D3</p> <p>0:00 - MISSION TIMER: RESET/START (T START)(SR -8 MIN) PCM BIT RATE - HIGH DIM INTERIOR LIGHTS</p> <p>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</p> <div style="border: 1px solid black; padding: 2px; margin: 5px;"> <p>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</p> <p>RECORD MAG % _____, FR # _____ PCM BIT RATE - LOW</p> </div>	<p>123:30 (11102) (X1111)</p> <p>123:40</p> <p>123:50</p> <p>124:00</p>	<p>CMC MODE - FREE P00; V49 MNVR TO UV PHOTO ATT (123:38) (142,057,000) OMNI <u>D</u> CMC MODE - AUTO RESET MISSION TIMER</p> <p>CONFIGURE CAMERA: (UV PHOTOS OF LUNAR HORIZON/EARTH) CM5/EL/105/UV - BRKT, CONT (F4.3,1/500,-)(16 FR) RINGSLIDE</p> <p>MAG (N) _____, FR # _____ REMOVE RT2 FLIGHT DATA FILE STORAGE BOX</p> <div style="border: 1px solid black; padding: 2px; margin: 5px;"> <p>UV PHOTOS OF LUNAR HORIZON/EARTH</p> </div> <p>DAMP RATES VERIFY FDATA SCALE 5/1 WAIT 5 MINUTES FOR RATES TO DAMP</p> <p>VERIFY RATES <0.2°/SEC (ALL AXES)</p> <p>REMOVE CM5 WINDOW COVER AND MOUNT UV CARDBOARD SHADE AND CAMERA</p> <p>2 FRAMES, FILTER 1, CHANGE SHUTTER TO B (T START) 1 X FRAMES, FILTER 2, EXP TIME 20 SEC and 1 @ 2sec exp ch @ 11:60:01 CHANGE SHUTTER TO 1/250 2 FRAMES, FILTER 3, CHANGE SHUTTER TO 1/500 2 FRAMES, FILTER 4, CHANGE SHUTTER TO 1/60</p> <div style="border: 1px solid black; padding: 5px; margin: 10px;"> <p style="text-align: center;">UV PHOTO PAD</p> <p style="text-align: center;">T-START: <u>1 2 3:4 9:4 9</u></p> </div> <p>2 FRAMES, FILTER 1, CHANGE SHUTTER TO B (T START +7 MIN) 1 X 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.</p> <p>RECORD FR # _____</p>
--	---	---	--

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

LM FLIGHT PLAN

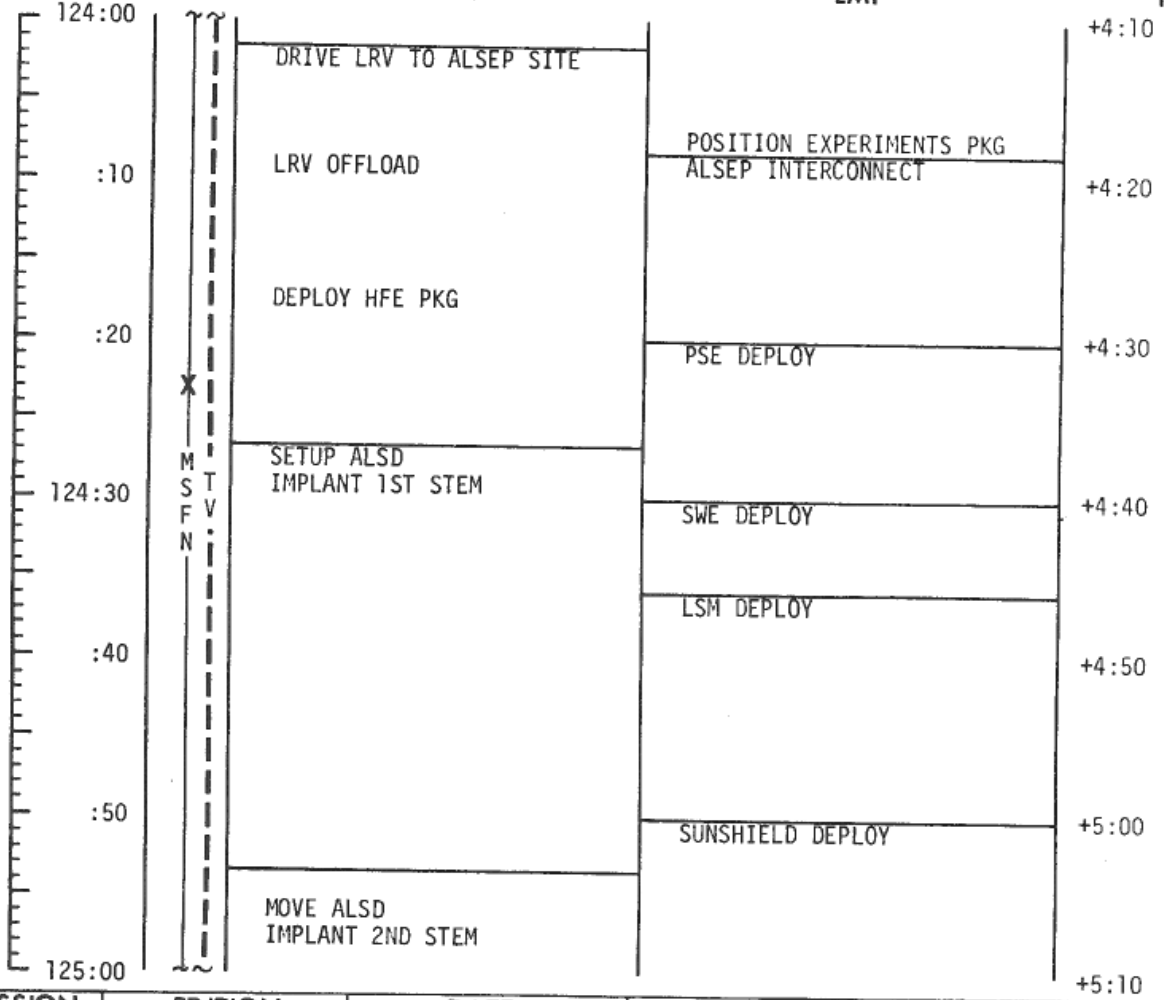
MCC-H

1234 CDT

CDR

LMP

NOTES



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

FLIGHT PLAN BRANCH

1234 CDT

CSM FLIGHT PLAN

<p>124:00 (11102) (X1111)</p> <p>(P20) (5.0°DB)</p> <p>124:10</p> <p style="text-align: center;">M S F N</p> <p>124:20</p> <p style="text-align: center;">X</p> <p>124:30</p>	<p>CONFIGURE CAMERA (UV COLOR PHOTOS OF EARTH) CM5/EL/105/CEX-BRKT, CONT (F8,1/250,=) (1 FR) RINGSLIDE</p> <p>MAG (M) _____, FR # _____ 1 FRAME, FILTER 4 REMOVE CAMERA & UV CARDBOARD SHADE, NOTE COMMENTS AS TO CONDITION OF CM5, REPLACE WINDOW COVER RECORD FR # _____</p> <p>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 <u>-45</u>, Y <u>208</u></p> <div style="border: 1px solid black; padding: 2px; width: fit-content;">MSFN CMDS: DSE DUMP</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin-top: 10px;">MSFN UPDATE: SUNSET SOLAR CORONA PAD (124:35)</div> <p style="text-align: right;">GAMMA RAY* ALPHA PART* X-RAY*</p> <p>CONFIGURE CAMERAS: (SUNSET SOLAR CORONA) CM4/DAC/18/VHBM - BRKT, MIR (T1,1/500,=) 24 fps (7% MAG)</p> <p>MAG (H) _____, MAG % _____</p> <p>UTILITY PWR - ON DAC - ON AT 24 fps FOR 2 SEC (COVER LENS) CHANGE FRAME RATE TO 1 fps</p> <p>CM4/EL/80/VHBM - BRKT (F2.8,1/500,=)(9 FR) PCM CABLE</p> <p>MAG (R) _____, FR # _____ COVER LENS, CYCLE 1 FRAME CHANGE SHUTTER TO 1/125</p>	<p>124:30 (P20) (5.0°DB)</p> <p>(11102) (X1111)</p> <p>124:40</p> <p style="text-align: center;">M S F N</p> <p>124:50 (11101) (X1111)</p> <p>125:00</p>	<p>SUNSET SOLAR CORONA</p> <p>0:00 - MISSION TIMER: RESET/START/(T START)(SS -5 MIN)</p> <p>VERIFY PCM BIT RATE HIGH <u>124:32:22 T-start</u> DIM INTERIOR LIGHTS</p> <div style="border: 2px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">SOLAR CORONA PHOTO PAD (SS)</p> <p style="text-align: center;">T-START: <u>1 24:32:22</u> START MISSION TIMER AT SUNSET -5 MIN</p> </div> <p>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</p> <p>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</p> <p>RECORD MAG % _____, FR # _____</p> <p style="text-align: right;">GAMMA RAY* ALPHA PART* X-RAY*</p> <p>V48 (11101) (X1111)</p> <p>RESET MISSION TIMER CONFIGURE FOR URINE DUMP</p> <p>124:50 (11101) (X1111)</p> <p>CMC MODE - FREE POO; V49 MNVR TO L4 PHOTO ATT (125:00) (328,293,354) OMNI <u>D</u> CMC MODE - AUTO</p> <p>H₂ PURGE LINE HEATERS - ON</p> <p>CONFIGURE CAMERA: (LUNAR LIBRATION) INSTALL CAMERA SHIELD CM4/NK/55/VHBM - BRKT, (F1.2,1/500,=) (6 FR)</p> <p>MAG () _____, FR # _____</p> <p>X-RAY EXP - STBY RECORD GET _____</p>
---	--	--	---

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-169

MCC-H

1334 CDT

LM FLIGHT PLAN

CDR

LMP

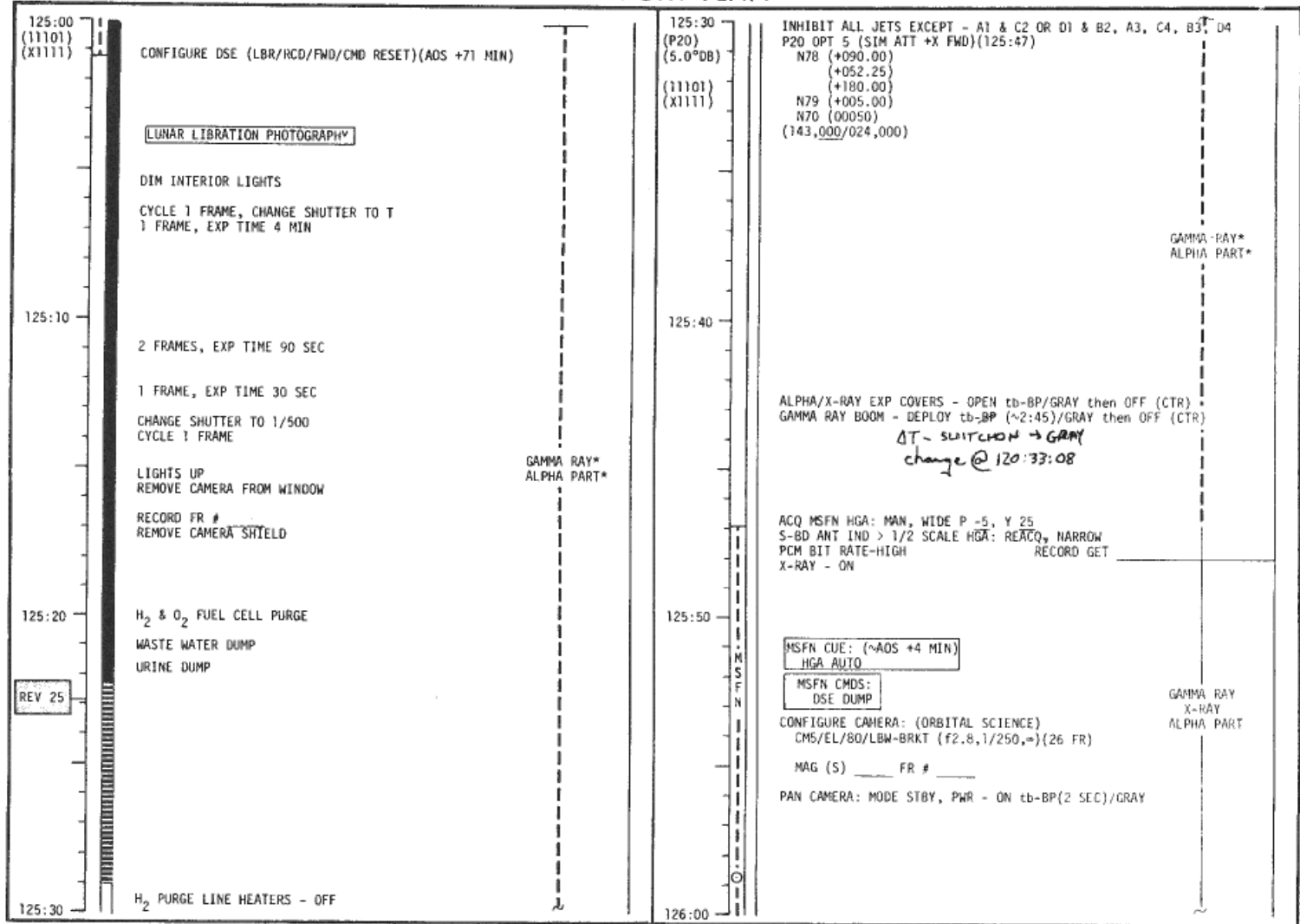
NOTES

125:00	M S T F V N		CHECK ANTENNA LEVEL & ALIGN	+5:10
:10			SIDE/CCIG DEPLOY	+5:20
:20		MOVE ALSD TO LRV DRILL CORE SAMPLE	ACTIVATE CENTRAL STATION DEPLOY LRRR	+5:30 CSM REV 25
125:30		PHOTO PANS CAP & STOW STEMS	ALSEP & LRRR PHOTOS	+5:40
:40		FILL SAMPLE BAGS LRV TRAVERSE TO LM	FILL SAMPLE BAGS LRV TRAVERSE TO LM	+5:50
:50		CONTAMINATED SAMPLE COLLECTION	CONTAMINATED SAMPLE COLLECTION	+6:00
126:00		POLARIMETRIC PHOTOGRAPHY	SWC DEPLOY	+6:10

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

MCC-H

1434 CDT

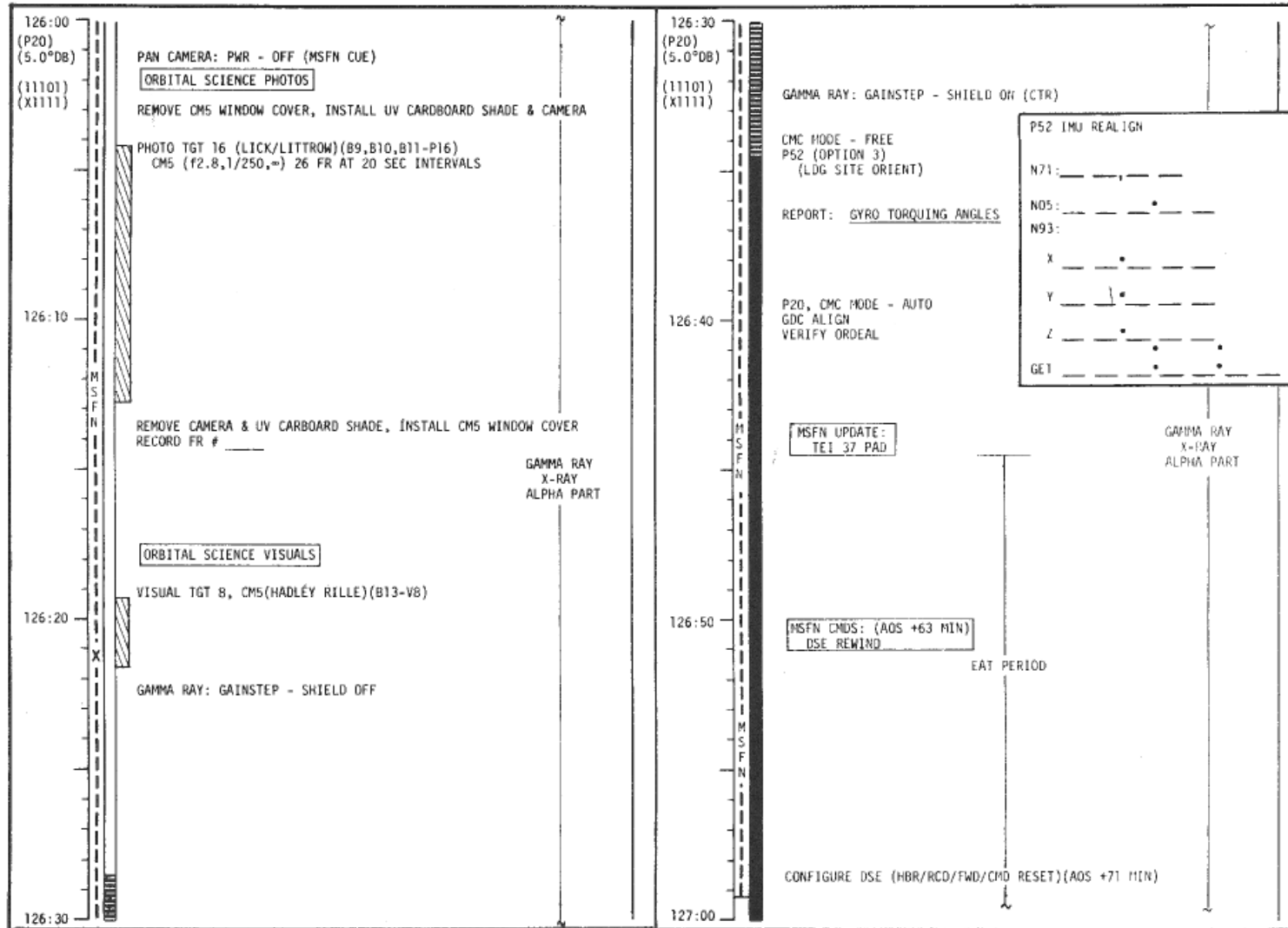
	CDR	LMP	NOTES
126:00	FAR-FIELD POLARIMETRIC PHOTOGRAPHY		+6:10
:10	NEAR-FIELD POLARIMETRIC PHOTOGRAPHY	LM INSPECTION & PHOTOS	+6:20
	FLAG DEPLOY	FLAG DEPLOY	
:20	LOAD ETB		
	CLEAN EMU'S		+6:30
	STOW LMP PLSS ANTENNA		
126:30	STOW BSLSS & 500mm LENS CAMERA ON LRV	INGRESS	+6:40
	TRANSFER ETB	STOW SAMPLE BAG	
		TRANSFER ETB	
:40	INGRESS		+6:50
	CLOSE HATCH REPRESS LM CABIN		
:50	POST EVA SYSTEMS CONFIGURATION CONFIGURE LM ECS, DOFF HELMETS & GLOVES CONNECT LM ECS HOSES TO SUITS CONNECT TO LM COMM, BIOMED LEFT		+7:00/END EVA
127:00			+:10

M
S
T
F
V
N

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

CSM FLIGHT PLAN



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

MCC-H

1534 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

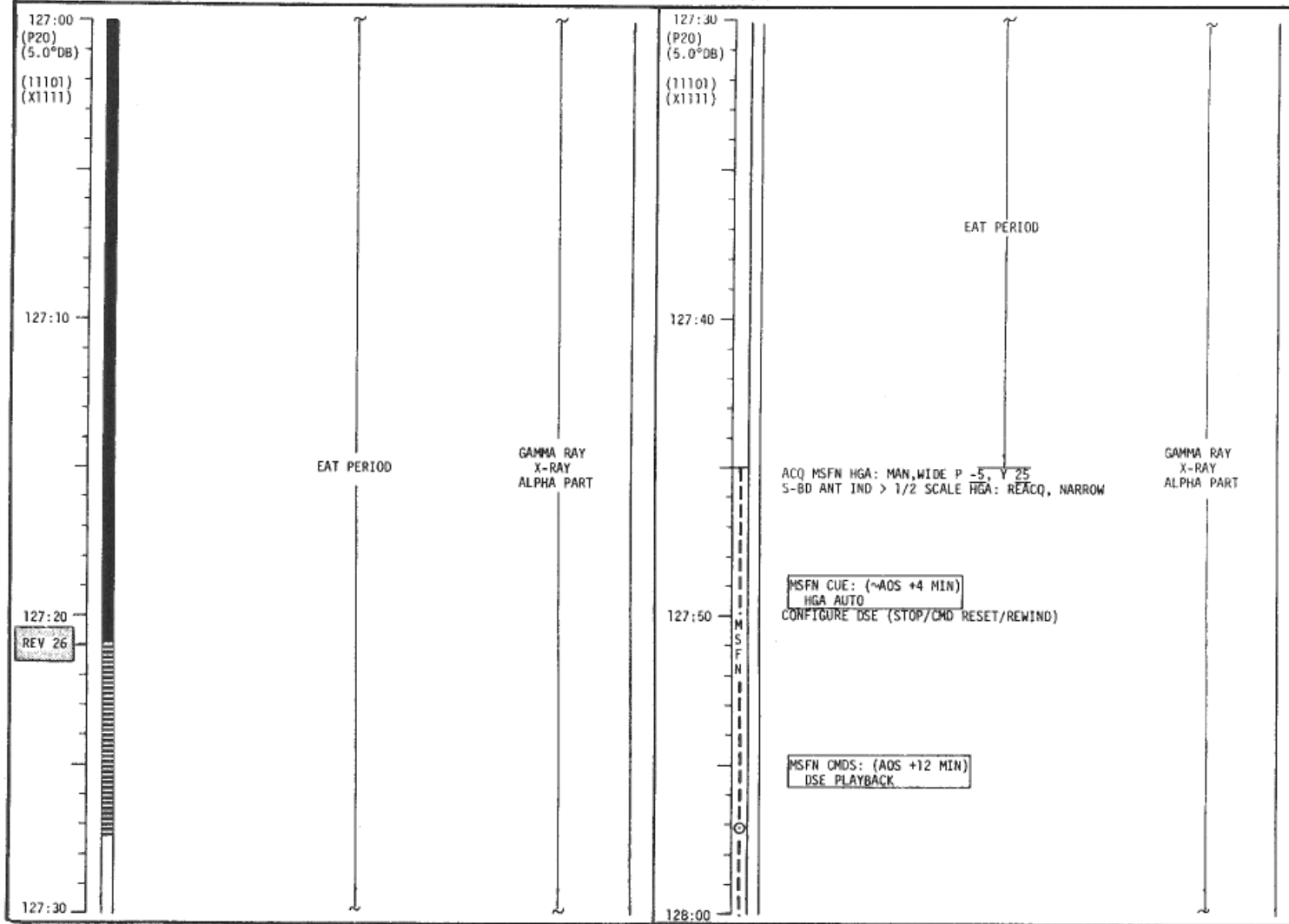
127:00	M S F N	PLSS O ₂ INITIAL RECHARGE	+ :10
:10		PLSS/OPS DOFFING DISCONNECT OPS & RCU FROM PLSS LMP, THEN CDR DOFF PLSS/OPS	+ :20
:20		CHANGE PLSS LiOH CARTRIDGES & BATTERIES STOW OPS'S & PLSS'S	+ :30 CSM REV 26
127:30		POST EVA CABIN CONFIGURATION UNSTOW LUNAR SURFACE CHECKLIST STOW EVA-1 PREP AND POST CARD STOW ETB	+ :40 BATS 1&2 - ON LUNAR BAT (LMP)-OFF/RESET CHECK BUS VOLTS
: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)	+1:00 BIOMED - OFF
128:00			+1:10

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 PLANNING BRANCH

1534

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-175

MCC-H

1634 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

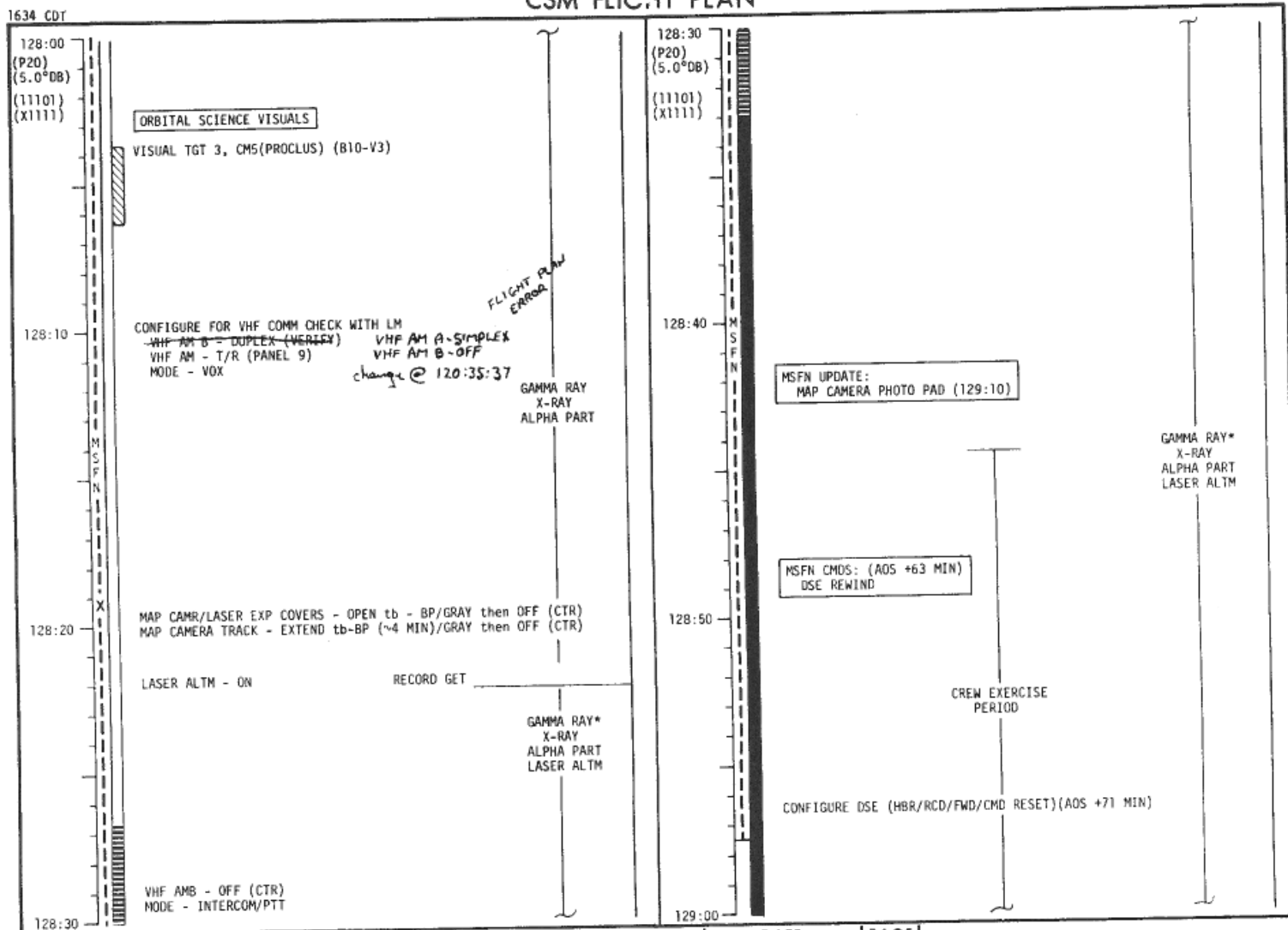
128:00				+1:10
:10		STOW PGA'S ON AFT ENGINE COVER AND DRY		+1:20
		VHF VOICE CHECK		
:20	X		BIOMED - RIGHT	+1:30
		<u>PLSS O₂ & H₂O RECHARGE</u>		
		CONNECT LM O ₂ SUPPLY TO CDR PLSS AND FILL (10 MIN)		
128:30	M S F N			
		CONNECT LM H ₂ O SUPPLY TO CDR PLSS AND FILL (3 MIN)		
		CONNECT LM O ₂ SUPPLY TO LMP PLSS AND FILL (10 MIN)		
:40				
		CONNECT LM H ₂ O SUPPLY TO LMP PLSS AND FILL (3 MIN)		
:50		<u>DEBRIEF</u>		
		REPORT PLSS RECHARGE STATUS		
		CREW STATUS REPORT (MED, PRD)		
129:00				

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

FLIGHT PLAN ENGINE BRANCH

CSM FLIGHT PLAN

1634 CDT



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

LM FLIGHT PLAN

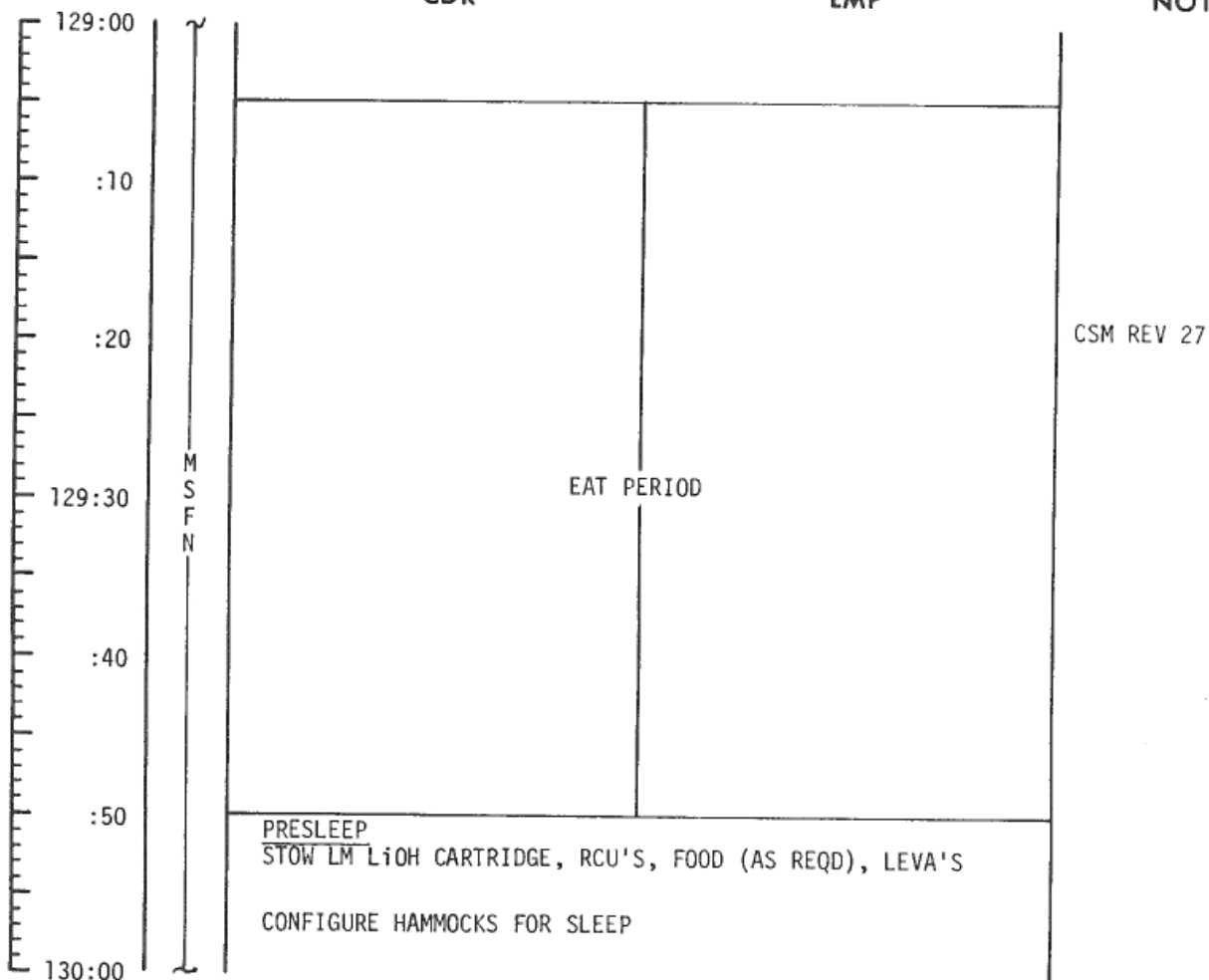
MCC-H

1734 CDT

CDR

LMP

NOTES



CSM REV 27

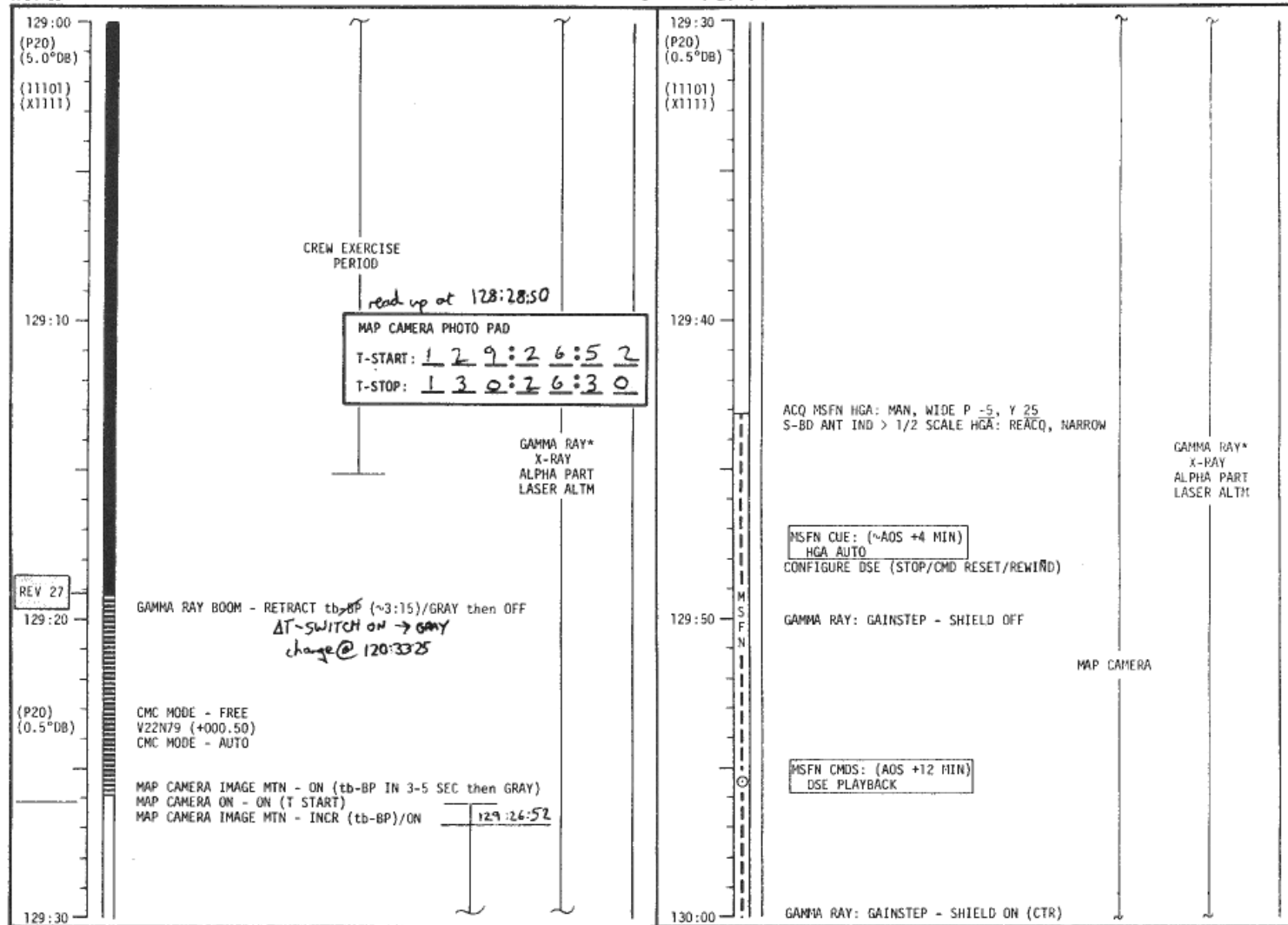
UPDATE TO LM
L/O TIMES REVS 28
THRU 31

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 P*^NNING BRANCH

1734 LL

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

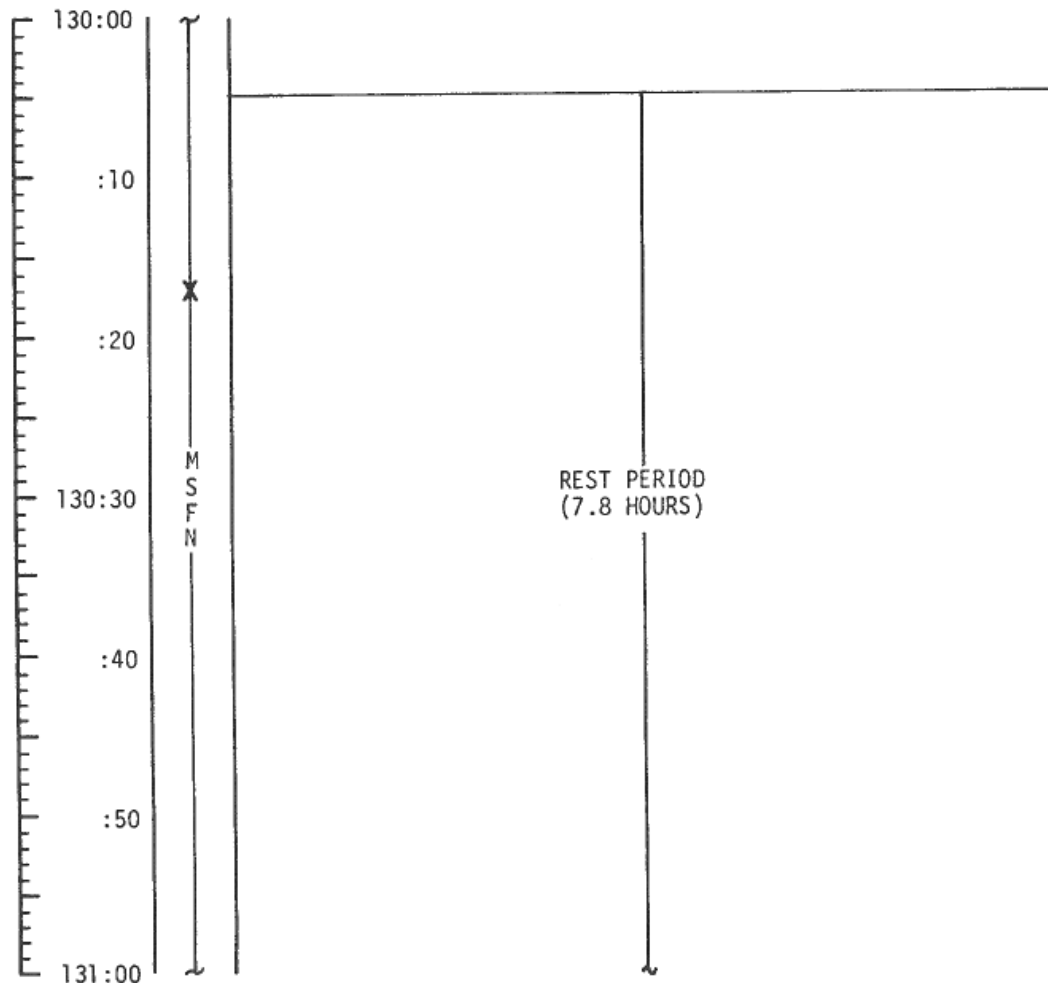
MCC-H

1834 CDT

CDR

LMP

NOTES



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

1834

CSM FLIGHT PLAN

<p>130:00 (P20) (0.5°DB)</p> <p>(11101) (X1111)</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>130:10</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>130:20</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>130:30</p>	<p>CSM SYSTEMS CHECKLIST</p> <p>PERFORM ONLY THE FOLLOWING IN PRESLEEP CHECKLIST PAGE S/1-26</p> <p>CREW STATUS REPORT ONBOARD READOUTS CYCLE CRYO FANS "E" MEMORY DUMP</p> <p>MSFN UPDATE: PAN CAMERA PHOTO PAD</p> <p>PAN CAMERA PHOTO PAD</p> <p>T-START: <u>130:18:05</u> T-STOP: <u>130:19:16</u></p> <p>ONBOARD READOUT</p> <p>BAT C _____</p> <p>PYRO BAT A _____</p> <p>PYRO BAT B _____</p> <p>RCS A _____</p> <p>B _____</p> <p>C _____</p> <p>D _____</p> <p>DC IND SEL - MNA OR B</p> <p>PAN CAMERA: MODE-STBY, PWR-ON tb-BP (2 SEC)/GRAY, STEREO, EXPOSURE - NORMAL (CTR)</p> <p>PAN CAMERA MODE - OPR tb-BP (2 SEC)/GRAY(T START)</p> <p>PAN CAMERA MODE - STBY (T STOP)</p> <p>MSFN: VERIFY LENS TUCK IN PAN CAMERA: PWR - OFF</p> <p>MAP CAMERA</p> <p>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)</p> <p>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</p> <p>MASS SPECT: EXP - ON, ION SOURCE - STBY</p>	<p>130:30 (P20) (0.5°DB)</p> <p>(11101) (X1111)</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>130:40</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>130:50</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>131:00</p>	<p>CMC MODE - FREE P52 (OPTION 3) (LDG SITE ORIENT)</p> <p>REPORT: GYRO TORQUING ANGLES</p> <p>P20, CMC MODE - AUTO GDC ALIGN VERIFY ORDEAL</p> <p>X-RAY - STBY LASER ALTM - 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)</p> <p>MSFN CMDS: (AOS +63 MIN) DSE REMIND</p> <p>MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)</p> <p>P00 AT PITCH OF 17.0 ← Rch @ 129:51:39</p> <p>P00 AT PITCH OF 17.0</p> <p>CONFIGURE DSE (LBR/RCD/FWD/CMD RESET)(AOS +71 MIN)</p> <p>GAMMA RAY* X-RAY ALPHA PART LASER ALTM MASS SPECT OUTGAS</p> <p>P52 IMU REALIGN</p> <p>N71: _____</p> <p>N05: _____</p> <p>N93: _____</p> <p>X _____</p> <p>Y _____</p> <p>Z _____</p> <p>GET _____</p> <p>RECORD GET</p> <p>GAMMA RAY ALPHA PART MASS SPECT OUTGAS</p>
--	---	--	---

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

LM FLIGHT PLAN

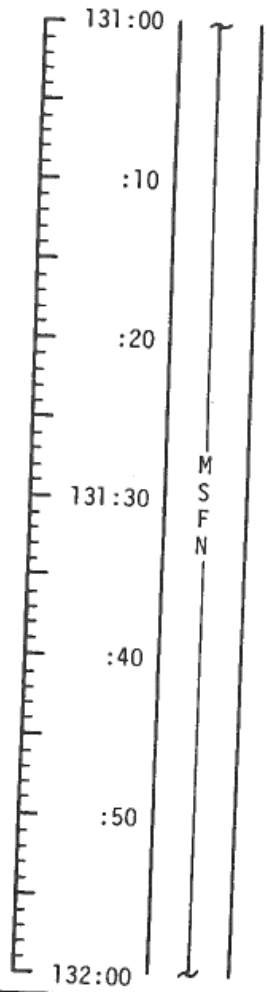
MCC-H

1934 CDT

CDR

LMP

NOTES



REST PERIOD
(7.8 HOURS)

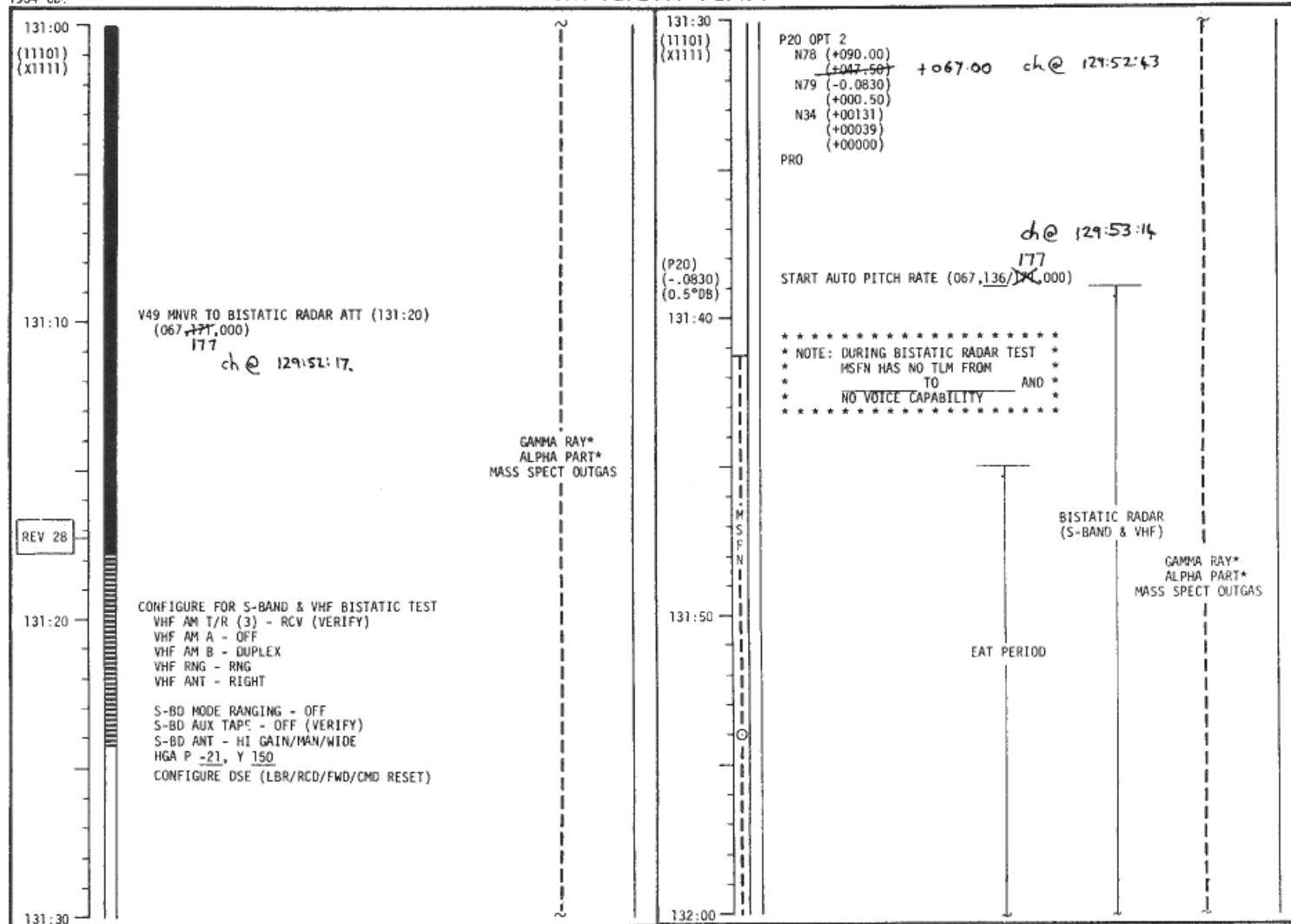
CSM REV 28

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 PLAN NG BRANCH

1934 L.

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

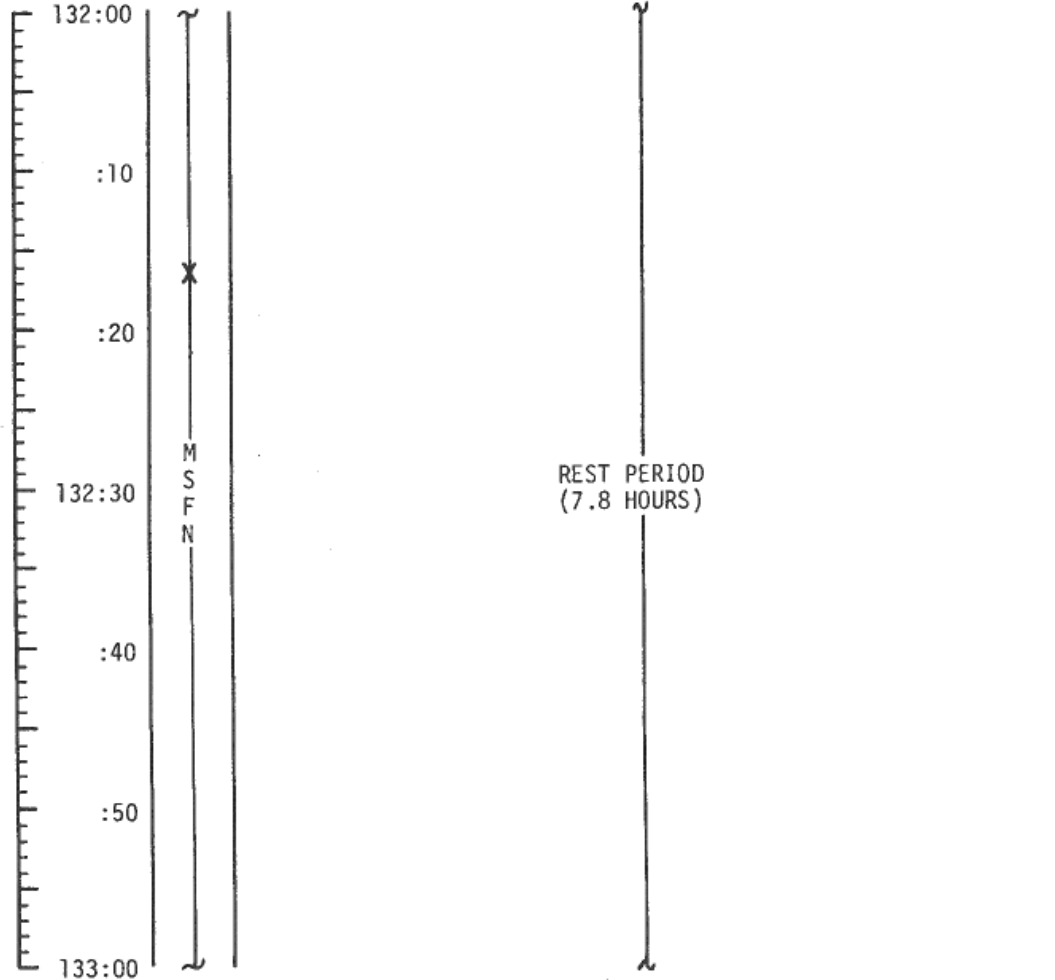
MCC-H

2034 CDT

CDR

LMP

NOTES

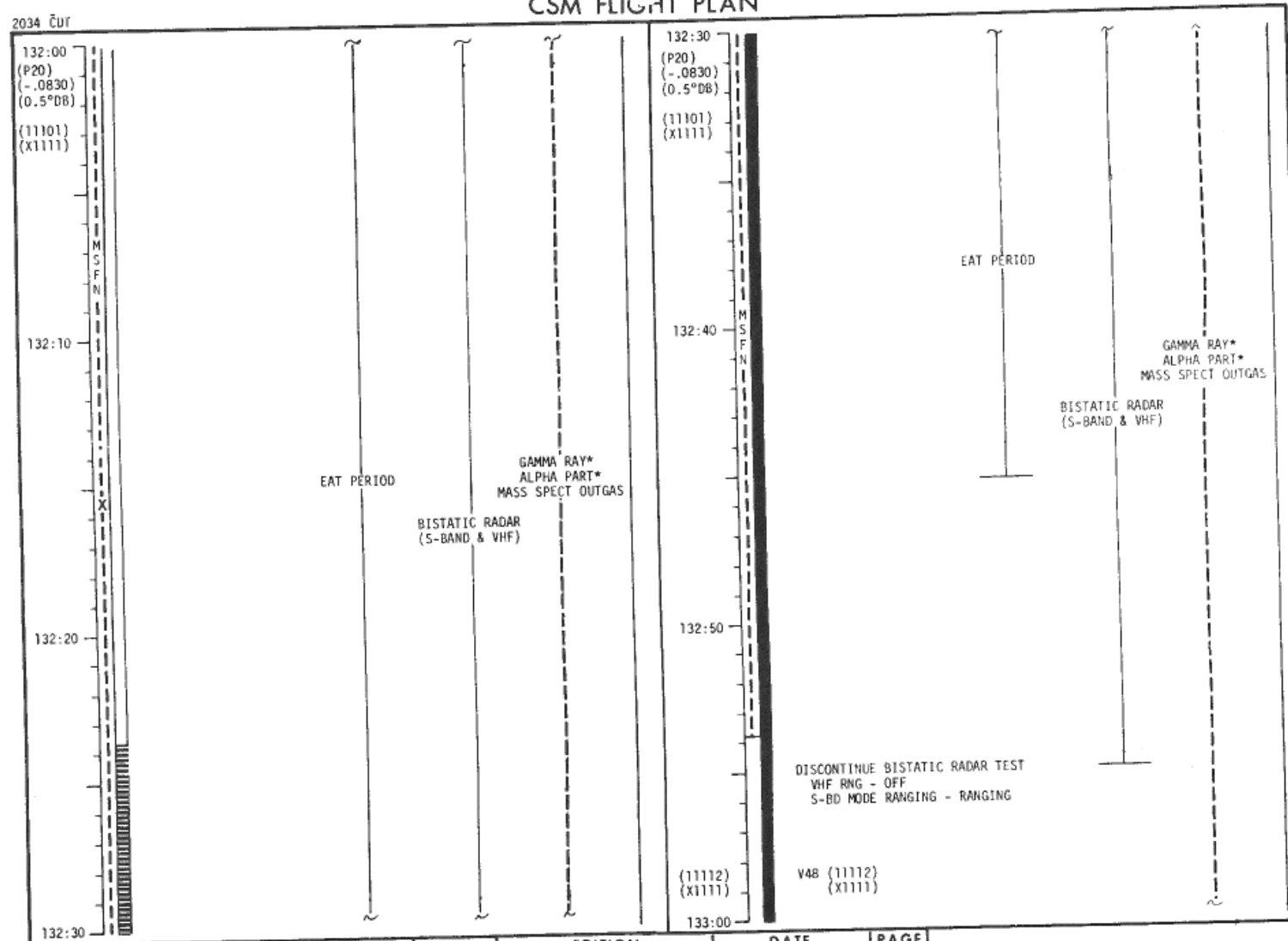


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	132:00 - 133:00	6/28	3-184

FLIGHT PLANNING BRANCH

CSM FLIGHT PLAN

2034 Cut



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

LM FLIGHT PLAN

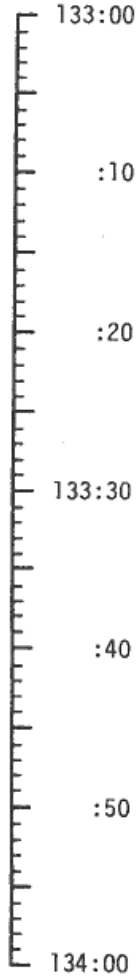
MCC-H

2134 CDT

CDR

LMP

NOTES



M
S
F
N

REST PERIOD
(7.8 HOURS)

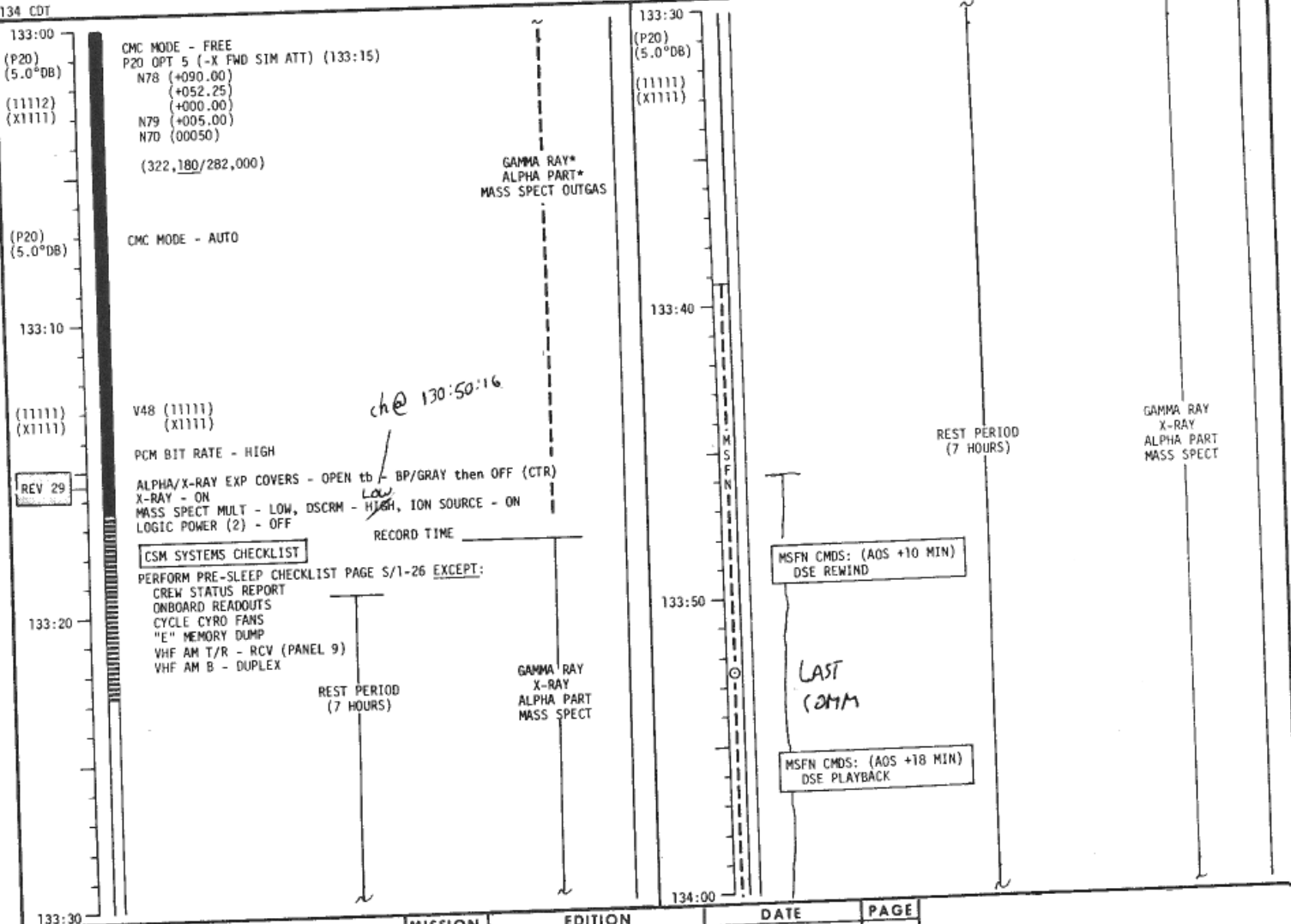
CSM REV 29

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

2134 CDT



REV 29

CSM SYSTEMS CHECKLIST

PERFORM PRE-SLEEP CHECKLIST PAGE S/1-26 EXCEPT:

- CREW STATUS REPORT
- ONBOARD READOUTS
- CYCLE CYRO FANS
- "E" MEMORY DUMP
- VHF AM T/R - RCV (PANEL 9)
- VHF AM B - DUPLEX

ch@ 130:50:16

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

LM FLIGHT PLAN

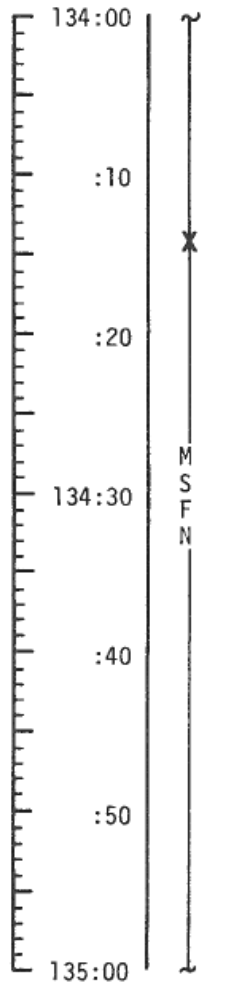
MCC-H

2234 CDT

CDR

LMP

NOTES



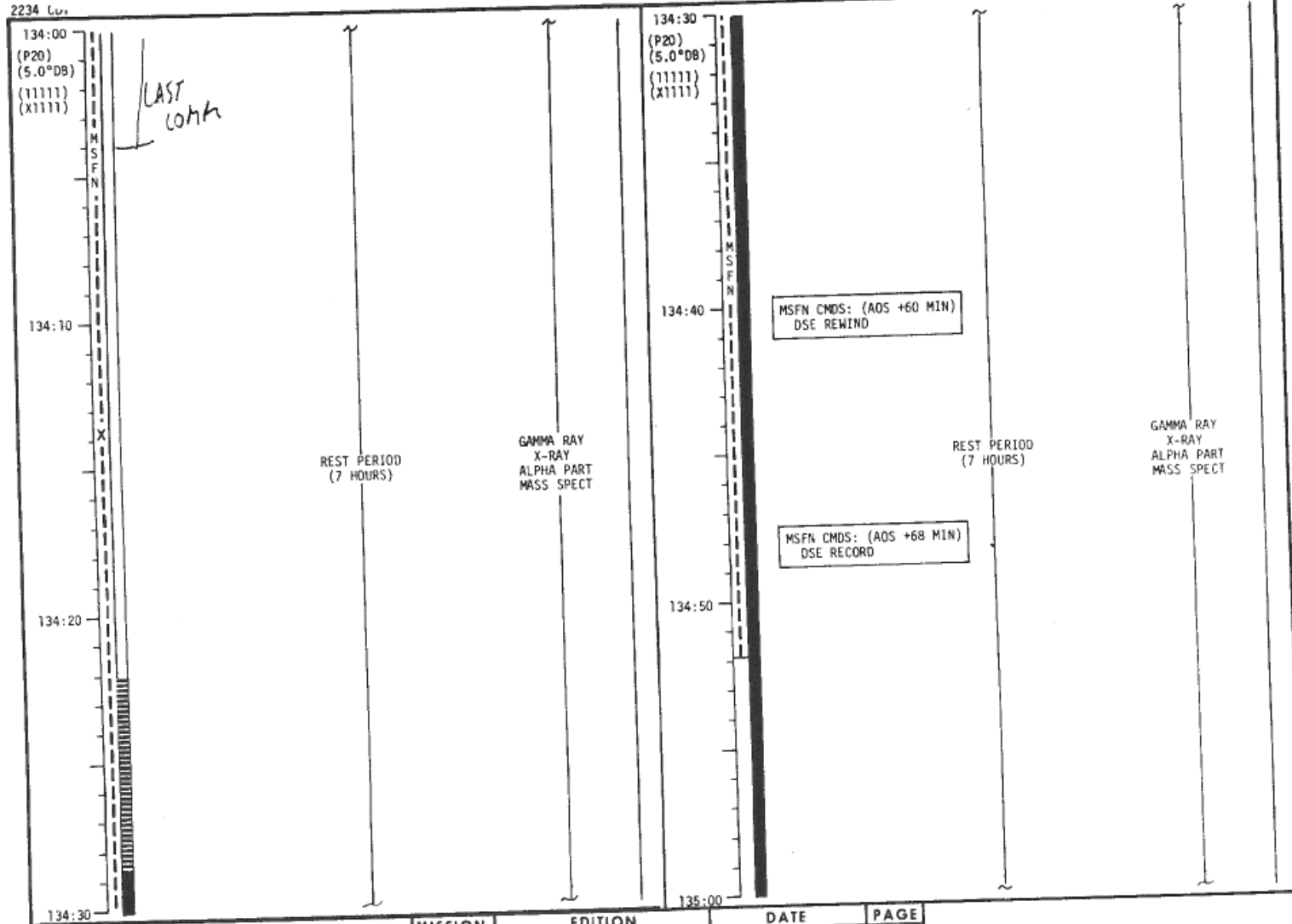
REST PERIOD
(7.8 HOURS)

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

2234 L₀



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

LM FLIGHT PLAN

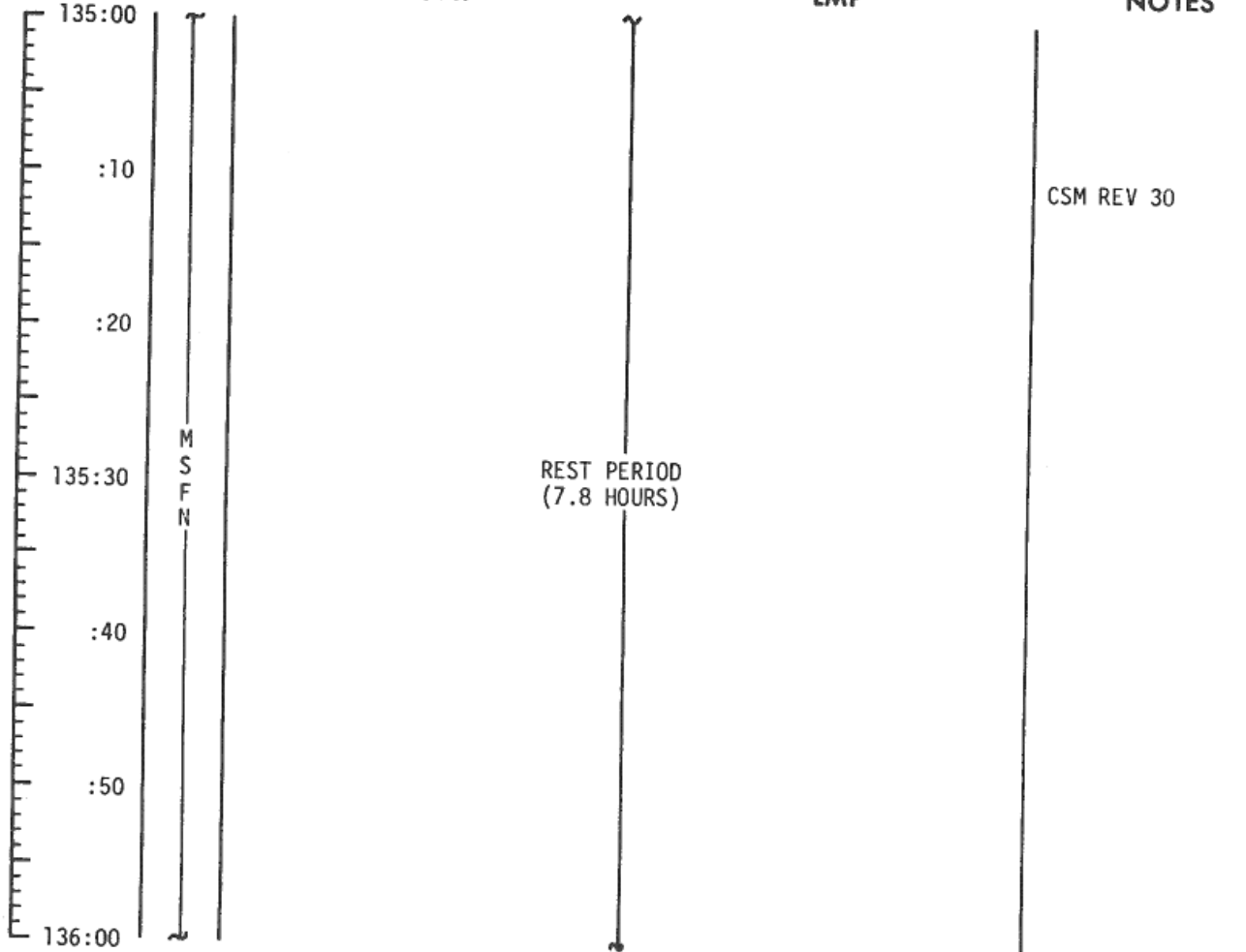
MCC-H

2334 CDT

CDR

LMP

NOTES

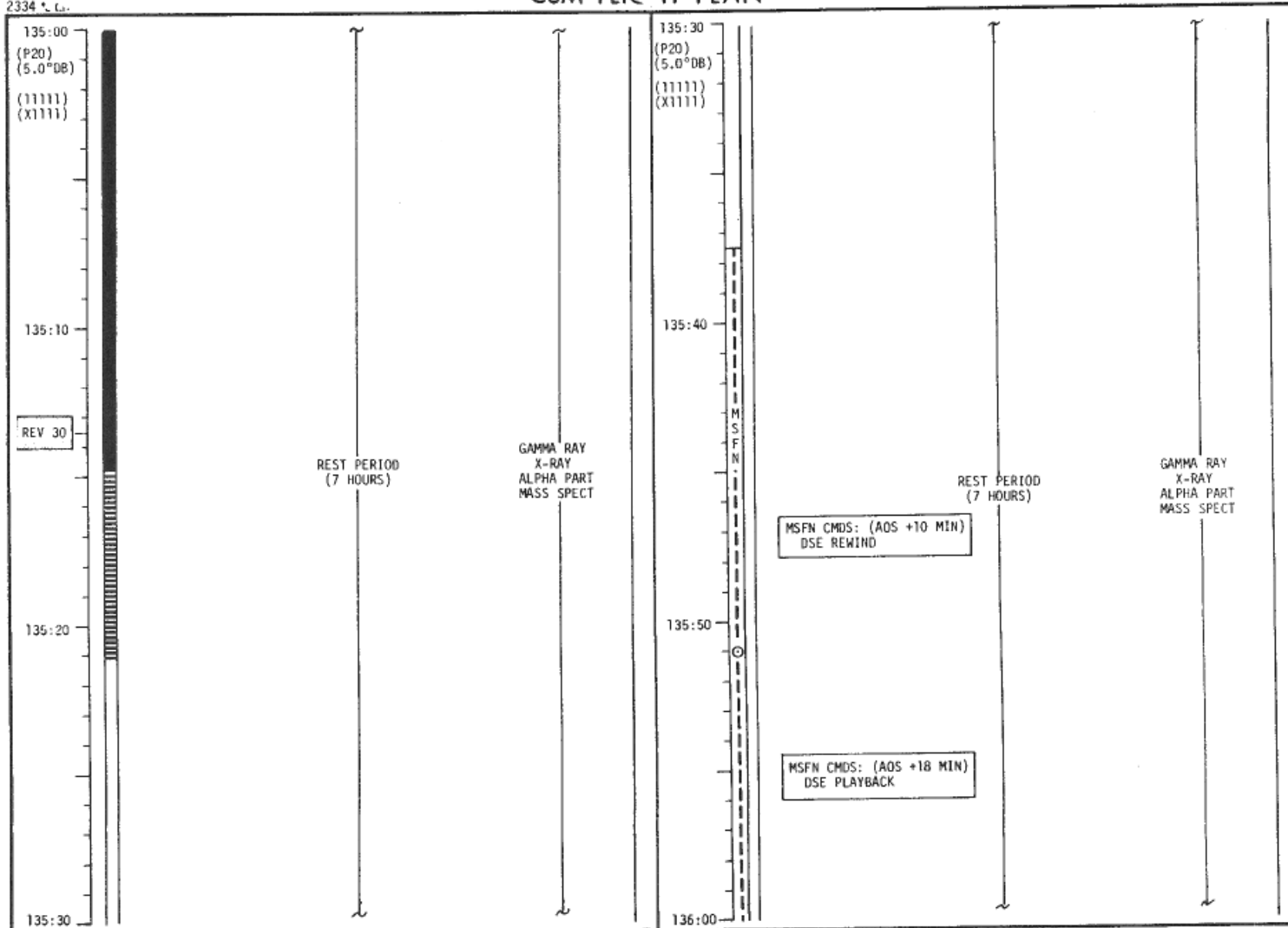


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	135:00 - 136:00	6/29-30	3-190

FLIGHT PLAN BRANCH

2334 L.L.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-191

LM FLIGHT PLAN

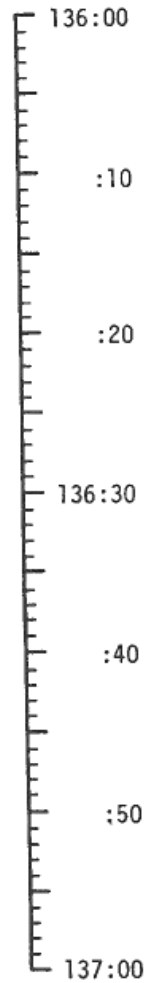
MCC-H

0034 CDT

CDR

LMP

NOTES



X

M
S
F
N

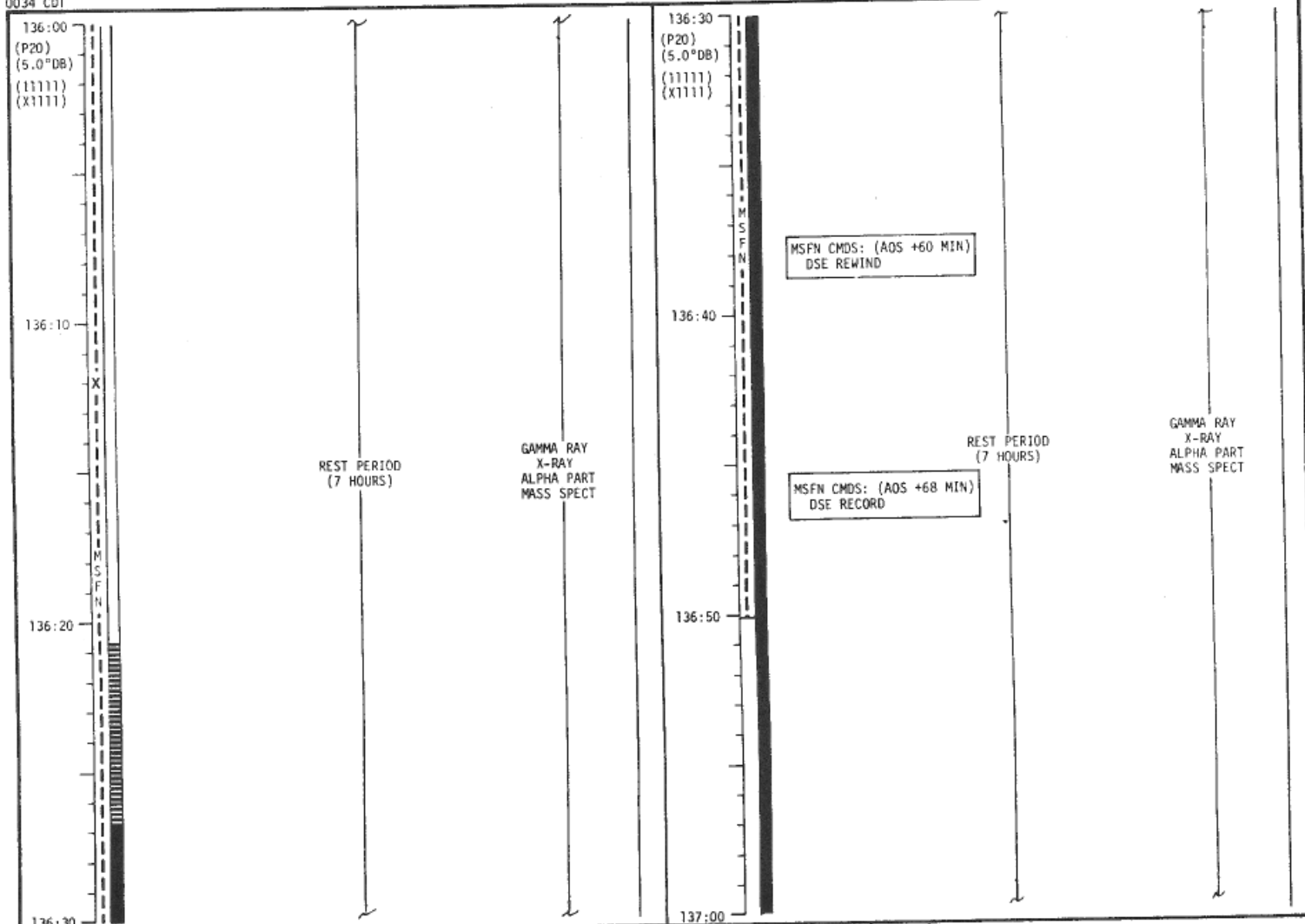
REST PERIOD
(7.8 HOURS)

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

FLIGHT PLAN BRANCH

CSM FLIGHT PLAN

0034 CDT



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

LM FLIGHT PLAN

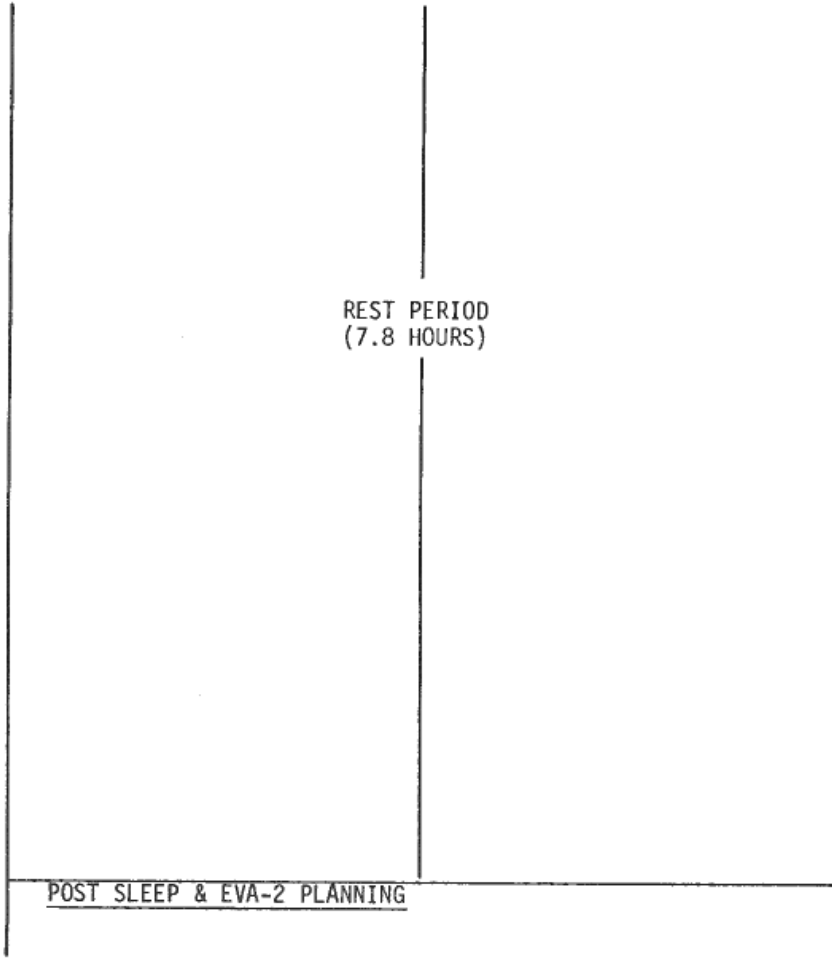
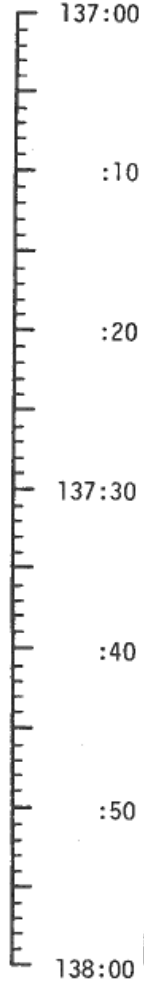
MCC-H

0134° CDT

CDR

LMP

NOTES



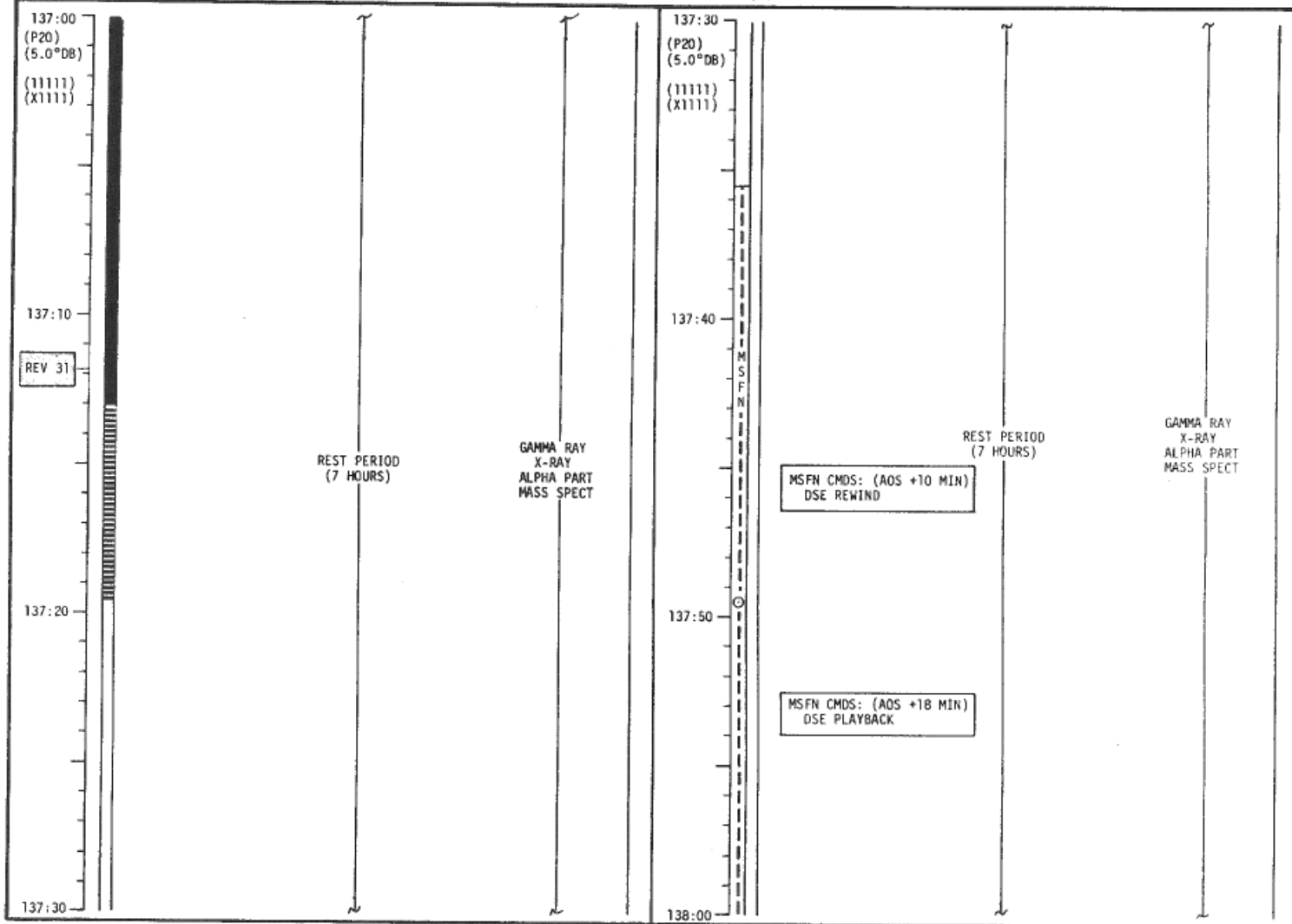
CSM REV 31

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 L.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-195

LM FLIGHT PLAN

MCC-H

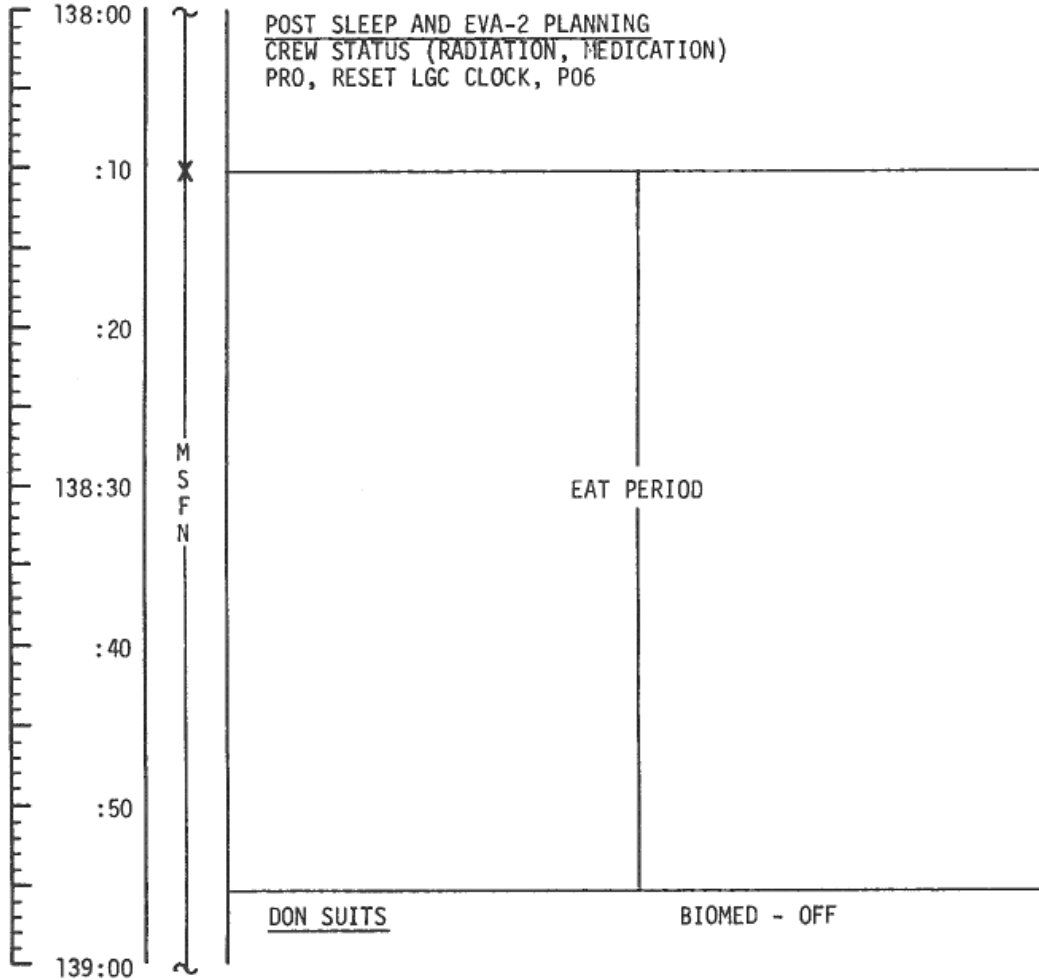
0234 CDT

CDR

LMP

NOTES

UPDATE TO LM
LM CONSUMABLES
TIME OF LIFT-OFF
FOR REVS 32
THROUGH 37

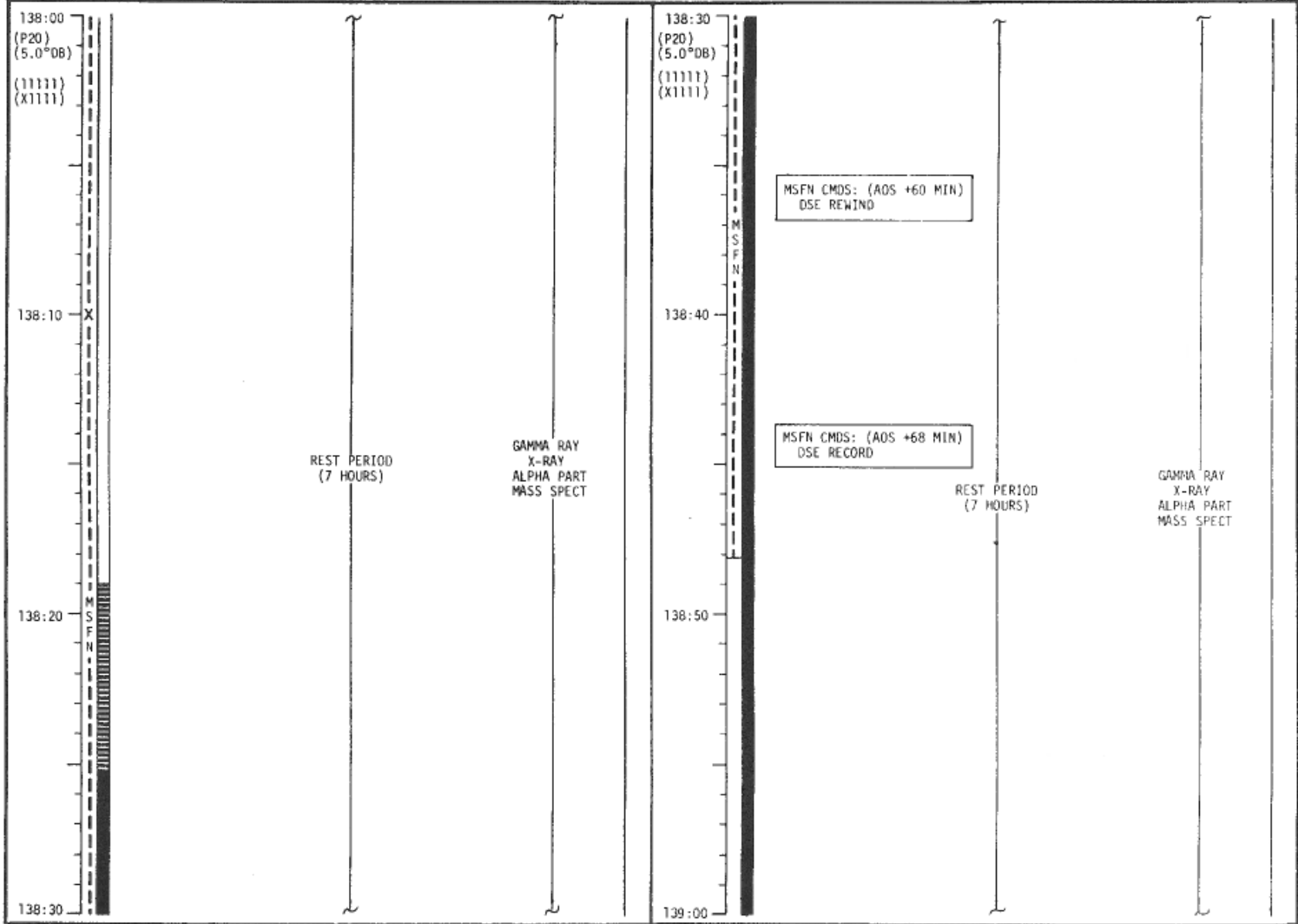


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	138:00 - 139:00	7/31	3-196

FLIGHT PLANNING BRANCH

023

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/27/71	3-197

LM FLIGHT PLAN

MCC-H

0334 CDT

CDR

LMP

NOTES

139:00
:10
:20
139:30
:40
:50
140:00

M
S
F
N

LMP, THEN CDR CLEAN & LUB PGA'S
DOFF ICG & CWG, DON LCG & PGA
CONNECT HOSES

CDR DON BIOMED HARNESS

VERIFY COMM

BIOMED - LEFT

EVA-2 PREP
STOW ALL LOOSE ITEMS NOT REQD FOR EVA

UNSTOW EVA-2 PREP & POST CARD

STOW LUNAR SURFACE CHECKLIST

UNSTOW AND CHECK BOTH OPS

CSM REV 32

-1:30

-1:20

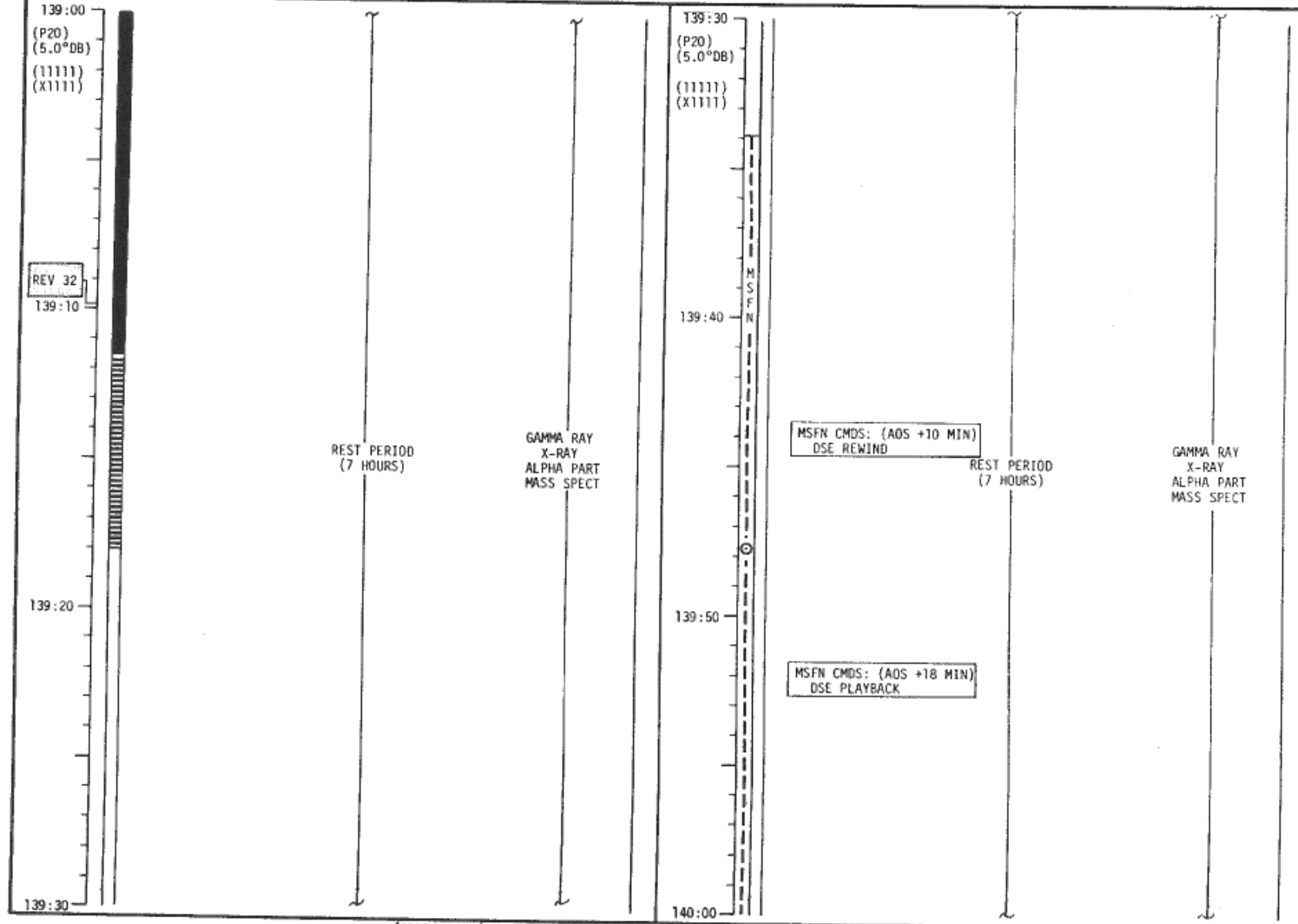
-1:10

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 PLAN' NG BRANCH

0334

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	X	<u>PLSS DONNING</u> 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	-1:00
:20		<u>PLSS COMM CHECK</u> VERIFY POWERDOWN CB CONFIGURATION, RECORDER - ON CONFIGURE FOR EVA COMM, BIOMED - OFF VERIFY PLSS COMM & TM REPORT PLSS O2 QUANTITIES TO MCC-H FINAL SYSTEM PREP	-:50
140:30	M S F N	<u>OPS CONNECT</u> CONNECT OPS O2 HOSE TO PGA CDR REPEAT OPS CONNECT	-:40
:40		<u>HELMET/GLOVE DONNING</u> PLSS FAN - ON DON HELMETS AND LEVA'S VERIFY PGA CONFIGURATION VERIFY CB CONFIGURATION DON GLOVES	-:30
:50			-:20
141:00			-:10

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

FLIGHT PLAN NG BRANCH

CSM FLIGHT PLAN

140:00
(P20)
(5.0°DB)
(11111)
(X1111)

CSM CONSUMABLES UPDATE

GET: _____

RCS TOTAL _____

QUAD A _____ B _____

C _____ D _____

H₂ TANK 1 _____ 2 _____ 3 _____

O₂ TANK 1 _____ 2 _____ 3 _____

REST PERIOD
(7 HOURS)

P52 IMU REALIGN

N71: _____

N05: _____

N93: _____

X _____

Y _____

Z _____

GET _____

140:10

140:20

140:30

140:30
(P20)
(5.0°DB)
(11111)
(X1111)

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST PAGE 5/1-26

MSFN UPLINK:
CSM S.V.

MSFN CMDS: (AOS +60 MIN)
DSE REWIND

MSFN UPDATE:
MAP CAMERA PHOTO PAD (141:13)
PAN CAMERA PHOTO PAD (141:25)
CONSUMABLES
FLIGHT PLAN

140:40

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

MSFN CMDS: (AOS +68 MIN)
DSE REWIND

*Does the P52
not alter of att?*

GAMMA RAY
X-RAY
ALPHA PART
MASS SPECT

140:50

P20, CMC MODE - AUTO
GDC ALIGN
VERIFY ORDEAL
VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)

MANUALLY ROLL CW 40°

(P20)
(5.0°DB)

P20 OPT 5 (+X FWD SIM ATT) (141:11)
V23N78 (+180.00)
(142,000/096,000)

MASS SPECT: ION SOURCE - OFF, EXP - STBY
CAUTION - WAIT 5 MIN BEFORE RETRACTING MASS SPECT BOOM
RECORD GET _____

141:00

REV 32

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

LM FLIGHT PLAN

MCC-H

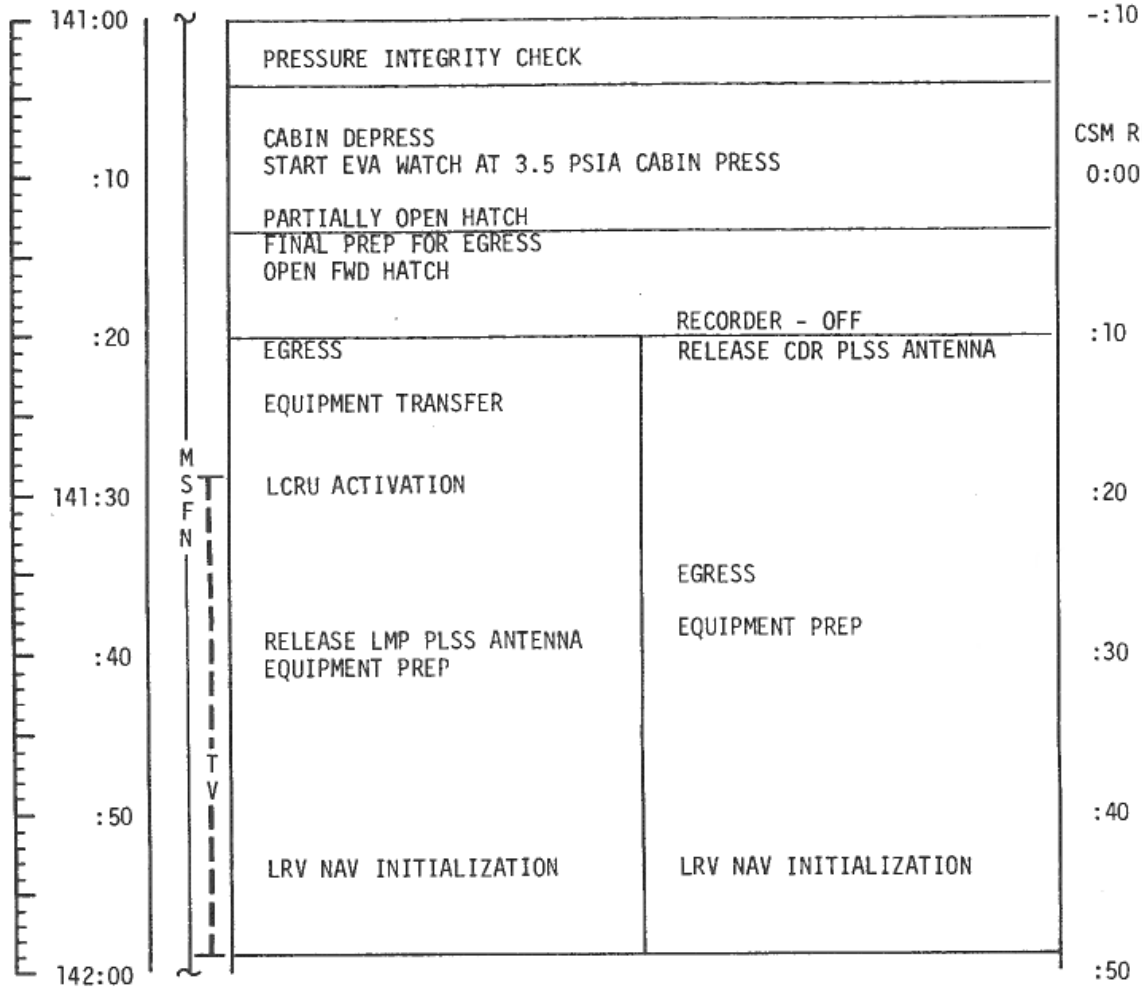
0534 CDT

CDR

LMP

NOTES

GO/NO-GO FOR
DEPRESS

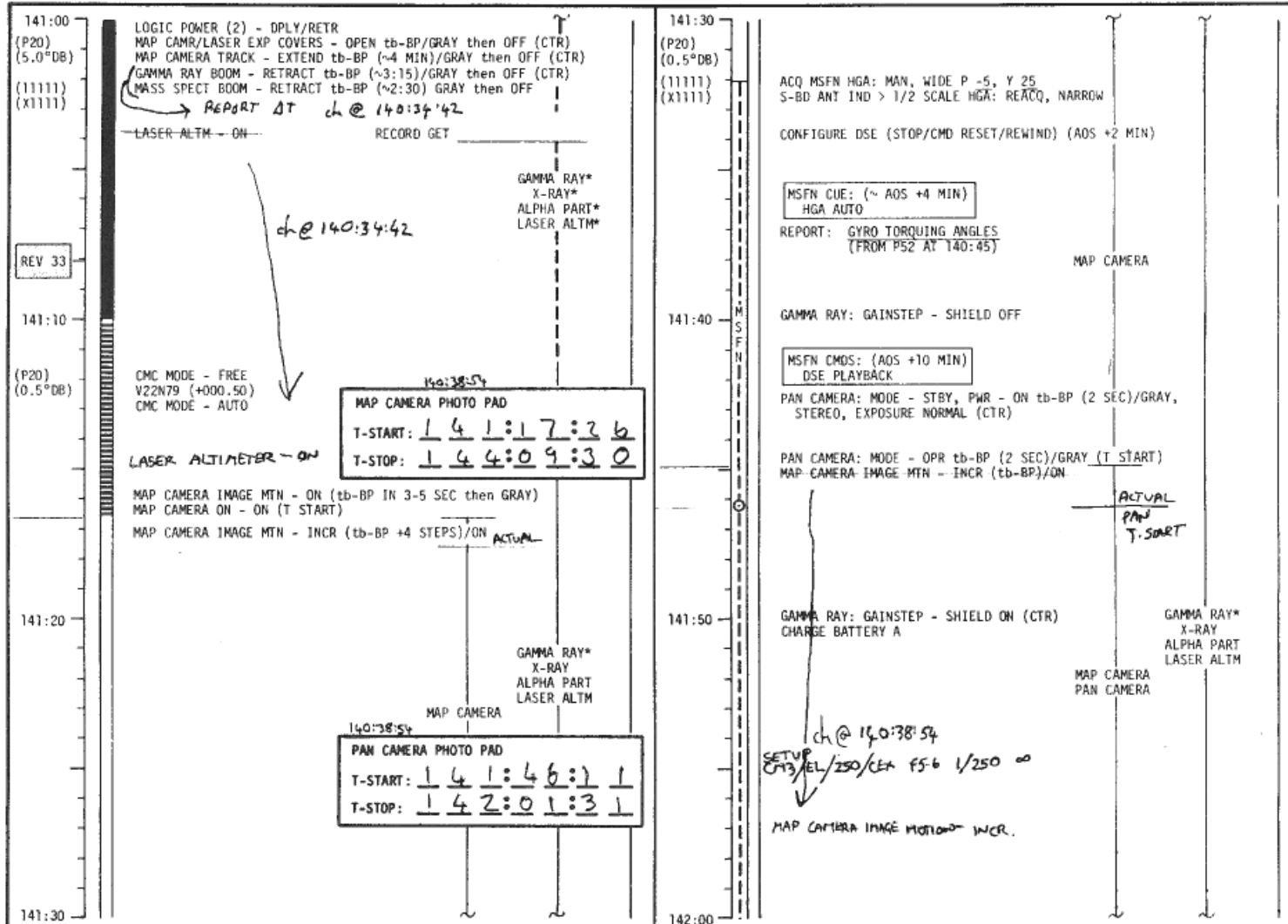


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	141:00 - 142:00	7/32-33	3-202

FLIGHT PLANNING BRANCH

0534 L.

CSM FLIGHT PLAN



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

MCC-H

0634 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

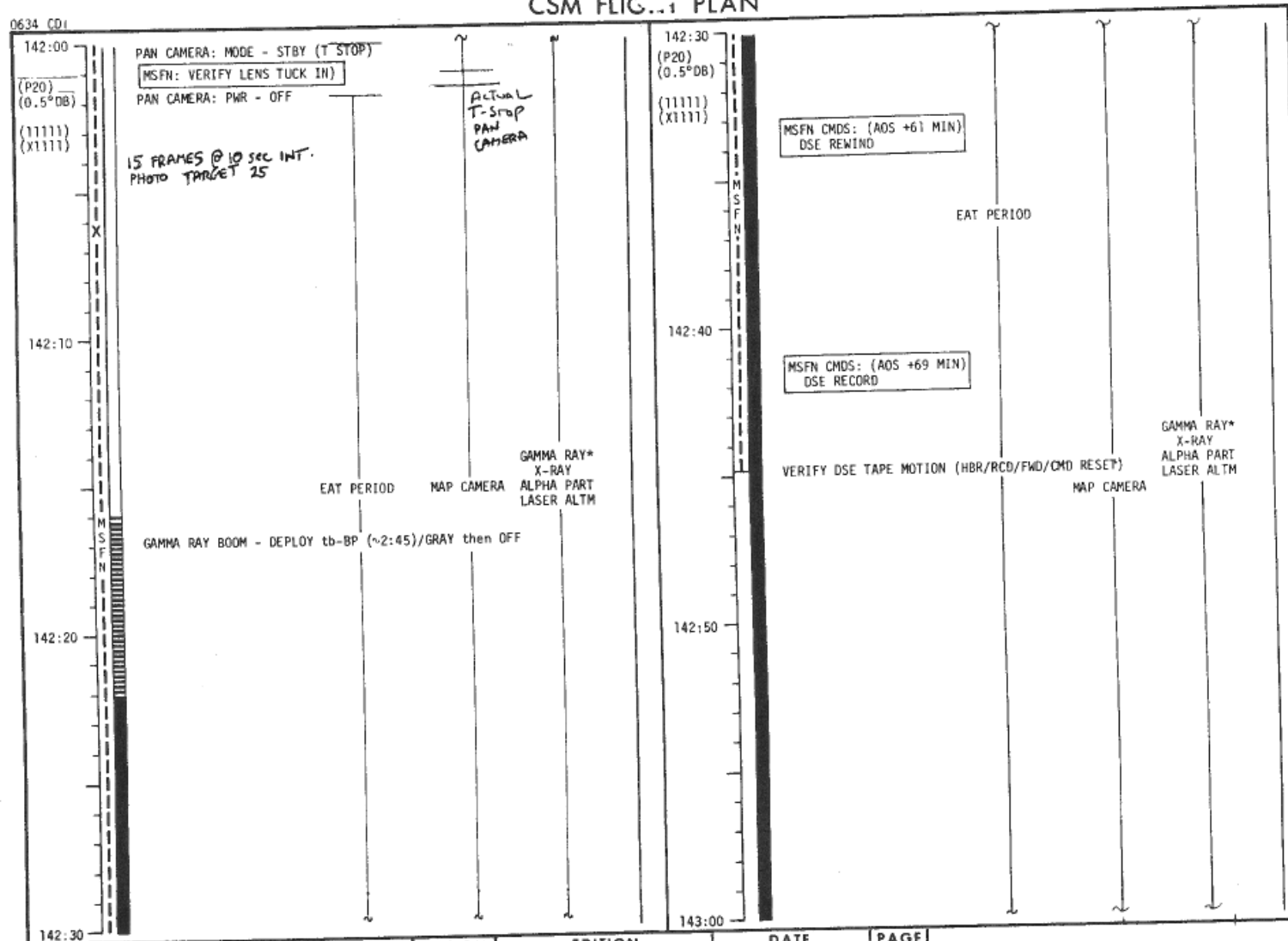
142:00	M S F I N I S T R U C T I O N	DRIVE TO STATION #4	:50
:10		OBSERVE SMOOTH MARE & SECONDARY CRATER CLUSTER CHARACTERISTICS PHOTOGRAPHY AS APPROPRIATE	1:00
:20		CHECK POINT (2 MIN)	1:10
142:30		STATION #4	1:20
:40		SOIL/RAKE SAMPLE DOCUMENTED SAMPLES PAN 500mm PHOTOGRAPHY OF FRONT EXPLORATORY TRENCH 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	1:40
143:00		OBSERVE SMOOTH MARE & SECONDARY CRATER CLUSTER CHARACTERISTICS	1:50
		CHECK POINT (FRONT)	

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

FLIGHT PLAN TRAINING BRANCH

CSM FLIGHT PLAN

0634 CD1



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

MCC-H

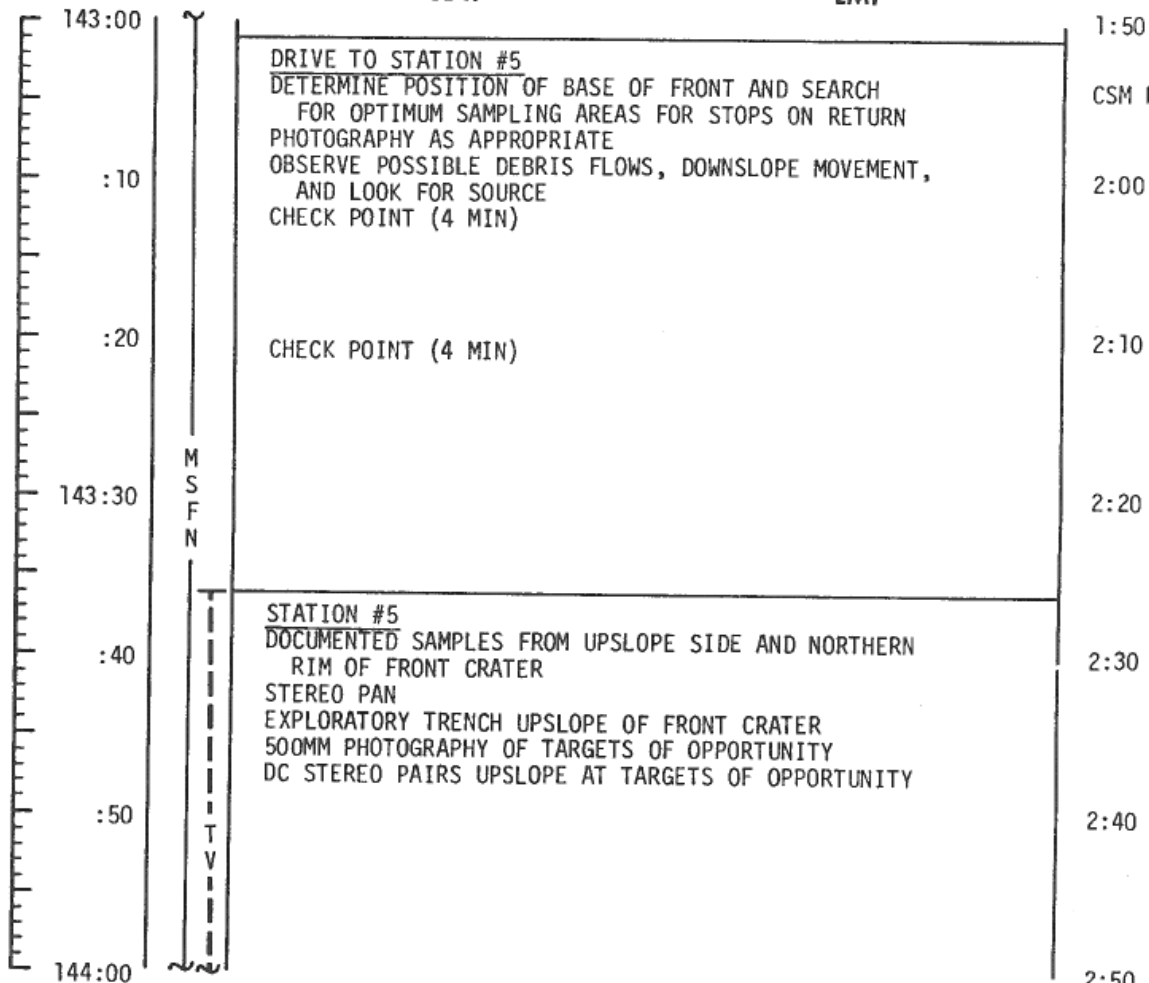
0734 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES



1:50

CSM REV 34

2:00

2:10

2:20

2:30

2:40

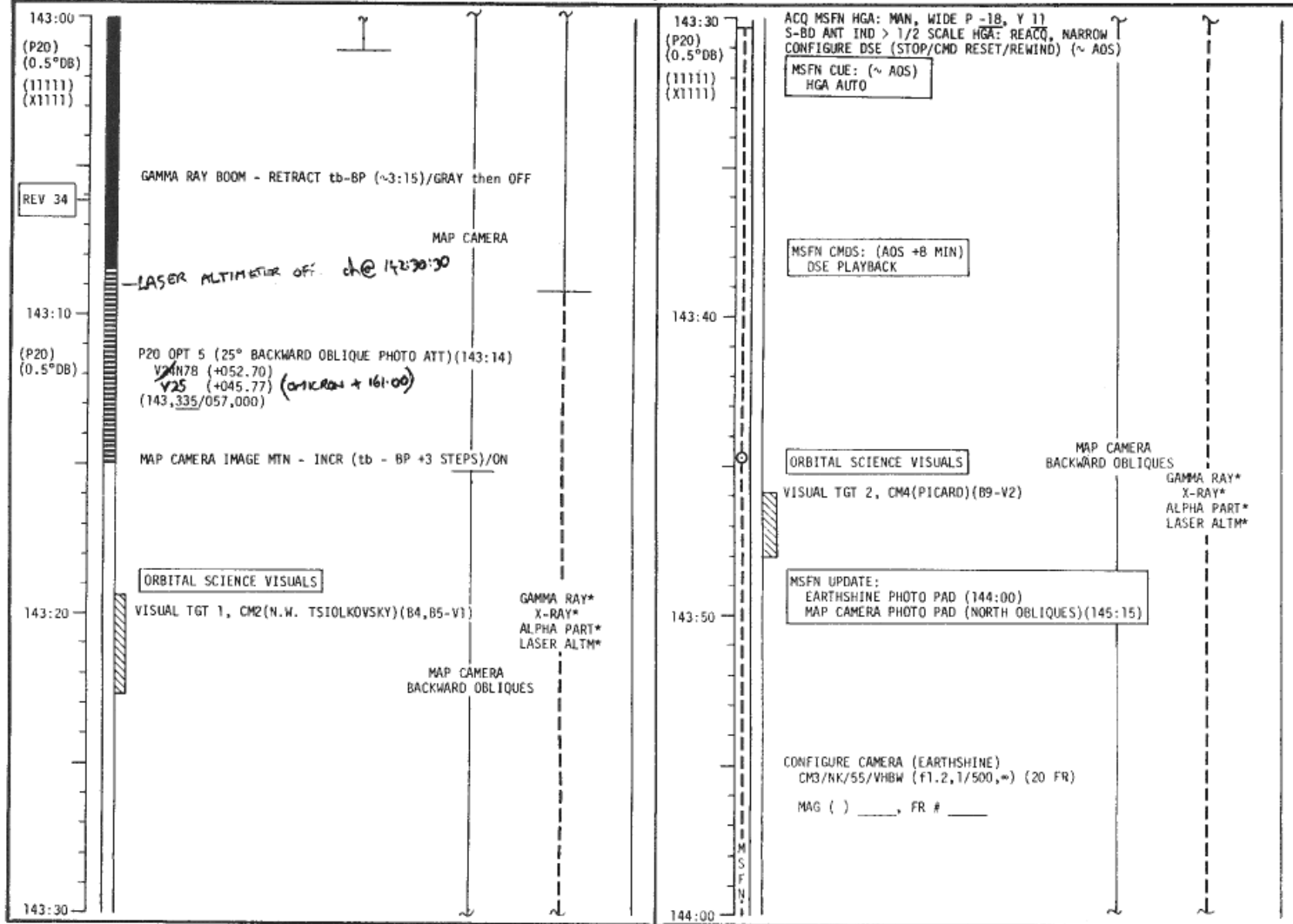
2:50

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

0734 EDT

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

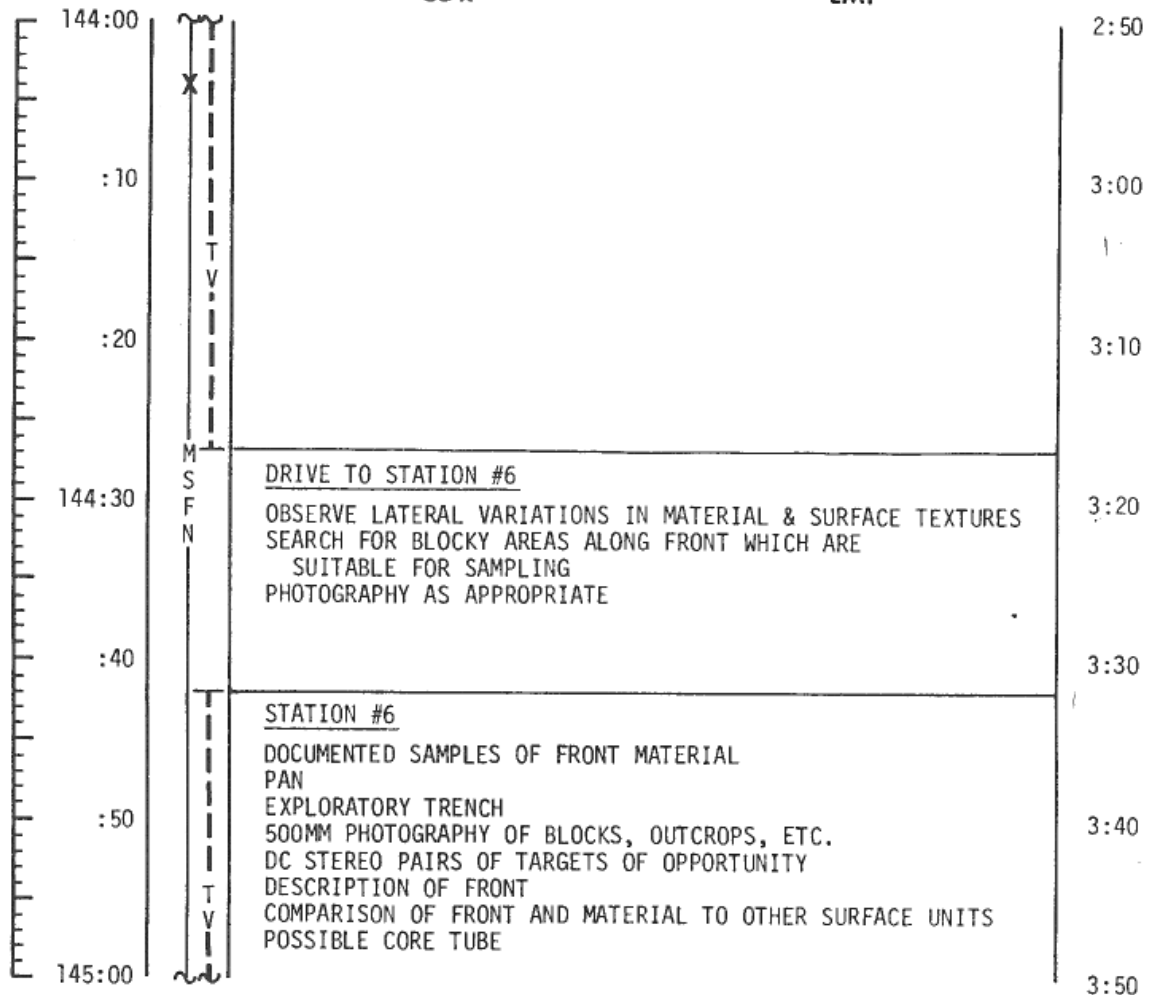
MCC-H

0834 CDT

CDR

LMP

NOTES

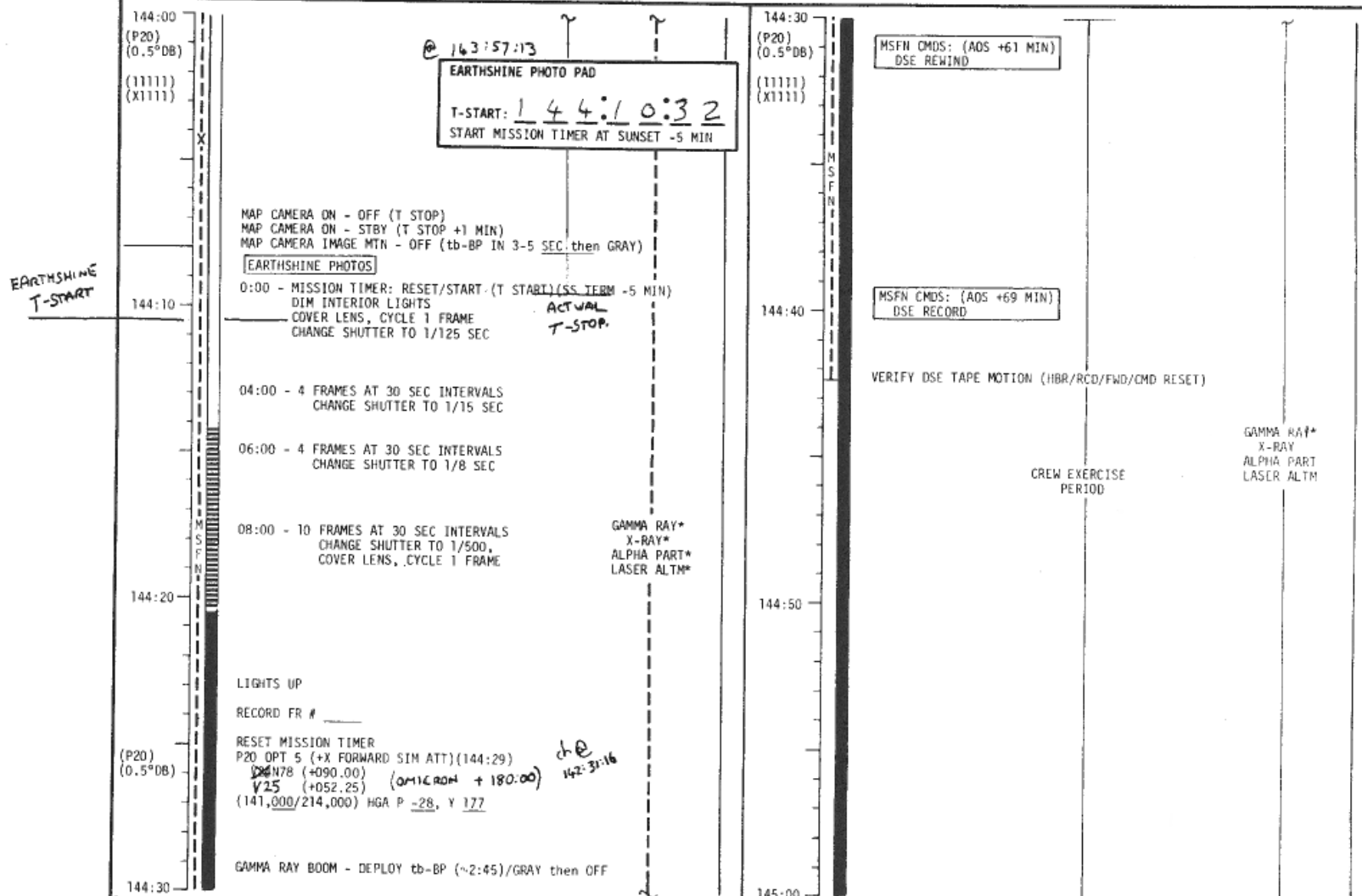


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	144:00 - 145:00	7/34	3-208

FLIGHT PLANNING BRANCH

0834 CDT

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

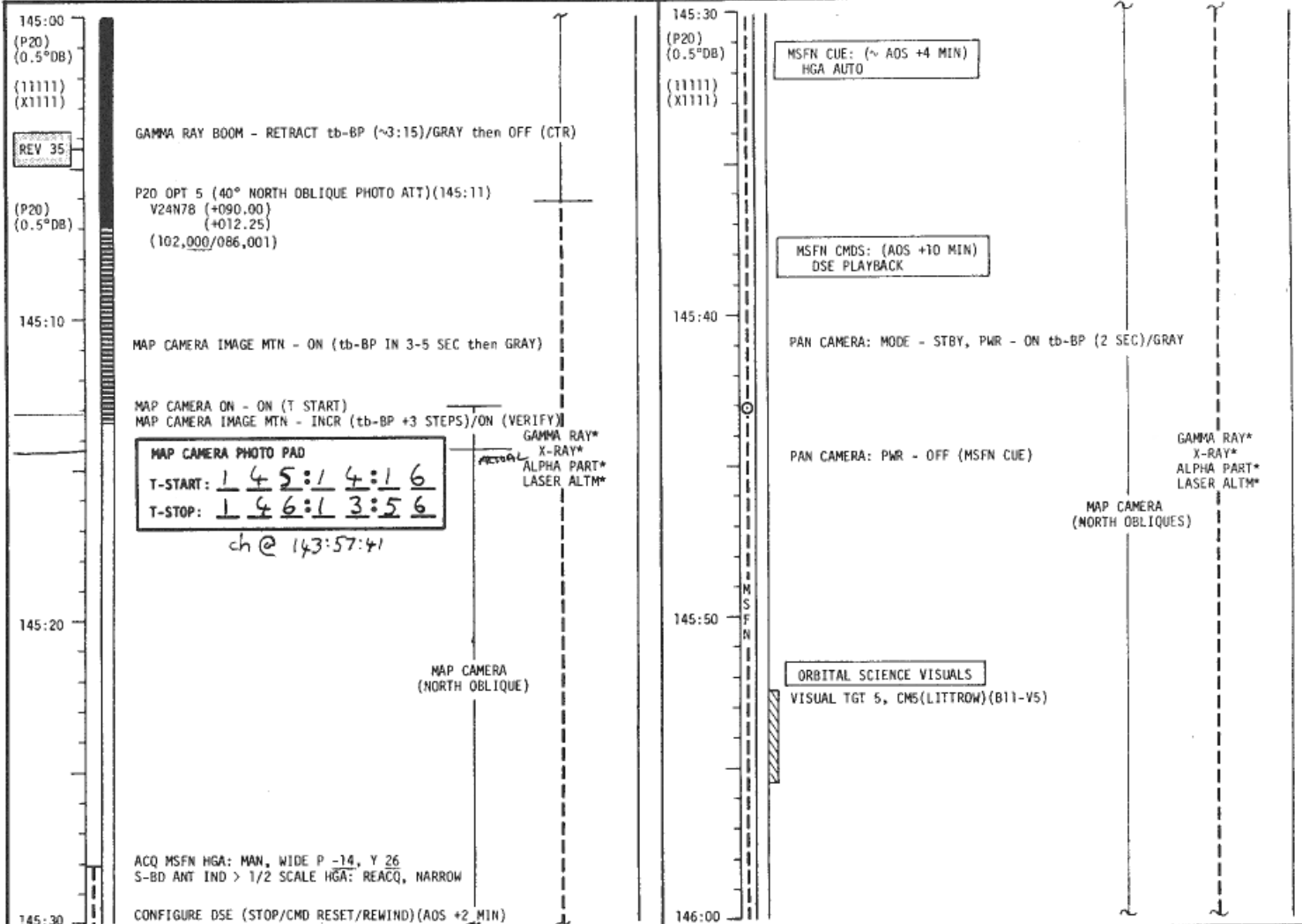
MCC-H	0934 CDT	CDR	LMP	NOTES
	145:00			3:50
	:10			CSM REV 35
	:20			4:00
	145:30	DRIVE TO STATION #7 OBSERVE LATERAL VARIATIONS IN MATERIAL & SURFACE TEXTURES SEARCH FOR BLOCKY AREAS ALONG FRONT WHICH ARE SUITABLE FOR SAMPLING PHOTOGRAPHY AS APPROPRIATE		4:10
	:40	STATION #7 COMPLETE FRONT SAMPLING		4:20
	:50			4:30
	146:00			4:40
				4:50

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

0934 CDT



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

LM FLIGHT PLAN

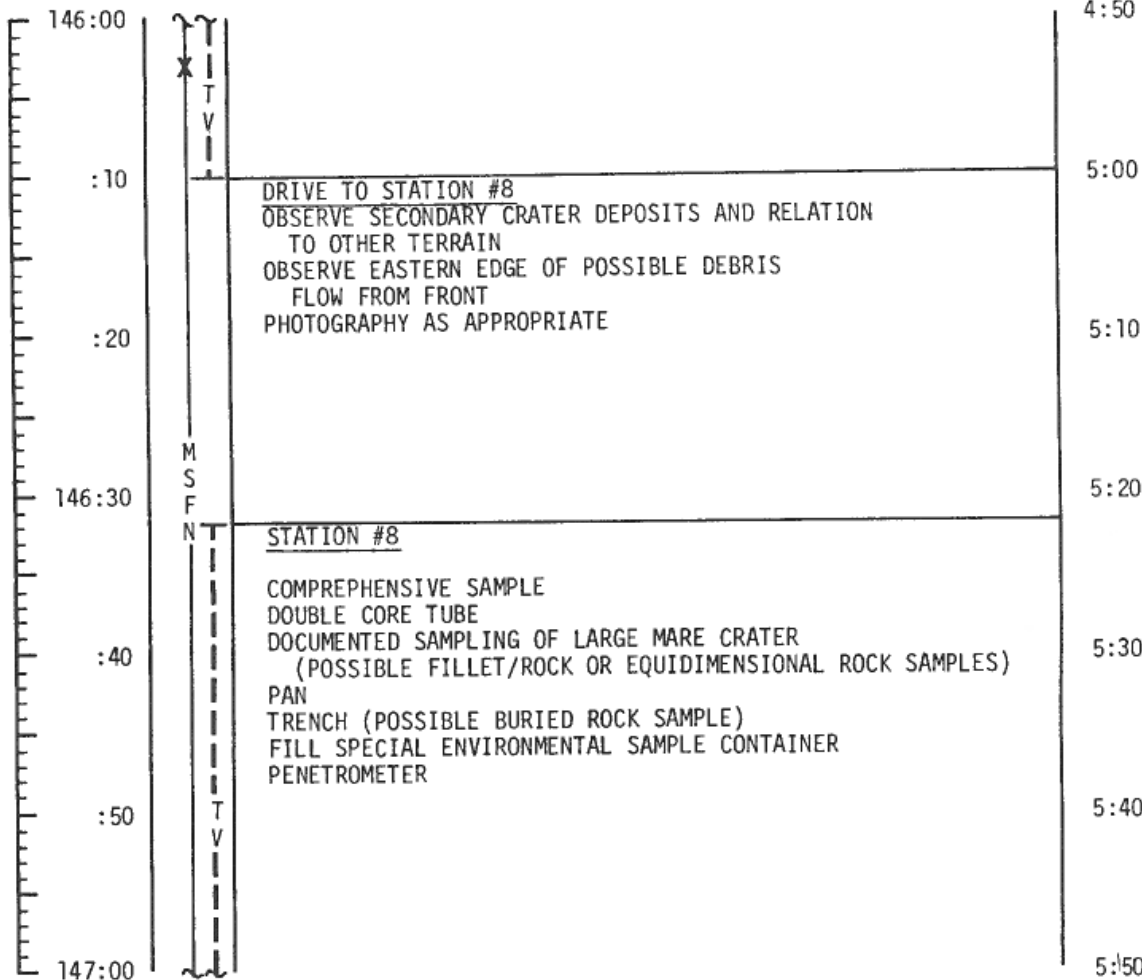
MCC-H

1034 CDT

CDR

LMP

NOTES



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

FLIGHT PLANING BRANCH

MCC-H

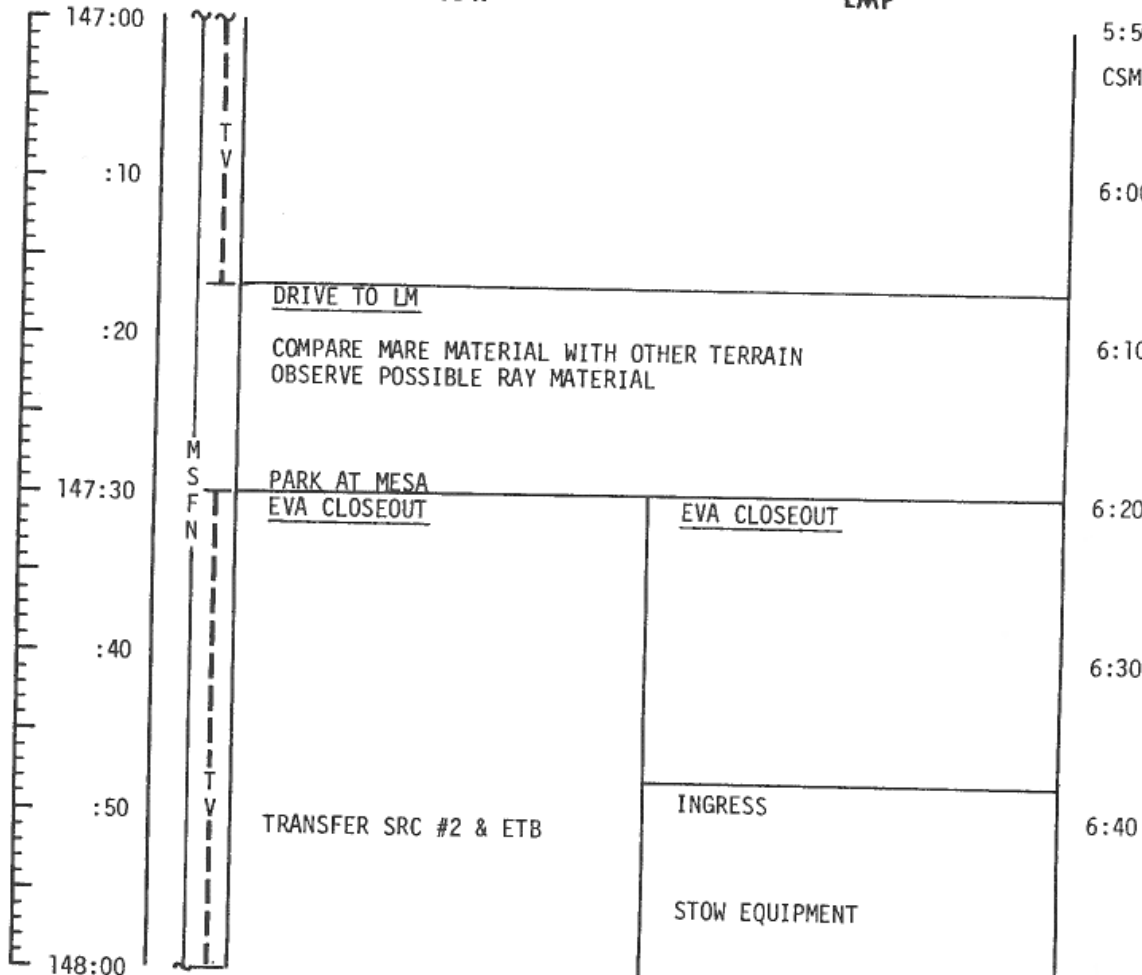
1134 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES



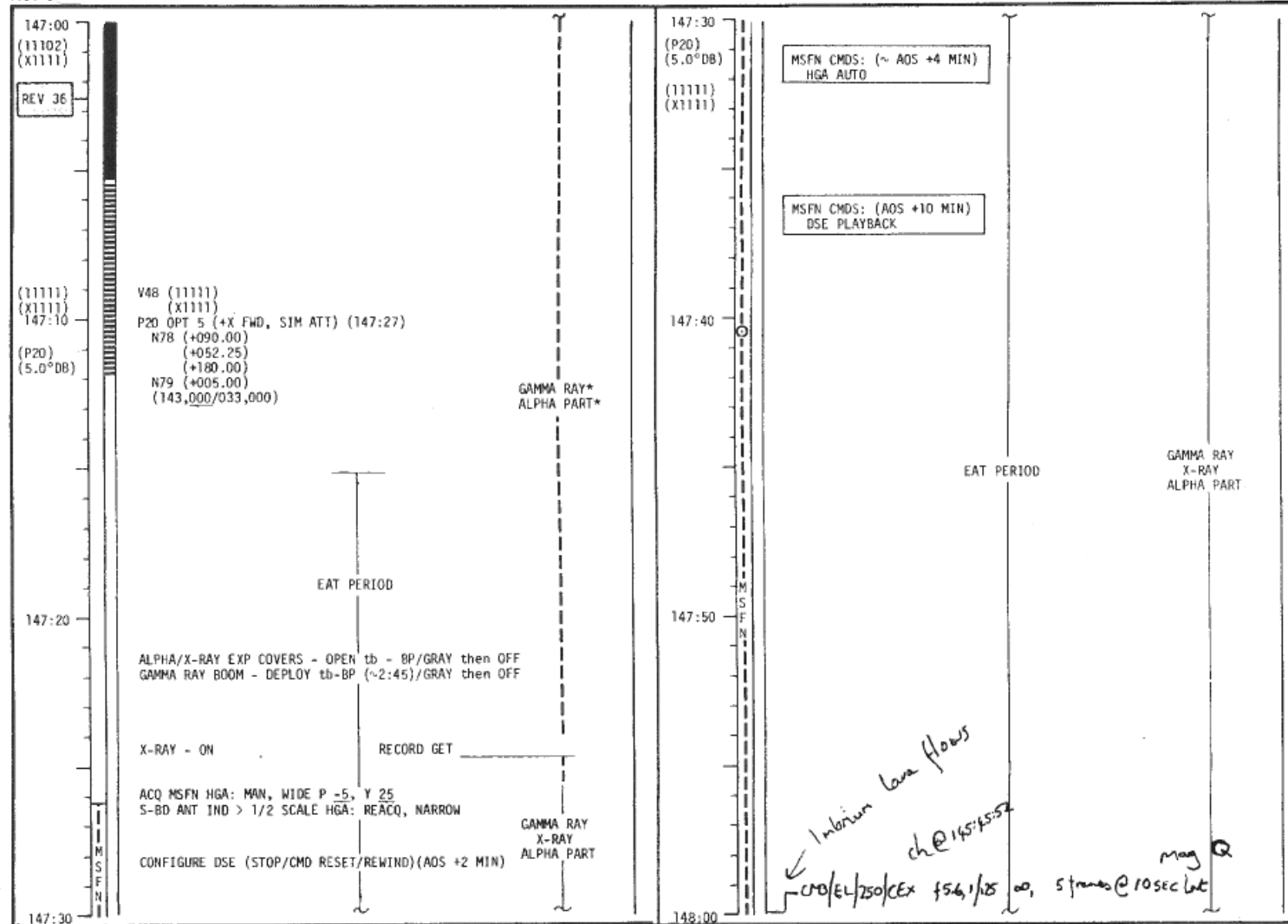
5:50
 CSM REV 36
 6:00
 6:10
 6:20
 6:30
 6:40
 6:50

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 PLANNING BRANCH

1734 c

CSM FLIGHT PLAN



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

MCC-H

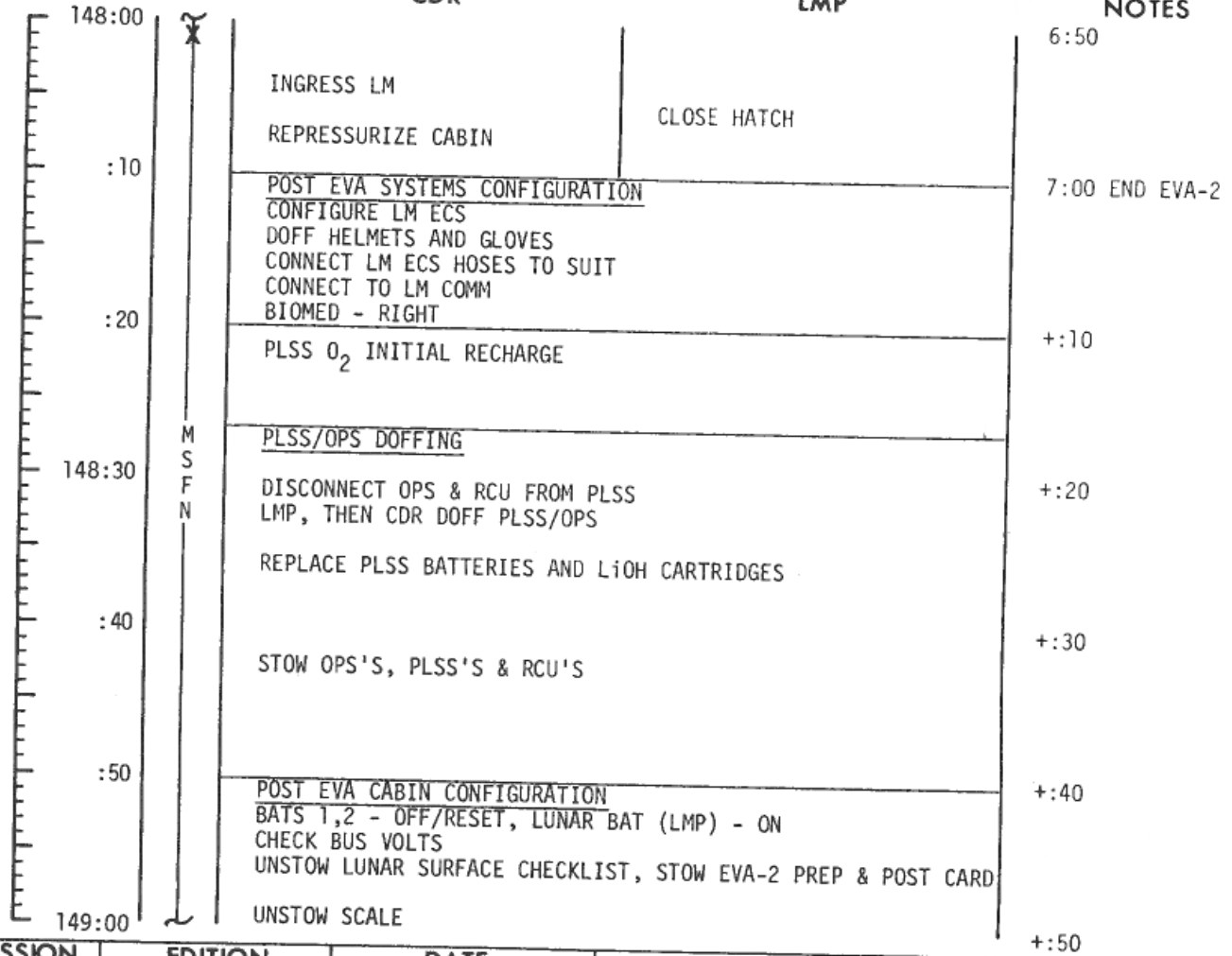
1234 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

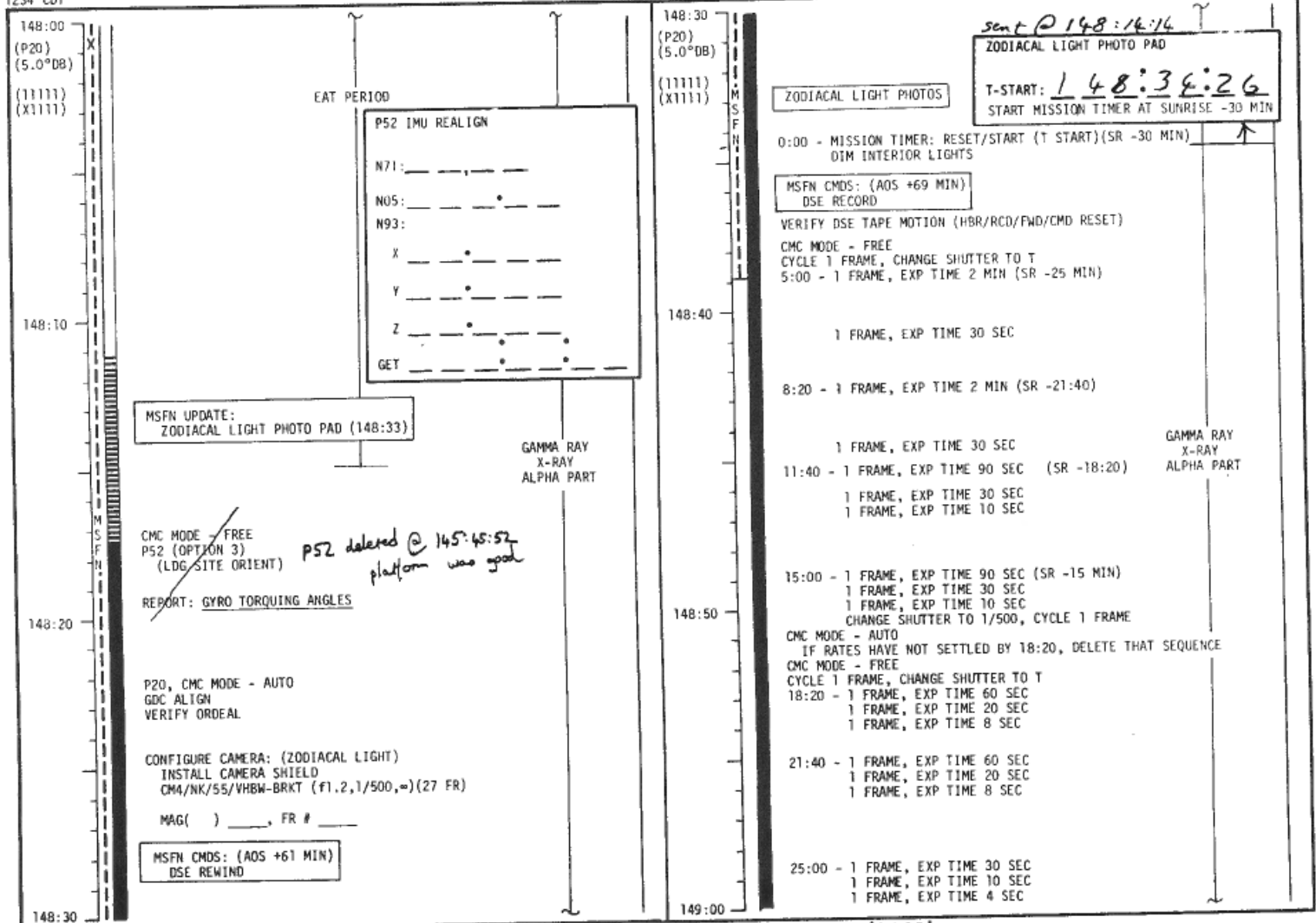


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	148:00 - 149:00	7/36	3-216

FLIGHT PLAN NG BRANCH

1234 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-217

MCC-H

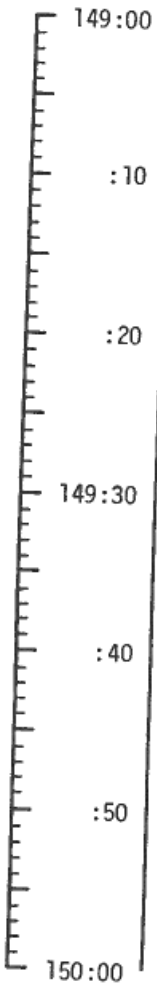
1334 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES



M
S
F
N

WEIGH SRC & COLLECTION BAGS, REPORT WEIGHTS TO MCC-H

+ :50
CSM REV 37

STOW SCALE, SRC & COLLECTION BAG

DOFF SUITS BIOMED - OFF
CDR, THEN LMP DOFF PGA & LCG, DON CWG & ICG

+1:00

STOW PGA ON AFT ENGINE COVER AND DRY

+1:10

LMP DOFF BIOMED HARNESS (IF DESIRED)

+1:20

PLSS O₂ & H₂O RECHARGE BIOMED - LEFT
CONNECT LM O₂ SUPPLY TO CDR PLSS AND FILL (10 MIN)

+1:30

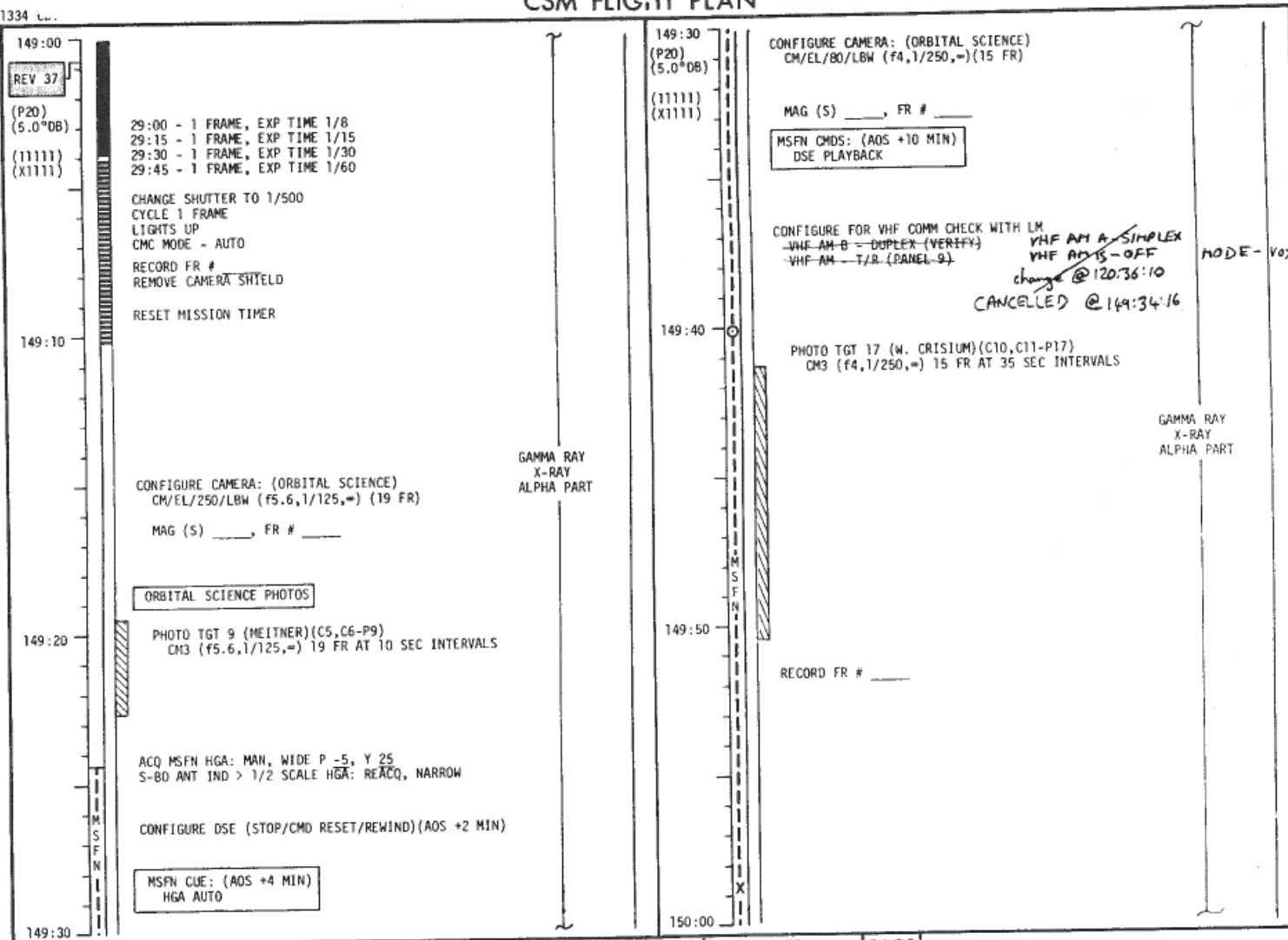
VHF VOICE CHECK
CONNECT LM H₂O SUPPLY TO CDR PLSS AND FILL (3 MIN)
CONNECT LM O₂ SUPPLY TO LMP PLSS AND FILL (10 MIN)

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



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

LM FLIGHT PLAN

MCC-H

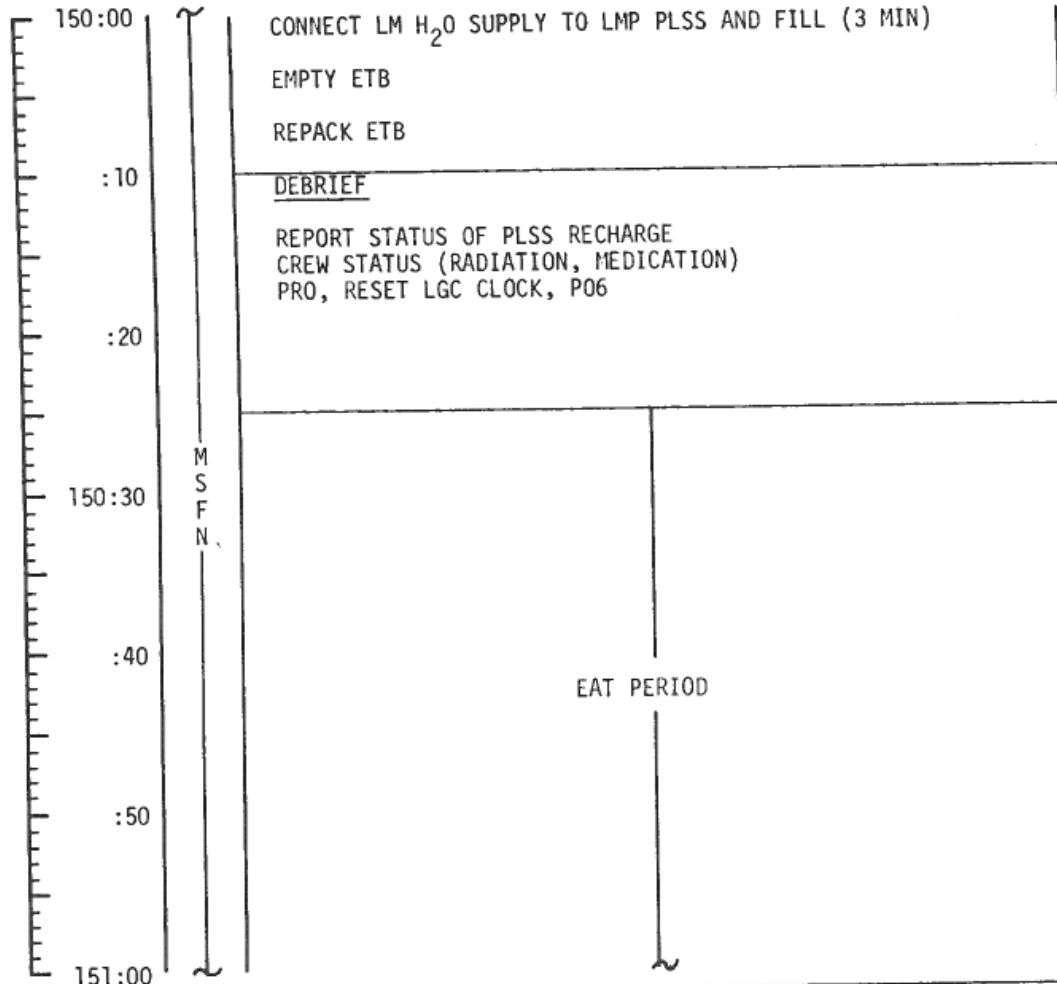
1434 CDT

CDR

LMP

NOTES

UPLINK TO LM
SATURN LIFT-OFF
TIME (IF REQD)



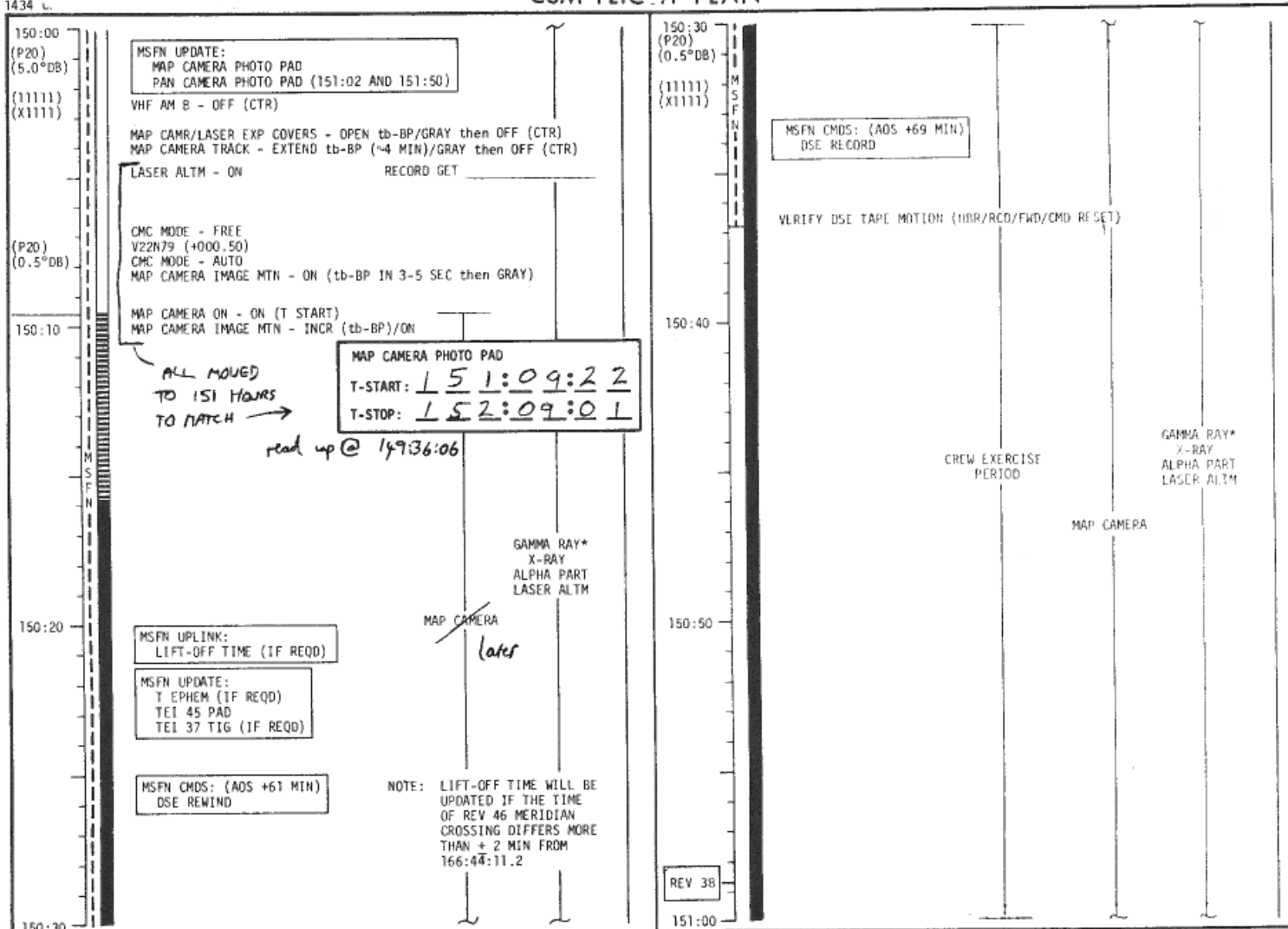
LIFT-OFF TIME WILL
BE UPDATED IF THE
REV 46 PRIME
MERIDIAN CROSSING
DIFFERS BY MORE
THAN +2 MIN FROM
166:44:11.2

CSM REV 38

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 PLANNING BRANCH

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

MCC-H

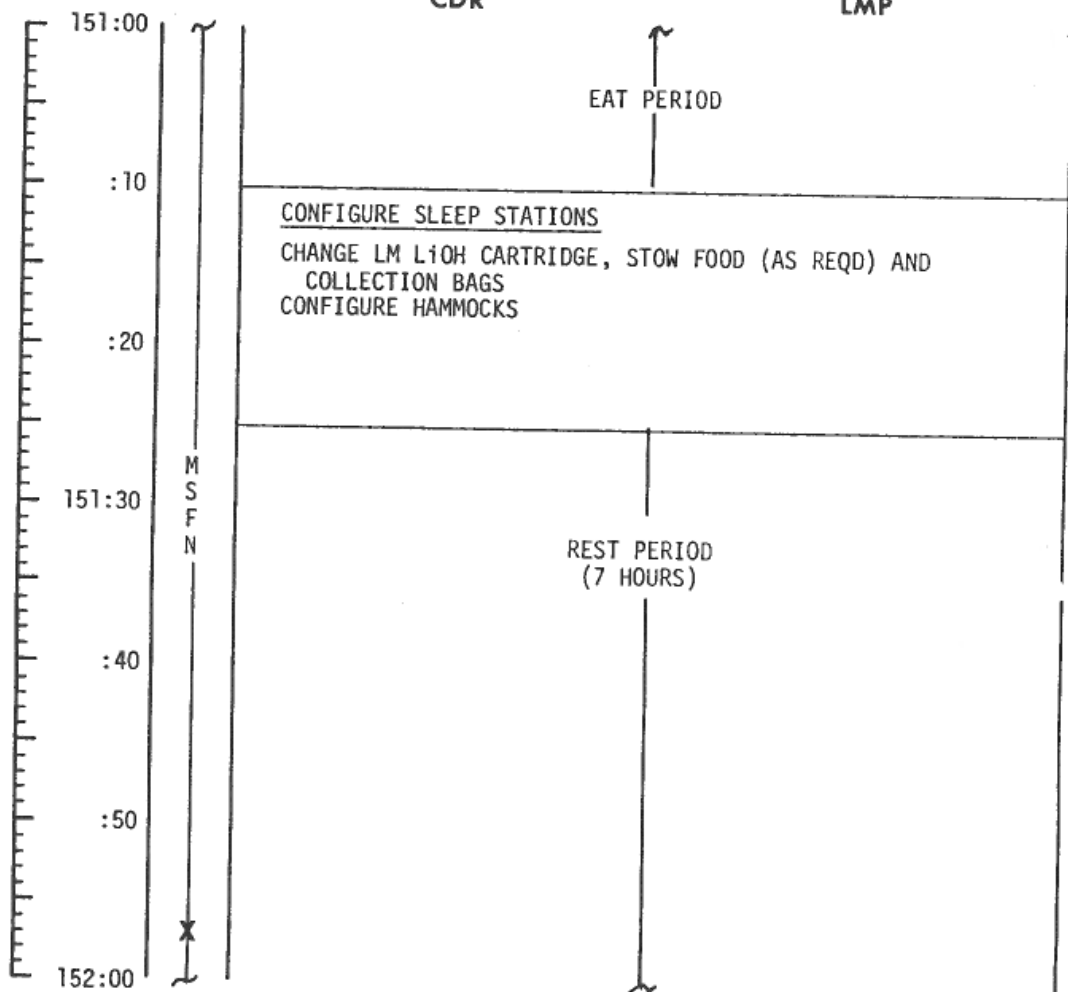
1534 CDT

CDR

LMP

NOTES

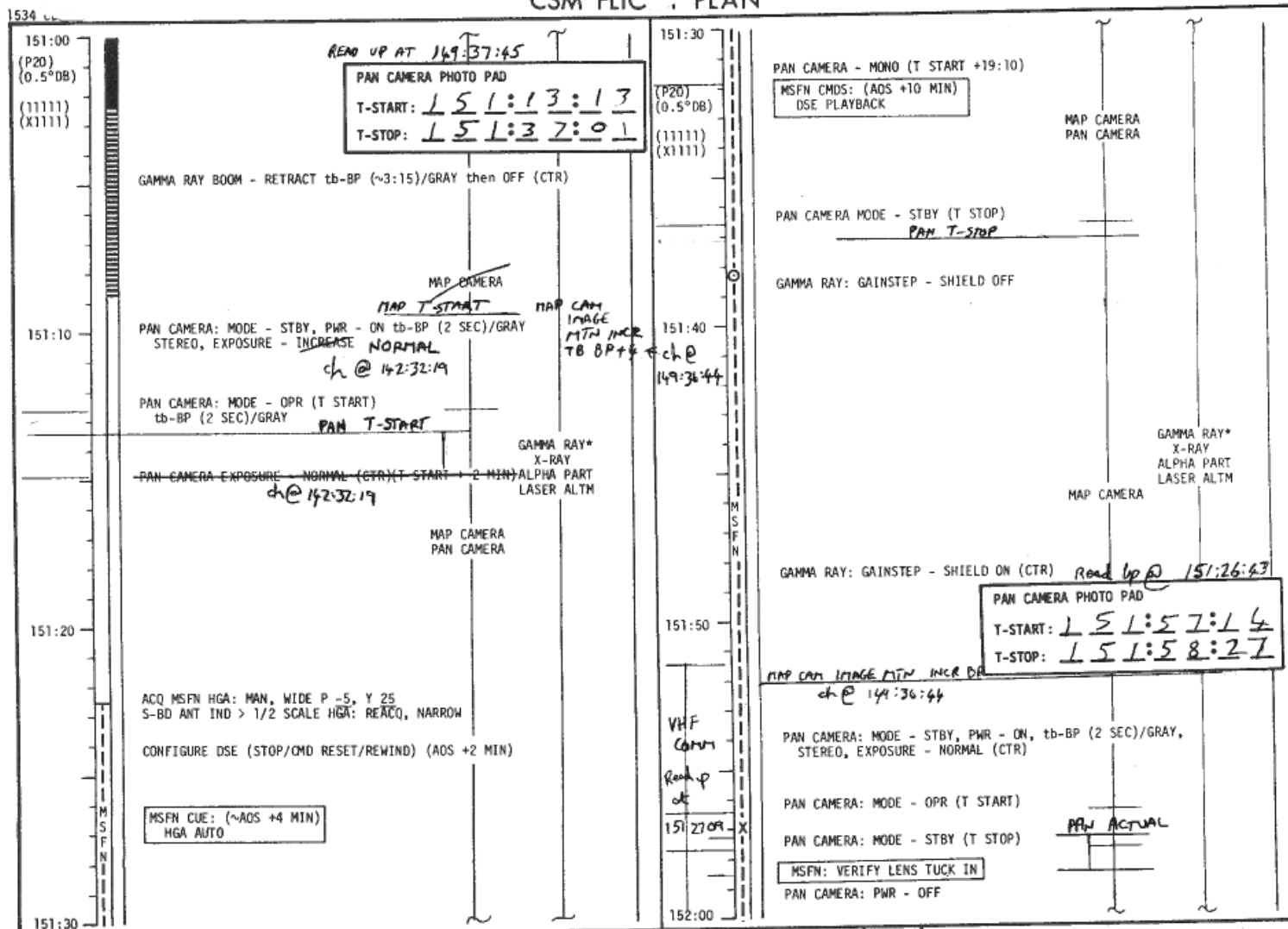
UPDATE TO LM
TIME OF LIFT-OFF
FOR REVS 38
THRU 41



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

FLIGHT PLANNING BRANCH

CSM FLIC PLAN



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

LM FLIGHT PLAN

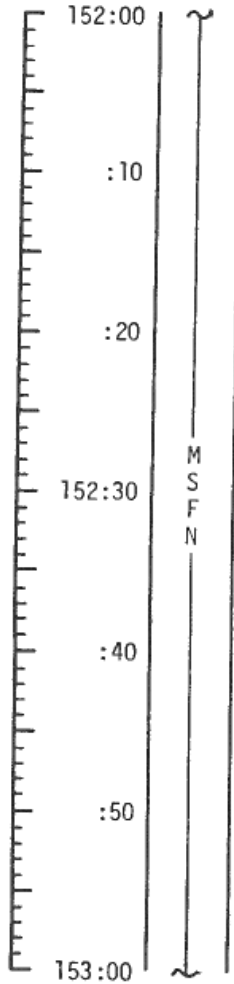
MCC-H

1634 CDT

CDR

LMP

NOTES



REST PERIOD
(7 HOURS)

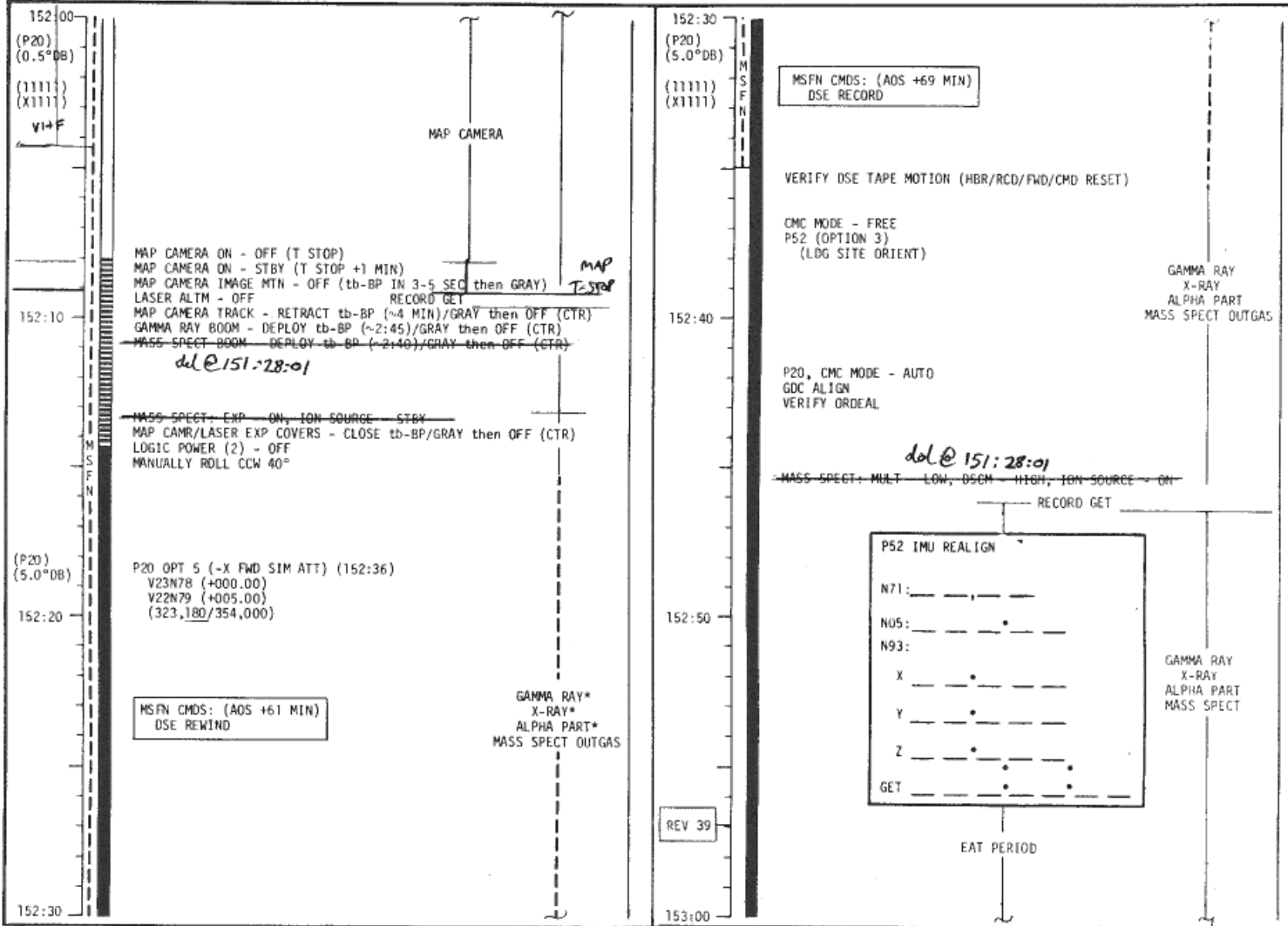
CSM REV 39

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 PLAN BRANCH

1634 Co.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-225

LM FLIGHT PLAN

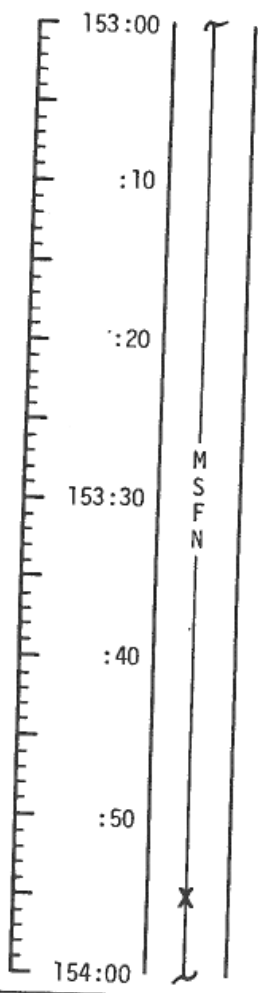
MCC-H

1734 CDT

CDR

LMP

NOTES



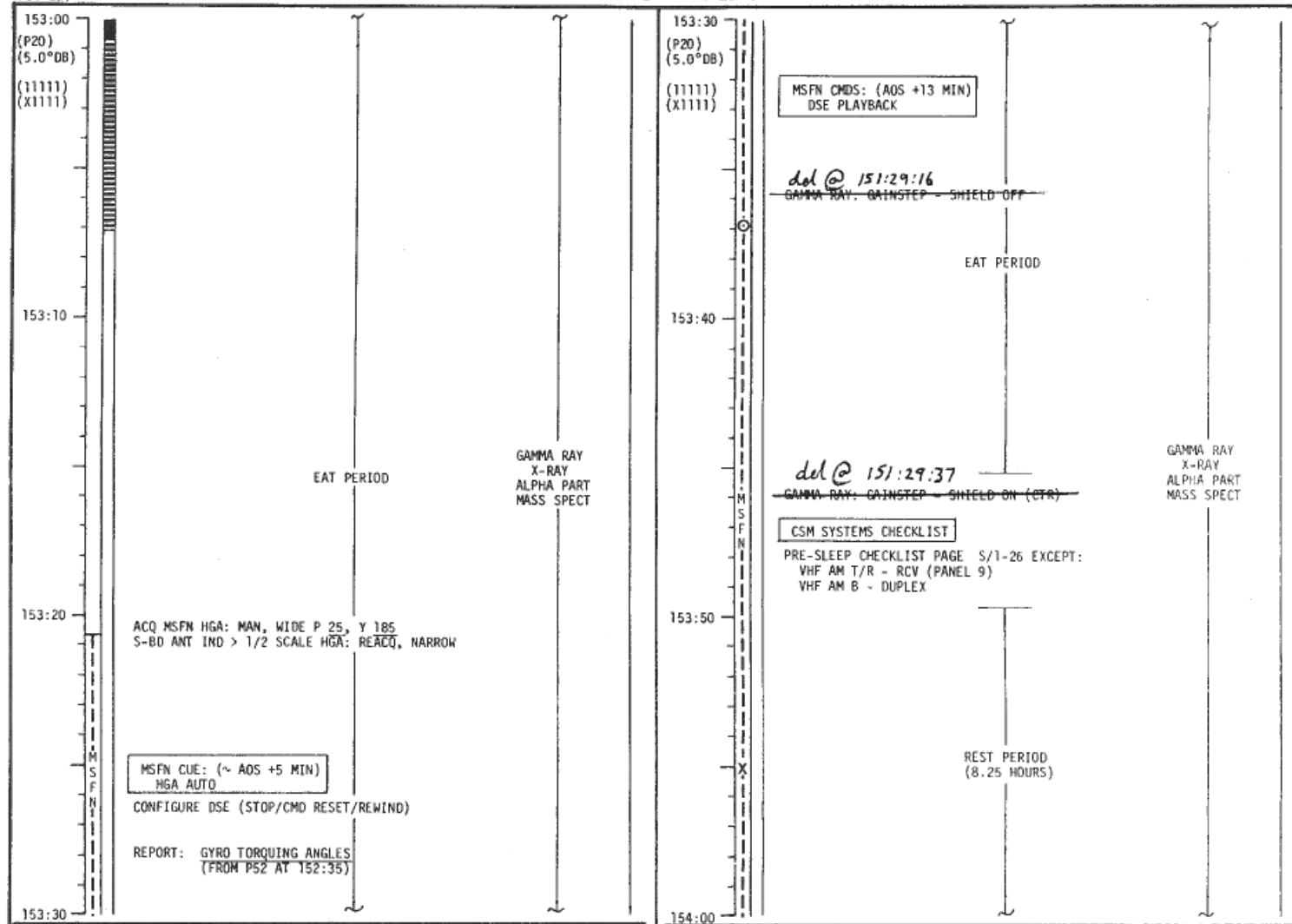
REST PERIOD
(7 HOURS)

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

1734 CL

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

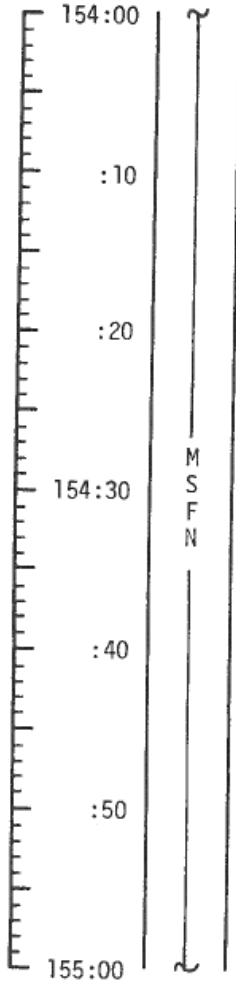
MCC-H

1834 CDT

CDR

LMP

NOTES



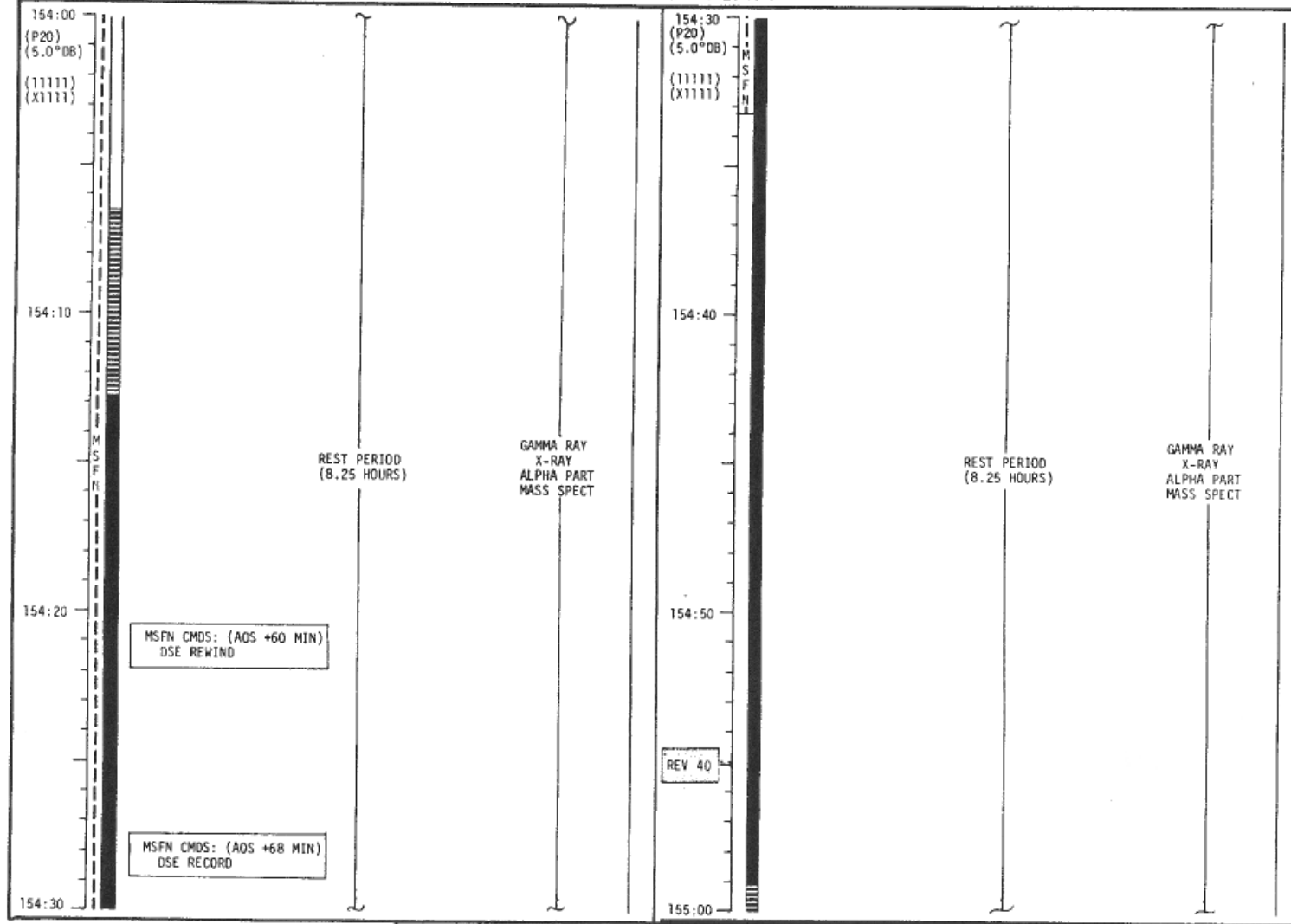
REST PERIOD
(7 HOURS)

CSM REV 40

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

CSM FLIGHT PLAN



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

MCC-H

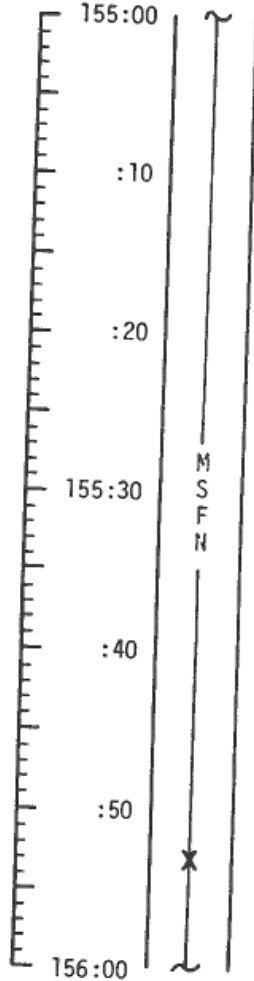
1934 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

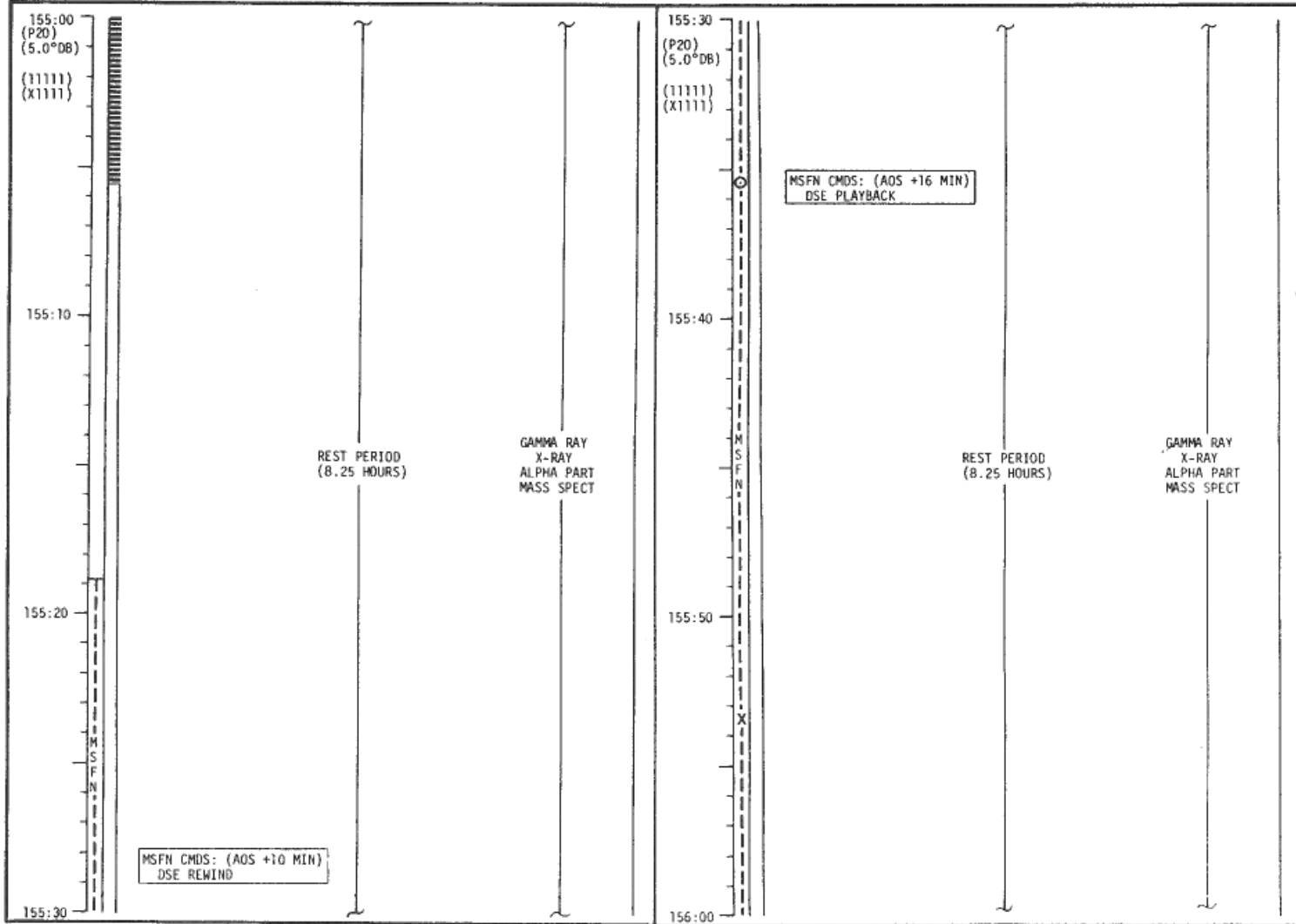


REST PERIOD
(7 HOURS)

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

FLIGHT PLAN BRANCH

CSM FLIGHT PLAN



MSFN CMDS: (AOS +10 MIN)
DSE REWIND

MSFN CMDS: (AOS +16 MIN)
DSE PLAYBACK

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-231

LM FLIGHT PLAN

MCC-H

2034 CDT

CDR

LMP

NOTES

156:00
:10
:20
156:30
:40
:50
157:00

M
S
F
N

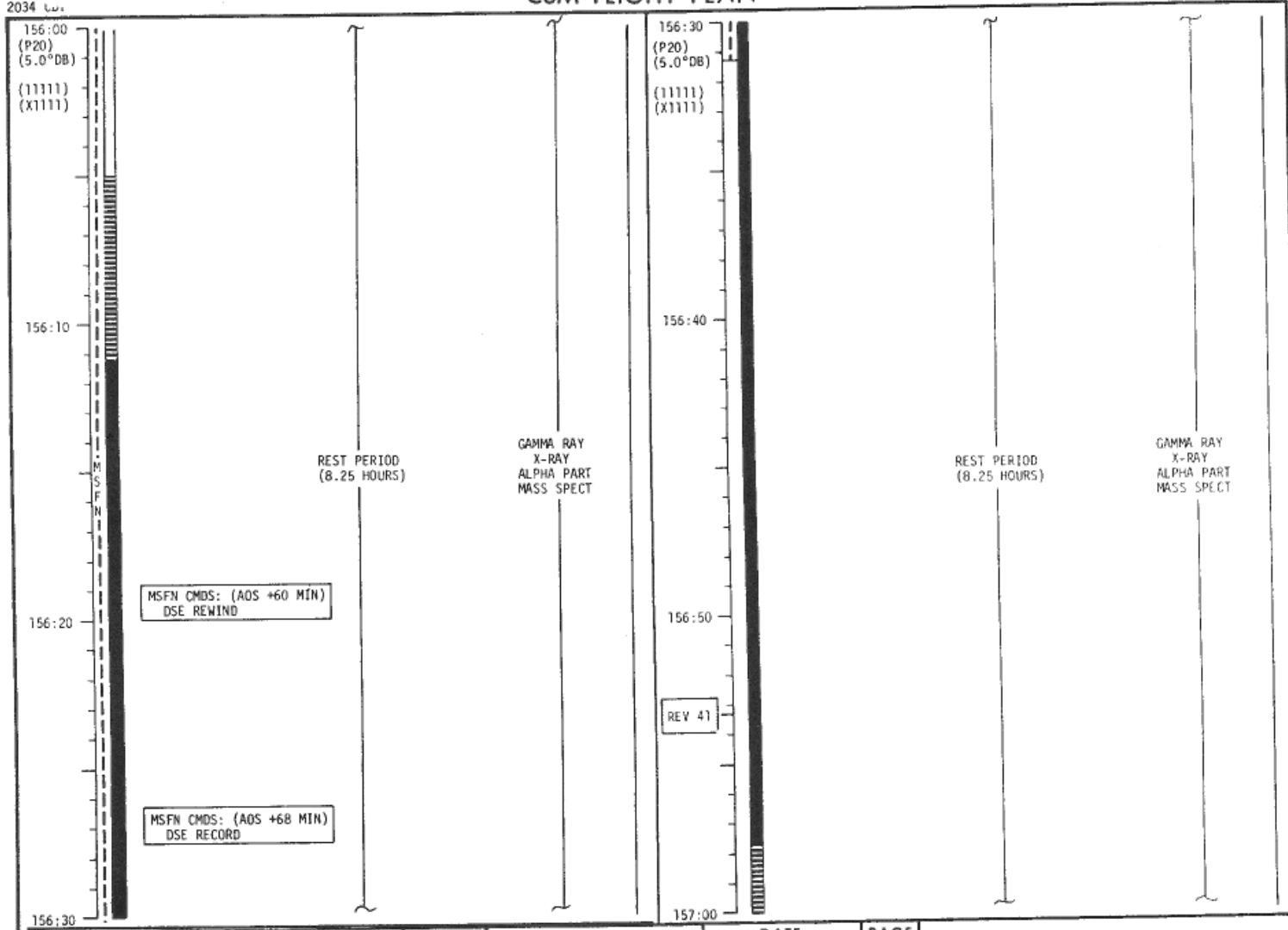
REST PERIOD
(7 HOURS)

CSM REV 41

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 PLAN' NG BRANCH

CSM FLIGHT PLAN



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

LM FLIGHT PLAN

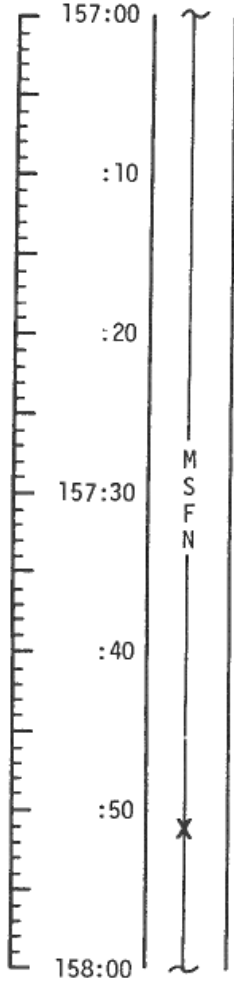
MCC-H

2134 CDT

CDR

LMP

NOTES



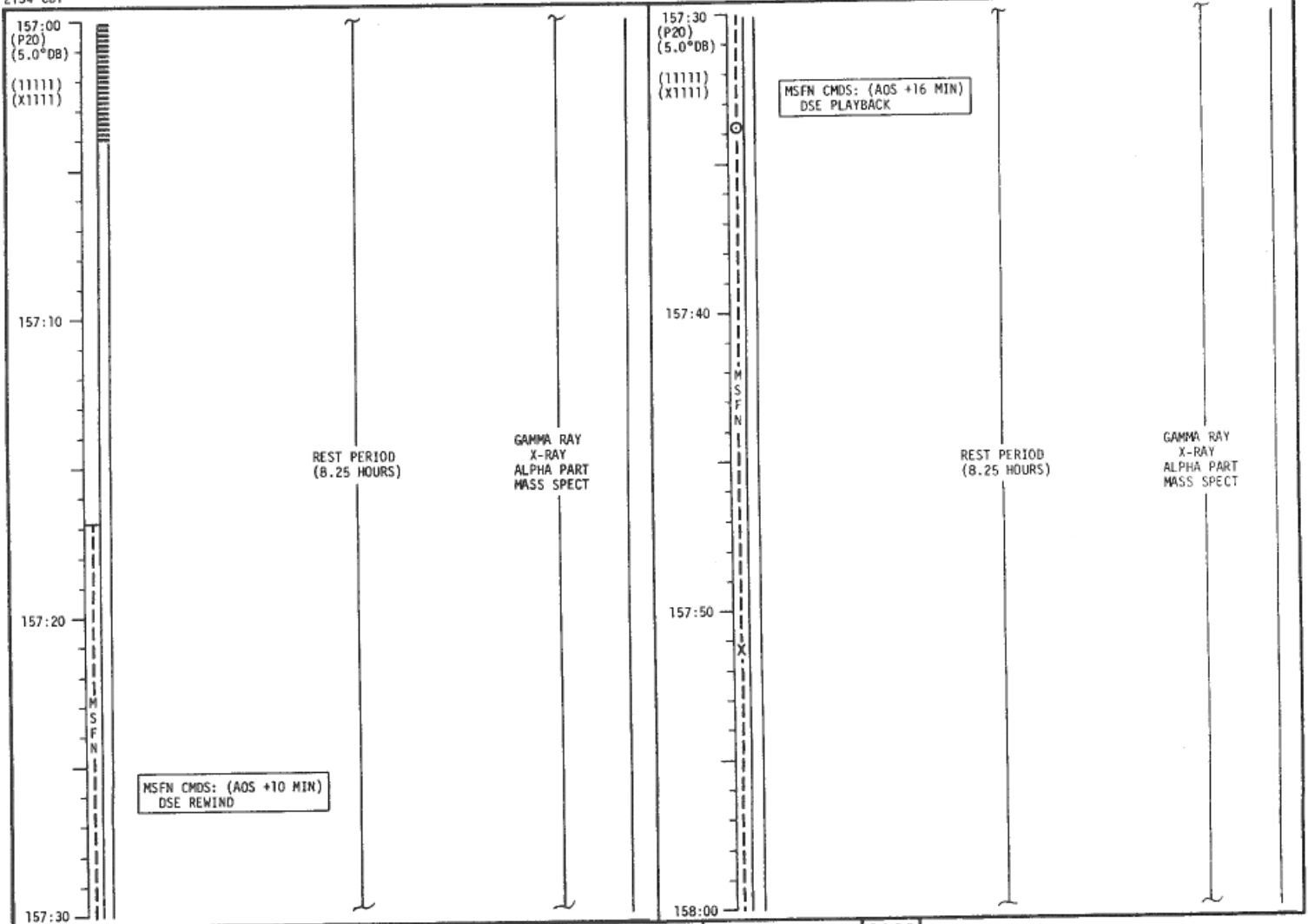
REST PERIOD
(7 HOURS)

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

2134 L.



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-235

LM FLIGHT PLAN

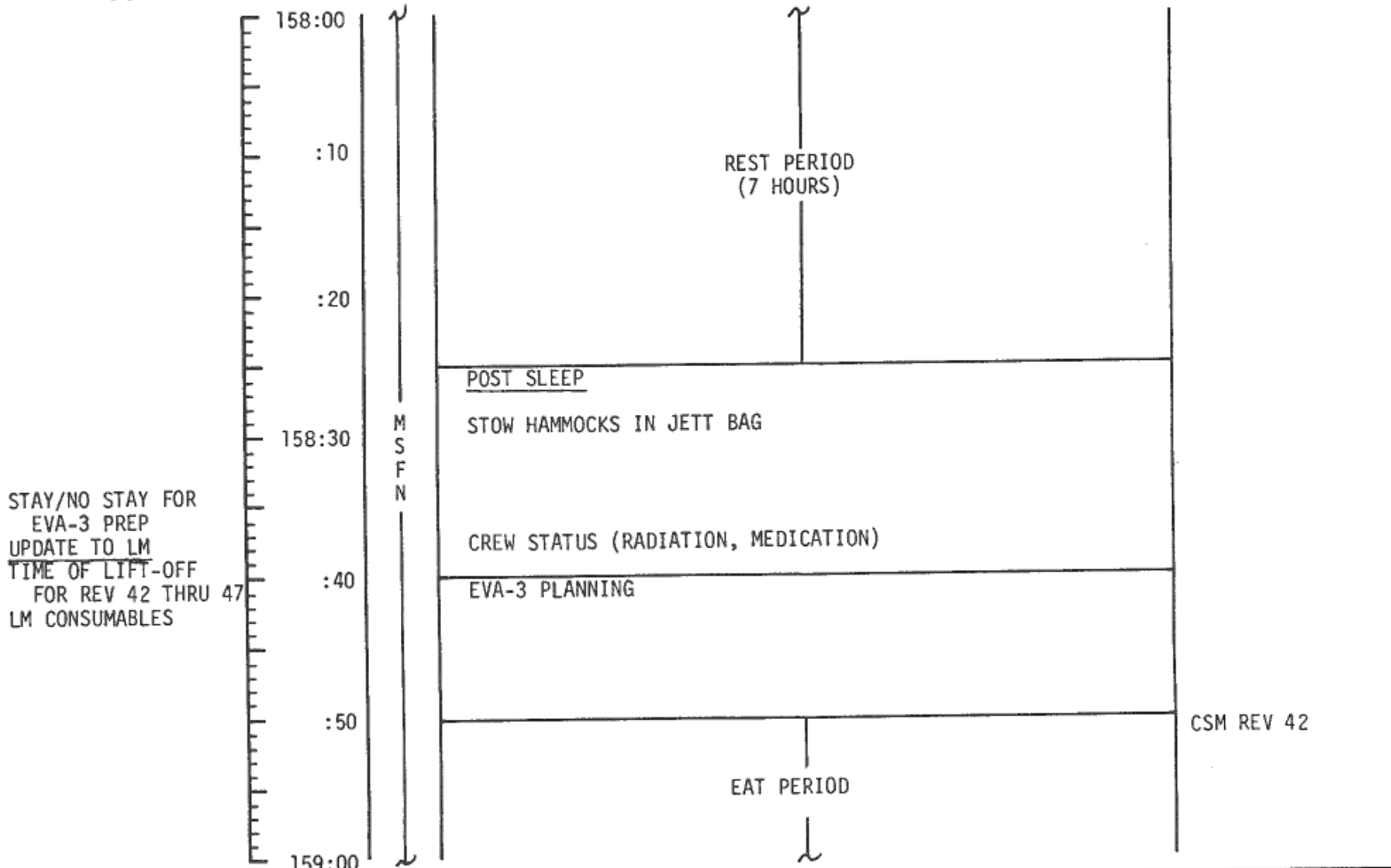
MCC-H

2234 CDT

CDR

LMP

NOTES

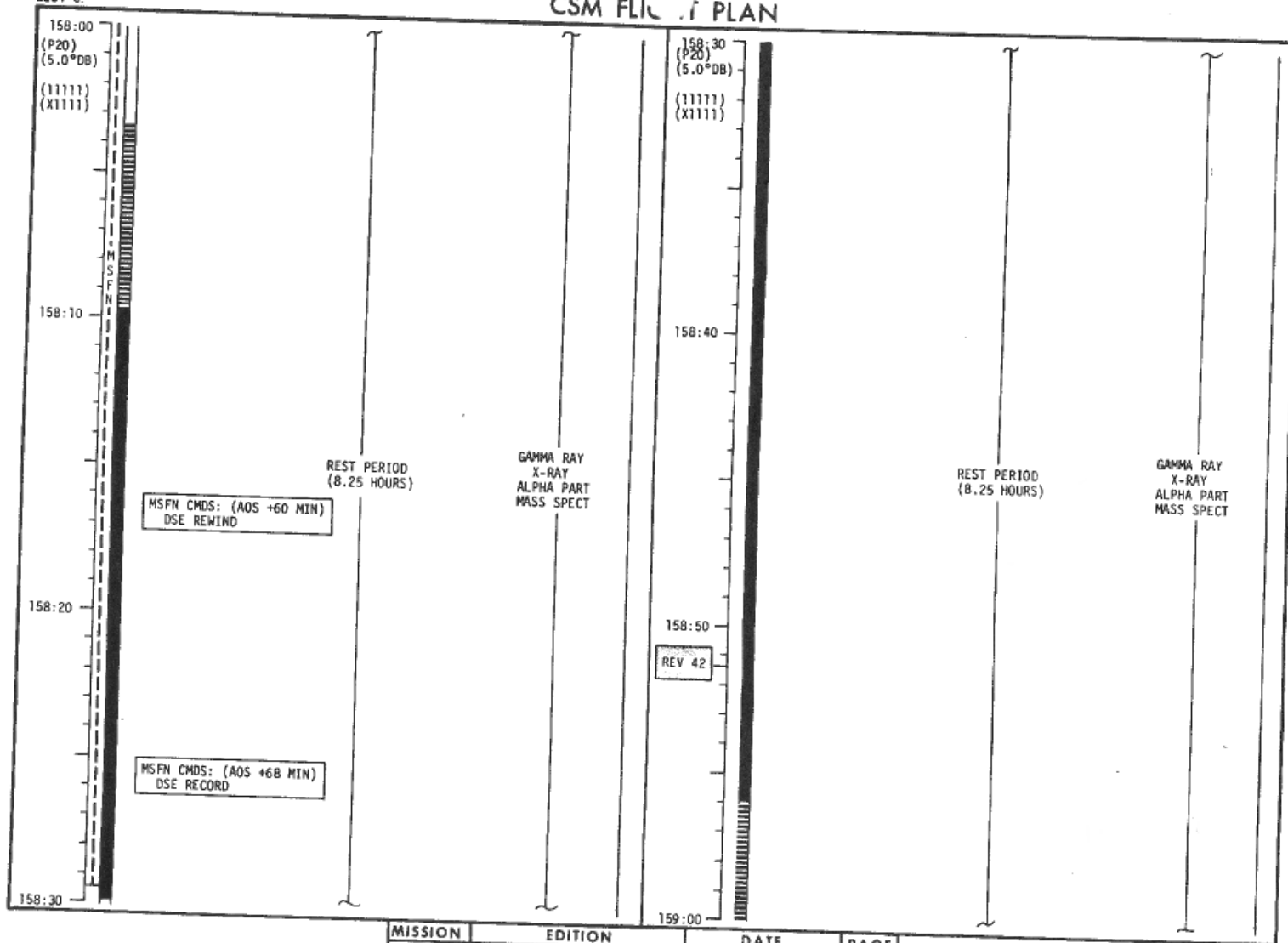


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	158:00 - 159:00	8/41-42	3-236

FLIGHT PLANNING BRANCH

2234

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-237

MCC-H

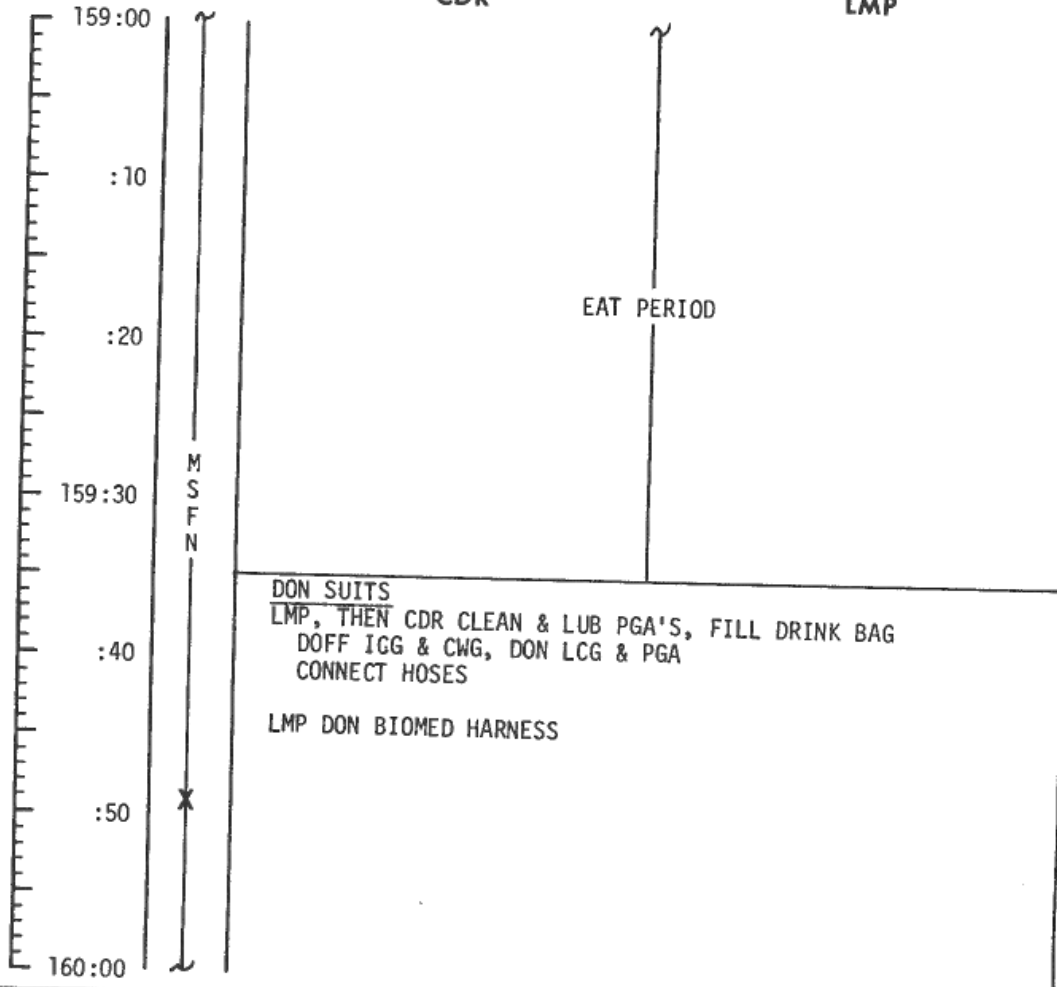
2334 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

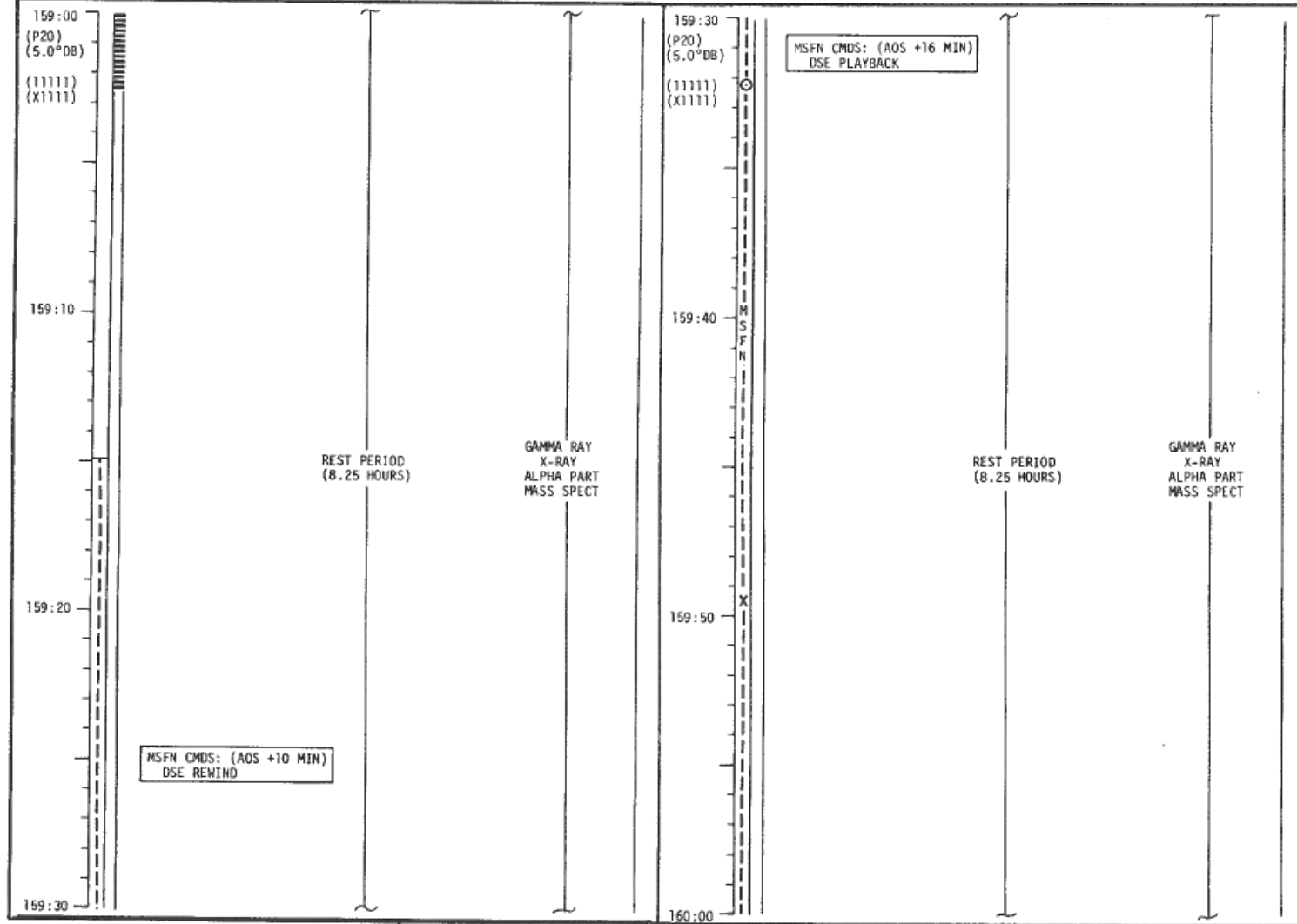


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	159:00 - 160:00	8/42	3-238

FLIGHT PLAN 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

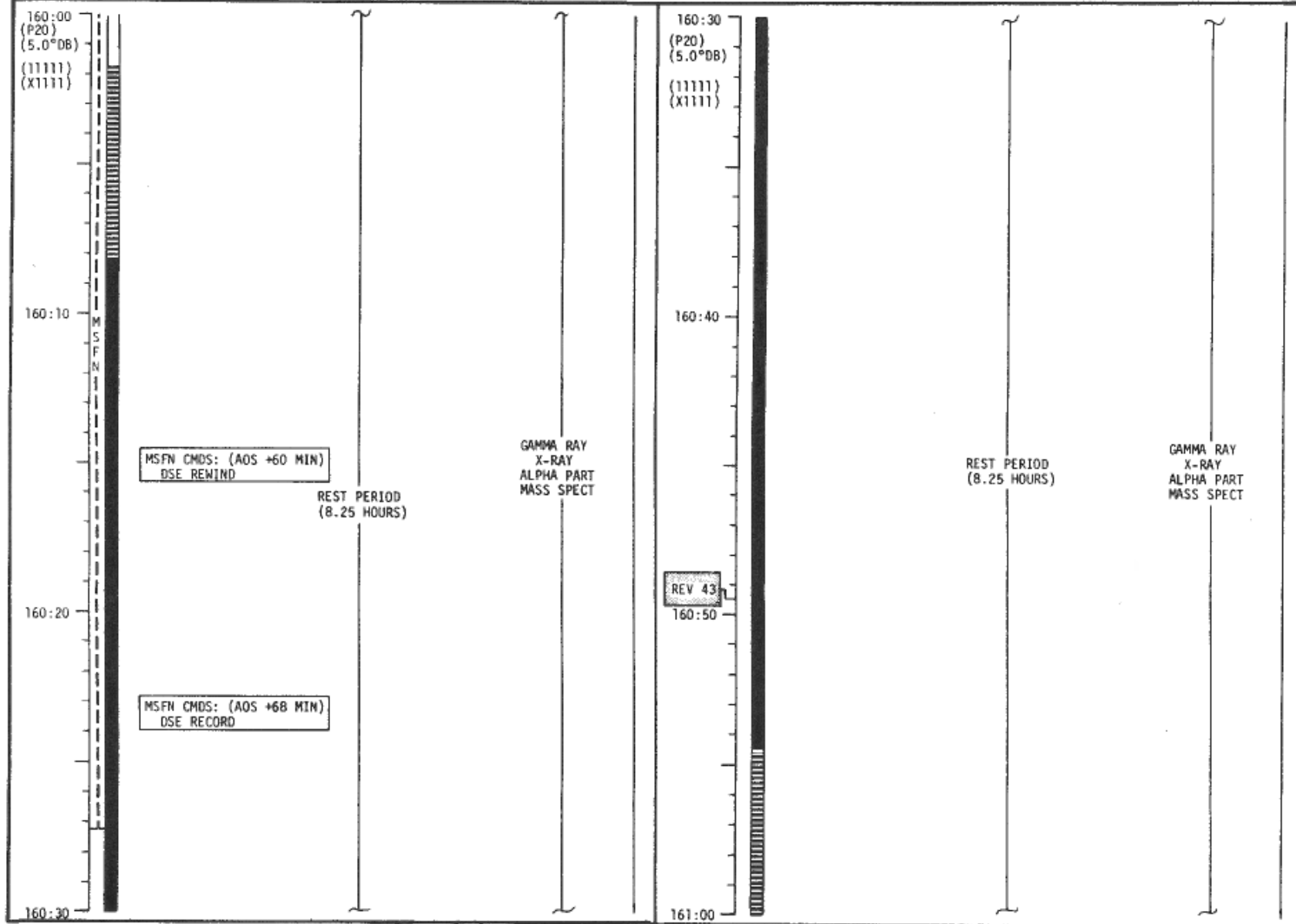
<p>160:00</p> <p style="text-align: center;">:10</p> <p style="text-align: center;">:20</p> <p style="text-align: center;">160:30</p> <p style="text-align: center;">:40</p> <p style="text-align: center;">:50</p> <p>161:00</p>	<p>↑</p> <p>M</p> <p>S</p> <p>F</p> <p>N</p> <p>↓</p>	<p>VERIFY COMM BIOMED - RIGHT</p> <p>BATS 1,2 & LUNAR BAT (CDR) - ON</p> <p>BATS 3,4 & LUNAR BAT (LMP) - OFF/RESET</p> <p>CHECK BUS VOLTS</p> <hr/> <p>EVA-3 PREP</p> <p>STOW ALL LOOSE ITEMS NOT REQD FOR EVA</p> <hr/> <p>UNSTOW EVA-3 PREP & POST CARD</p> <p>STOW LUNAR SURFACE CHECKLIST</p> <p>UNSTOW AND CHECK BOTH OPS</p> <p>PREPARE VISORS & HELMETS FOR EVA</p> <p>UNLOCK FORWARD HATCH HANDLE</p> <hr/> <p>PLSS DONNING</p> <p>CONFIGURE LMP PLSS</p> <p>ATTACH OPS TO PLSS</p> <p>LMP DON PLSS/OPS</p> <p>CONNECT RCU TO PGA AND PLSS</p> <p>UNSTOW LMP OPS O2 ACTUATOR AND CONNECT TO RCU</p> <p>CDR REPEAT PLSS DONNING</p>	<p>-1:30</p> <p>-1:20</p> <p>-1:10</p> <p>CSM REV 43</p> <p>-1:00</p> <p>- :50</p>
---	---	---	--

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 PLAN BRANCH

0034 CD1

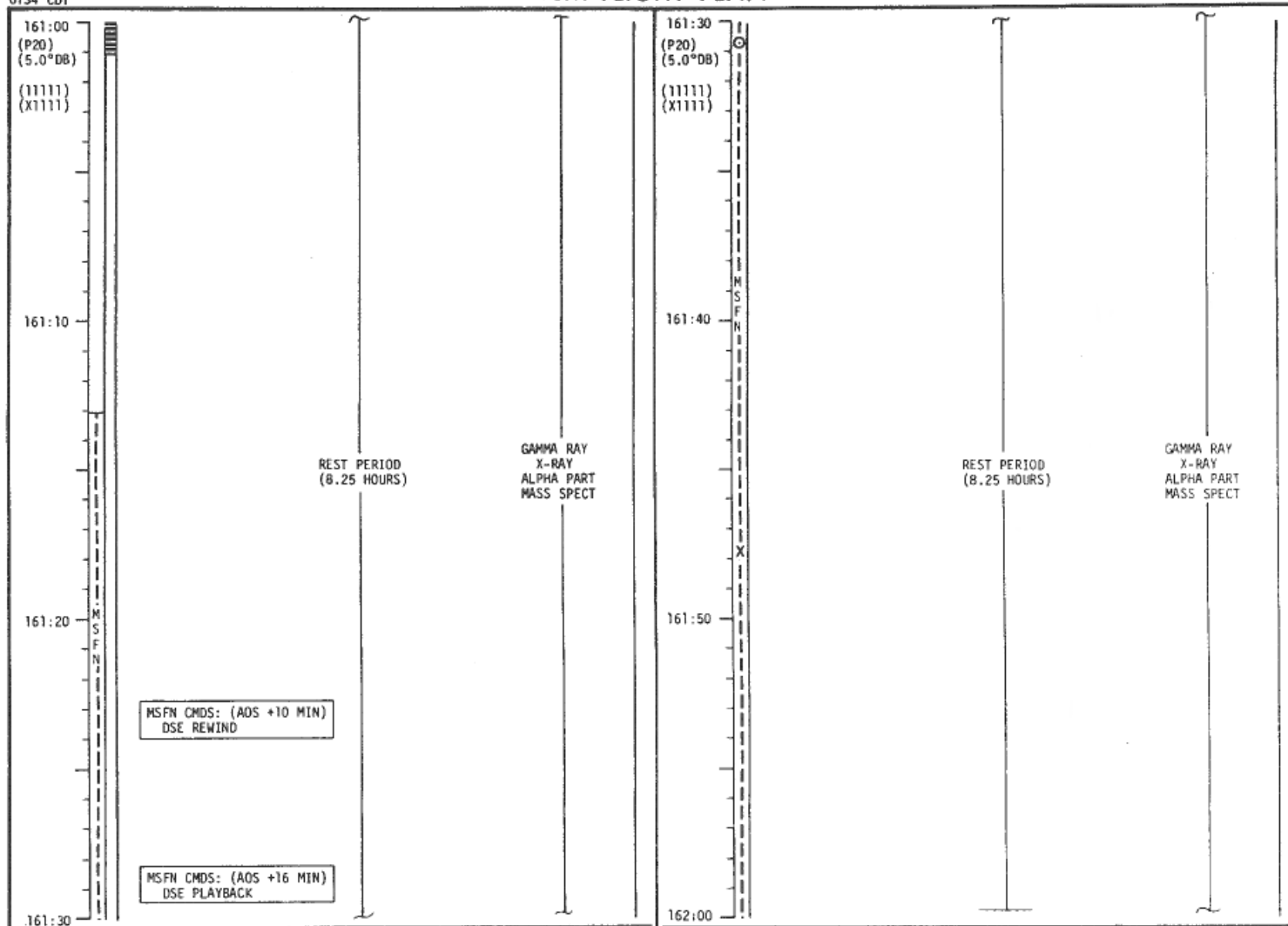
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-241

0134 CD1

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-243

LM FLIGHT PLAN

MCC-H

0234 CDT

CDR

LMP

NOTES

162:00	T	EGRESS	RELEASE CDR PLSS ANTENNA	0:10
:10	T	EQUIPMENT TRANSFER	EGRESS	0:20
:20	T	LCRU ACTIVATION RELEASE LMP PLSS ANTENNA EQUIPMENT PREP	EQUIPMENT PREP	0:30
:30	T	LRV NAV INITIALIZATION		0:40
162:30	M S F N	<u>DRIVE TO STATION #9</u>		0:40
:40		COMPARE SMOOTH MARE MATERIAL TO RILLE RIM MATERIAL		0:50
:50		SUPPLEMENTARY SAMPLE STOP (5 MIN) SOIL/ROCK SAMPLE PAN		0:50
163:00	T	<u>STATION #9</u>		1:00
	T	OBSERVE AND DESCRIBE RILLE AND FAR WALL		1:10

CSM REV 44

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

0234

CSM FLIGHT PLAN

162:00 (P20) (5.0°DB) (11111) (X1111)

CSM SYSTEMS CHECKLIST
 POST-SLEEP CHECKLIST PAGE 5/1-26

MSFN UPLINK: CSM S.V.

MSFN UPDATE:
 CONSUMABLES
 MAP CAMERA PHOTO PAD (162:55)
 FLIGHT PLAN

GAMMA RAY: GAINSTEP SHIELD OFF *ch@162:03:34*

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

REPORT: GYRO TORQUING ANGLES

P20, CMC MODE - AUTO
 GDC ALIGN
 VERIFY ORDEAL

MSFN CMDS: (AOS +60 MIN)
 DSE REWIND

GAMMA RAY: GAINSTEP SHIELD ON (CTR) *ch@162:05:13*

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 then OFF (CTR)
 GAMMA RAY BOOM - RETRACT tb-BP (~3:15)/GRAY then OFF (CTR)
 MASS SPECT: ION SOURCE - OFF, EXP - STBY
 CAUTION - WAIT 5 MIN BEFORE RETRACTING MASS SPECT BOOM

LASER ALTM - ON

MSFN CMDS: (AOS +68 MIN)
 DSE RECORD

MASS SPECT BOOM - RETRACT tb-BP (~2:30)/GRAY then OFF (CTR)
 VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)

MANUALLY ROLL CW 40°

162:30 (P20) (0.5°DB) (11111) (X1111)

P20 OPTION 5 (+X FWD SIM ATT) (162:47)
 V23N78 (+180.00)
 V22N79 (+000.50)
 (142,000/118,001)

GAMMA RAY
 X-RAY
 ALPHA PART
 MASS SPECT

P52(IMU REALIGN)

N71: _____

N05: _____

N93: _____

X _____

Y _____

Z _____

GET _____

162:40

162:50

163:00

REV 44

CSM CONSUMABLES UPDATE

GET: _____

RCS TOTAL _____

QUAD A _____ B _____

C _____ D _____

H₂ TANK 1 _____ 2 _____ 3 _____

O₂ TANK 1 _____ 2 _____ 3 _____

EAT PERIOD

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

GAMMA RAY*
 X-RAY
 ALPHA PART
 LASER ALTM

ch@162:04:41

MAP CAMERA PHOTO PAD

T-START: 162:59:30

T-STOP: 163:59:11

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

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-245

LM FLIGHT PLAN

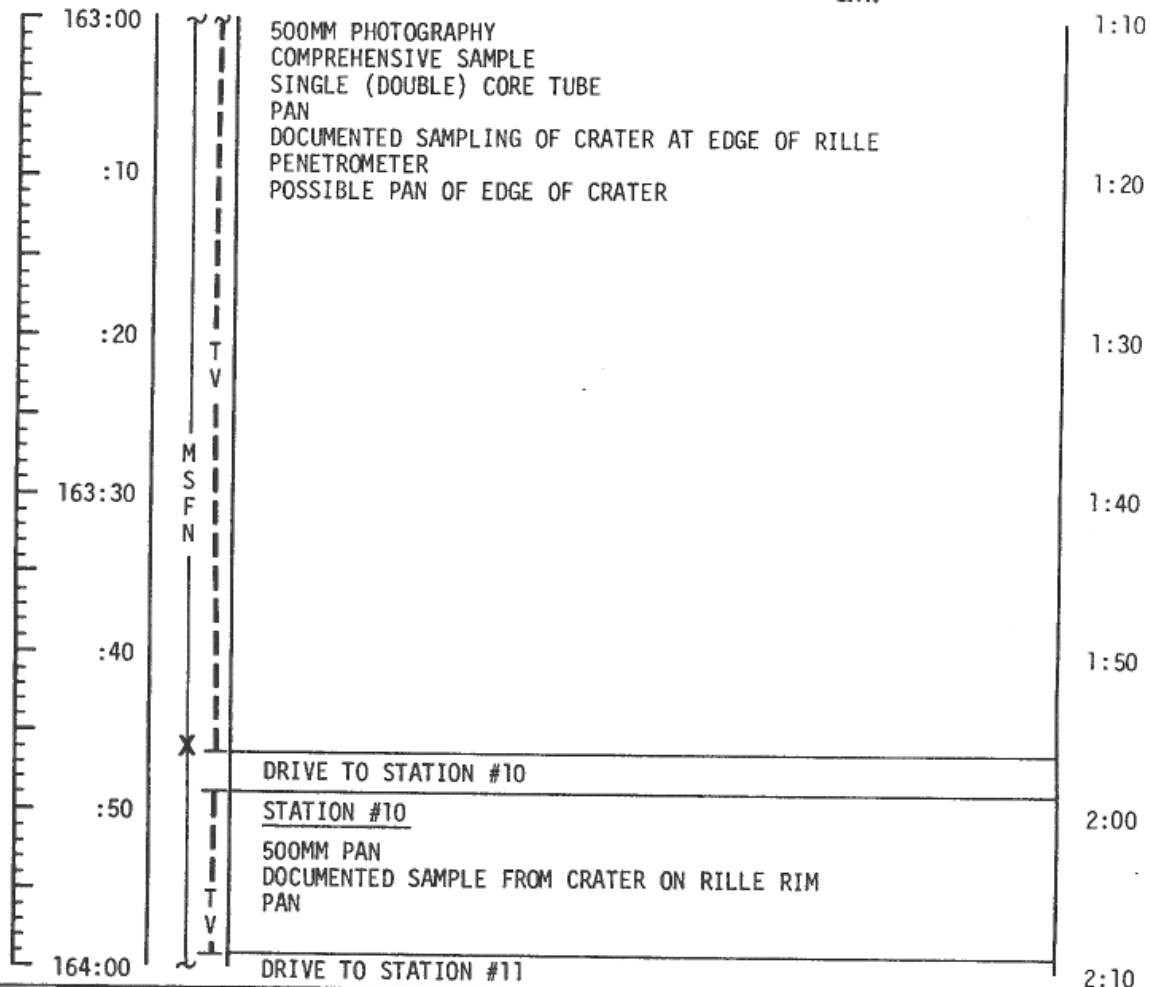
MCC-H

0334 CDT

CDR

LMP

NOTES

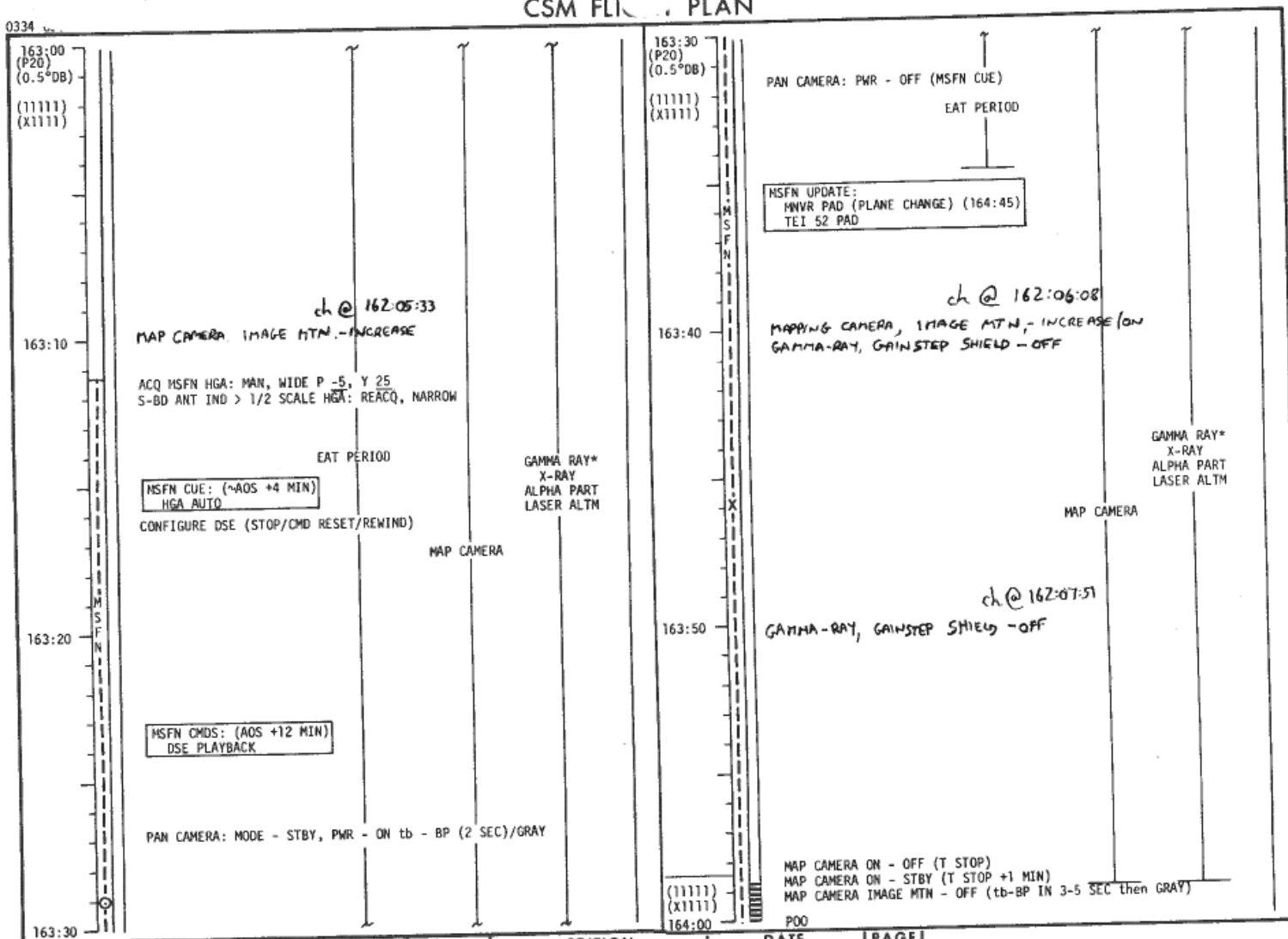


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	163:00 - 164:00	8/44	3-246

FLIGHT PLAN IG BRANCH

CSM FLIGHT PLAN

0334



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-247

MCC-H

0434 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

164:00 :05 :10 164:15 :20 :25 164:30	CONTINUE DESCRIPTION OF RILLE AND RILLE RIM MATERIAL PHOTOGRAPHY AS APPROPRIATE 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 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	2:10 2:20 2:30 2:40
--	--	--

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	164:00 - 164:30	8/44	3-248

FLIGHT PLAN NG BRANCH

0434 CDT

CSM FLIGHT PLAN

164:00
(11111)
(X1111)

GAMMA RAY EXP - OFF
X-RAY - OFF, a RAY/X DR - a 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 V49 MNVR TO P52 ATT (164:15)
 (180,214,045) HGA P -10, Y 206

M
S
F
N

MSFN CMDS: (AOS +61 MIN)
DSE REWIND

P52 (OPTION 3)
(LDG SITE ORIENT)

REPORT: GYRO TORQUING ANGLES

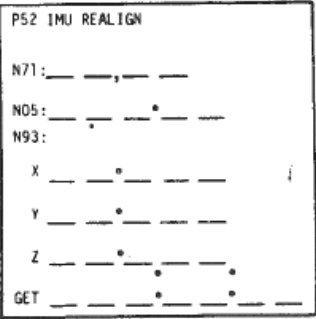
164:20 P52 (OPTION 1)
 (PLANE CHANGE ORIENT)

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

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

GDC ALIGN
VERIFY ORDEAL

164:30



MISSION	EDITION	DATE	PAGE
APOLLO 15	-FINAL (7/26)	6/21/71	3-249

LM FLIGHT PLAN

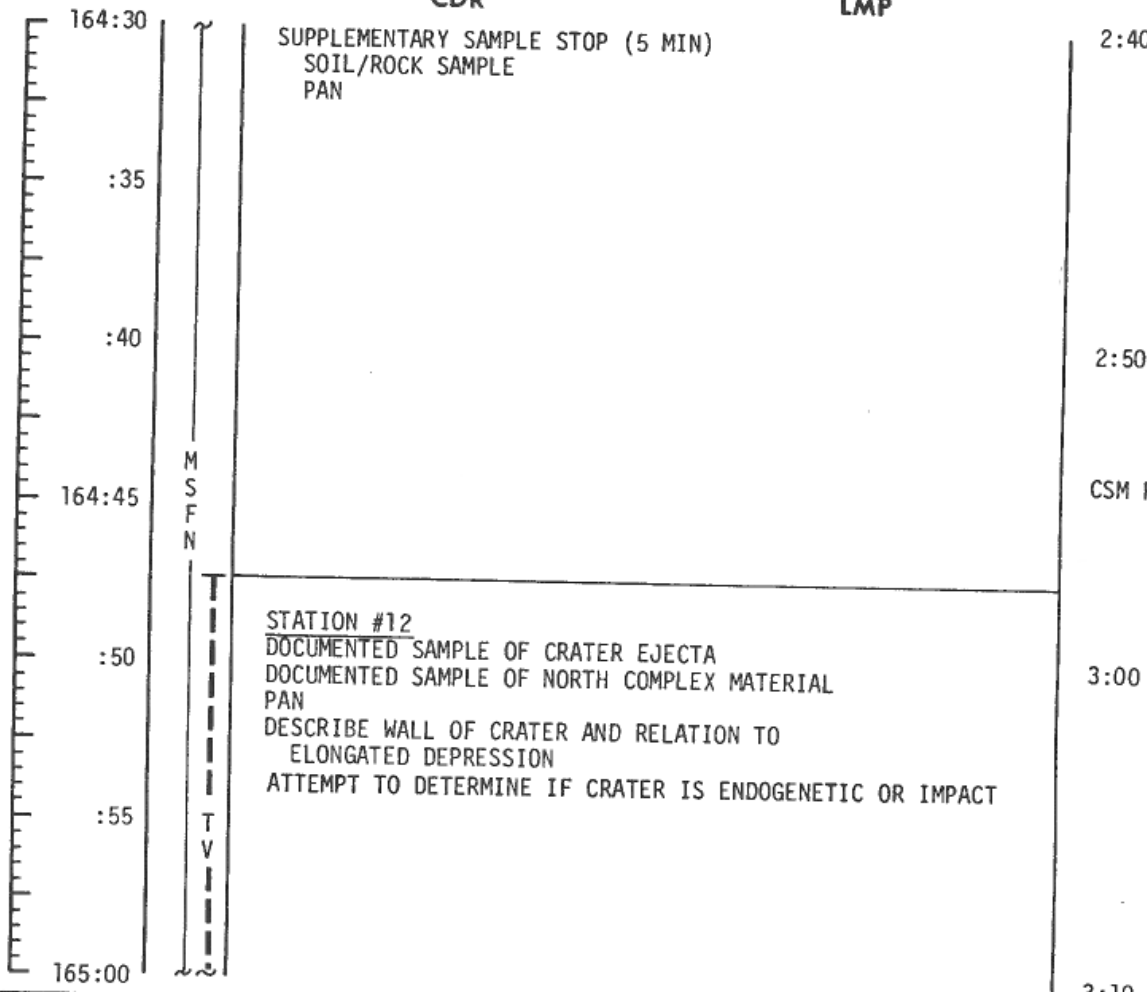
MCC-H

0504 CDT

CDR

LMP

NOTES



SUPPLEMENTARY SAMPLE STOP (5 MIN)
SOIL/ROCK SAMPLE
PAN

2:40

:35

2:50

:40

CSM REV 45

164:45

:50

3:00

:55

3:10

165:00

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

0504 Cb1

CSM FLIGHT PLAN

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°08)

165:00

P40 (TRIM)

P30 MANEUVER

DENEUB VEGA		C	S	M	P	C	I	PURPOSE	
SET STARS		S	P	S	G	&	N	PROP/GUID	
		+	3	7	2	0	2	WT	N47
R ALIGN	1 8 9	0	0	0	3	3		P TRIM	N48
P ALIGN	2 5 6	0	0	1	0	7		Y TRIM	
Y ALIGN	3 3 0	+	0	0	1	6	5	HRS	GETI
		+	0	0	0	1	1	MIN	N33
		+	0	3	1	9	6	SEC	
ULLAGE	B+D	-	0	0	0	9	2	ΔV _X	N81
	17 SECONDS	+	0	3	3	0	3	ΔV _Y	
		+	0	0	1	8	4	ΔV _Z	
		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	H _A	N44
		+	0	0	5	3	3	H _P	
		+	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			NA	BSS	
		X	X				NA	SPA	
		X	X	X			NA	SXP	

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-251

LM FLIGHT PLAN

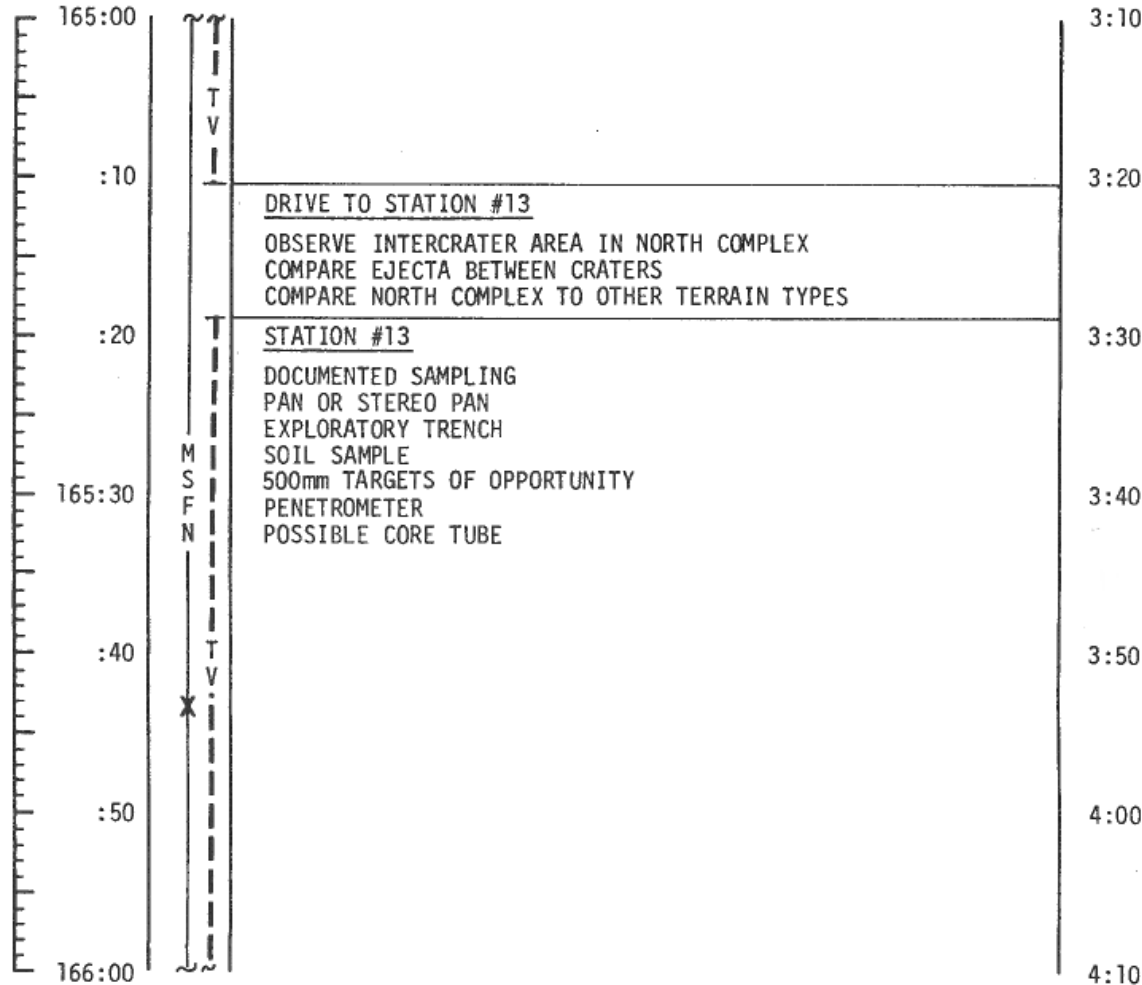
MCC-H

0534 CDT

CDR

LMP

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	165:00 - 166:00	8/45	3-252

FLIGHT PLANING BRANCH

MCC-H

0634 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

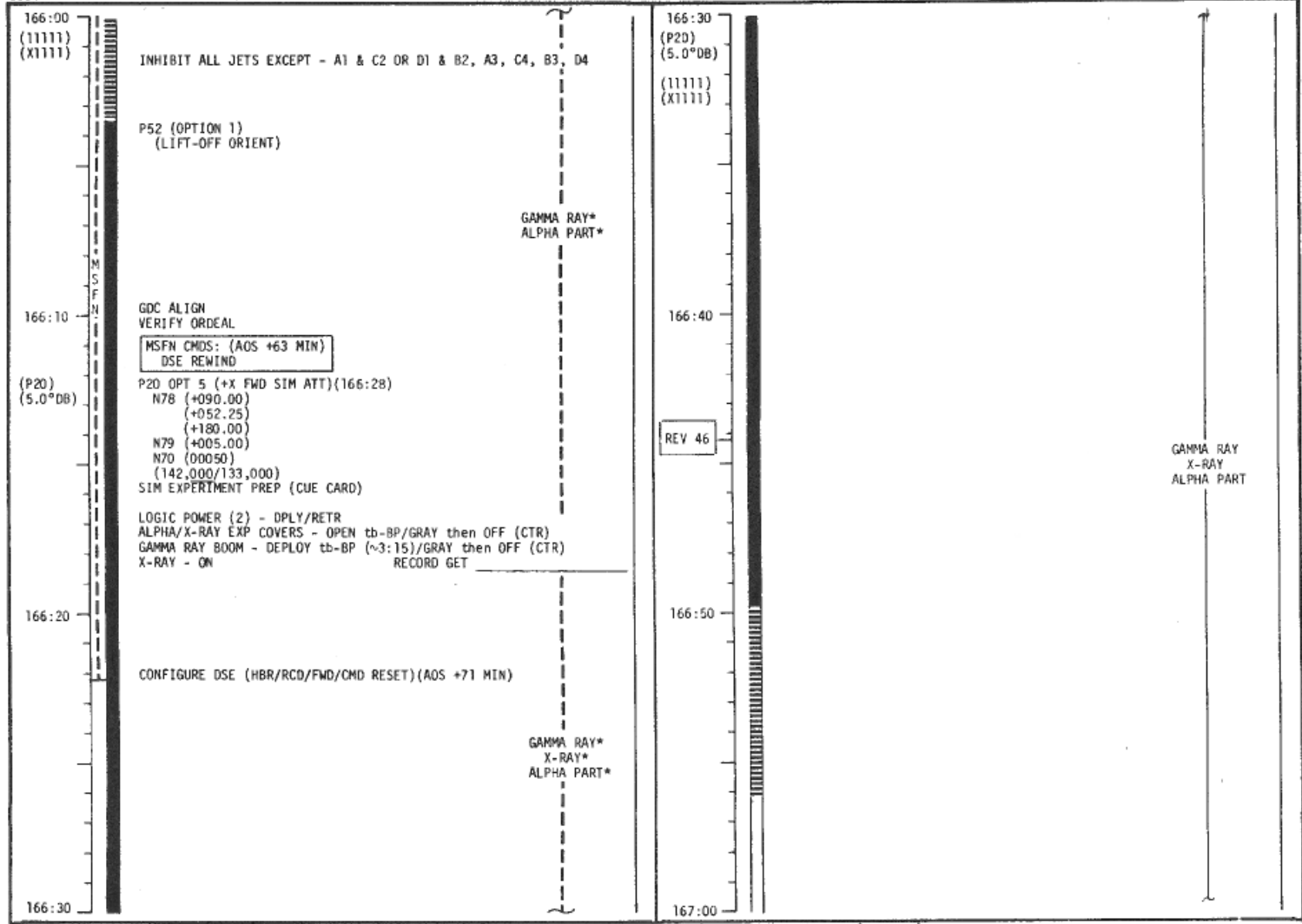
166:00	T V		4:10
:10			4:20
:20		<p><u>DRIVE TO STATION #14</u></p> <p>OBSERVE AND DESCRIBE DIFFERENCES IN MATERIAL AND SURFACE TEXTURES BETWEEN NORTH COMPLEX AND MARE</p> <p>NOTE AMOUNT OF SECONDARY CRATERING PHOTOGRAPHY AS APPROPRIATE</p>	4:30
166:30	M S F N		4:40
:40	T V	<p><u>STATION #14</u></p> <p>COMPARE BLOCKS AND MARE MATERIAL WITH NORTH COMPLEX DOCUMENTED SAMPLE OF MARE MATERIAL (POSSIBLE FILLET/ROCK, EQUIDIMENSIONAL ROCK AND RADIAL SAMPLES)</p> <p>PAN</p> <p>EXPLORATORY TRENCH IN RAY MATERIAL</p>	4:50 CSM REV 46
:50			5:00
167:00		<p><u>DRIVE TO LM</u></p> <p>DESCRIBE DIFFERENCES BETWEEN THIS AREA AND OTHER MARE AREAS</p> <p>NOTE DISTRIBUTION OF POSSIBLE SECONDARIES</p>	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 PLAN NG BRANCH

0634

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-255

MCC-H

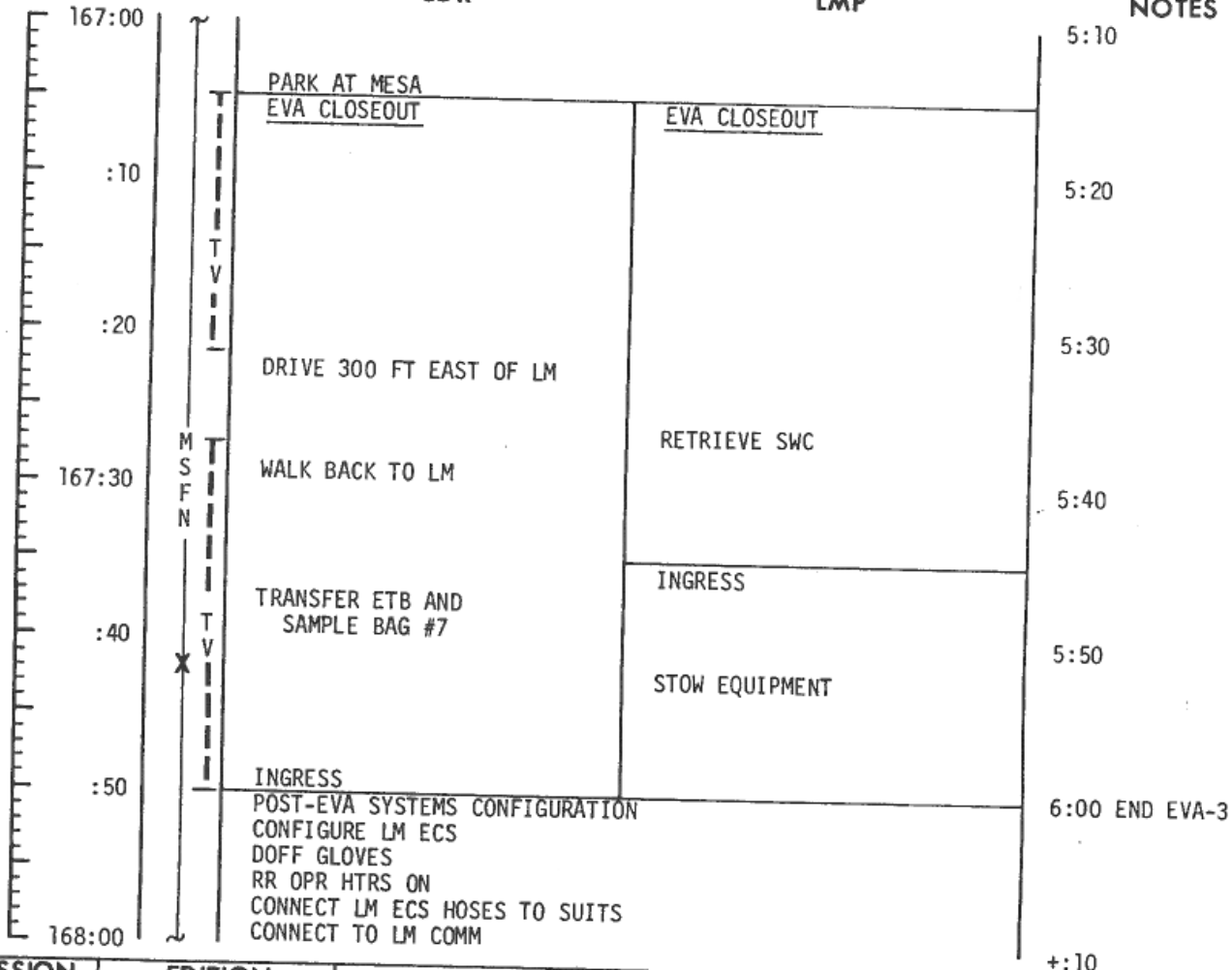
0734 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES

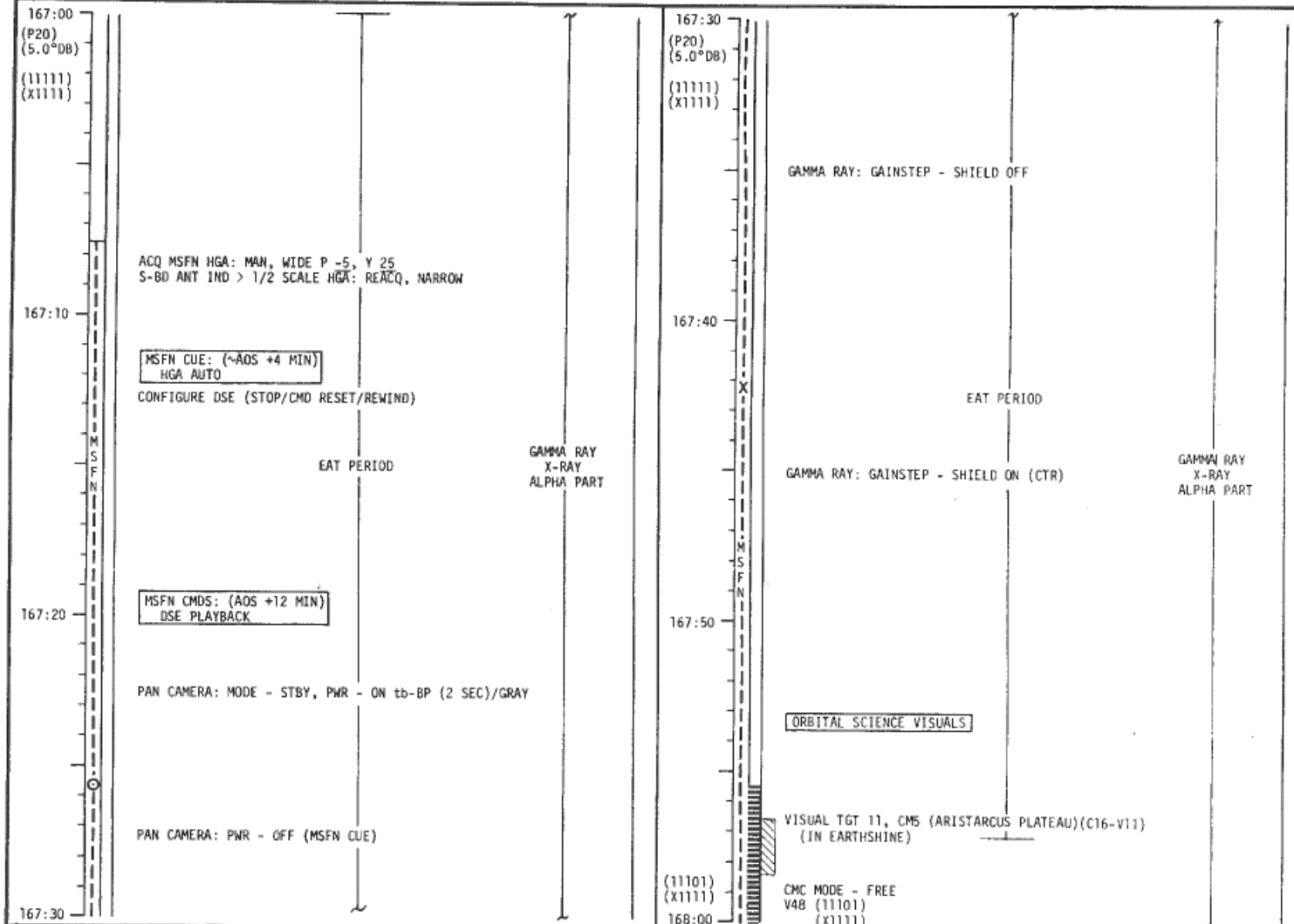


MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	167:00 - 168:00	8/46	3-256

FLIGHT PLAN BRANCH

0734 CUI

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

GO/NO GO FOR
DEPRESS

UPDATE TO LM
P57 LIFT-OFF TIME
P22 ACQ TIME
UPLINK TO LM
CSM S.V. (L/O)
ZERO POS/NEG CELLS
RLS

168:00							
						PLSS/OPS DOFFING DISCONNECT OPS ACTUATORS & RCU'S	+:10
						DISCONNECT AND DOFF PLSS/OPS (LMP FIRST)	
					:10	CDR, THEN LMP, DISASSEMBLE PLSS/OPS CHECKOUT AND STOW OPS	+:20
						VERIFY POWER DOWN CB CONFIGURATION	
						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
						PRESSURE INTEGRITY CHECK	+:40
						CABIN DEPRESS FOR JETTISON OPEN FORWARD HATCH JETTISON JET BAG AND PLSS'S CLOSE HATCH REPRESSURIZE CABIN DOFF HELMET & GLOVES	+:50 CSM REV 47
					:40	PGNS TURN ON & SELF TEST E-MEMORY DUMP	
					(12102)	BATS 3&4 - ON LUNAR BAT (CDR) - OFF/RESET	
						P57 LUNAR SURFACE ALIGN OPTION 4 LANDING SITE A/T 3 - GRAVITY AND CELESTIAL BODY (LIFT-OFF ORIENTATION)	+1:00
						POST-EVA CABIN CLEANUP	
					:50		
							+1:10
					169:00		

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

0834 CD1

<p>168:00 (11101) (X1111)</p>	<p>POO; V49 MNVR TO ANTISOLAR POINT (168:15) (180,252,041) HGA P -66, Y 156 CMC MODE - AUTO</p> <p>CONFIGURE CAMERA: (GEGENSCHIN) INSTALL CAMERA SHIELD CM4/NK/55/VHBW-BRKT, (f1.2,1/500,=) (12 FR) MAG () _____, FR # _____</p> <p>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)</p> <p>LOGIC POWER (2) - OFF S-BD AUX TV - OFF PCM BIT RATE - LOW</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;">MSFN CMDS: (AOS +63 MIN) DSE REWIND</div> <p>ENABLE ALL JETS EXCEPT - A3,C4,B3,D4</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;">GEGENSCHIN PHOTOS</div> <p>CONFIGURE DSE (LBR/RCD/FMD/CMD RESET)(AOS +71 MIN) DIM INTERIOR LIGHTS</p> <p>CYCLE 1 FRAME, CHANGE SHUTTER TO T 1 FRAME, EXP TIME 1 MIN 1 FRAME, EXP TIME 3 MIN</p> <p>CHANGE SHUTTER TO 1/500 CYCLE 1 FRAME, LIGHTS UP V49 MNVR TO MIDWAY PT (168:30) (180,257,032)</p>	<p>168:30 (11101) (X1111)</p>	<p>DIM INTERIOR LIGHTS</p> <p>CYCLE 1 FRAME, CHANGE SHUTTER TO T 1 FRAME, EXP TIME 1 MIN 1 FRAME, EXP TIME 3 MIN</p> <p>CHANGE SHUTTER TO 1/500 CYCLE 1 FRAME, LIGHTS UP V49 MNVR TO MOULTON PT (168:38) (180,261,021)</p> <p>DIM INTERIOR LIGHTS</p> <p>CYCLE 1 FRAME 1 FRAME, EXP TIME 1 MIN 1 FRAME, EXP TIME 3 MIN</p> <p>CHANGE SHUTTER TO 1/500 CYCLE 1 FRAME, LIGHTS UP</p> <p>cb SCS CONTR DIR 1 MNB - CLOSE cb SCS CONTR DIR 2 MNA - CLOSE ENABLE ALL JETS</p> <p>RNDZ XPNDR ACTIVATION AND SELF TEST (DECAL)</p> <p>RNDZ XPNDR - HTR</p> <p>CONFIGURE CAMERA: (LDMK TRK) CM/DAC/SXT(EXP PAD) 1 fps (3.8% MAG) MAG (E) _____, MAG % _____ UTILITY POWER - ON</p>
<p>168:10</p>	<p>168:10</p>	<p>168:40</p>	<p>168:40</p>
<p>168:20</p>	<p>168:20</p>	<p>168:50</p>	<p>168:50</p>
<p>168:30</p>	<p>168:30</p>	<p>169:00</p>	<p>169:00</p>

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)

:05

:10

169:15

:20

:25

169:30

M
S
F
N

SECURE OPS'S ON FLOOR

STOW EQUIPMENT FOR RETURN

PACK ISA

ATTACH BSLSS/ROCK BAG TO +Z27

STOW COLLECTION BAGS

INSTALL ISA IN AFT CABIN

SECURE LEVA BAGS ON ENG COVER

STOW EVA ONBOARD DATA IN FLIGHT DATA FILE

+1:10

+1:20

+1:30

+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

0934 L

<p>169:00 (11101) (X1111)</p>	<p>L10H CANISTER CHANGE (13 INTO A, STOW 11 IN A9)</p>	<p>↑</p>	
	<p>ACQ MSFN HGA P -68, Y 114</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> <p>MSFN CMDS: DSE DUMP</p> </div>		
<p>169:10</p>	<div style="border: 1px solid black; padding: 2px; width: fit-content;"> <p>MSFN UPDATE: P24 LDMK TRACK (169:50)</p> </div>		
<p>(P20) (0.5°DB)</p>	<p>P20 OPT 5 (LDMK TRK ATT)(169:32)</p> <p>N78 (+000.00) (-068.00) (+000.00)</p> <p>N79 (+000.50)</p> <p>N70 (00050) (000,338/272,000) OMNI <u>D</u></p>	<p>↑</p> <p>GAMMA RAY* ALPHA PART*</p> <p>↑</p>	
<p>169:20</p>	<p>CONFIGURE FOR VHF COMM CHECK WITH LM</p> <p>VHF AM B - DUPLX (VERIFY) VHF AM A - SIMPLEX</p> <p>VHF AM - T/R (PANEL 9) VHF B - OFF</p> <p>MODE - VOX change @ 120:34:56</p> <p>RNDZ XPDR - PWR</p>		
<p>169:30</p>			

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-261

MCC-H

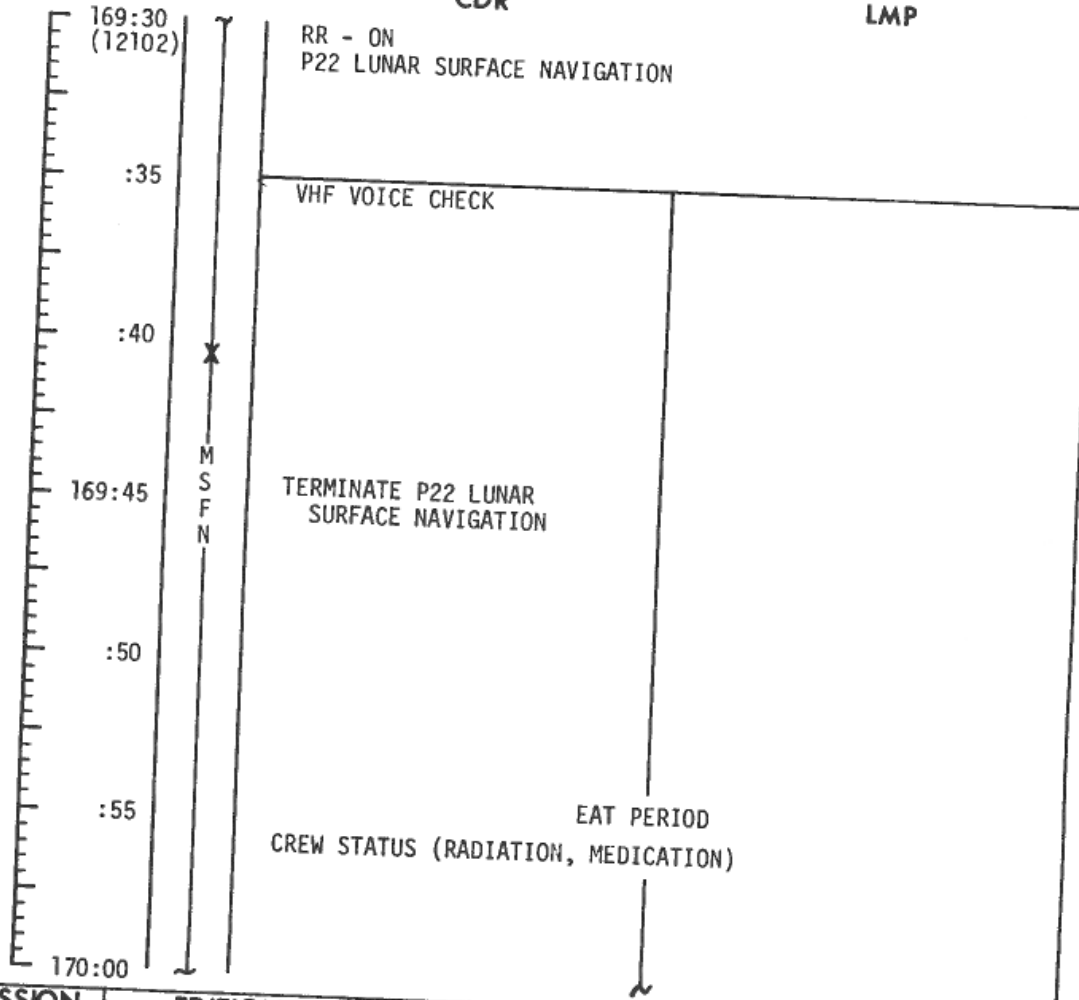
1004 CDT

LM FLIGHT PLAN

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 PLANNING BRANCH

LM FLIGHT PLAN

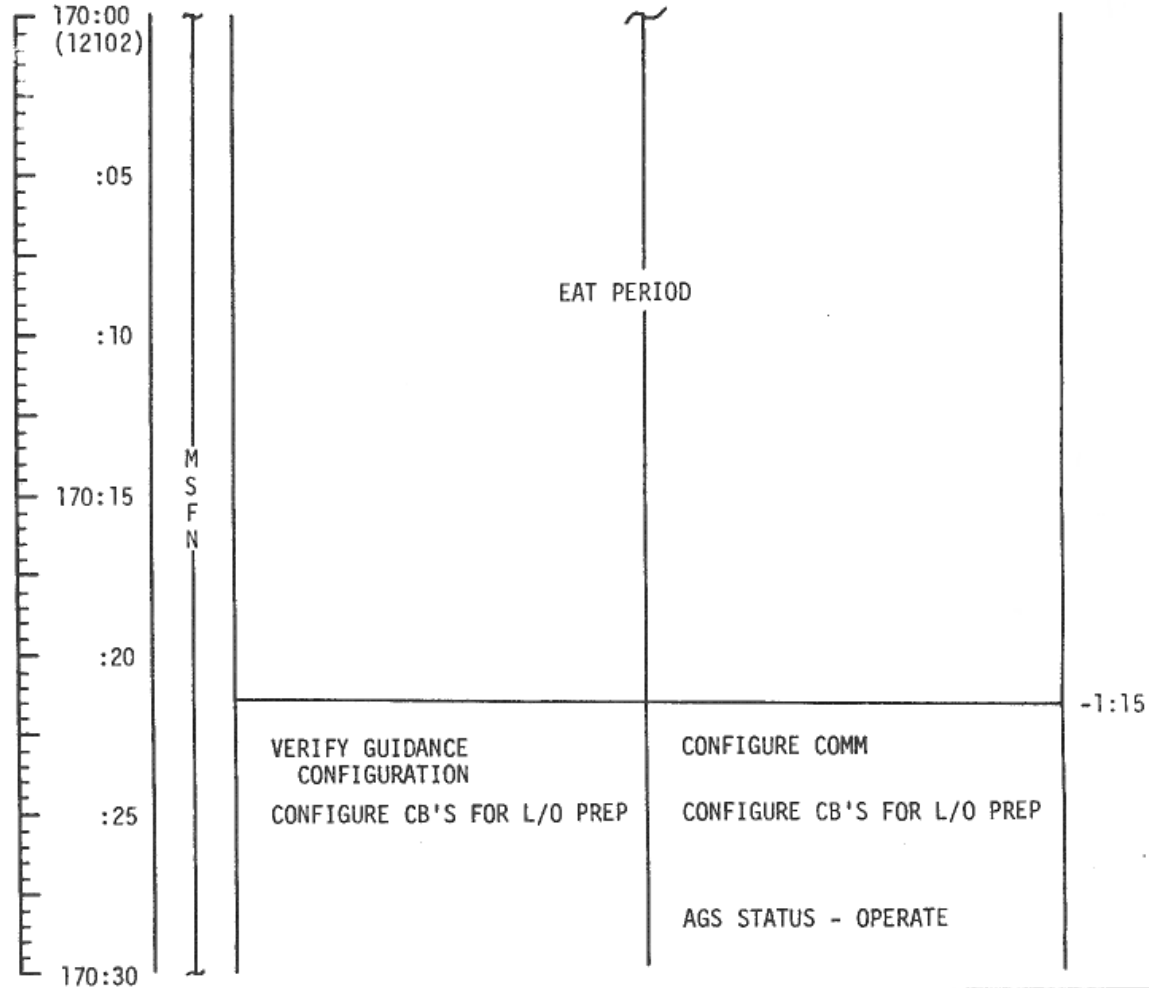
MCC-H

1034 CDT

CDR

LMP

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	170:00 - 170:30	8/47	3-264

FLIGHT PLAN NG BRANCH

CSM FLIGHT PLAN

1034 CDT

170:00
(11112)
(X1111)

H₂ PURGE LINE HEATERS - ON
P52 (OPTION 3)
(LIFT-OFF ORIENT)
REPORT: GYRO TORQUING ANGLES

P52 (COAS CALIB)
USE STAR NO. 41

170:10

POO
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)

H₂ AND O₂ 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				

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-265

LM FLIGHT PLAN

MCC-H

1104 CDT

CDR

LMP

NOTES

170:30 (12102)		CONFIGURE RR		
:35		V63 RR SELF TEST (IF REQ)	ALIGN AGS TO PGNS AGS GYRO CALIBRATION	-1:00
:40			LOAD AGS ASCENT TARGETING	CSM REV 48
170:45	M S F N	RATE GYRO TEST	LGC CLOCK SYNC AGS CLOCK INITIALIZATION	
:50		RCS CHECKOUT		
:55		P57 LUNAR SURFACE ALIGN OPTION 4 LANDING SITE A/T 3 - GRAVITY AND CELESTIAL BODY (LIFT-OFF ORIENTATION)		-0:45
171:00				

UPDATE TO LM
AGS K-FACTOR

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

CSM FLIGHT PLAN

1104 C...

170:30
(11112)
(X1111)

170:40
REV 48

170:50

171:00

DON PGA WITHOUT HELMET AND GLOVES

UNSTOW JETTISON BAG (R13)

PACK JETTISON ITEMS (4 L10H CANISTERS FROM A9)

INSTALL CABIN FAN LUMAR DUST FILTER (PGA BAG)

INSTALL SPRINGS AND CLIPS ON A8, A6, A3, AND PNL 350

INSTALL TEMP STOWAGE BAGS ON LH AND RH SIDES OF LEB

REMOVE B5 AND B6 POUCHES

REMOVE COVERALLS, CMG AND INSTALL T-ADAPTERS

UNSTOW AND ASSEMBLE:

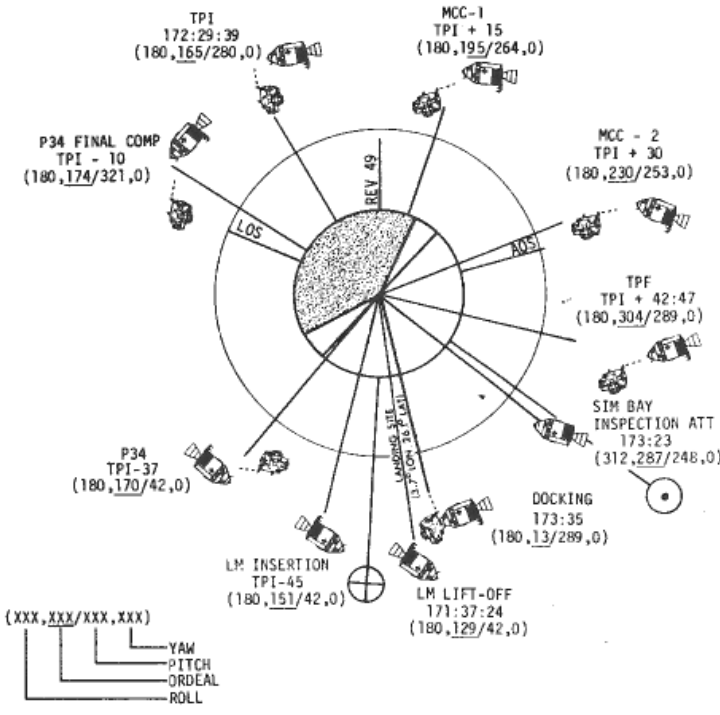
VACUUM CLEANER, PWR CABLE, HOSE AND BAG (SIDE A12, SIDE A8)

REMOVE DECONTAMINATION BAGS (A8, U1)

H₂ PURGE LINE HEATERS - OFF

EAT PERIOD

GAMMA RAY*
ALPHA PART*



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-267

LM FLIGHT PLAN

MCC-H

1134 CDT

CDR

LMP

NOTES

UPLINK TO LM
CSM S.V. (L/O)
(IF REQD)
RLS (IF REQD)
LGC GYRO COMP

171:00
(12102)
:05
:10
171:15
:20
:25
171:30

M
S
F
N

POSITION RR ANT LOAD DAP, LM WT P12 POWERED ASCENT	ALIGN AGS TO PGNS BATS 5&6 - ON, 1&3-OFF/RESET SET CAMERA: LM3/DAC
PRELAUNCH SWITCH CHECKS DON HELMET & GLOVES	AGS LUNAR ALIGN PRELAUNCH SWITCH CHECKS DON HELMET & GLOVES
VERIFY CB STATUS APS PRESSURIZATION	V47 SET AGS BIAS LIFT-OFF COMM, RECORDER - ON BAT 2,4 - OFF/RESET DES BATS - DEADFACE

-0:30

-0:15

GUIDANCE RECOMMEN-
DATION FOR ASCENT

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

1134 L.

CSM FLIGHT PLAN

<p>171:00 (11112) (X1111)</p> <p>171:10 M S F N</p> <p>(11102) (X1111)</p> <p>171:20</p> <p>171:30</p>	<p>AUTO RCS SEL (16) - MNA/MNB</p> <p>ACQ MSFN HGA P -46, Y 164</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;"> <p>MSFN CMDS: DSE DUMP</p> </div> <p>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</p> <p>CYCLE CMC MODE - FREE/AUTO V48 (11102) (X1111) LOAD CSM AND LM WT V49 MNVR TO P20 ATT (171:20) (180,42,0) OMNI <u>D</u></p> <p>GDC ALIGN VERIFY ORDEAL</p> <p>SYSTEMS TEST - XPNDR/C</p> <p>GAMMA RAY EXP - OFF X-RAY - OFF o RAY/X DR - o OFF MASS SPECT EXP - OFF MAP CAMERA ON - STBY (VERIFY) MAP CAMERA IMAGE MTN - OFF (VERIFY) PAN CAMERA PWR - BOOST</p> <p>LOAD N37</p>	<p>GAMMA RAY* ALPHA PART*</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">DIRECT ASCENT RNDZ PAD</th> <th colspan="5">UPDATE (IF REQ'D)</th> </tr> </thead> <tbody> <tr> <td>GETI</td> <td>HRS</td> <td>+</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LIFT-OFF</td> <td>MIN</td> <td>+</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>SEC</td> <td>+</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GETI</td> <td>HRS</td> <td>+</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TPI</td> <td>MIN</td> <td>+</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>N37</td> <td>SEC</td> <td>+</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>CSM WT</td> <td>+</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LM WT</td> <td>+</td> <td>0</td> <td>5</td> <td>9</td> <td>0</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">COELLIPTIC RNDZ PAD</th> <th colspan="5">UPDATE (IF REQ'D)</th> </tr> </thead> <tbody> <tr> <td>GETI</td> <td>HRS</td> <td>+</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>LIFT-OFF</td> <td>MIN</td> <td>+</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>SEC</td> <td>+</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GETI</td> <td>HRS</td> <td>+</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSI</td> <td>MIN</td> <td>+</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>N11</td> <td>SEC</td> <td>+</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GETI</td> <td>HRS</td> <td>+</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TPI</td> <td>MIN</td> <td>+</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>N37</td> <td>SEC</td> <td>+</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	DIRECT ASCENT RNDZ PAD					UPDATE (IF REQ'D)					GETI	HRS	+	0	0							LIFT-OFF	MIN	+	0	0	0							SEC	+	0								GETI	HRS	+	0	0							TPI	MIN	+	0	0	0						N37	SEC	+	0								CSM WT	+					LM WT	+	0	5	9	0	COELLIPTIC RNDZ PAD					UPDATE (IF REQ'D)					GETI	HRS	+	0	0							LIFT-OFF	MIN	+	0	0	0							SEC	+	0								GETI	HRS	+	0	0							CSI	MIN	+	0	0	0						N11	SEC	+	0								GETI	HRS	+	0	0							TPI	MIN	+	0	0	0						N37	SEC	+	0							
DIRECT ASCENT RNDZ PAD					UPDATE (IF REQ'D)																																																																																																																																																																																																			
GETI	HRS	+	0	0																																																																																																																																																																																																				
LIFT-OFF	MIN	+	0	0	0																																																																																																																																																																																																			
	SEC	+	0																																																																																																																																																																																																					
GETI	HRS	+	0	0																																																																																																																																																																																																				
TPI	MIN	+	0	0	0																																																																																																																																																																																																			
N37	SEC	+	0																																																																																																																																																																																																					
CSM WT	+																																																																																																																																																																																																							
LM WT	+	0	5	9	0																																																																																																																																																																																																			
COELLIPTIC RNDZ PAD					UPDATE (IF REQ'D)																																																																																																																																																																																																			
GETI	HRS	+	0	0																																																																																																																																																																																																				
LIFT-OFF	MIN	+	0	0	0																																																																																																																																																																																																			
	SEC	+	0																																																																																																																																																																																																					
GETI	HRS	+	0	0																																																																																																																																																																																																				
CSI	MIN	+	0	0	0																																																																																																																																																																																																			
N11	SEC	+	0																																																																																																																																																																																																					
GETI	HRS	+	0	0																																																																																																																																																																																																				
TPI	MIN	+	0	0	0																																																																																																																																																																																																			
N37	SEC	+	0																																																																																																																																																																																																					

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-269

MCC-H
GO/NO GO FOR
LIFT-OFF ✓

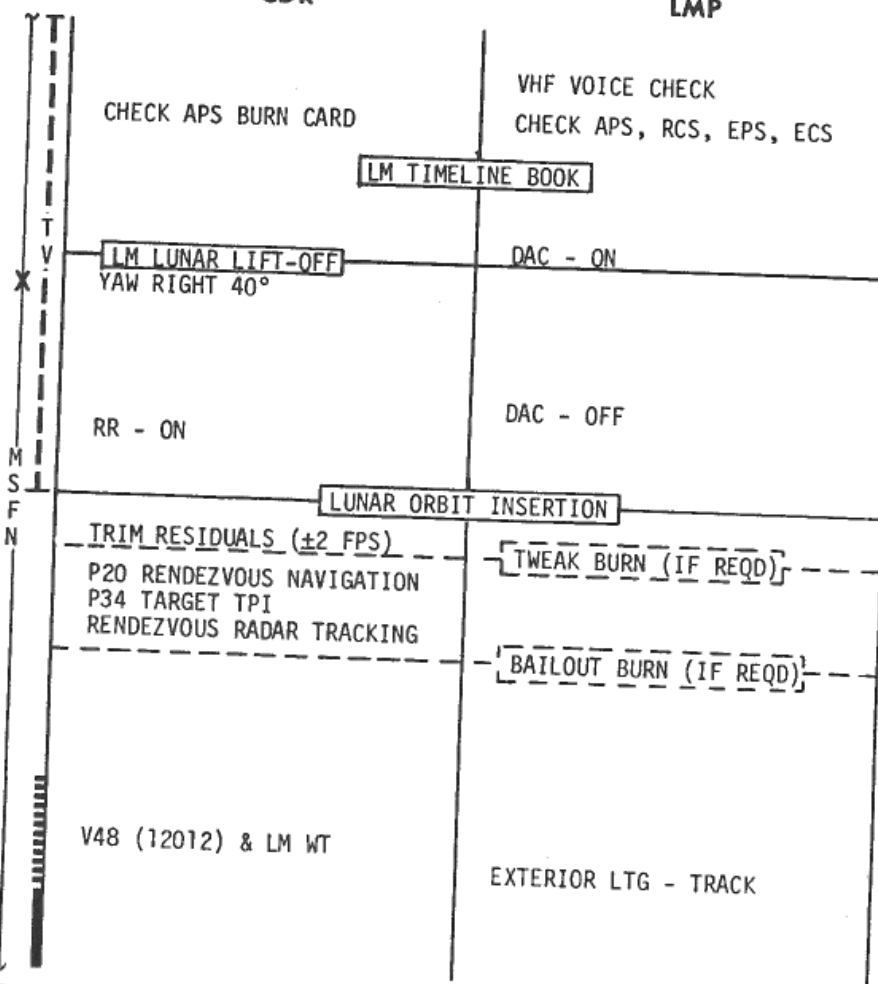
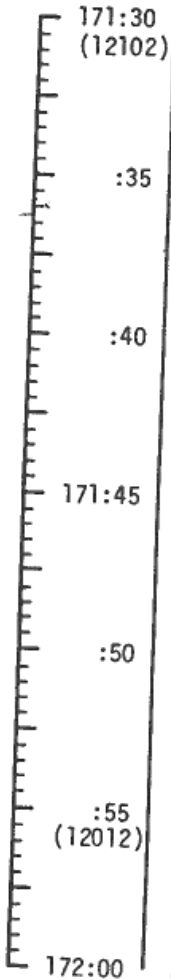
LM FLIGHT PLAN

1204 CDT

CDR

LMP

NOTES



TIG: 171:37:23.9
BT: 7MIN 15.2 SEC
ΔVT: 6055.5 FT/SEC
ULLAGE: NONE
ORBIT: 45.6 x 9.0

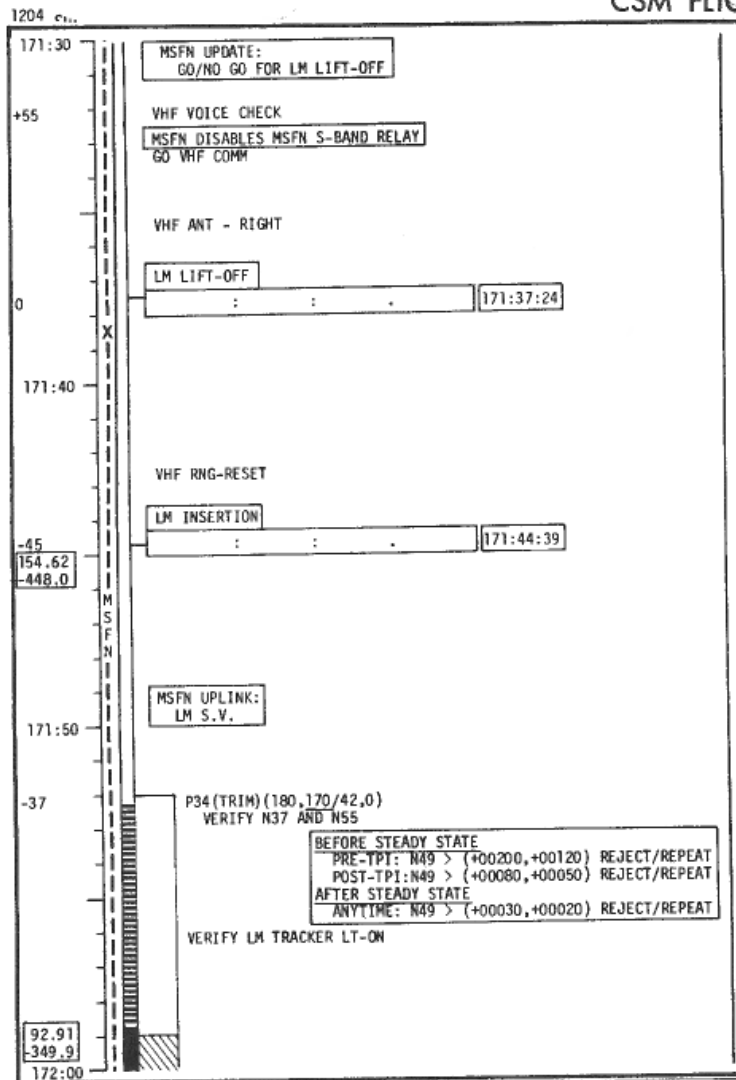
UPDATE TO LM
TWEAK OR BAILOUT
INSTRUCTION
(IF REQD)

171:44:39
171:46:39
171:49:39

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



P30 MANEUVER

N/A SET STARS	C	S	M	B	O	PURPOSE
	S	P	S	G	&N	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 GET1
	+	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 GET1-TPI	:	:
55	INTEG OPT	ELEVATION }	TRANSFER }
	+00000	+000.00	+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

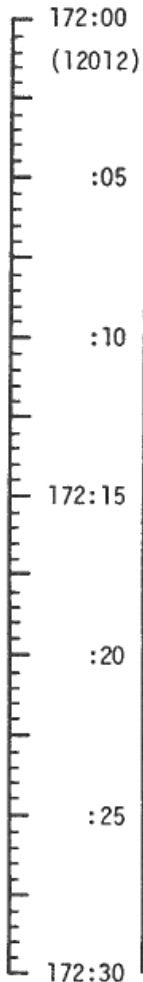
MCC-H

1234 CDT

CDR

LMP

NOTES



M
S
F
N

CONFIGURE S-BD FOR LOS
OMNI-AFT, PCM-HI

P42 APS THRUSTING

LOAD AGS TPI EXTERNAL ΔV

MANUAL ULLAGE

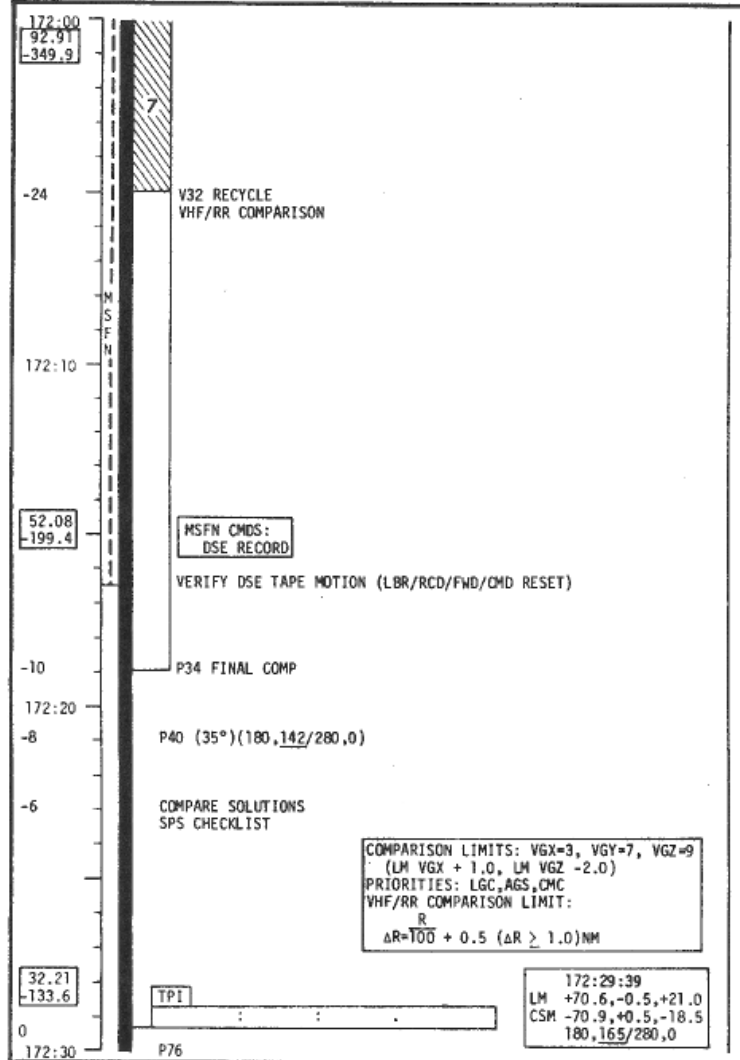
TIG: 172:29:39.1
BT: 2.6 SEC
ΔVT: 73.6 FT/SEC
ULLAGE: 4 JET TO SEC
ORBIT: 61.5 x 43.9NM

TPI NULL RESIDUALS

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 TIG BRANCH

CSM FLIGHT PLAN



* CONTINGENCY PROCEDURE *
* (P30-P40 BACKUP WITH LM SOLUTION) *
* P30-MIRROR IMAGE OF LM ΔV *
* P40 *

P34 RECYCLE			
	INTEG OPT	ELEVATION } TPI ΔV	TRANSFER } TPF ΔV
55	+00000	.	+130.00
58	PERILUNE ALT	.	.
81	TPI ΔV-LV	.	.
84	LM TPI ΔV-LV	.	.

GROUND TPI FOR LM

					ΔV _X
					ΔV _Y
					ΔV _Z

P34 FINAL COMP			
	INTEG OPT	ELEVATION } TPI ΔV	TRANSFER } TPF ΔV
55	+00000	.	+130.00
58	PERILUNE ALT	.	.
81	TPI ΔV-LV	.	.
84	LM TPI ΔV-LV	.	.
P76	LM TPI ΔV-LV	.	.

* 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

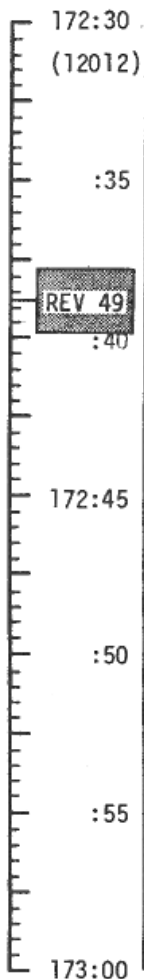
MCC-H

1304 CDT

CDR

LMP

NOTES



P35 TARGET MCC-1
RENDEZVOUS RADAR TRACKING

FINAL MCC-1 COMPUTATION

P41 RCS THRUSTING

NULL RESIDUALS
P35 TARGET MCC-2
RENDEZVOUS RADAR TRACKING

FINAL MCC-2 COMPUTATION
P41 RCS THRUSTING

NULL RESIDUALS

LOAD AGS MCC-1 EXTERNAL ΔV

EXTERIOR LTG - OFF

LOAD AGS MCC-2 EXTERNAL ΔV

TIG: 172:44:39
 ΔVT : NOM ZERO

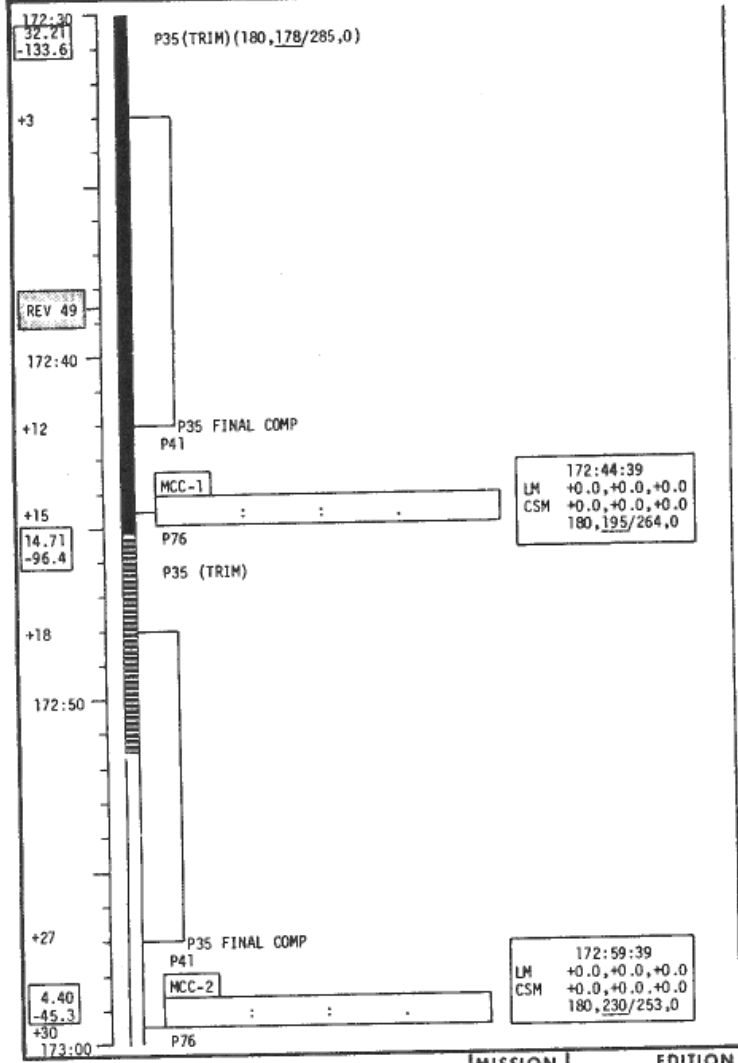
TIG: 172:59:39
 ΔVT : NOM ZERO

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 Cu



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

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-275

LM FLIGHT PLAN

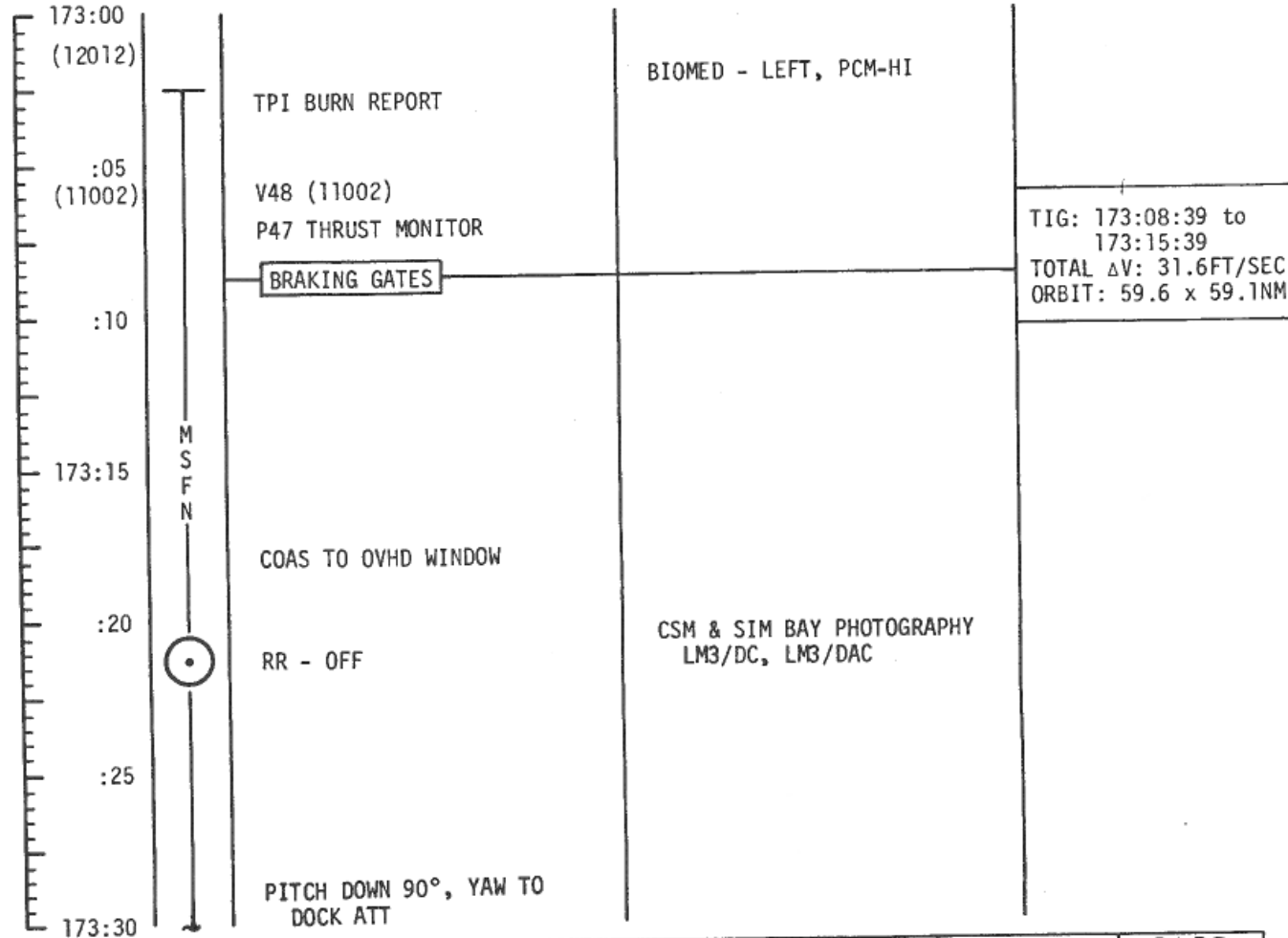
MCC-H

1334 CDT

CDR

LMP

NOTES



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

1334 L

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

TPF

EMS MODE - STBY
EMS FUNC - OFF
EXT LIGHT RNDZ - OFF

LM STATIONKEEP

P00
DAC/TV - OFF
CMC MODE - AUTO

V49 MNVR TO SIM BAY INSPECTION ATTITUDE (173:23)
(312,248,0)

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)

173:10
M
S
F
N
V

173:20

173:30

173:12:26
LM 31.7 (TOTAL)
CSM 33.6 (TOTAL)
180,304/289,0

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 EXT/REL - RETRACT
RATE - LOW (VERIFY)	PROBE EXT/REL TB (2) - GRAY (VERIFY)
TRANS CONTR PWR - ON (UP)	(IF TB NOT GRAY, GO TO PG 5/2-12, 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

MCC-H

1404 CDT

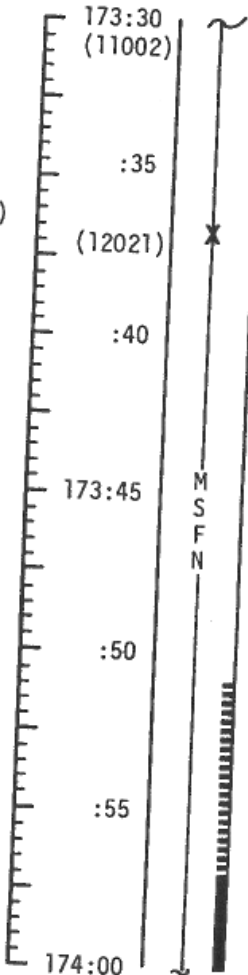
LM FLIGHT PLAN

CDR

LMP

NOTES

UPDATE TO LM
 DEORBIT BURN PAD
 DAP LOAD (WEIGHTS)
 UPLINK TO LM
 LM S.V. (TIG -10)
 P30 TARGET LOAD
 P99 LM DEORBIT



173:30 (11002)

:35

(12021) **DOCKING**

CONFIGURE PGNS V48 (12021) RECORDER - OFF

:40

PREP FOR TRANSFER

173:45

VERIFY TUNNEL PRESSURIZED FROM CSM
 OVHD DUMP VALVE - OPEN

DOFF HELMETS AND GLOVES

WHEN TUNNEL/LM PRESSURES EQUAL, OVHD DUMP VALVE - AUTO

VERIFY PRESS REGS A&B - EGRESS

:50

OPEN HATCH

RECEIVE FROM CMP AND STOW:
 PROBE
 DROGUE
 VACUUM CLEANER

:55

174:00

0:00

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	173:30 - 174:00	8/49	3-278

FLIGHT TRAINING BRANCH

CSM FLIGHT PLAN

<p>173:30 (11102) (X1111)</p> <p>P47 DAC/TV - ON (ZOOM - 25MM) LM PITCH DOWN 90°, YAW LEFT 120°</p> <p>T TRANSLATE TO CAPTURE LATCH V PERFORM DOCKING CHECKLIST</p> <p>DOCKING</p> <p>_____ : _____ : _____ 173:35:00</p> <p>DAC/TV - OFF P00</p> <p>(61101) V48 (61101) RECORD MAG % _____ (11111) (11111) RECORD EL FR # _____</p> <p>CMC MODE - AUTO SC CONT - CMC RNDZ XPNDR - OFF</p> <p>173:40</p> <p>MSFN UPDATE: DAP LOAD - UPDATE WEIGHTS (174:01) MAP CAMERA PHOTO PAD (174:48) PAN CAMERA PHOTO PAD (175:22)</p> <p>PREPARE COUCH FOR HATCH</p> <p>REMOVE PROBE STRAPS (RS)</p> <p>CDR - VERIFY FWD DUMP VLV - AUTO CABIN FANS - ON (UP)</p> <p>EQUALIZE CSM/LM PRESSURE (LOD DECAL)</p> <p>TUNNEL LIGHTS - LIGHTS REMOVE HATCH AND STOW (DECAL)</p> <p>173:50</p> <p>VERIFY DOCKING LATCHES (DECAL)</p> <p>REMOVE AND TEMP STOW PROBE AND DROGUE (DECAL)</p> <p>TRANSFER TO CDR AT HIS REQUEST: PROBE DROGUE VACUUM CLEANER (ASSEMBLED)</p> <p>DOFF PGA ZIP SUIT & INSTALL ELECTRICAL COVER PRIOR TO STOWING (PGA BAG) STOW COMM CARRIERS AND UCTA (PGA BAG) TRANSFER PRD TO CWG</p> <p>174:00</p>	<p>DOCKING CHECKLIST</p> <p>AT CAPTURE</p> <p>PROBE EXTD/REL TB (2) - BP (IF TB NOT BP, GO TO PG 5/2-11, 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)</p> <p>AT DOCK LATCH</p> <p>PROBE EXTD/REL TB (2) - GRAY</p> <p>AT HARD DOCK</p> <table border="1"> <tr> <td>SECS PYRO ARM (2) - SAFE</td> <td>EXT LIGHTS (2) - OFF</td> </tr> <tr> <td>SECS LOGIC (BOTH) - OFF</td> <td>COAS PWR - OFF</td> </tr> <tr> <td>CB SECS ARM (2) - OPEN</td> <td>LIMIT CYCLE - ON (UP)</td> </tr> <tr> <td>CB DOCK PROBE (2) - OPEN</td> <td>ATT DB - MAX</td> </tr> <tr> <td>THC - LOCKED</td> <td>SC CONT - SCS</td> </tr> <tr> <td>RHC - LOCKED</td> <td>BNAG MODE (3) - ATT 1/RATE 2</td> </tr> <tr> <td>BMAG MODE (3) - RATE 2</td> <td>AUTO RCS SEL B/D ROLL (4) - OFF</td> </tr> <tr> <td>PROBE EXTD/REL - OFF</td> <td>TRANS CONTR PWR - OFF</td> </tr> <tr> <td>PROBE RETRACT (2) - OFF</td> <td>ROT CONTR PWR DIRECT (BOTH) - OFF</td> </tr> </table>	SECS PYRO ARM (2) - SAFE	EXT LIGHTS (2) - OFF	SECS LOGIC (BOTH) - OFF	COAS PWR - OFF	CB SECS ARM (2) - OPEN	LIMIT CYCLE - ON (UP)	CB DOCK PROBE (2) - OPEN	ATT DB - MAX	THC - LOCKED	SC CONT - SCS	RHC - LOCKED	BNAG MODE (3) - ATT 1/RATE 2	BMAG MODE (3) - RATE 2	AUTO RCS SEL B/D ROLL (4) - OFF	PROBE EXTD/REL - OFF	TRANS CONTR PWR - OFF	PROBE RETRACT (2) - OFF	ROT CONTR PWR DIRECT (BOTH) - OFF
SECS PYRO ARM (2) - SAFE	EXT LIGHTS (2) - OFF																		
SECS LOGIC (BOTH) - OFF	COAS PWR - OFF																		
CB SECS ARM (2) - OPEN	LIMIT CYCLE - ON (UP)																		
CB DOCK PROBE (2) - OPEN	ATT DB - MAX																		
THC - LOCKED	SC CONT - SCS																		
RHC - LOCKED	BNAG MODE (3) - ATT 1/RATE 2																		
BMAG MODE (3) - RATE 2	AUTO RCS SEL B/D ROLL (4) - OFF																		
PROBE EXTD/REL - OFF	TRANS CONTR PWR - OFF																		
PROBE RETRACT (2) - OFF	ROT CONTR PWR DIRECT (BOTH) - OFF																		

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-279

LM FLIGHT PLAN

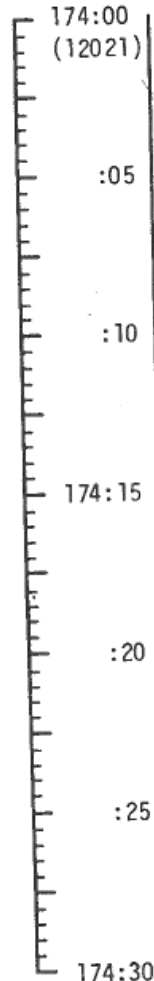
MCC-H

1434 CDT

CDR

LMP

NOTES



VACUUM PGA'S

DOFF SUITS

TRANSFER SUITS TO CMP

PLACE EV GLOVES INSIDE HELMETS, HELMETS INSIDE
LEVA'S, IN LEVA BAG

TRANSFER LEVA BAGS TO CMP

RECEIVE DECONTAMINATION BAGS FROM CMP

0:30

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	174:00 - 174:30	8/49	3-280

FLIGHT PLAN BRANCH

CSM FLIGHT PLAN

1434 CDT

174:00
(61101)
(11111)

M
S
F
R
I

V48 LOAD CSM & LM WEIGHT

CSM WT	+						
LM WT	+						

S-BD AUX TV - SC1
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

DATA SYSTEMS ON - ON *deleted @ 174:03:39*
LOGIC POWER (2) - DPLY/RETR
~~MAP CAMERA 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)~~
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 RECORD GET
~~LASER ALTM ON~~ *deleted @ 174:04:13*
MASS SPECT EXP - STBY
PAN CAMERA PWR - OFF

174:20

RECEIVE SUITS FROM CDR

RECEIVE LEVA BAGS

TRANSFER TO CDR
DECONTAMINATION BAGS

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

174:30

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-281

LM FLIGHT PLAN

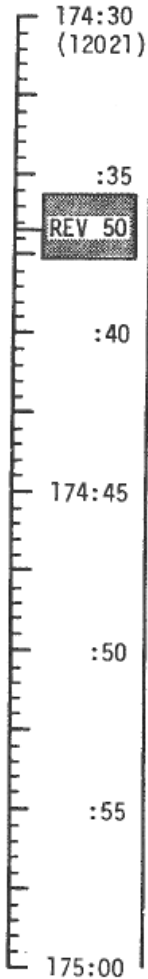
MCC-H

1504 CDT

CDR

LMP

NOTES



UNSTOW, VACUUM/WET WIPE AND BAG:

70MM MAG BAG (13 MAGS)

SURFACE 16MM MAG BAG (8 MAGS)

4 COLLECTION BAGS

ISA

BSLSS/ROCK BAG

1:00

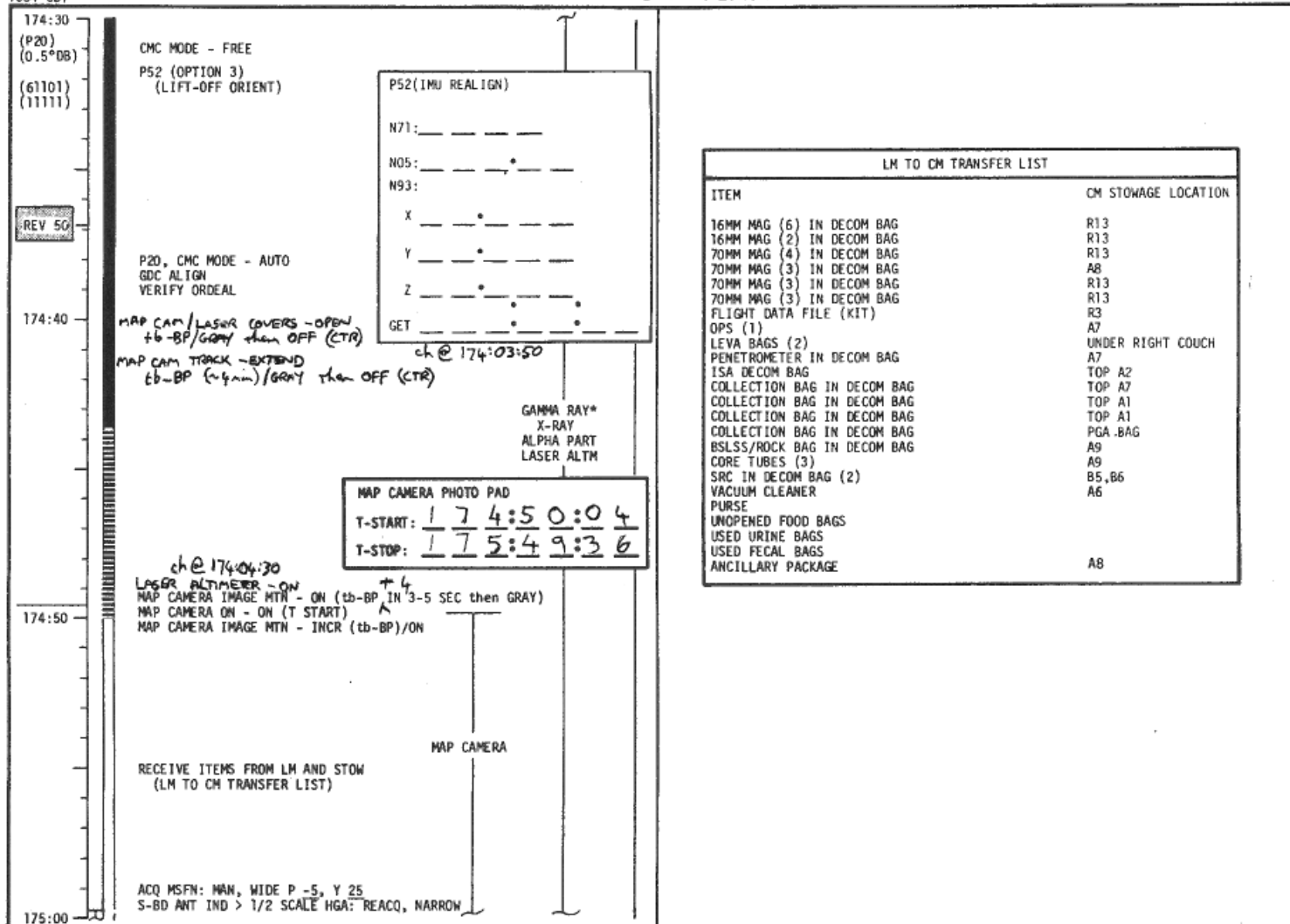
TRANSFER ABOVE ITEMS TO CSM

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

1504 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-283

MCC-H

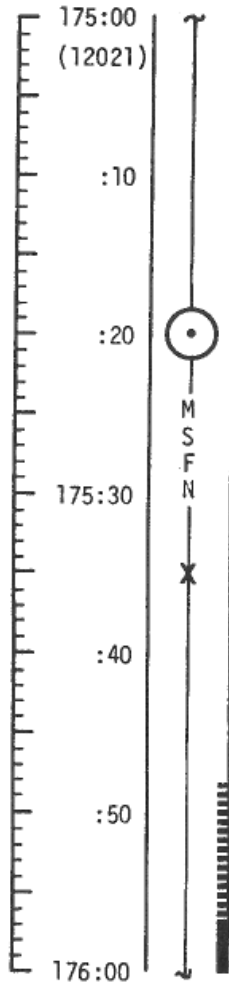
1534 CDT

LM FLIGHT PLAN

CDR

LMP

NOTES



UNSTOW SRC'S, VACUUM AND BAG, TRANSFER TO CSM

RECEIVE B5 & B6 FROM CMP AND STOW IN SRC RACK
TRANSFER VACUUM CLEANER TO CSM

UNSTOW OPS, CHECKOUT, TRANSFER TO CMP

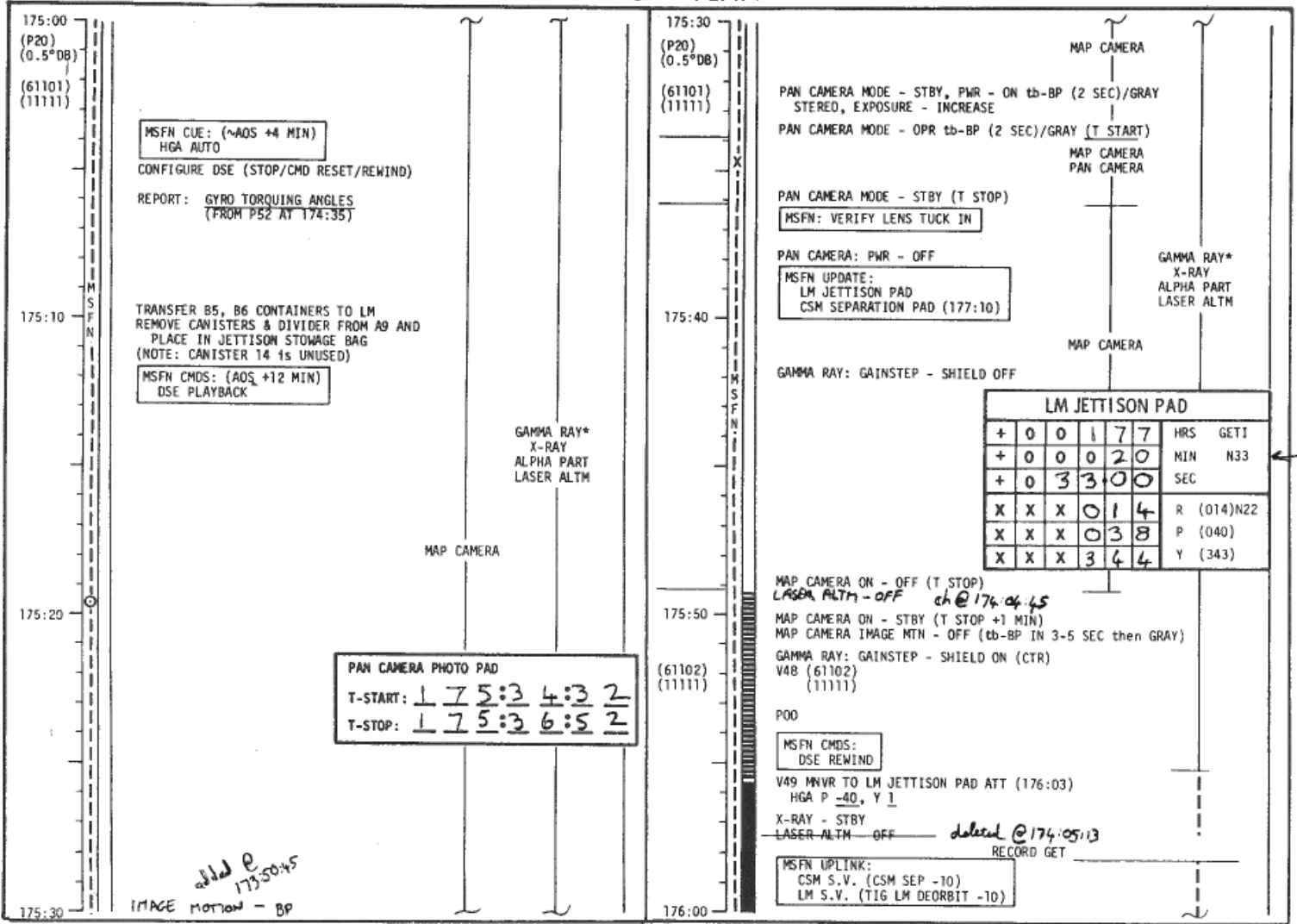
DON LT WT HEADSET
CONNECT CWG ADAPTER
CONNECT LM COMM

1:30

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

CSM FL. PLAN



175:49:27

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-285

LM FLIGHT PLAN

	1634 CDT	CDR	LMP	NOTES
<p>MCC-H</p> <p>UPDATE TO LM DEORBIT TIG</p> <p>GO/NO GO FOR LM CLOSE OUT</p>	<p>176:00 (12021)</p> <p>:10</p> <p>:20</p> <p>176:30</p> <p>REV 51</p> <p>:40</p> <p>:50</p> <p>177:00</p>	<p style="text-align: center;">M S F N</p> <p>VERIFY LM JETTISON ATTITUDE P30 TARGET PGNS</p> <hr/> <p>CONFIGURE LM FOR JETTISON</p> <p>STOW CSM JETTISON ITEMS</p> <p>IVT TO CSM</p>	<p>STEERABLE P <u>205</u>, Y <u>70</u></p> <p>CONFIGURE S-BAND VERIFY COMM TARGET AGS ΔV FOR DEORBIT</p> <hr/> <p>CLOSE HATCH, IVT TO CSM</p>	<p>2:30</p> <p>3:00</p> <p>3:10/LM CLOSEOUT</p>

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

<p>176:00 (61102) (11111)</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">M S F N</p> <p>176:10</p> <p>176:20</p> <p>176:30</p>	<p>MAP CAMERA TRACK - RETRACT tb-BP (~4 MIN)/GRAY then OFF (CTR) ALPHA/X-RAY EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)</p> <p><i>moved up @ 174:05:49</i></p> <p>MAP CAMR/LASER EXP COVERS - CLOSE tb-BP/GRAY then OFF (CTR)</p> <p>LOGIC POWER (2) - OFF</p> <p>ENABLE ALL JETS</p> <p>cb SCS CONTR DIR 1 MNB - CLOSE cb SCS CONTR DIR 2 MNA - CLOSE</p> <div style="border: 1px solid black; padding: 2px; width: fit-content;">MSFN UPDATE: GO/NO-GO FOR LM CLOSEOUT</div> <div style="border: 1px solid black; padding: 2px; width: fit-content;">MSFN CMDS: DSE RECORD</div> <p>VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)</p> <p style="text-align: right;">GAMMA RAY* ALPHA PART*</p> <p>TRANSFER CM JETTISON ITEMS TO LM</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center; margin: 0;">WARNING</p> <p style="margin: 0;">NO URINE/FECES ALL OPENED FOOD MUST BE TREATED AND STORED IN BETA BAG</p> </div>	<p>176:30 (61102) (11111)</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">REV 51</div> <p>176:40</p> <p>176:50</p> <p>177:00</p>	<p>VHF AM B - OFF (CTR) VHF RANGING - OFF</p> <p style="text-align: right;">GAMMA RAY* ALPHA PART*</p> <p>LMP - CLOSE LM HATCH</p> <p>DIRECT O₂ VLV - CLOSED (CW)</p> <p>UNSTOW AND INSTALL FORWARD HATCH (DECAL)</p> <p>PERFORM HATCH INTEGRITY CHECK (DECAL)</p> <p>TUNNEL LIGHTS - OFF</p> <p>CONFIGURE CAMERA FOR LM JETTISON PHOTOS CM2/DAC/18/CEX-BRKT,MIR (f8,1/250,7) 12 fps (50% MAG)</p> <p>MAG (D) _____, MAG % _____ UTILITY PWR - ON</p> <p>ACQ MSFN HGA: P <u>-40</u>, Y <u>1</u></p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;">MSFN CMDS: DSE REWIND</div>
--	---	--	---

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-287

1734 CDT

CSM FLIGHT PLAN

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

177:10

LOAD ΔV IN EMS TO +100.0
CHECK NULL BIAS
GDC ALIGN
VERIFY ORDEAL

REPORT: CM/LM ΔP

PRE-JETTISON CHECKLIST

V48 (11102)
(11111)

SECS PYRO ARM (2) - ARM

P47 (JETT -1 MIN)
EMS MODE NORMAL (JETT -30 SEC)
DAC - ON

177:20

LM JETTISON

177:20:45
177 : 20 : 33 . (014,090/040,343)

POO
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)

POO

177:30

P30 MANEUVER

SET STARS	C	S	M	S	E	P	PURPOSE
	R	C	S	G	&	N	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

GAMMA RAY*
ALPHA PART*

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 MNR)

SECS PYRO ARM (2) - SAFE
SECS LOGIC (BOTH) - OFF
CB SECS ARM (2) - OPEN

1804 C01

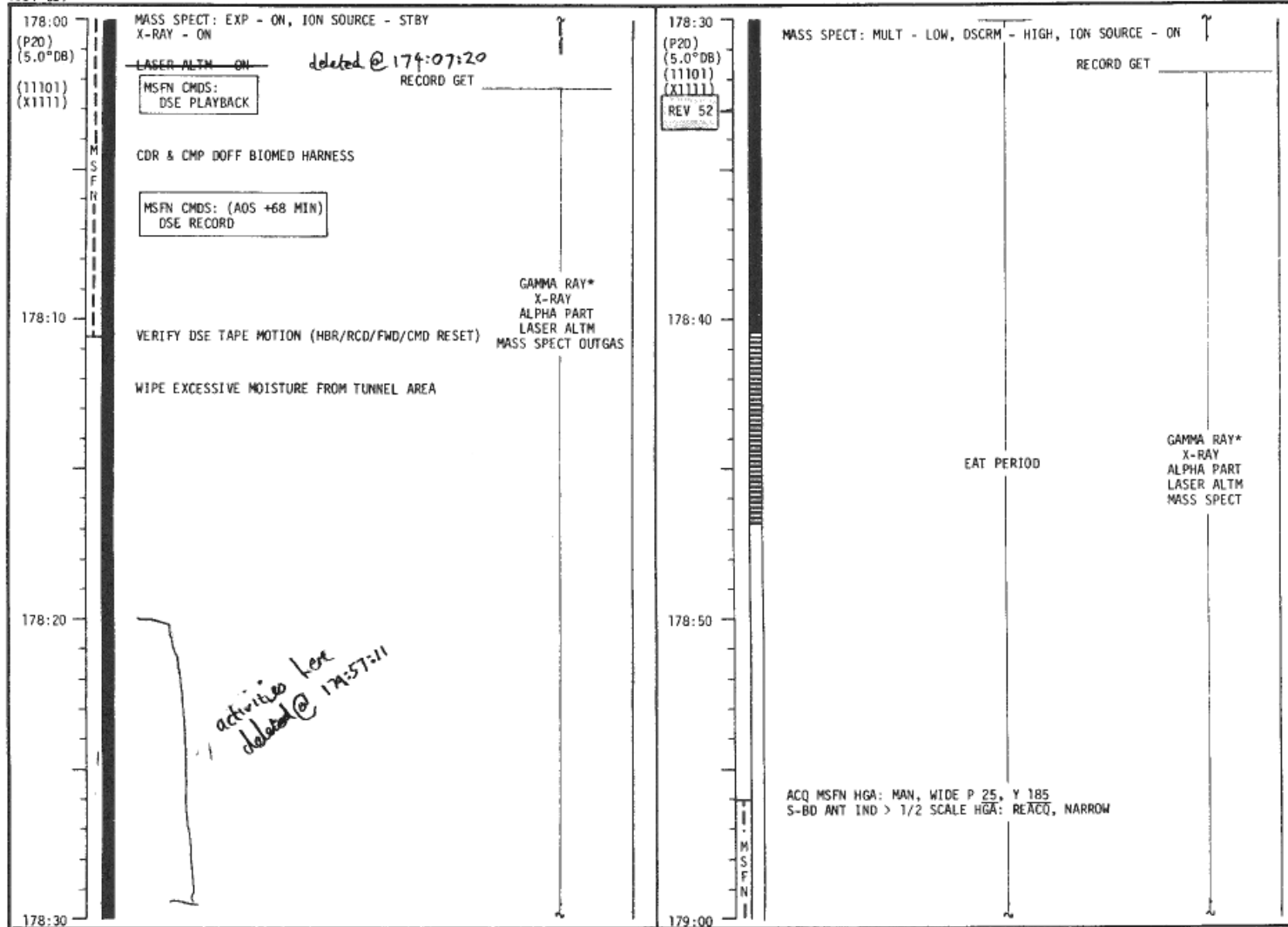
CSM FLIGHT PLAN

<p>177:30 (11102) (11111)</p> <p>177:40</p> <p>(11101) (X1111)</p> <p>(P20) (5.0°DB)</p> <p>177:50</p> <p>178:00</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>EMS MODE - STBY EMS FUNC - OFF THC PMR - OFF RHC PMR DIR - OFF THC LOCKED RHC LOCKED</p> </div> <p>V44</p> <p>V48 (11101) (X1111)</p> <p>INHIBIT ALL JETS EXCEPT: A1 & C2 OR D1 & B2, A3, C4, B3, D4</p> <p>P20 OPT 5 (-X FWD SIM ATT)(178:02) N78 (+090.00) (+052.25) (+000.00) N79 (+005.00) N70 (00050) (322,180/005,000) HGA P 8, Y 339</p> <p>SIM EXPERIMENT PREP (CUE CARD)</p> <p>LOGIC POWER (2) - DPLY/RETR</p> <p>NAP CAMR/LASER EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)</p> <p>ALPHA/X-RAY EXP COVERS - OPEN tb-BP/GRAY then OFF (CTR)</p> <p>GAMMA RAY BOOM - DEPLOY tb-BP (~2:45)/GRAY then OFF (CTR)</p> <p>MASS SPECT BOOM - DEPLOY tb-BP (~2:40)/GRAY then OFF (CTR)</p> <p>LOGIC POWER (2) - OFF ch @ 174:06:58</p>	<p>GAMMA RAY* ALPHA PART*</p>
--	---	-----------------------------------

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-289

1834 CDT

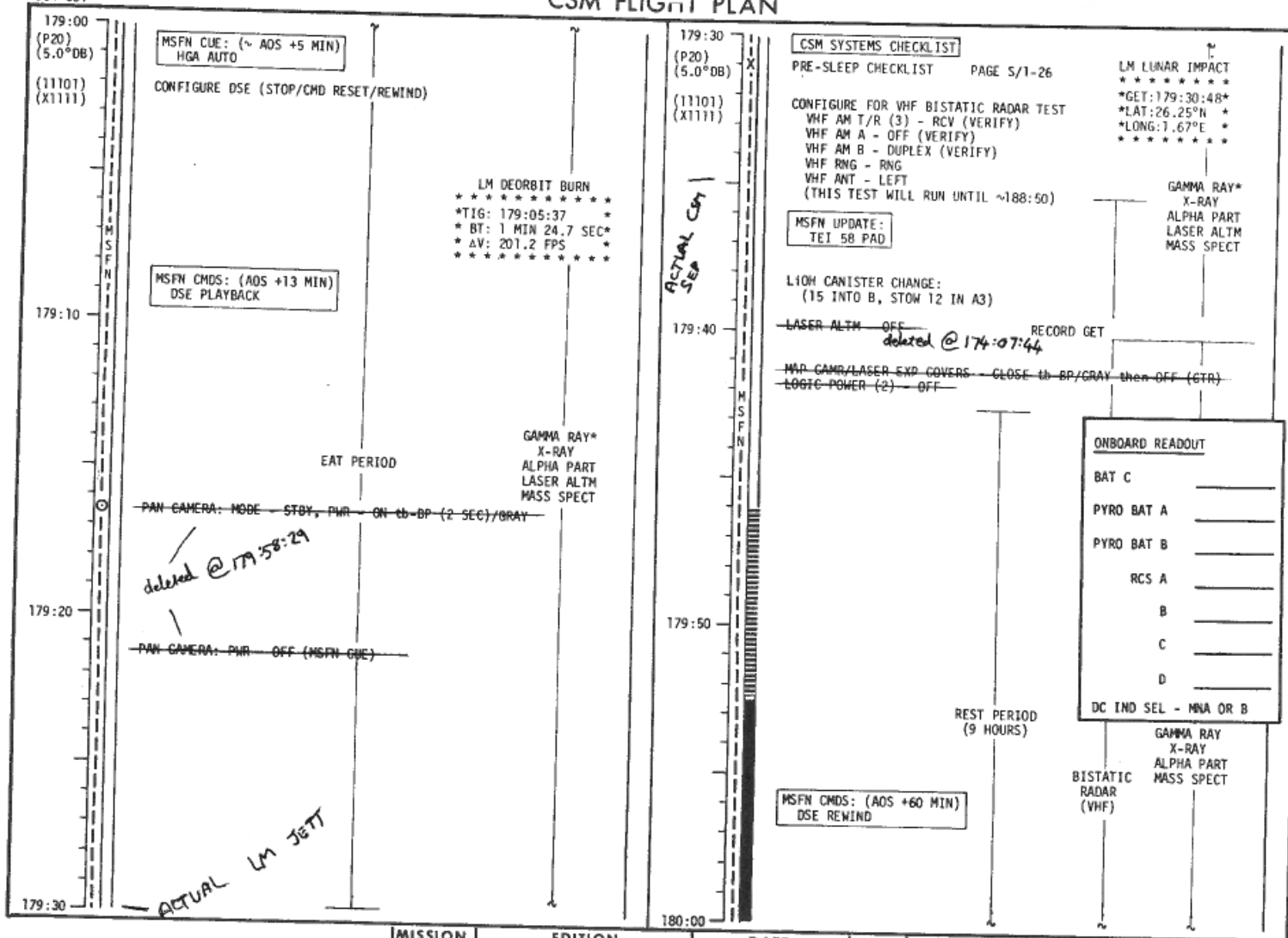
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-290

1934 CDT

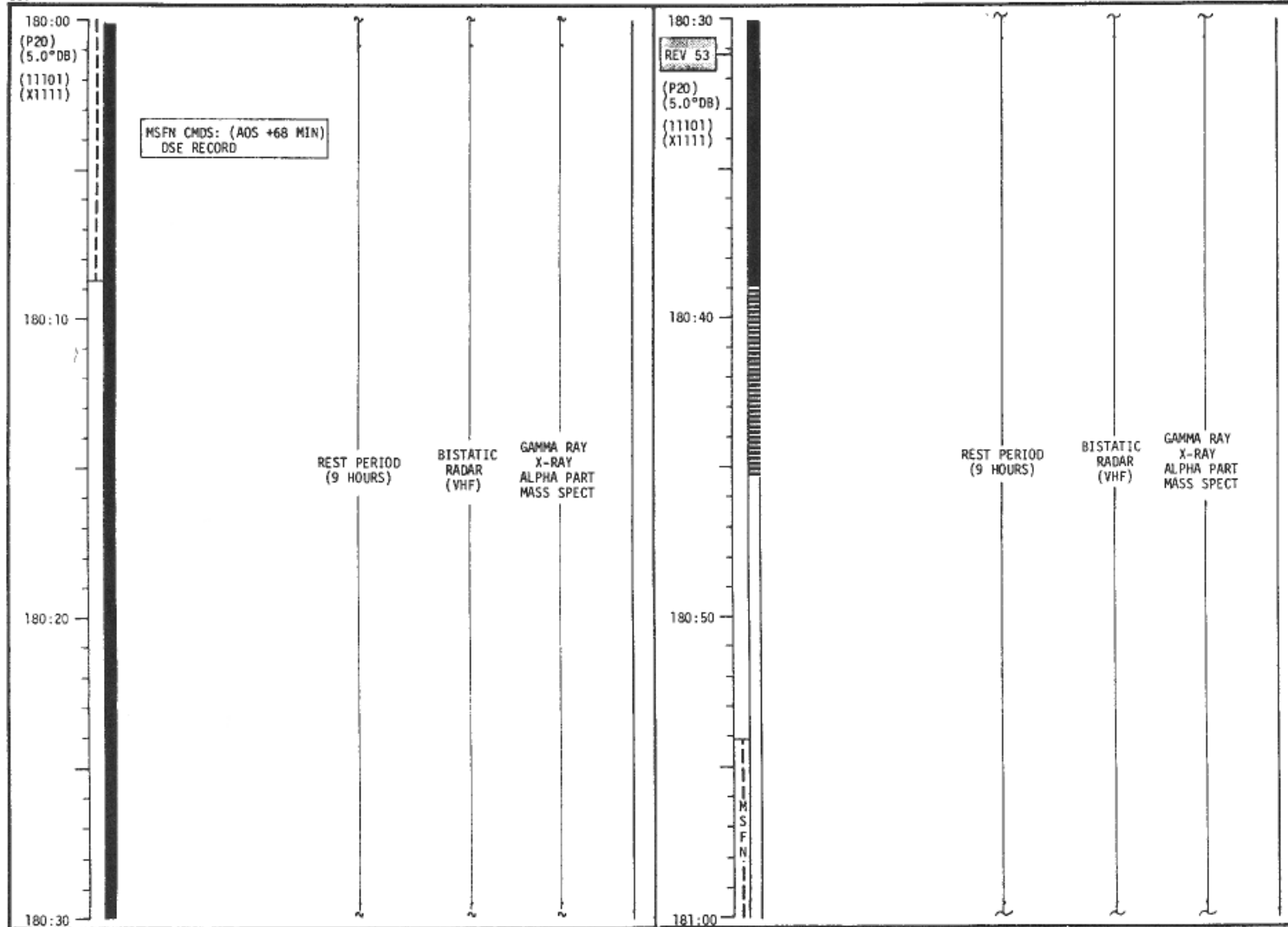
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-291

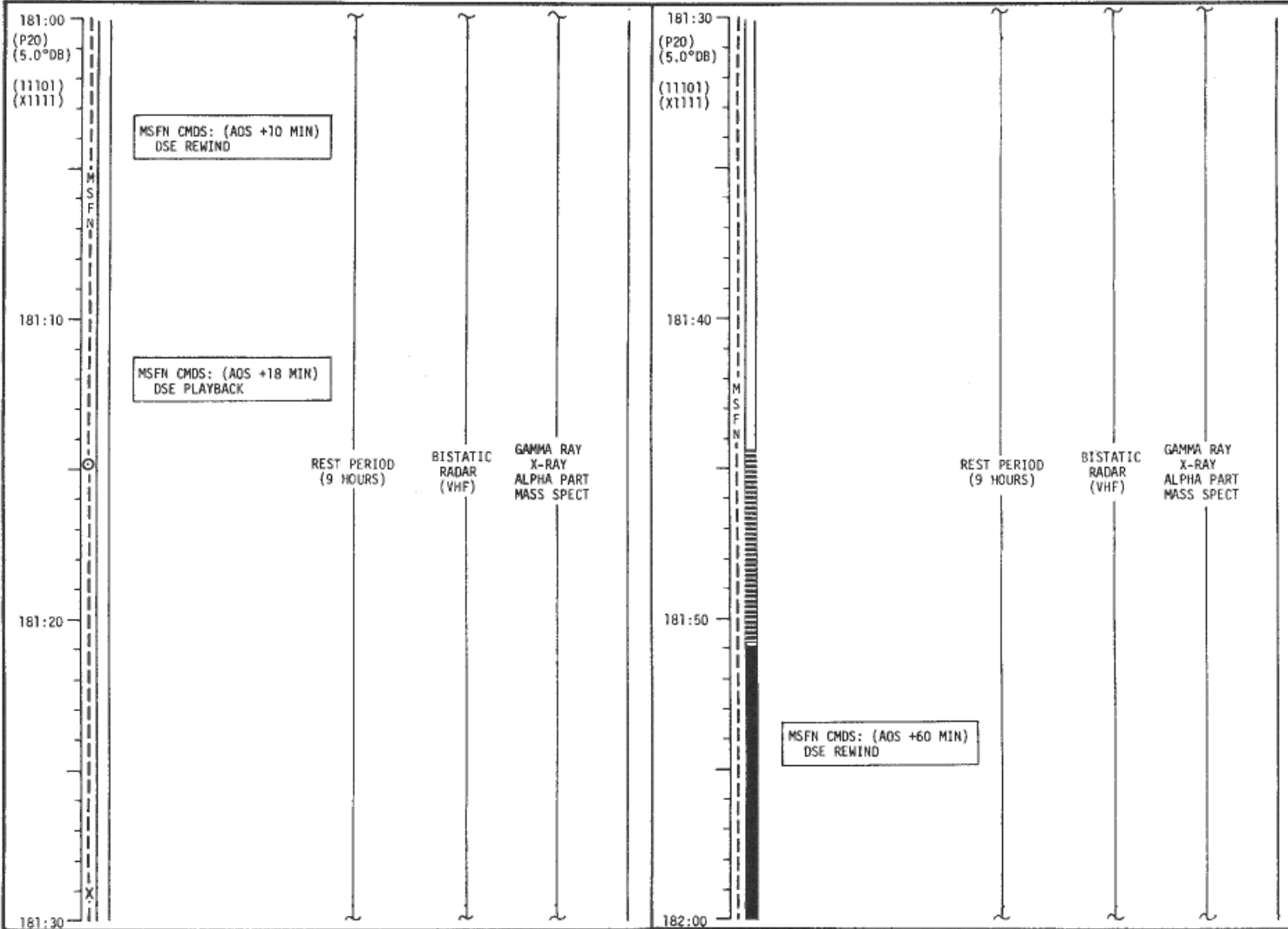
2034 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-292

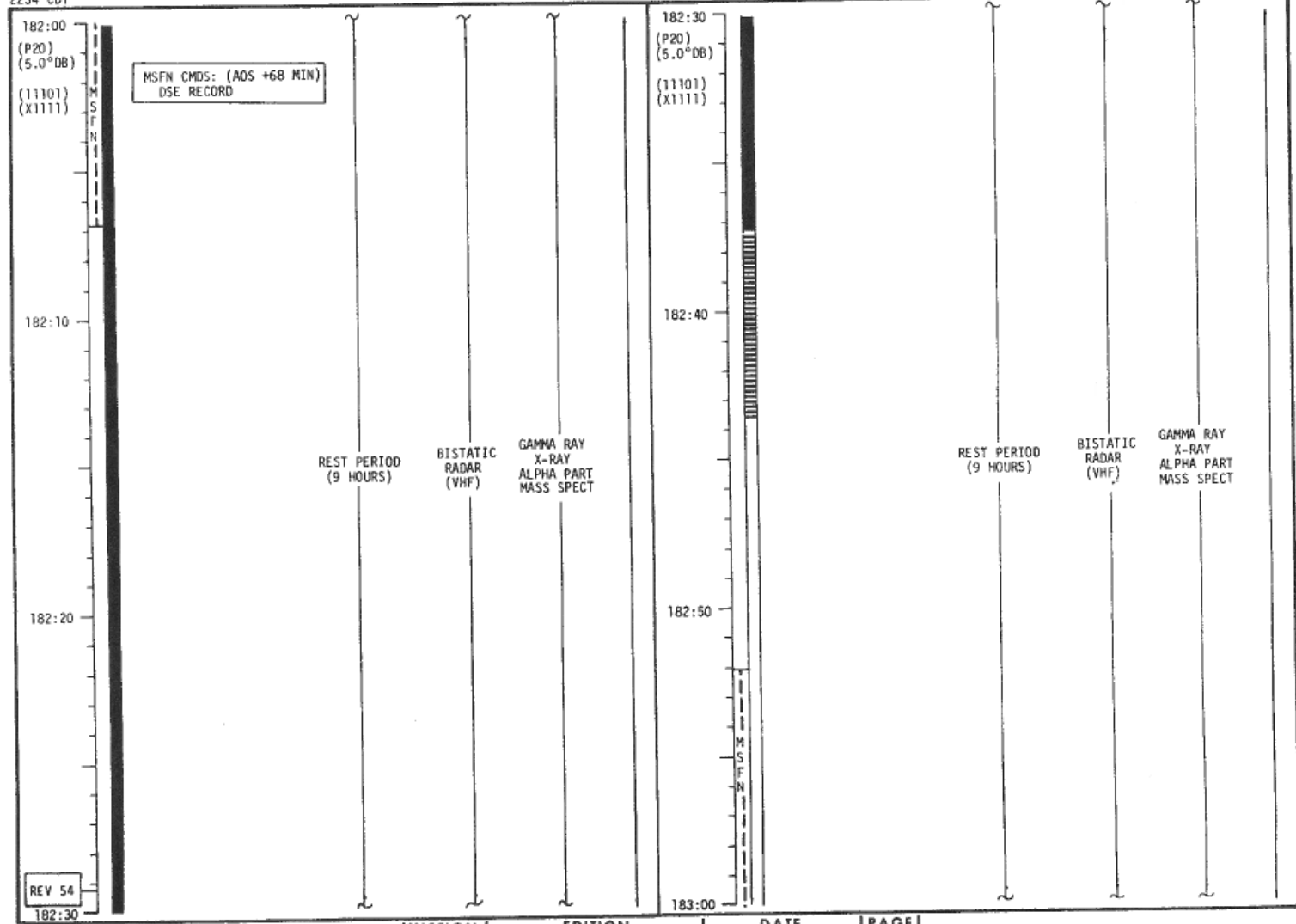
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-293

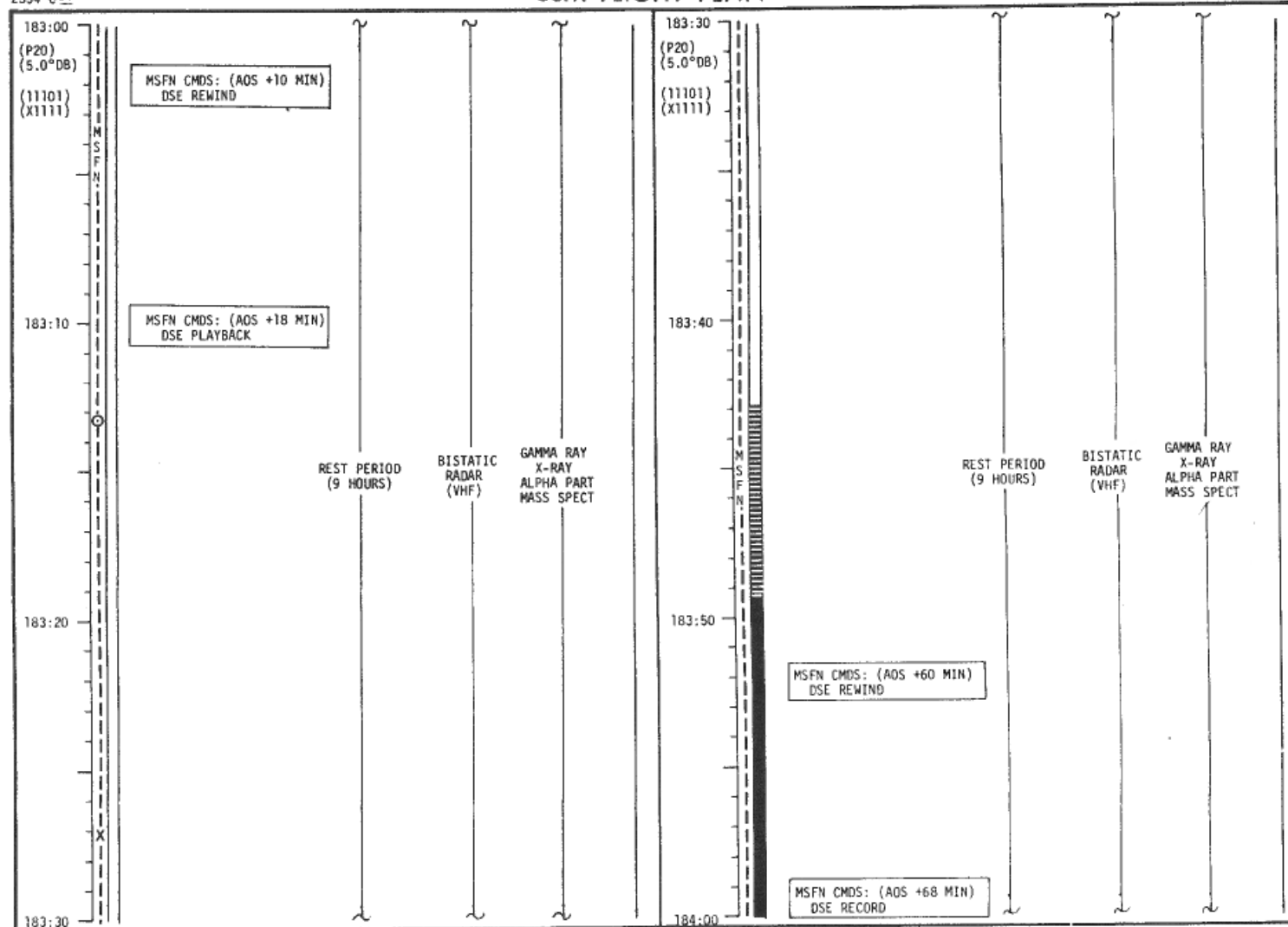
CSM FLIGHT PLAN

2234 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-294

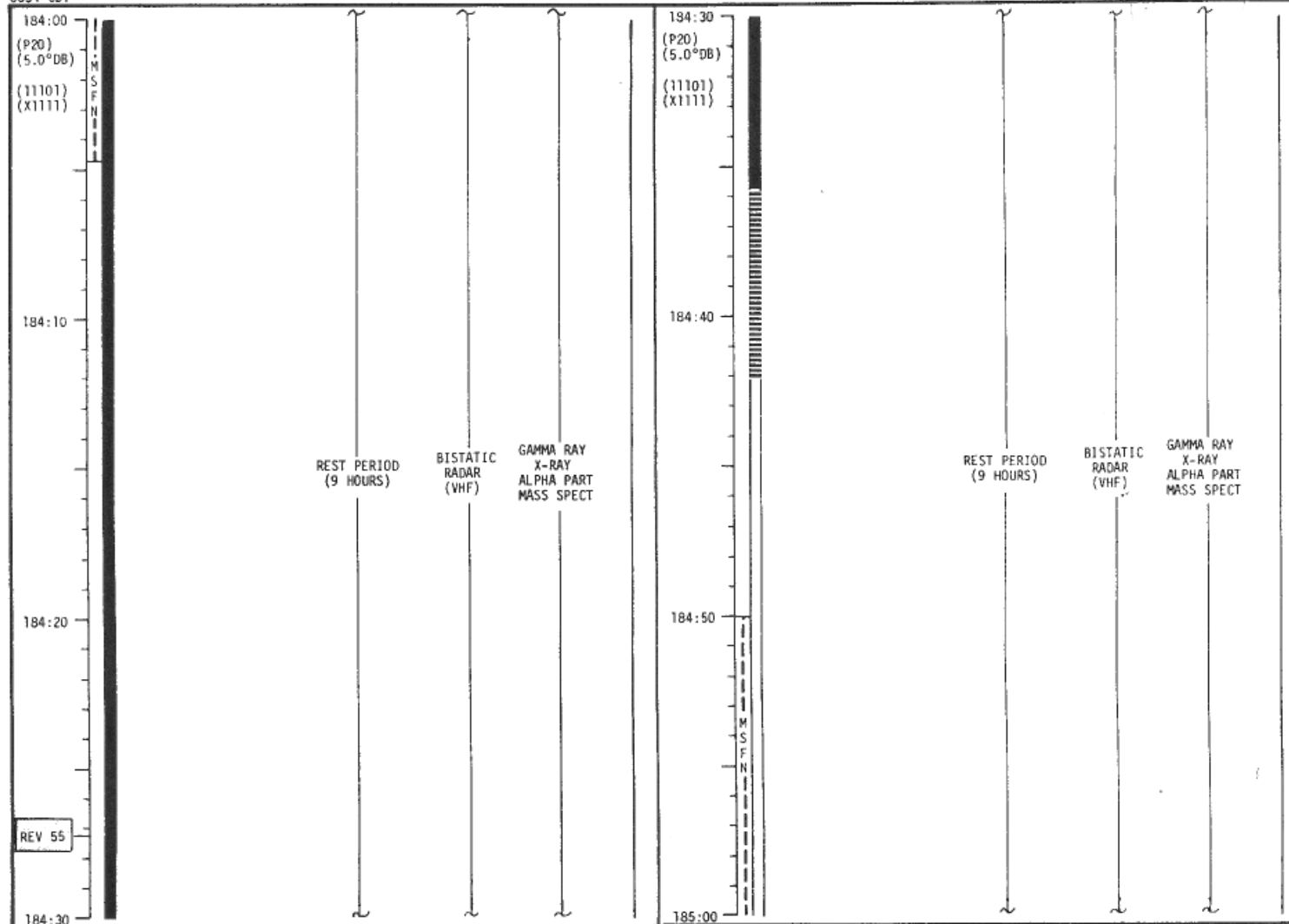
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-295

0034 CDT

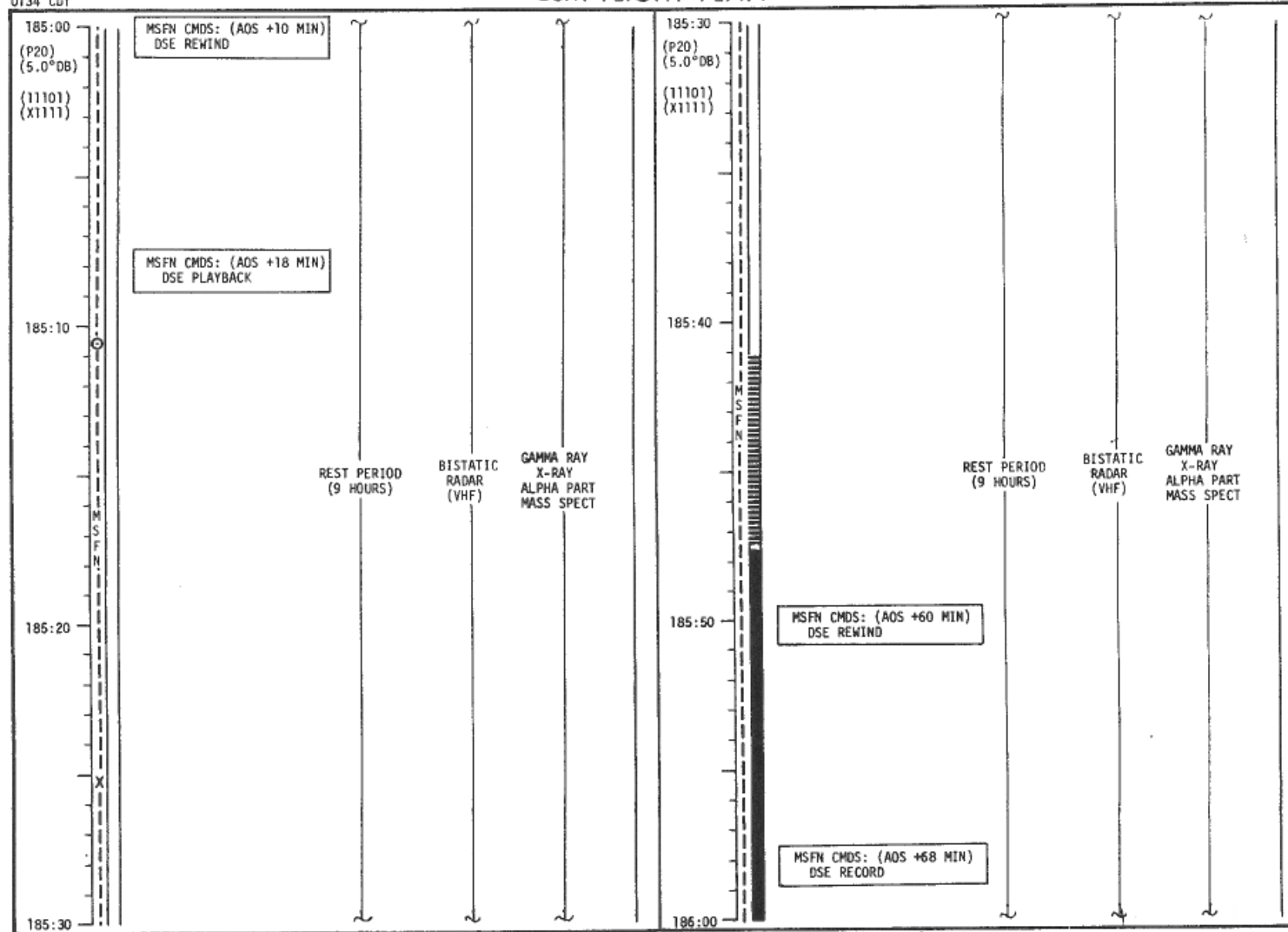
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-296

CSM FLIGHT PLAN

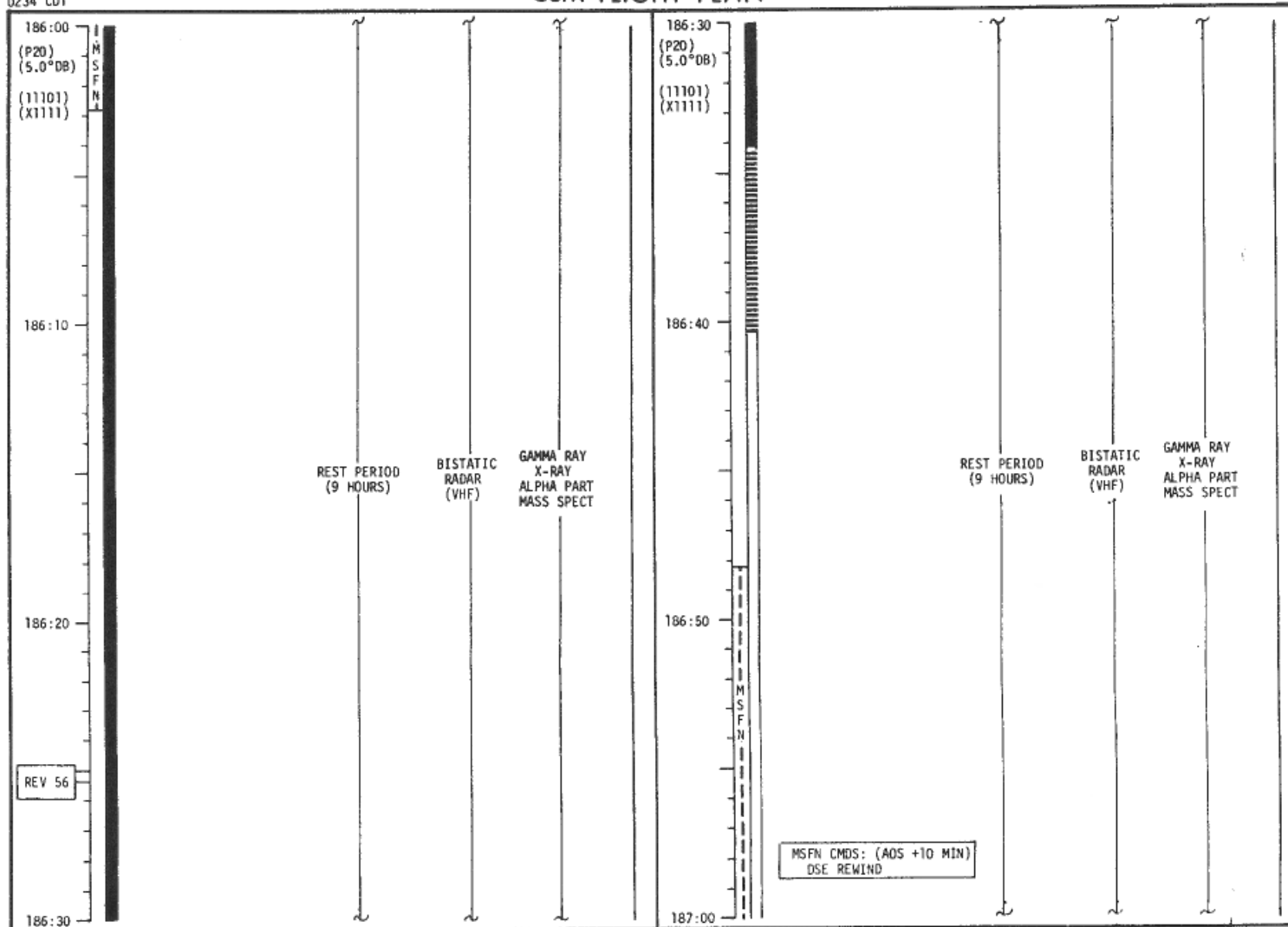
0134 Cut



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-297

0234 CDT

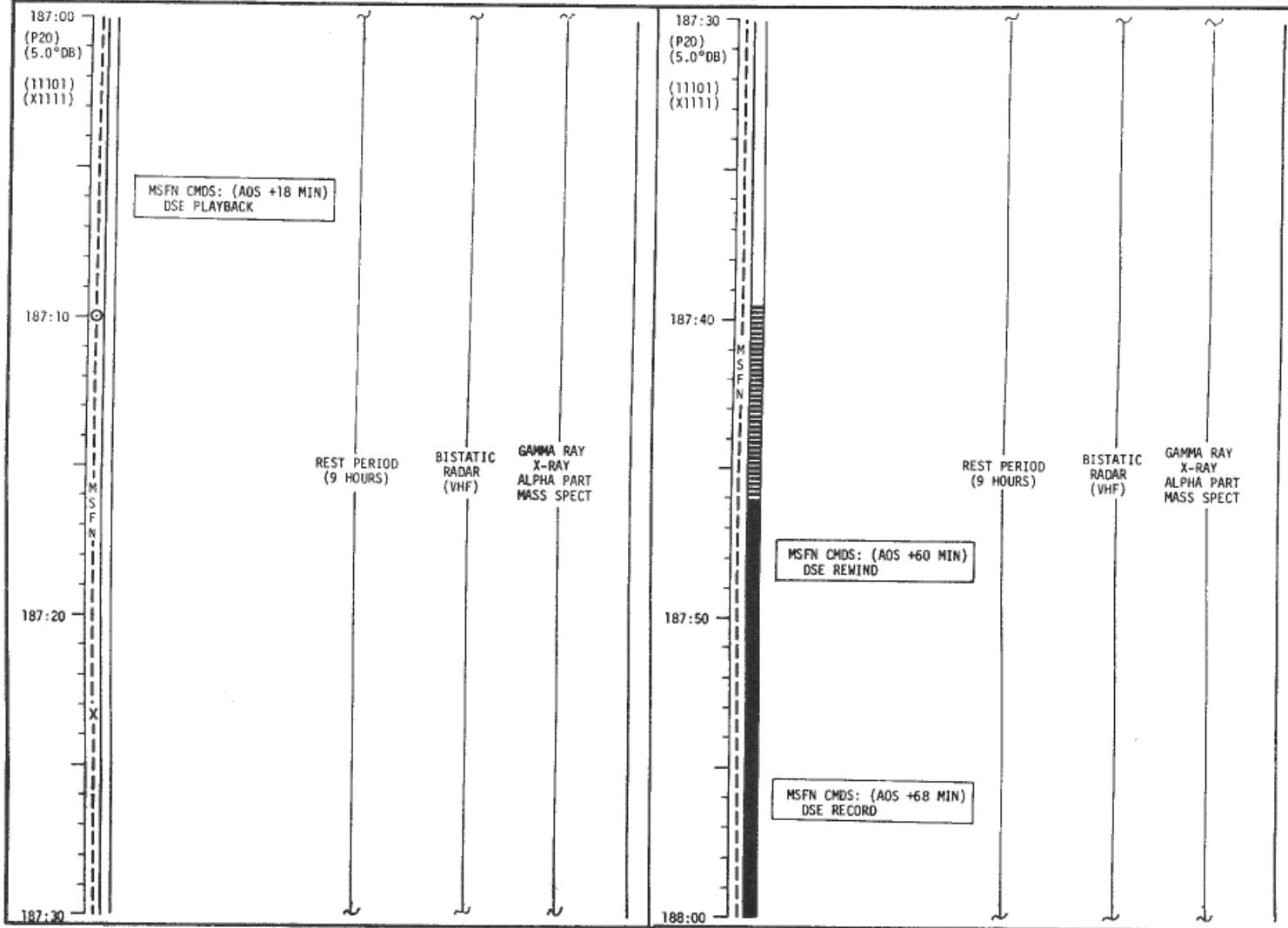
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-298

0334 Cb

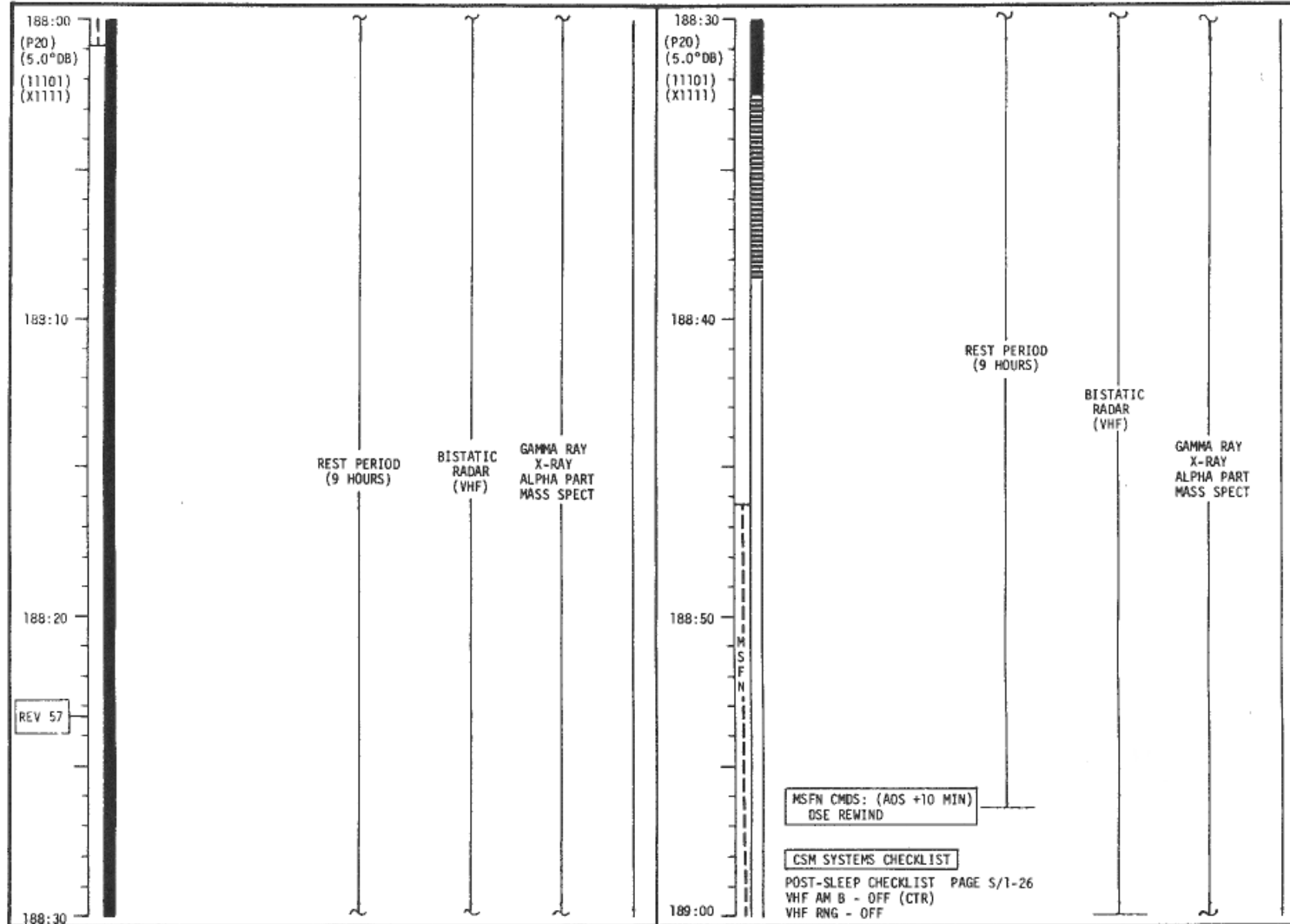
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-299

0434 CDT

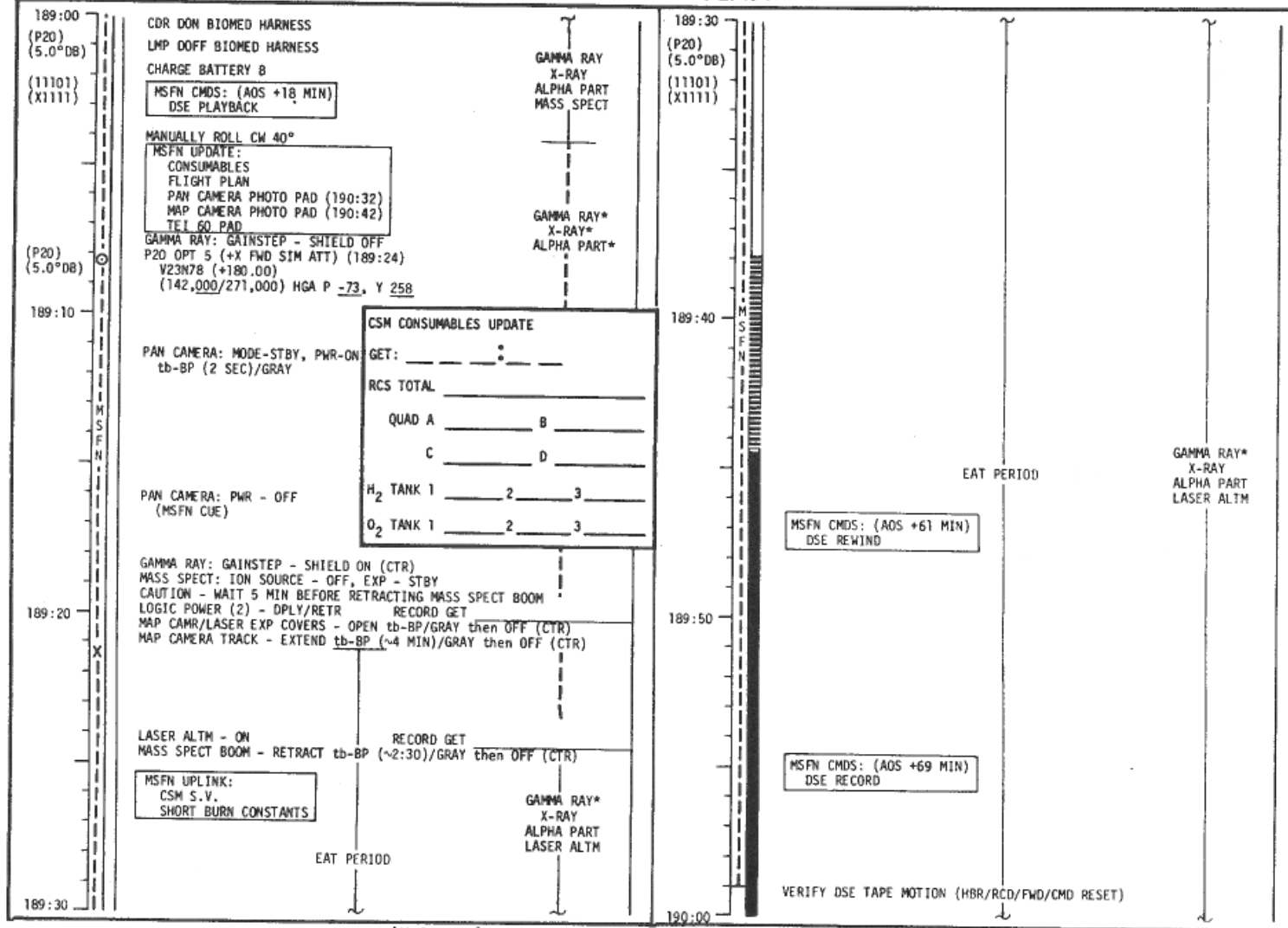
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-300

0534 L.L.

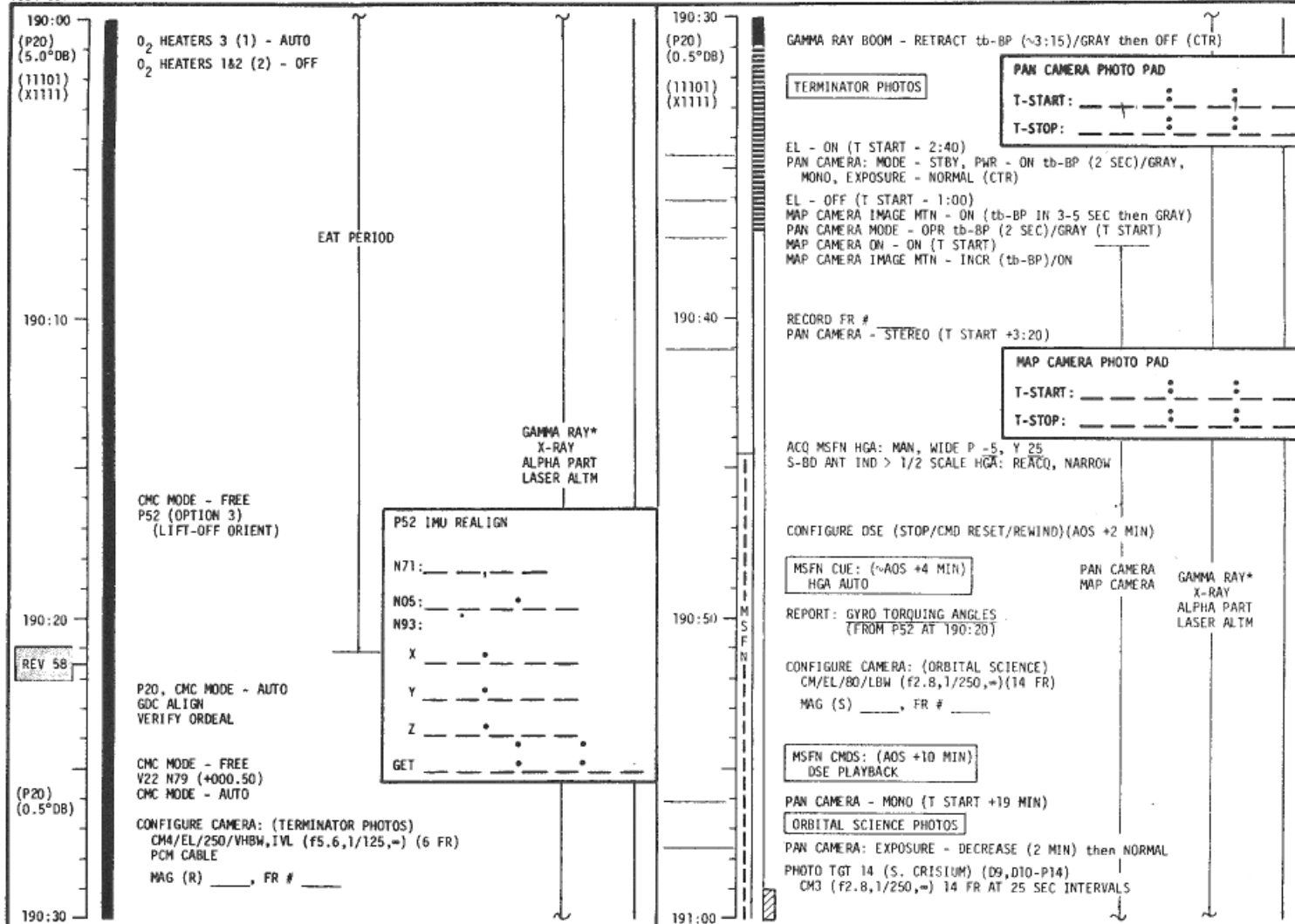
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-301

CSM FLIGHT PLAN

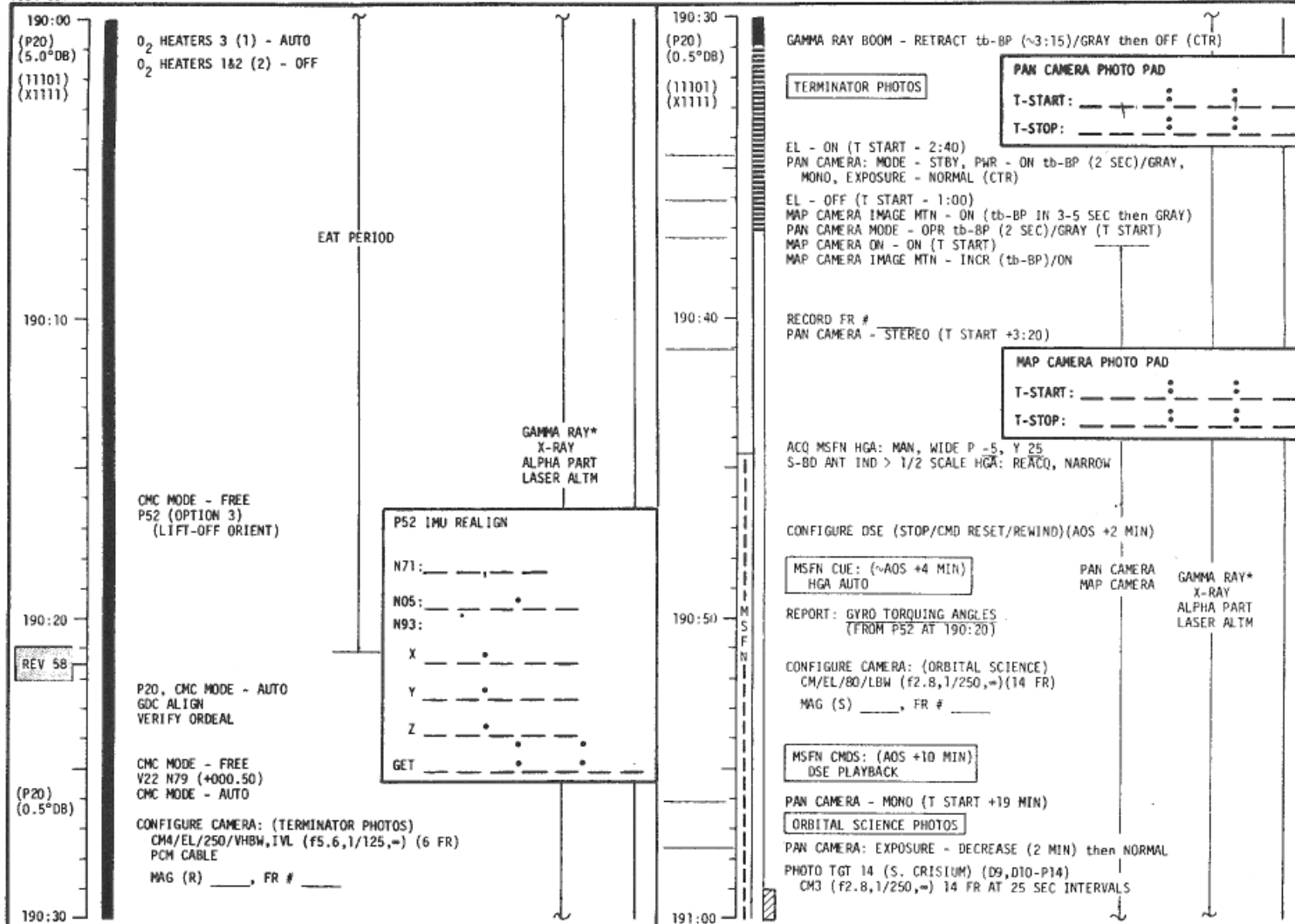
0634 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-302

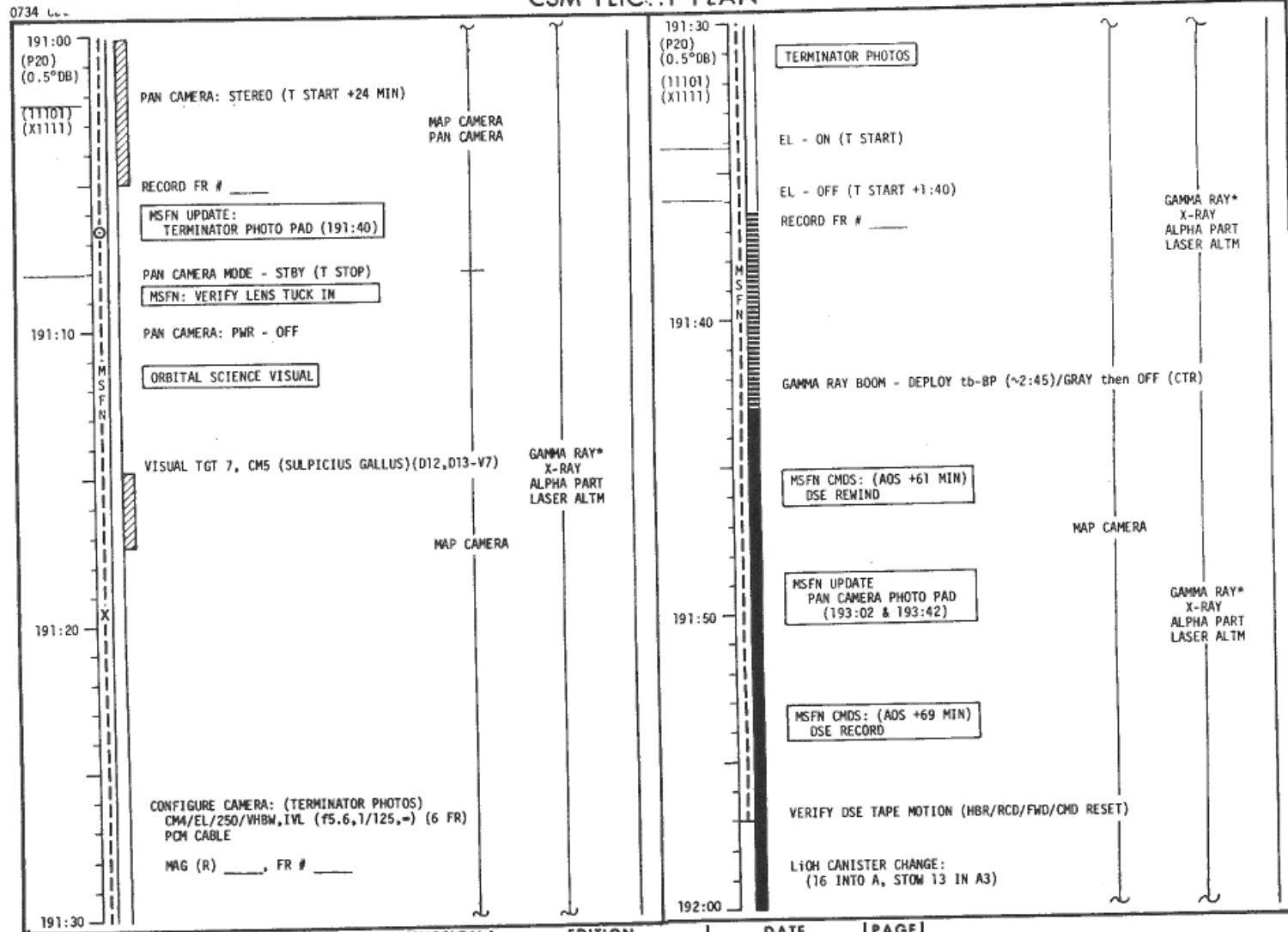
CSM FLIGHT PLAN

0634 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-302

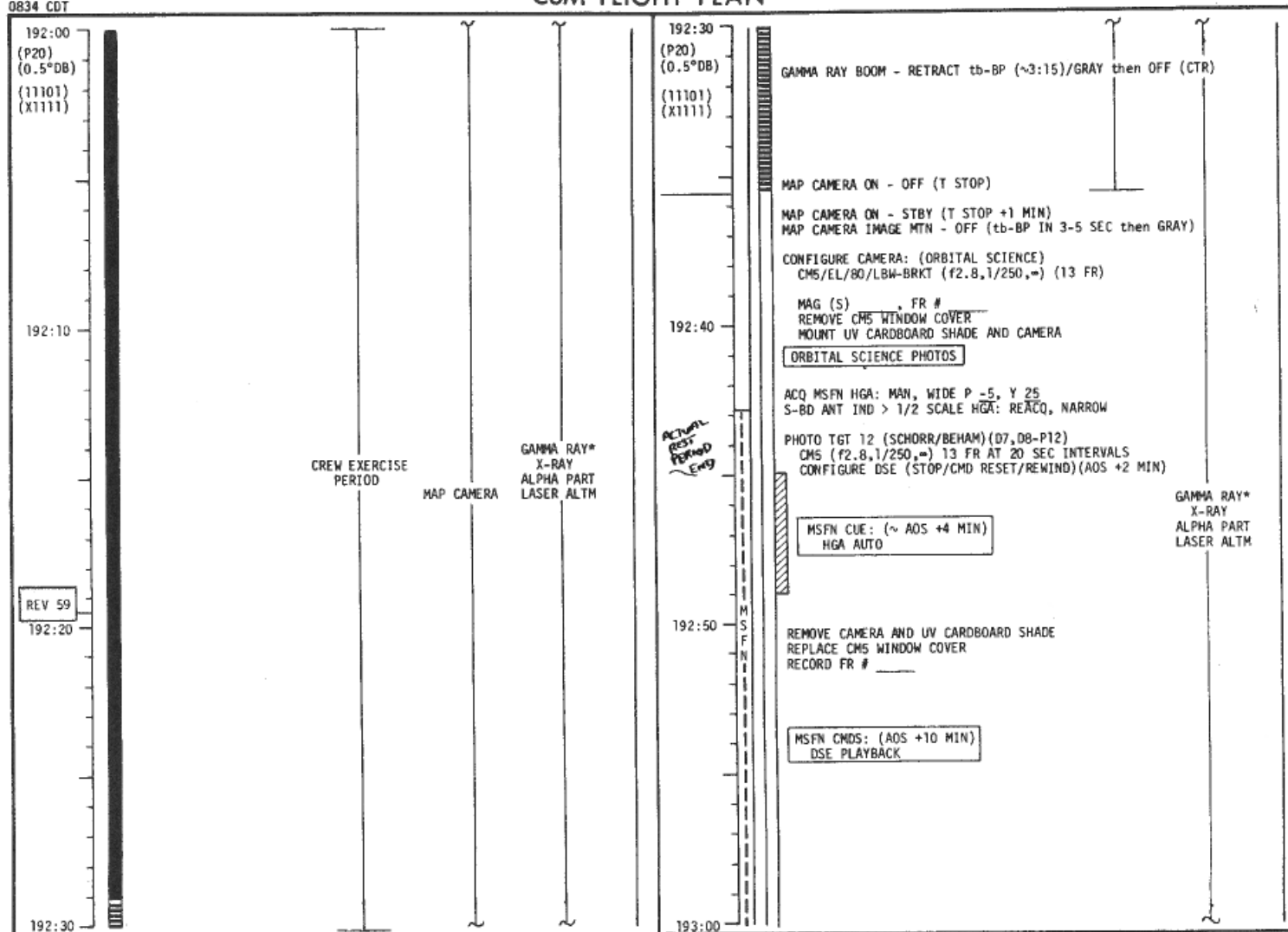
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-303

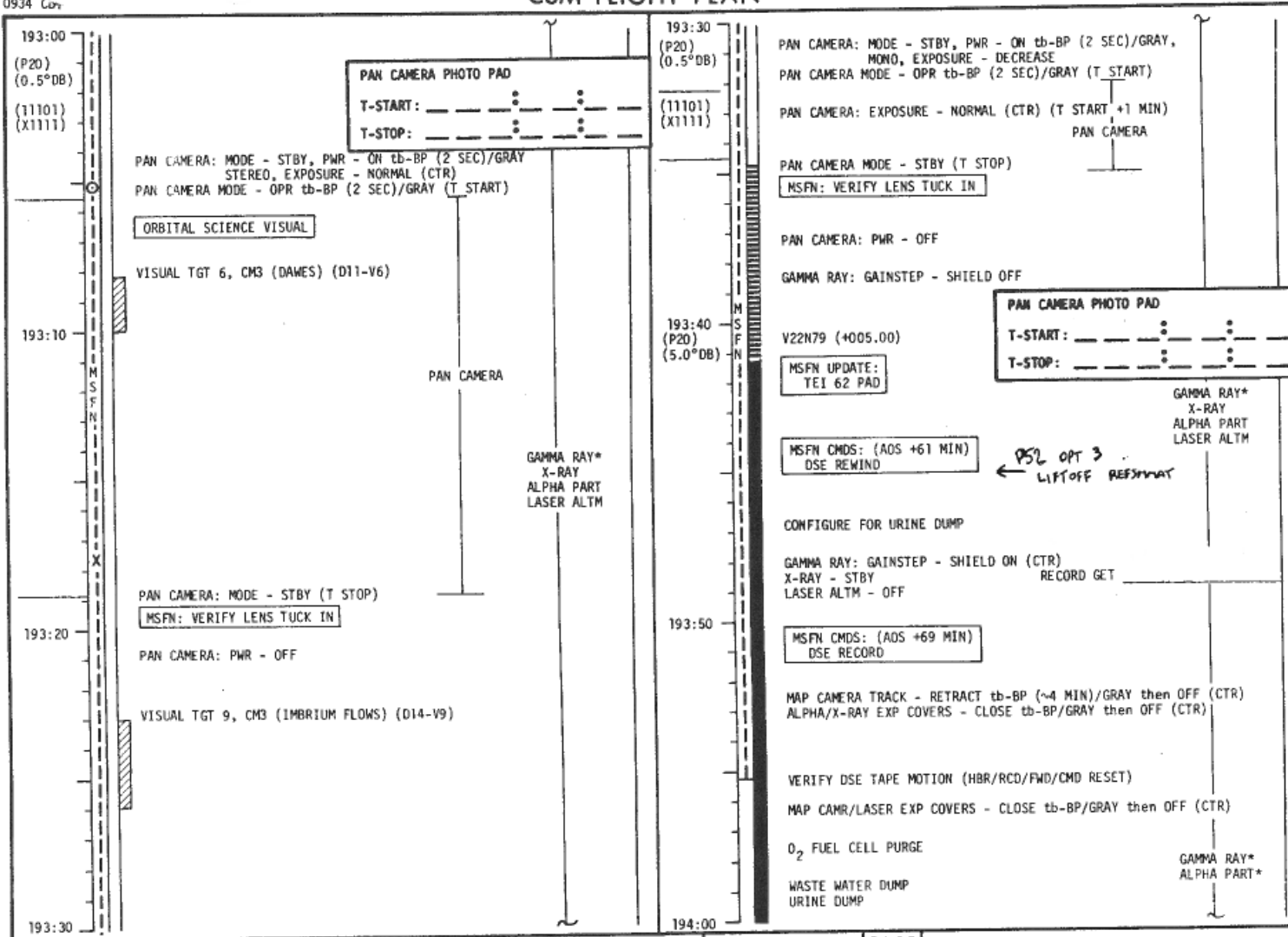
CSM FLIGHT PLAN

0834 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-304

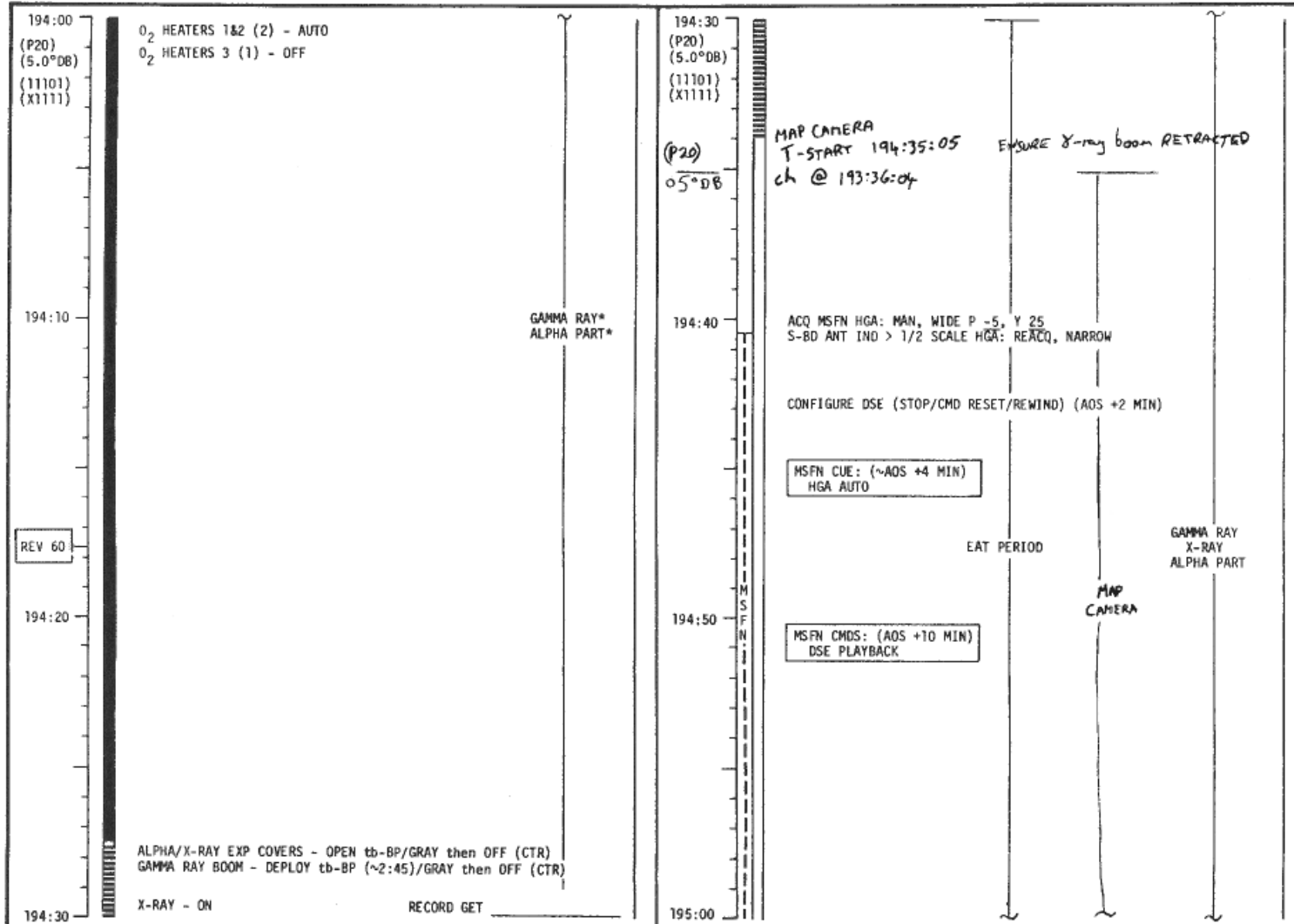
CSM FLIGHT PLAN



ch @ 193:09:58

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-305

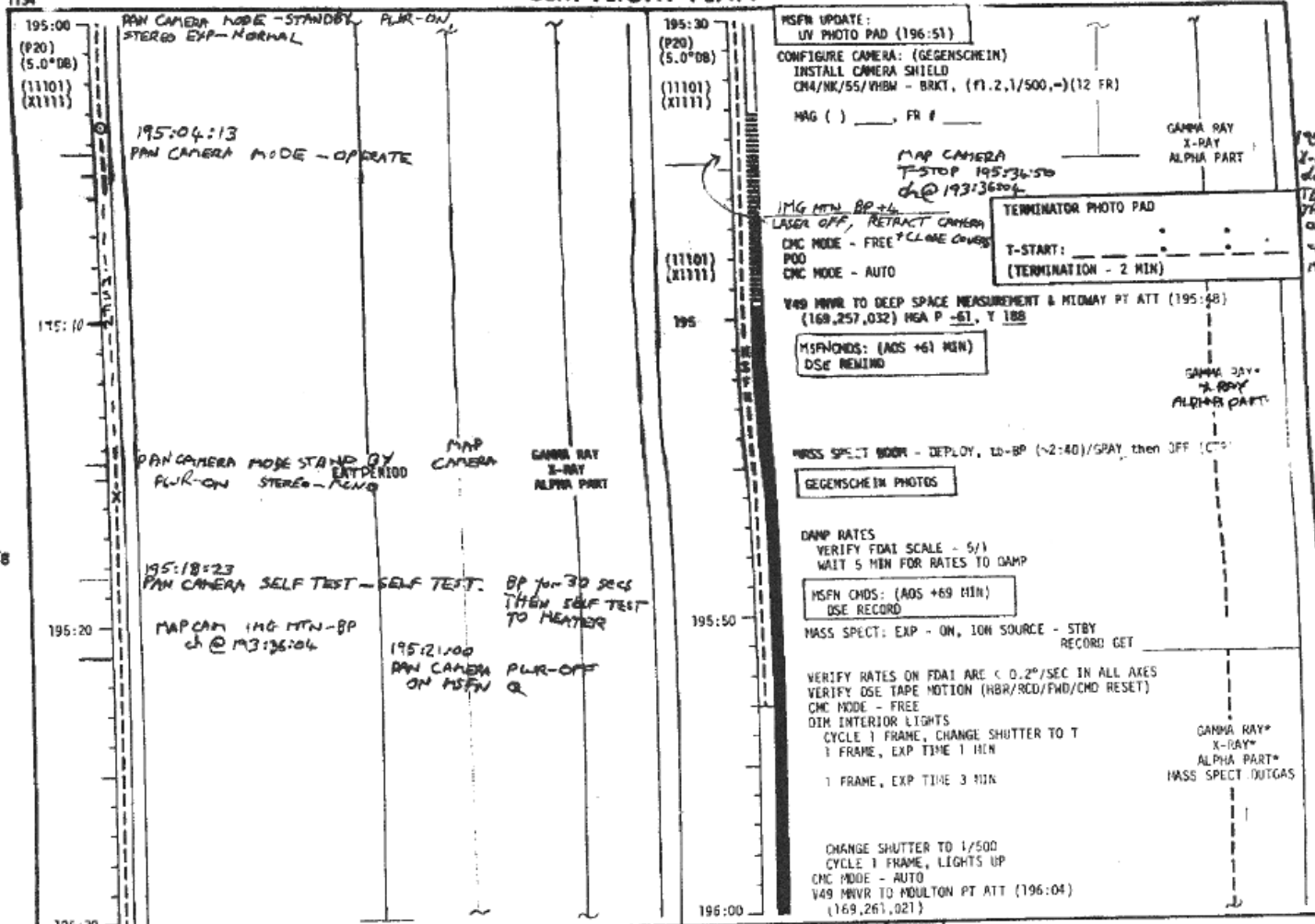
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-306

1134

CSM FLIGHT PLAN



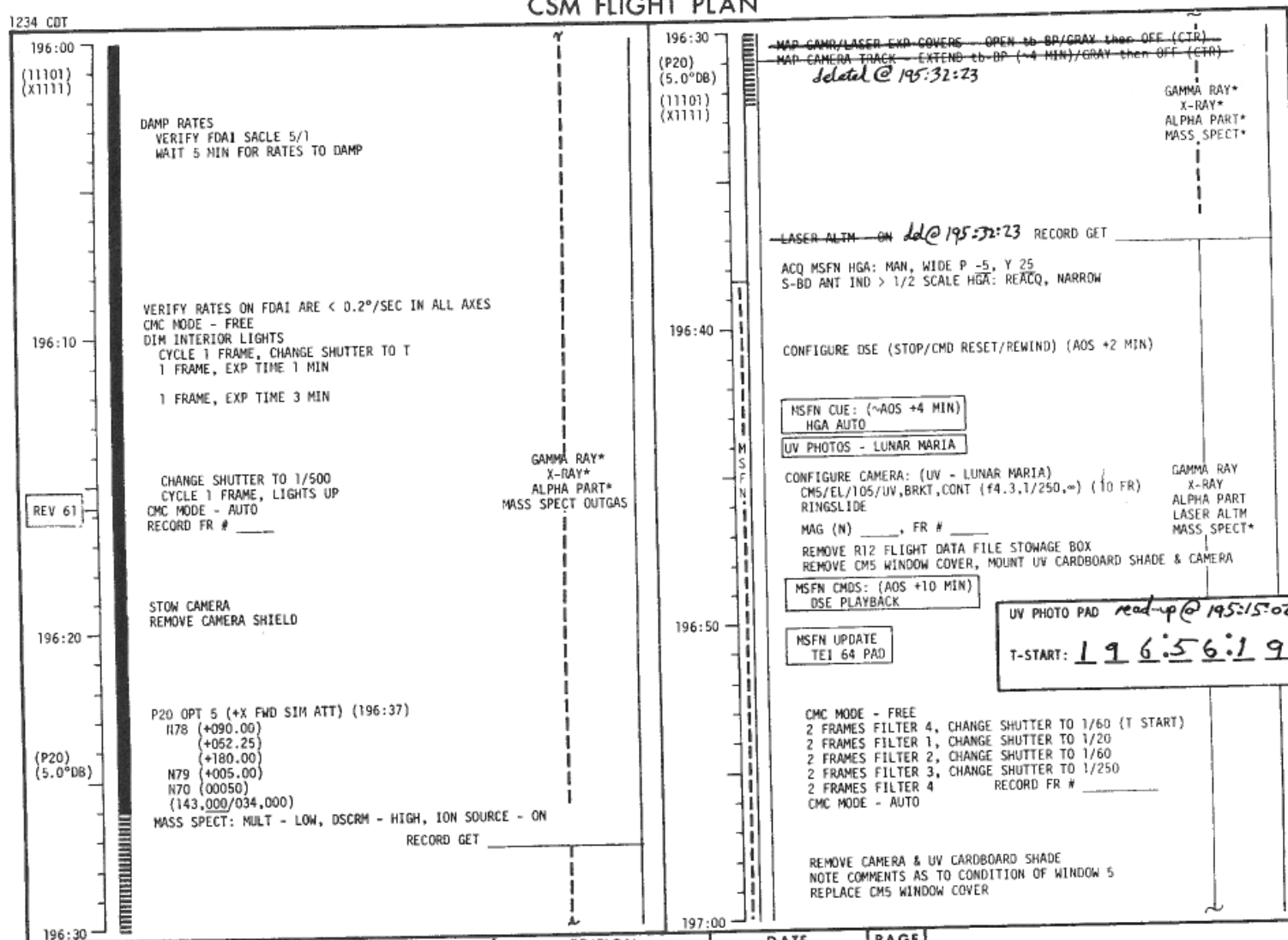
PAN CAM change @ 194:56:58

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-307

CSM FLIGHT PLAN

1234 CDT

Revised Plan:
 Rev 61 - UV photography - scheduled 196:40



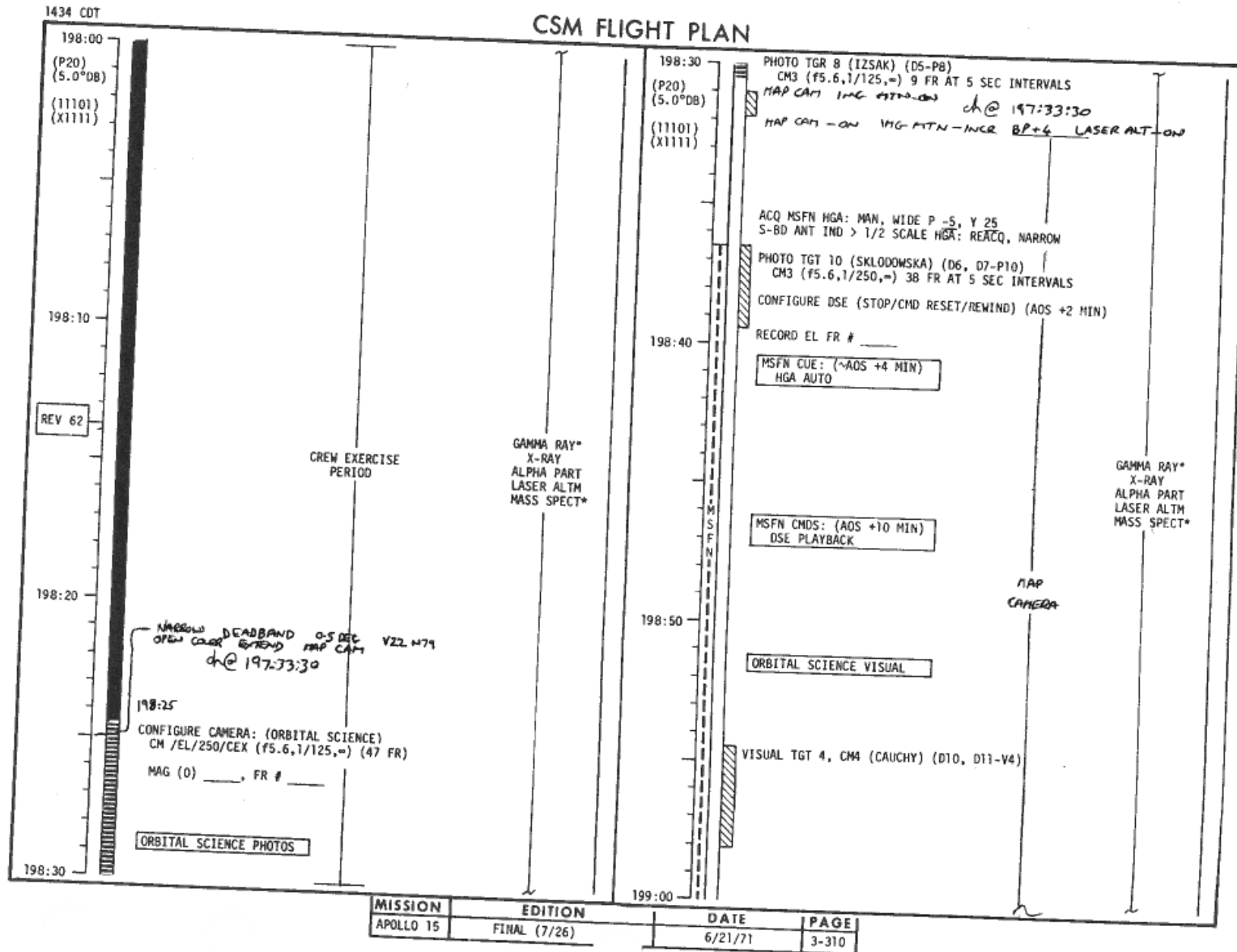
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-308

CSM FLIGHT PLAN

<p>197:00 (P20) (5.0°DB) (11101) (X1111)</p>	<p>LIGHT FLASH EXPERIMENT: UNSTOW EYE SHIELD SET KITCHEN TIMER TO 60 MIN 00:00 - DON EYE SHIELD, REPORT GET TO MSFN CREWMAN FACING LUNAR SURFACE</p> <p>PAN CAMERA: MODE STBY, PWR ON LB BP (2 SEC)/GRAY</p> <p>REPORT THE FOLLOWING TO MSFN: FREQUENCY OF FLASHES DESCRIPTION OF FLASHES CREWMAN HEAD POSITION WRT LUNAR SURFACE CREWMAN HEAD POSITION WRT TO SC AXES</p> <p><i>deleted @ 197:04:48</i></p> <p>PAN CAMERA: PWR OFF (MSFN CUE)</p>	<p>197:30 (P20) (5.0°DB) (11101) (X1111)</p>	<p>MSFN CMDS: (AOS +61 MIN) DSE REWIND</p> <p>CMC MODE FREE P52 (OPTION 3) (LIFT-OFF ORIENT) <i>ch @ 197:10:00</i></p> <p>REPORT: GYRO TORQUING ANGLES P20, CMC MODE - AUTO</p> <p>MSFN CMDS: (AOS +69 MIN) DSE RECORD</p> <p>50:00 - CONTINUE LIGHT FLASHING OBSERVATIONS EXCEPT CREWMAN FACING AWAY FROM MOON</p> <p>GDC ALIGN VERIFY ORDEAL</p> <p>VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)</p> <p>60:00 - TERMINATE LIGHT FLASHING OBSERVATIONS REMOVE AND STOW EYE SHIELD</p>	<p>197:10</p> <p>CSM SYSTEMS CHECKLIST</p> <p>CONTAMINATION CONTROL PAGE 5/1-16</p> <p>GAMMA RAY* X-RAY ALPHA PART LASER ALTM MASS SPECT*</p> <p><i>PAN CAMERA - OPERATE (51-30 STEPS CHECKLIST) ch @ 197:10:00</i></p> <p><i>PAN CAMERA - STANDBY</i></p> <p>ORBITAL SCIENCE VISUAL</p> <p>197:20</p> <p>VISUAL TGT 10, CMS (HARBINGER MTS) (D16-V10)</p> <p>VISUAL TGT 11, CMS (ARISTARCUS PLATEAU) (D16-V11)</p> <p>197:30</p>
--	--	--	---	---

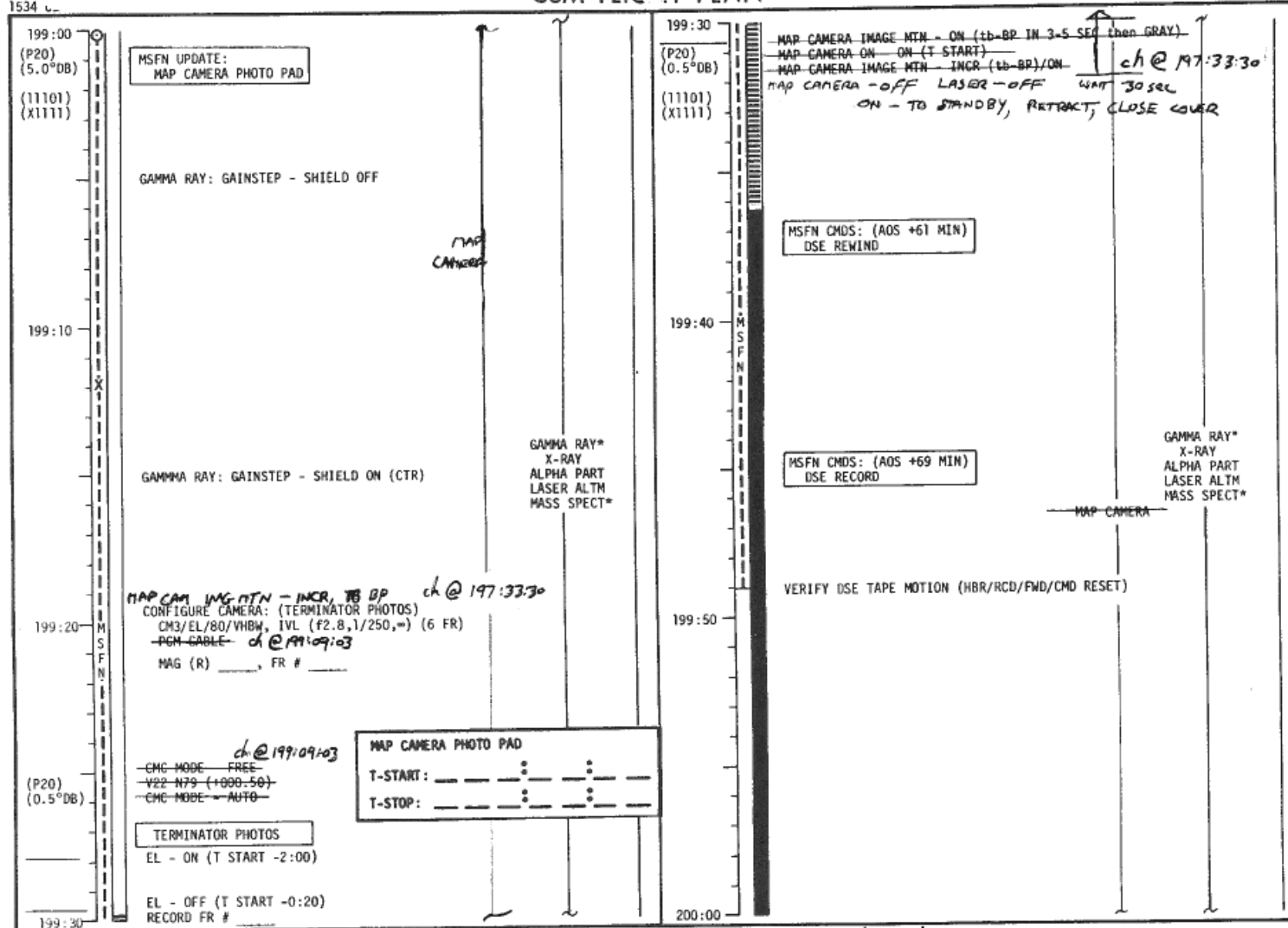
MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-309

Revised Flight Plan
 Rev 62 - Crew exercise - Science photos + visuals
 Mapping camera + laser altimeter
 Terminator photos.



1534 c

CSM FLIGHT PLAN

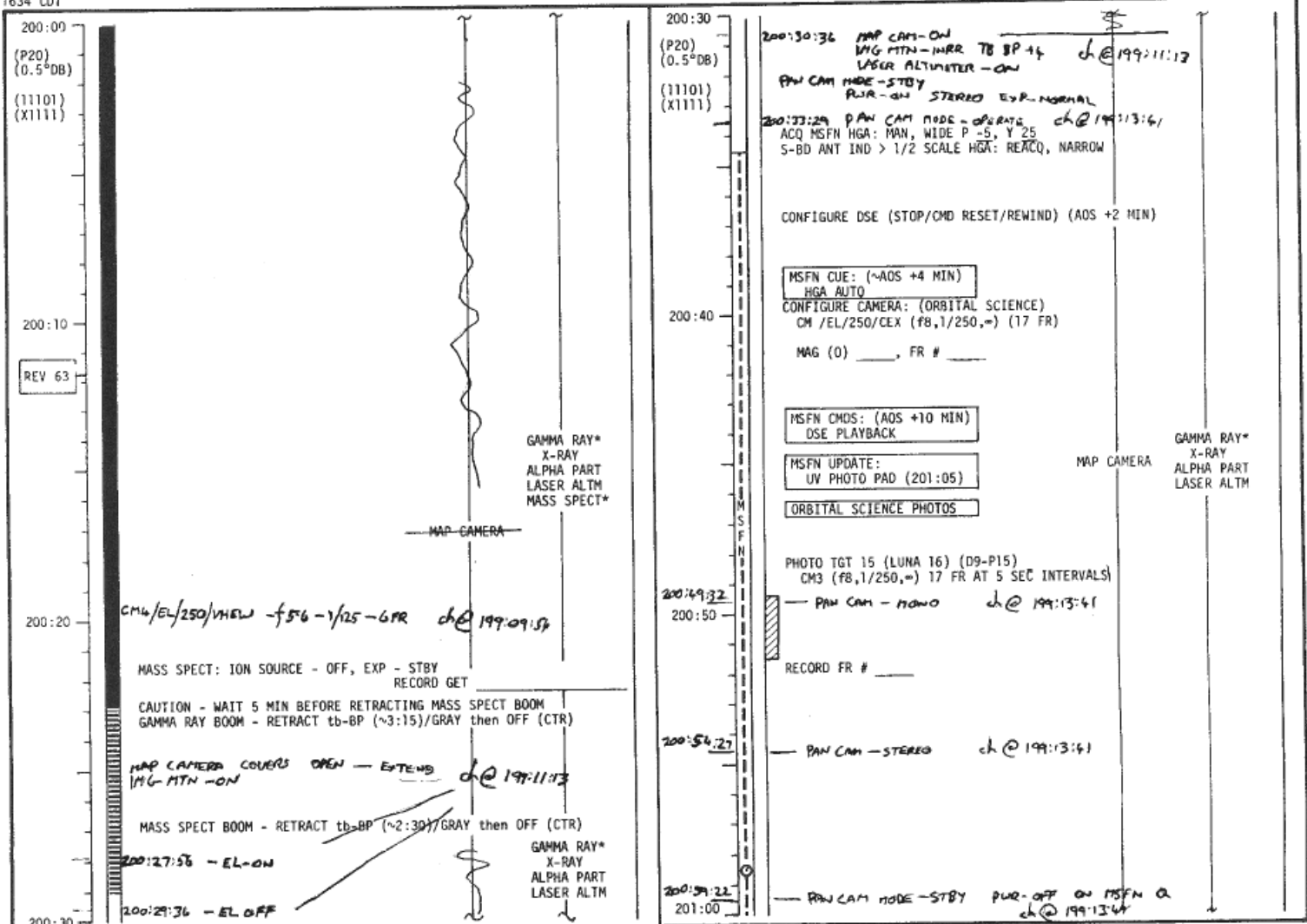


MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-311

Revised Flight Plan
 Rev 63 - Mapping Camera, Laser Altimeter, Pan Camera, UV and Terminator Photos

1634 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-312

1734 21

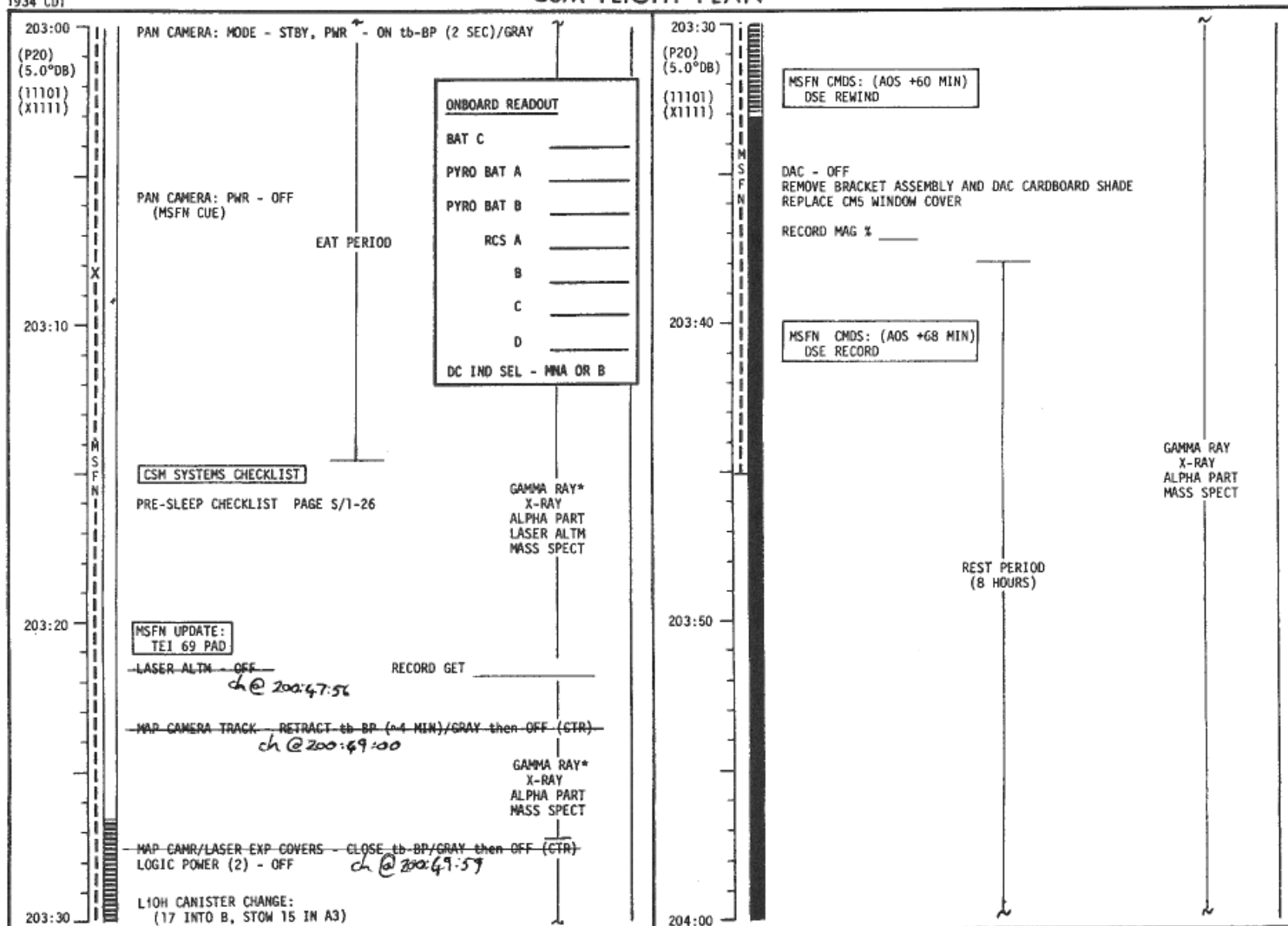
CSM FLIGHT PLAN

<p>201:00 (P20) (0.5°DB)</p> <p>(11101) (X1111)</p>	<p>CONFIGURE CAMERA: (UV - LUNAR TERRA) CM5/EL/105/UV,BRKT,CONT (FB,1/250,=) (10 FR) RINGSLIDE MAG (N) _____, FR # _____ REMOVE RT2 FLIGHT DATA FILE STORAGE BOX REMOVE CM5 WINDOW COVER, MOUNT UV CARDBOARD SHADE AND CAMERA</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>UV PHOTO PAD <i>ch @ 200:47:00</i></p> <p>T-START: <u>201:11:19</u> (5° E)</p> </div> <p>UV PHOTOS - LUNAR TERRA</p> <p>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</p> <p>RECORD FR # _____ REMOVE CAMERA AND UV CARDBOARD SHADE NOTE COMMENTS AS TO CONDITION OF WINDOW 5 REPLACE CM5 WINDOW COVER</p> <p><i>MAP CAM 1/16 FWH - INCR TB-BP ch @ 199:13:41</i></p> <p>CONFIGURE CAMERA: (TERMINATOR PHOTOS) CM3/EL/250/VHBM,IVL (f5.6,1/125,=)(6 FR) PCM CABLE <i>del @ 200:47:22</i></p> <p>MAG (R) _____, FR # _____</p> <p>MAP CAMERA</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>TERMINATOR PHOTOS</p> </div> <p>EL - ON (T STOP -2:00)</p> <p>EL - OFF (T STOP -0:20)</p> <p>MAPPING CAMERA ON - OFF (T STOP)</p> <p>RECORD FR # _____</p>	<p>201:30 (P20) (0.5°DB)</p> <p>(11101) (X1111)</p>	<p>MAP CAMERA ON - STBY (T STOP +1 MIN) MAP CAMERA IMAGE MIN - OFF (tb-BP IN 3-5 SEC then GRAY)</p> <p>MANUALLY ROLL CCW 40° <i>2nd ch @ 200:52:29 returning to printed instructions as part of laser filter test</i></p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>MSFN CMDS: (AOS +61 MIN) DSE REWIND</p> </div> <p>P20 OPT 5 (-X FWD SIM ATT) (201:50) V23N78 (+000.00) V22N79 (+005.00) (323,180/343,000)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>P52 IMU REALIGN</p> <p>N71: _____</p> <p>N05: _____</p> <p>N93: _____</p> <p>X _____</p> <p>Y _____</p> <p>Z _____</p> <p>GET _____</p> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>MSFN CMDS: (AOS +69 MIN) DSE RECORD</p> </div> <p>VERIFY DSE TAPE MOTION (HBR/RCD/FWD/CMD RESET)</p> <p>CMC MODE - FREE P52 (OPTION 3) (LIFT-OFF ORIENT)</p> <p>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)</p>
<p>201:10</p> <p>201:17:00</p> <p>201:20</p> <p>201:30</p>	<p>201:40</p> <p>201:50</p> <p>202:00</p>	<p>201:30</p> <p>201:40</p> <p>201:50</p> <p>202:00</p>	<p>GAMMA RAY* X-RAY* ALPHA PART* LASER ALTM*</p> <p>GAMMA RAY* X-RAY* ALPHA PART* LASER ALTM*</p>

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-313

CSM FLIGHT PLAN

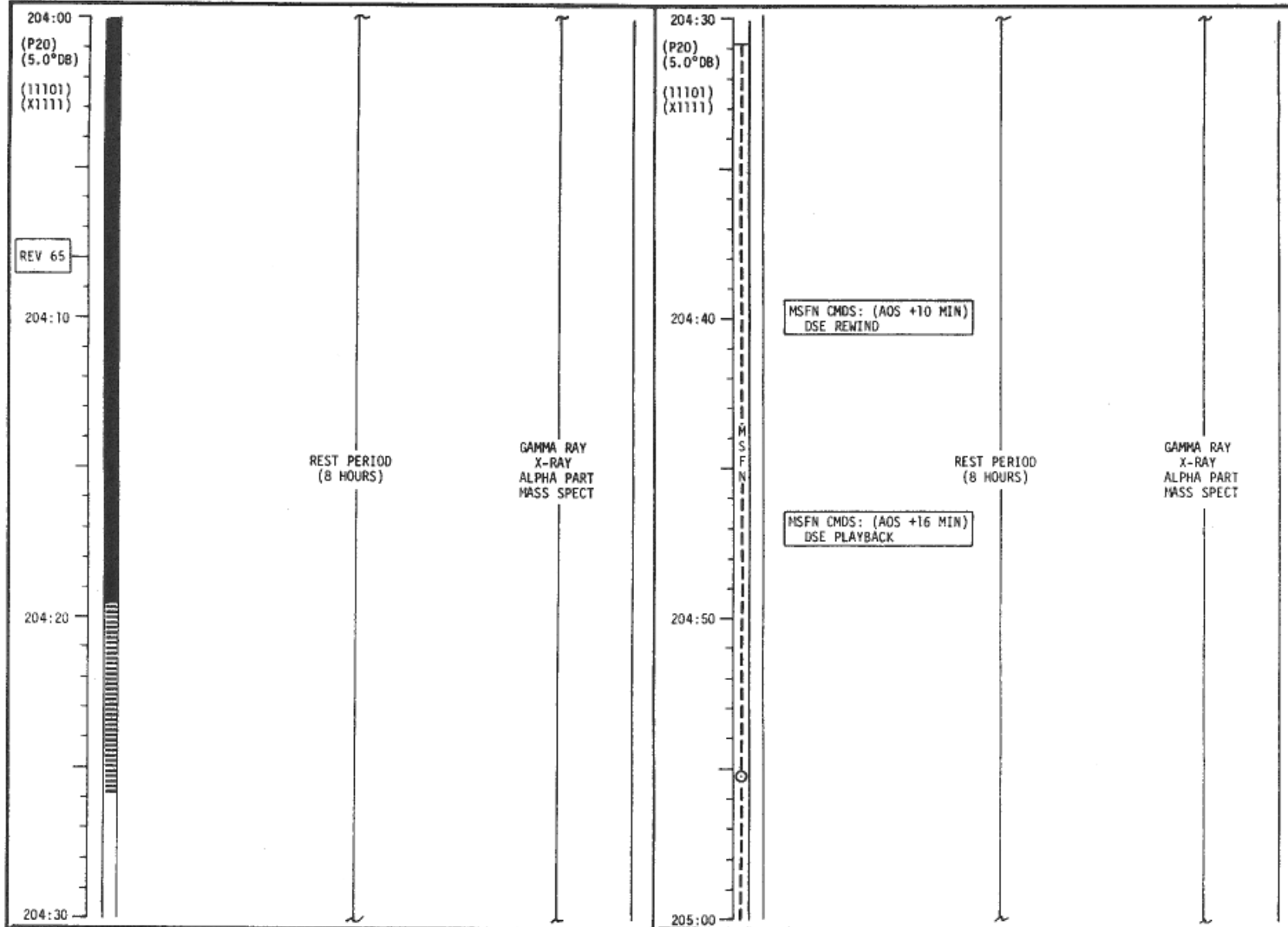
1934 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-315

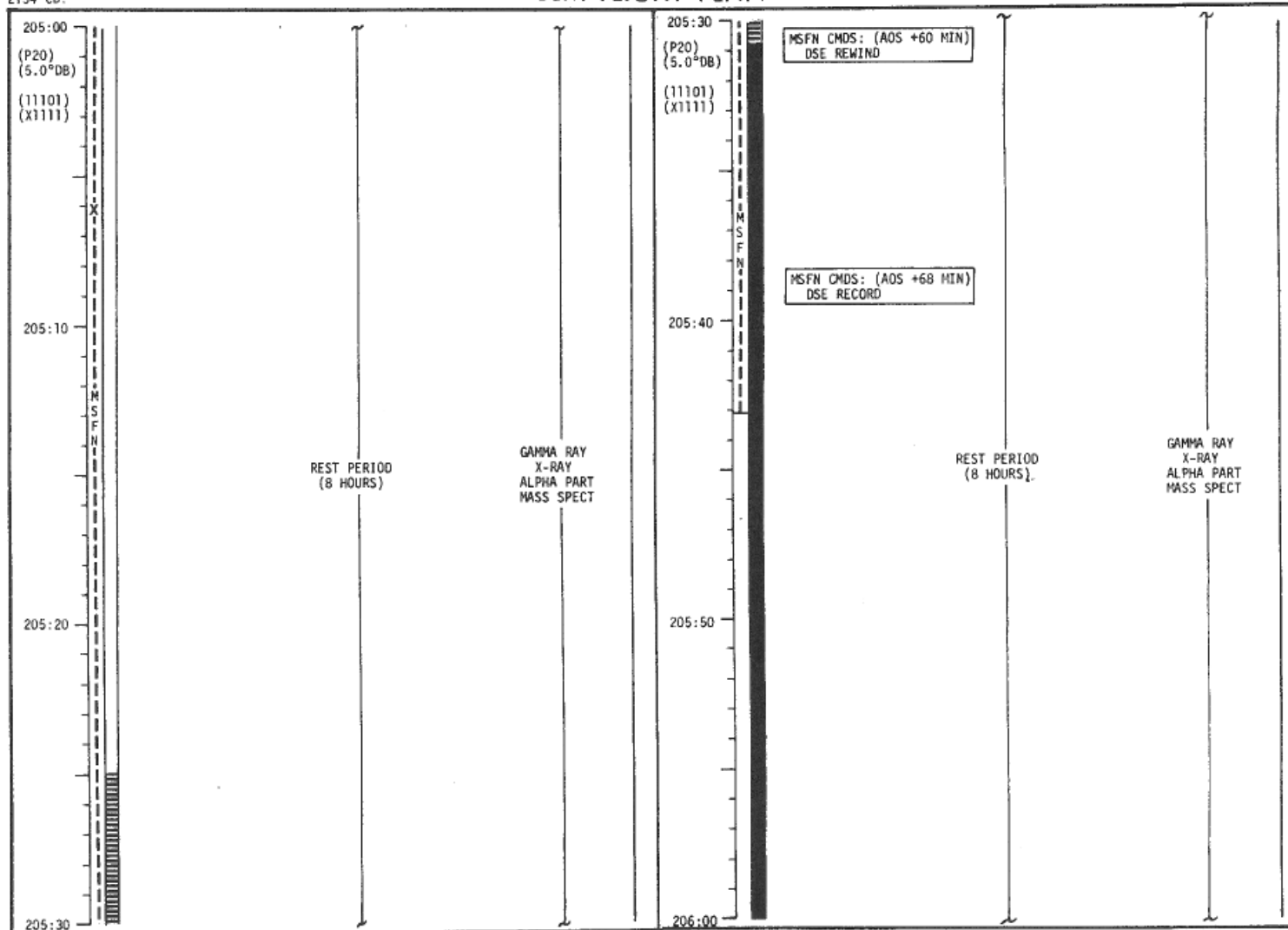
2034 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-316

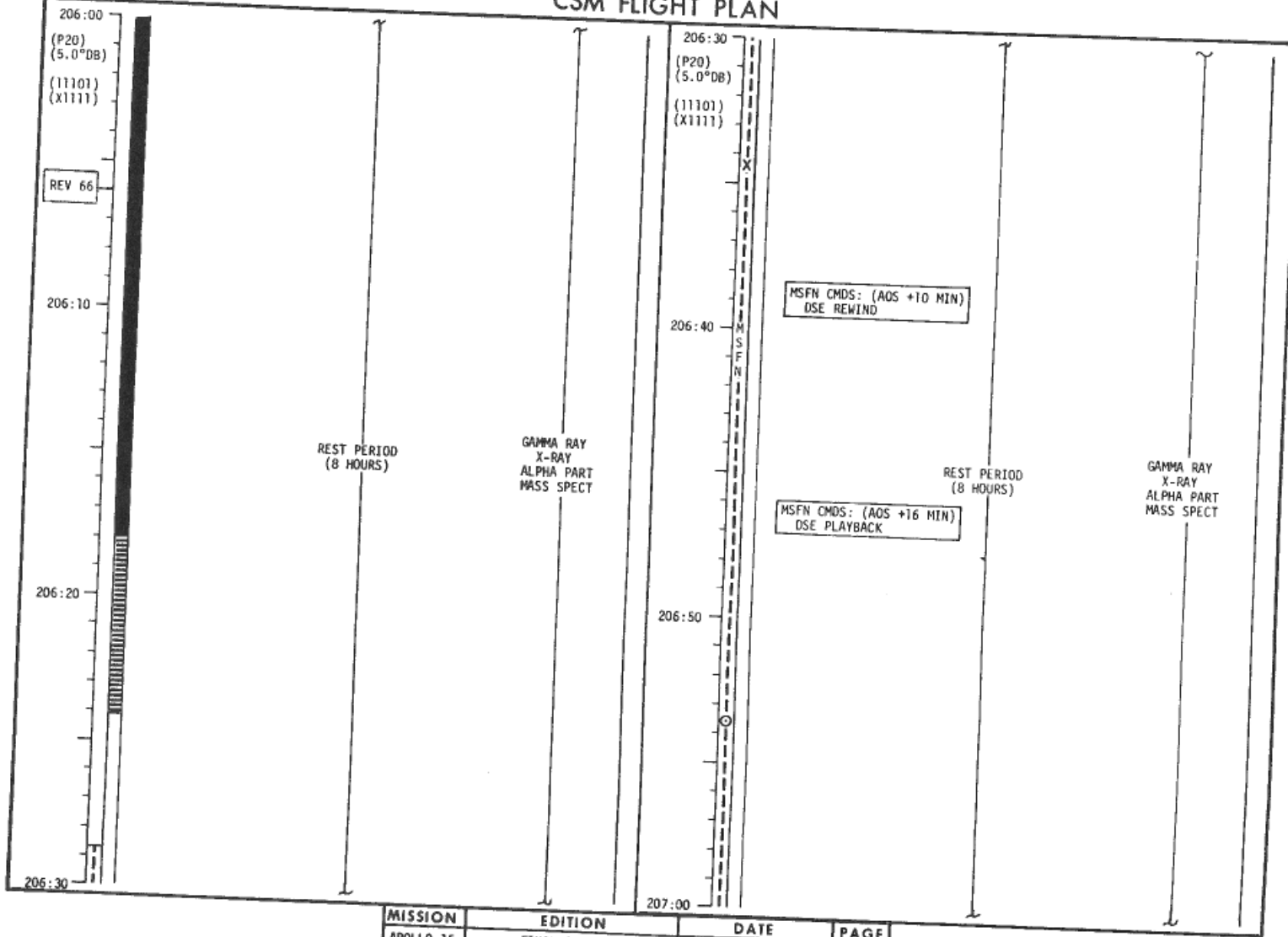
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-317

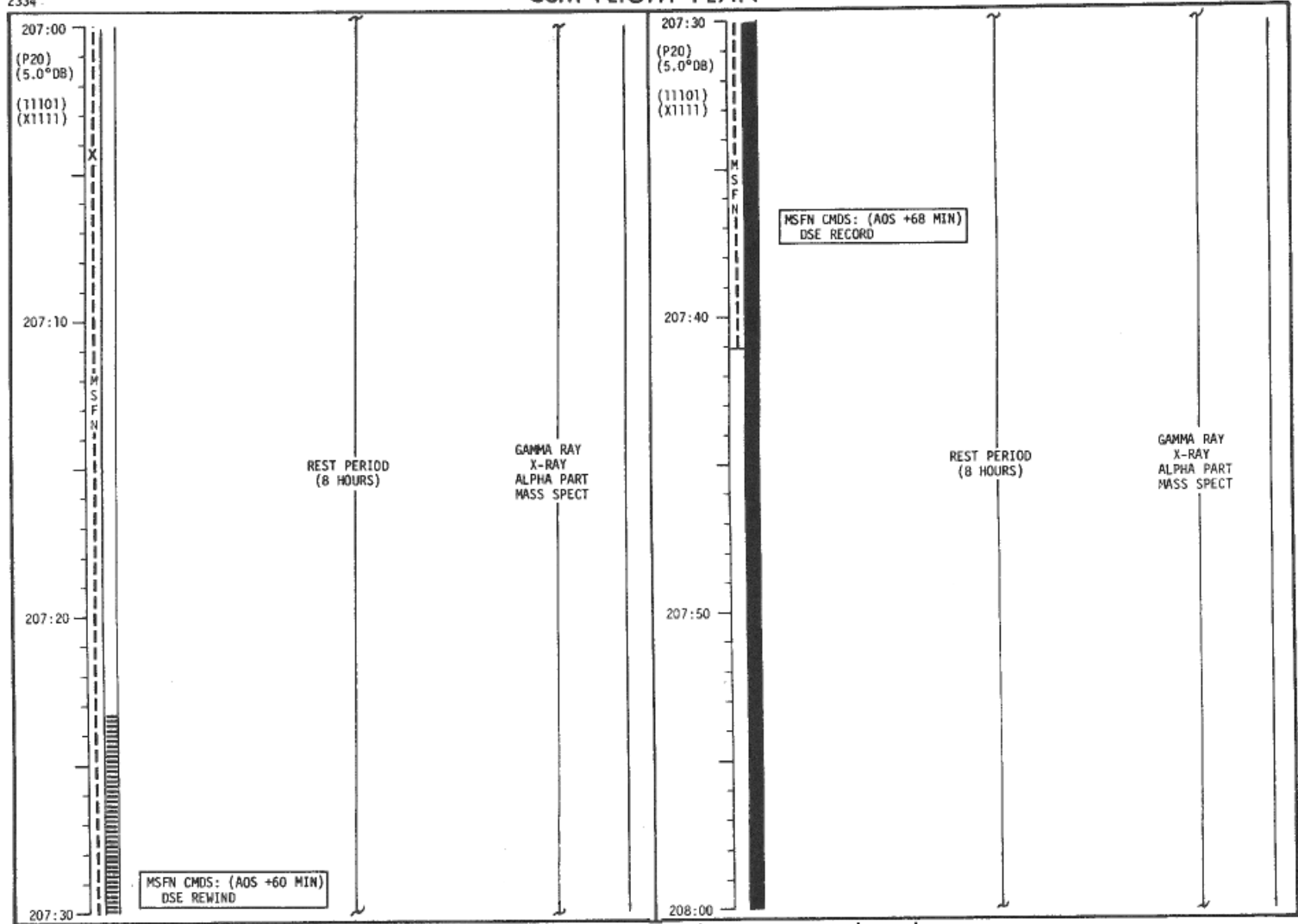
2234 CDT

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-318

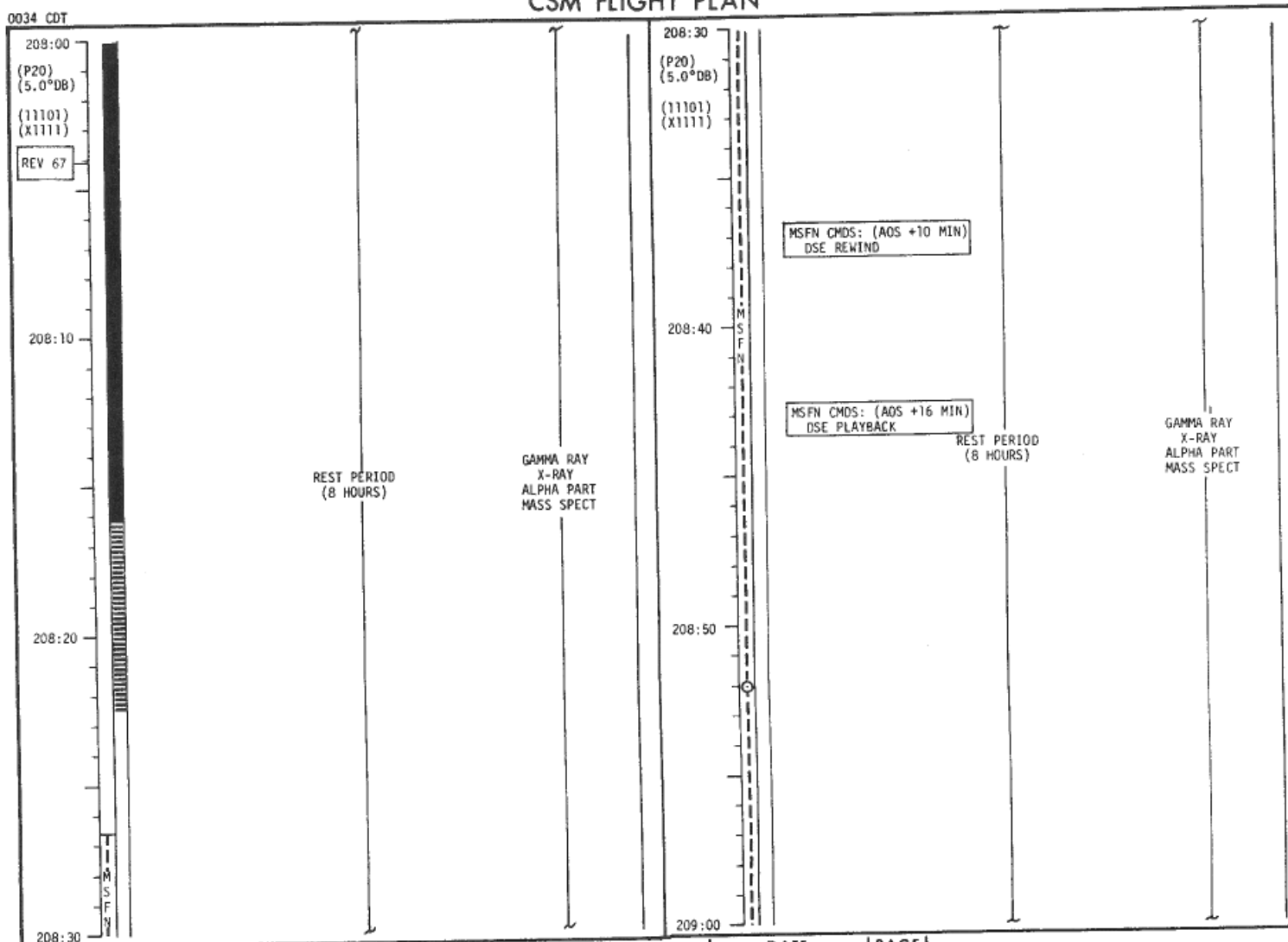
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-319

CSM FLIGHT PLAN

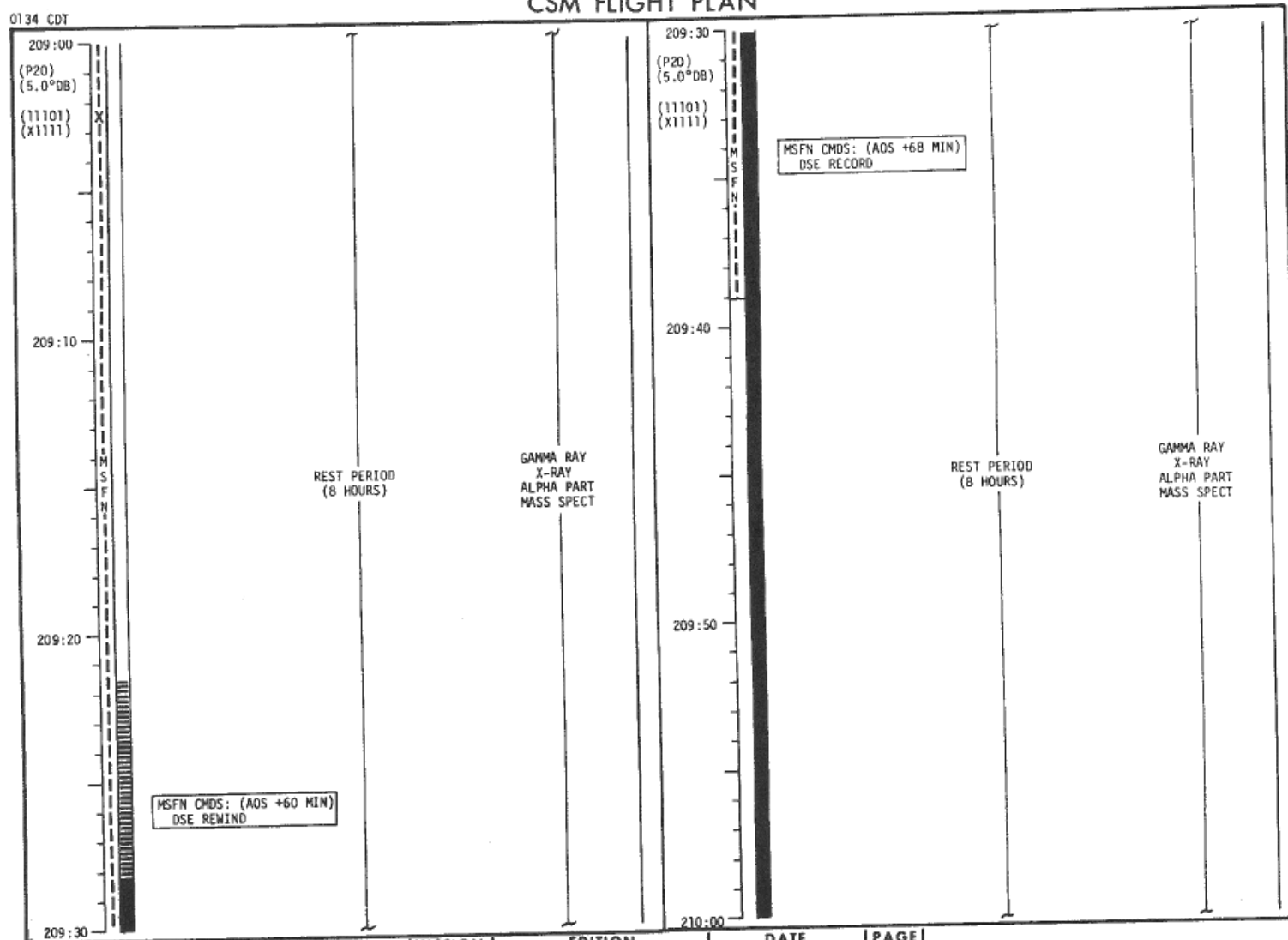
0034 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-320

CSM FLIGHT PLAN

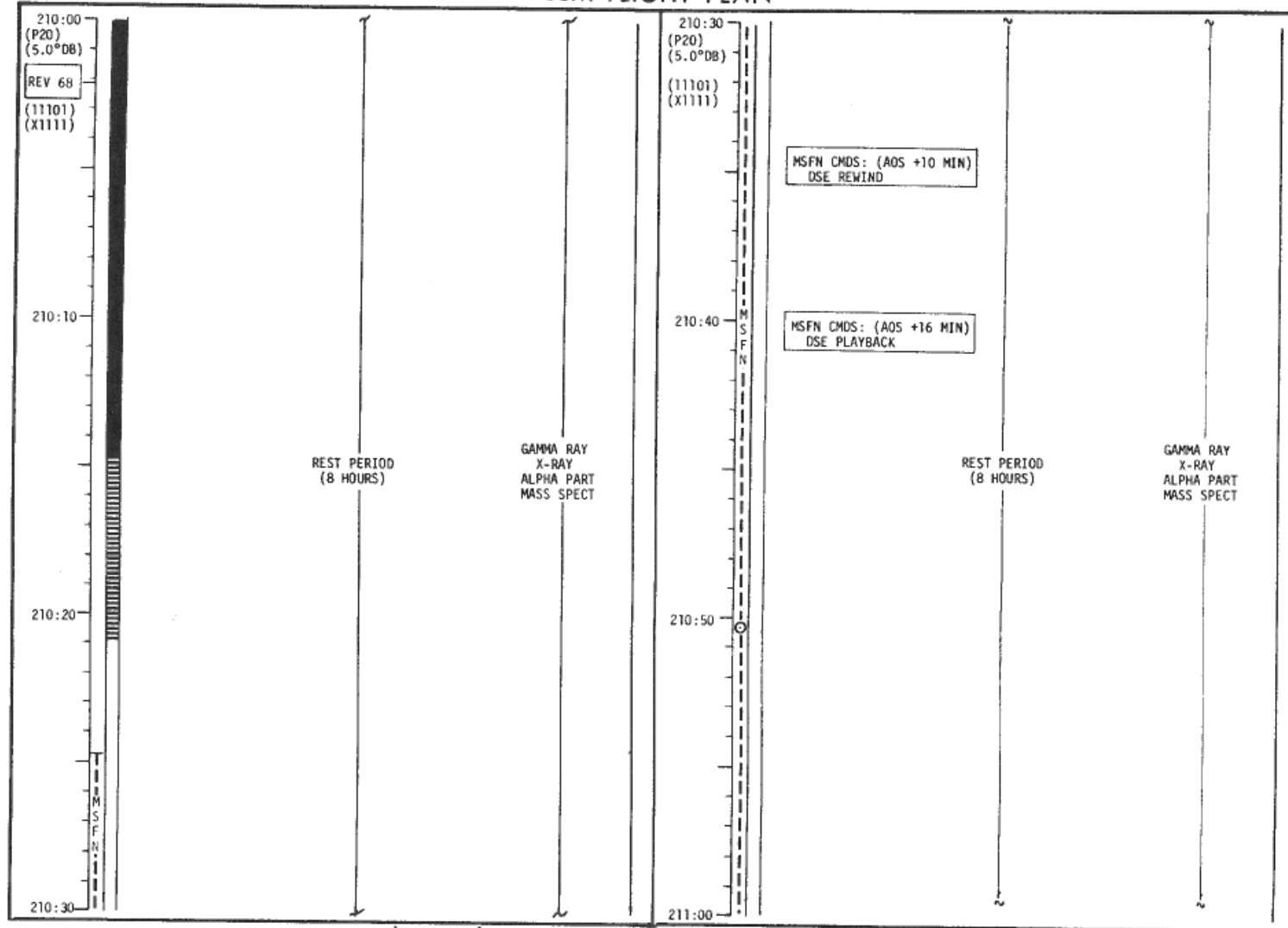
0134 CDT



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-321

0234 CDT

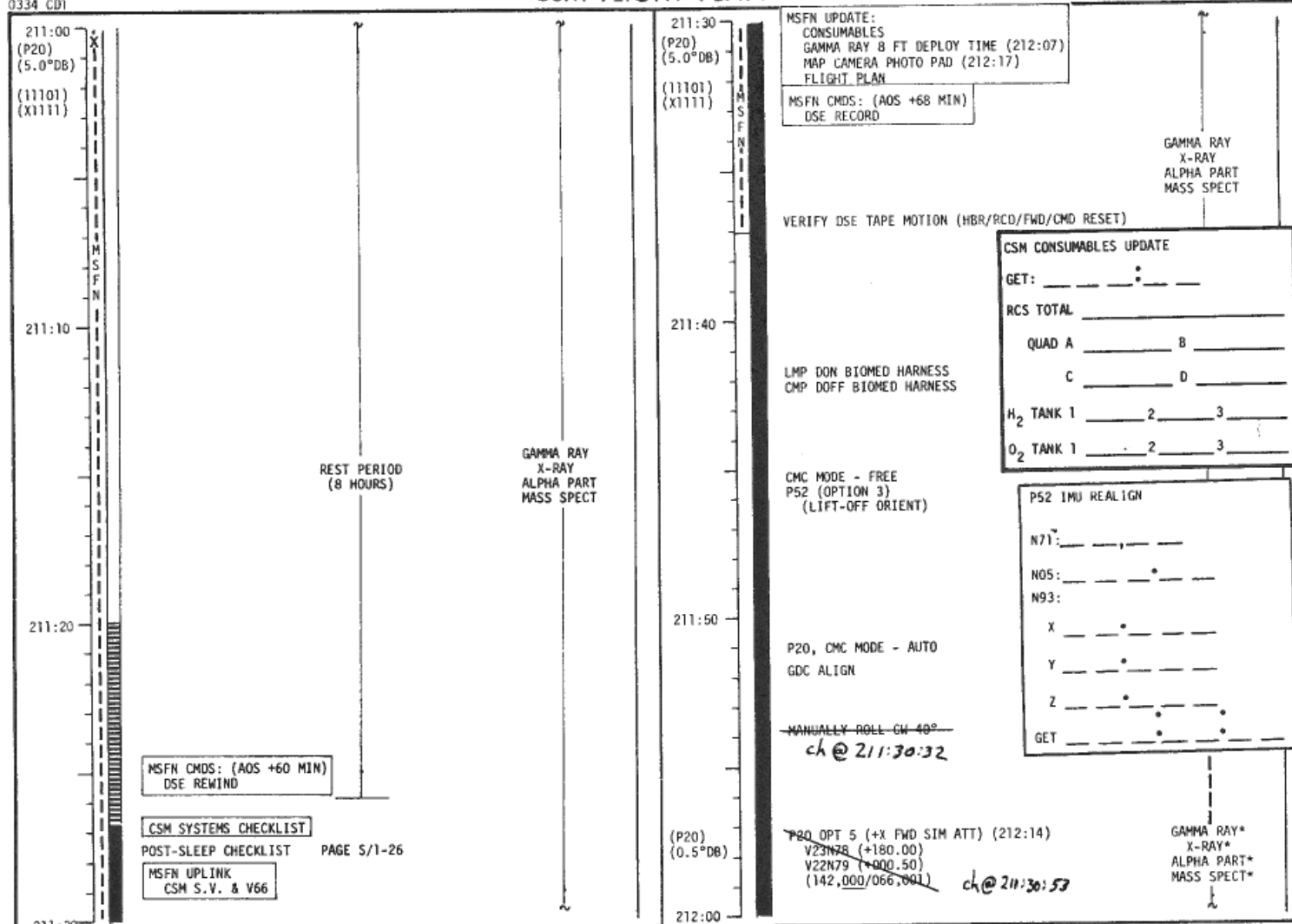
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-322

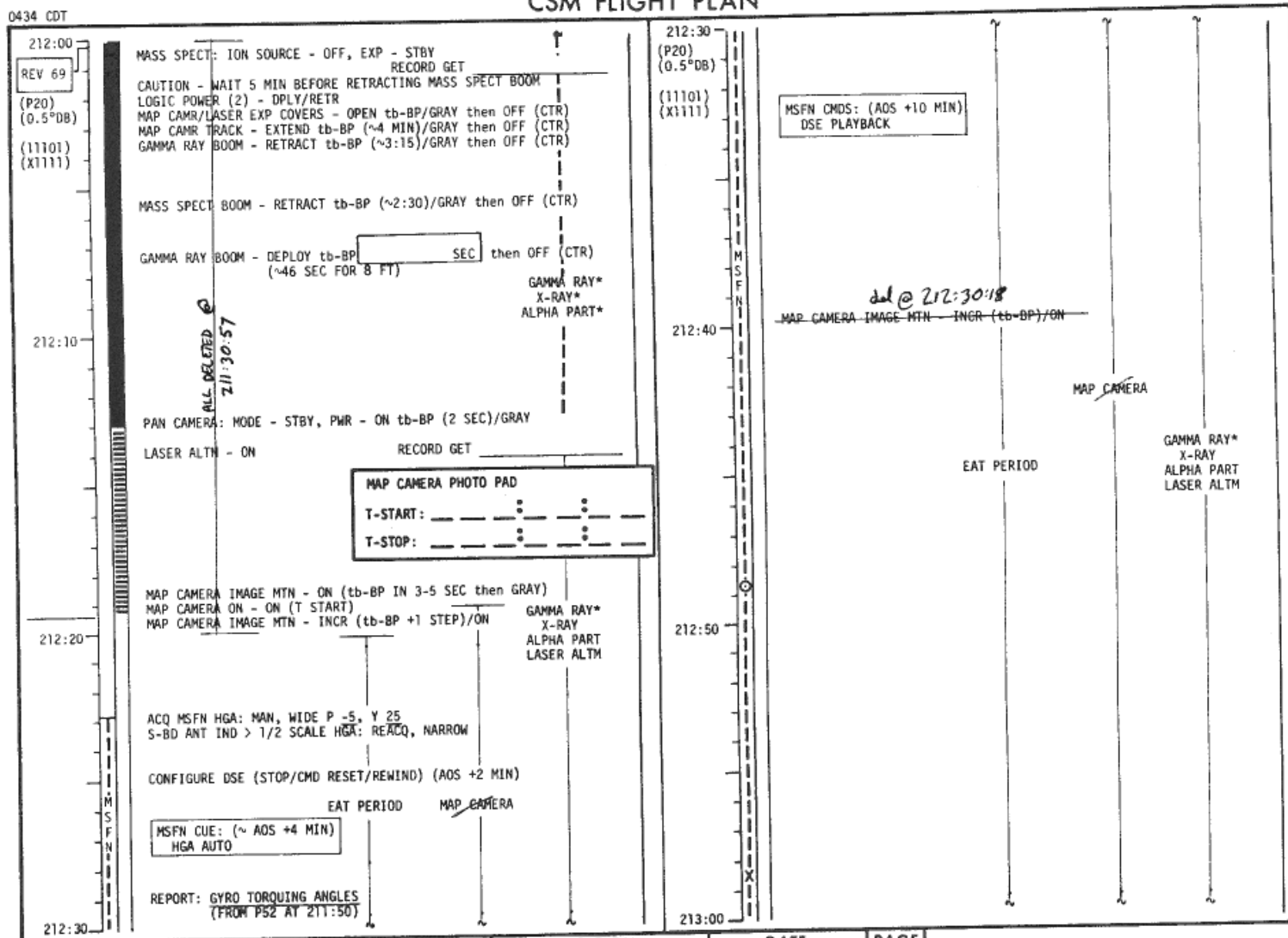
CSM FLIGHT PLAN

0334 CD1



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-323

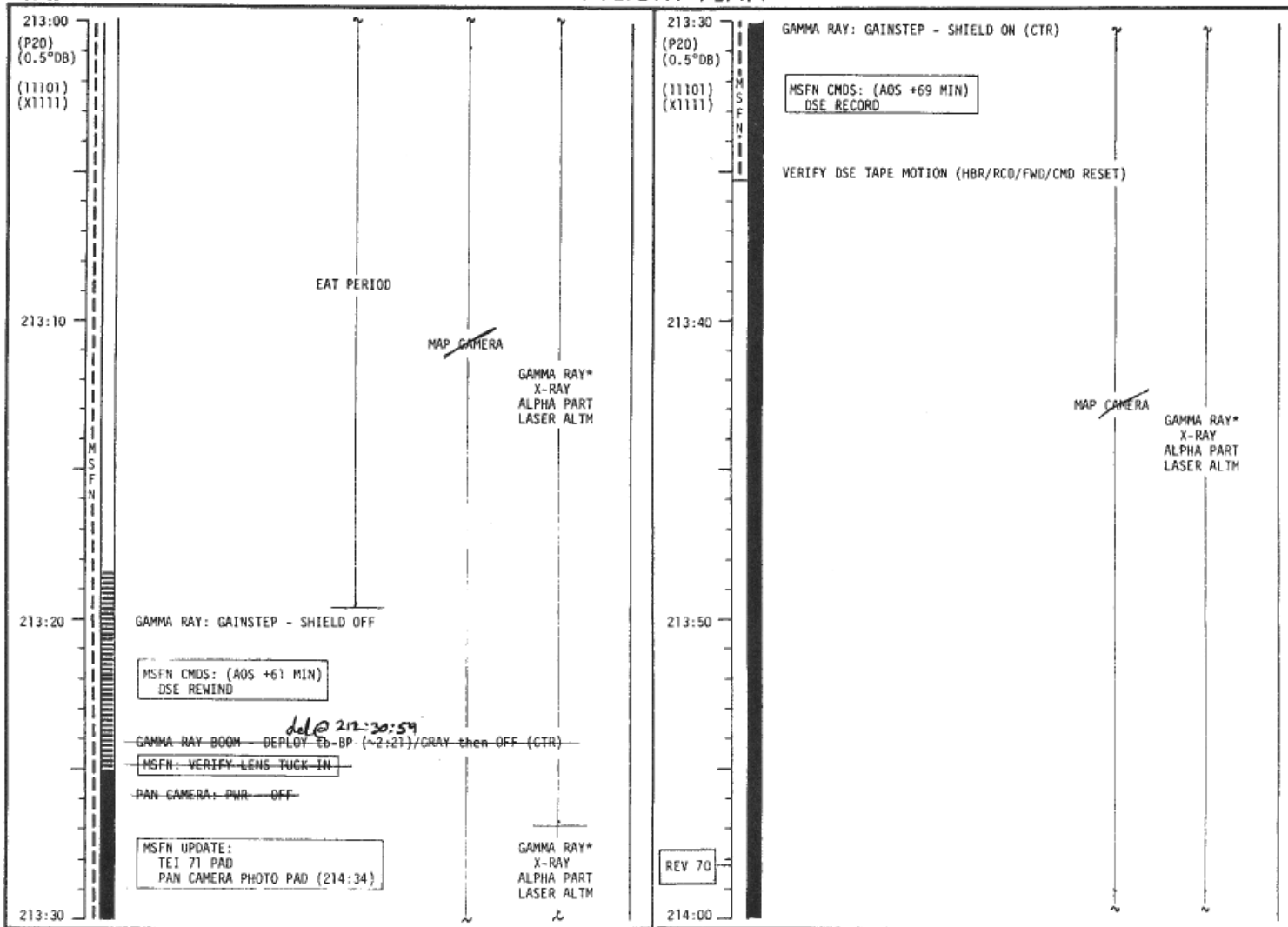
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-324

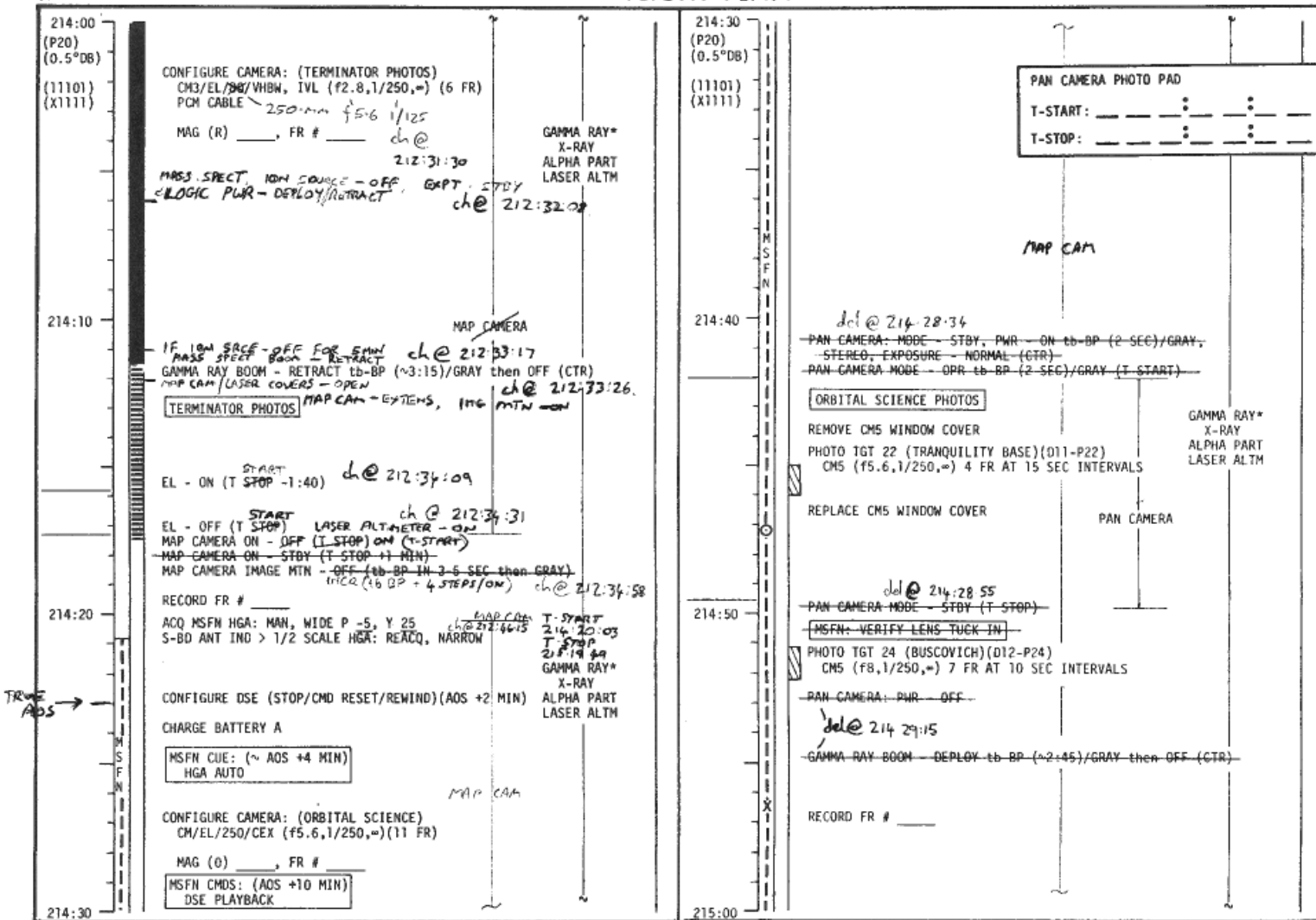
0534 C

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-325

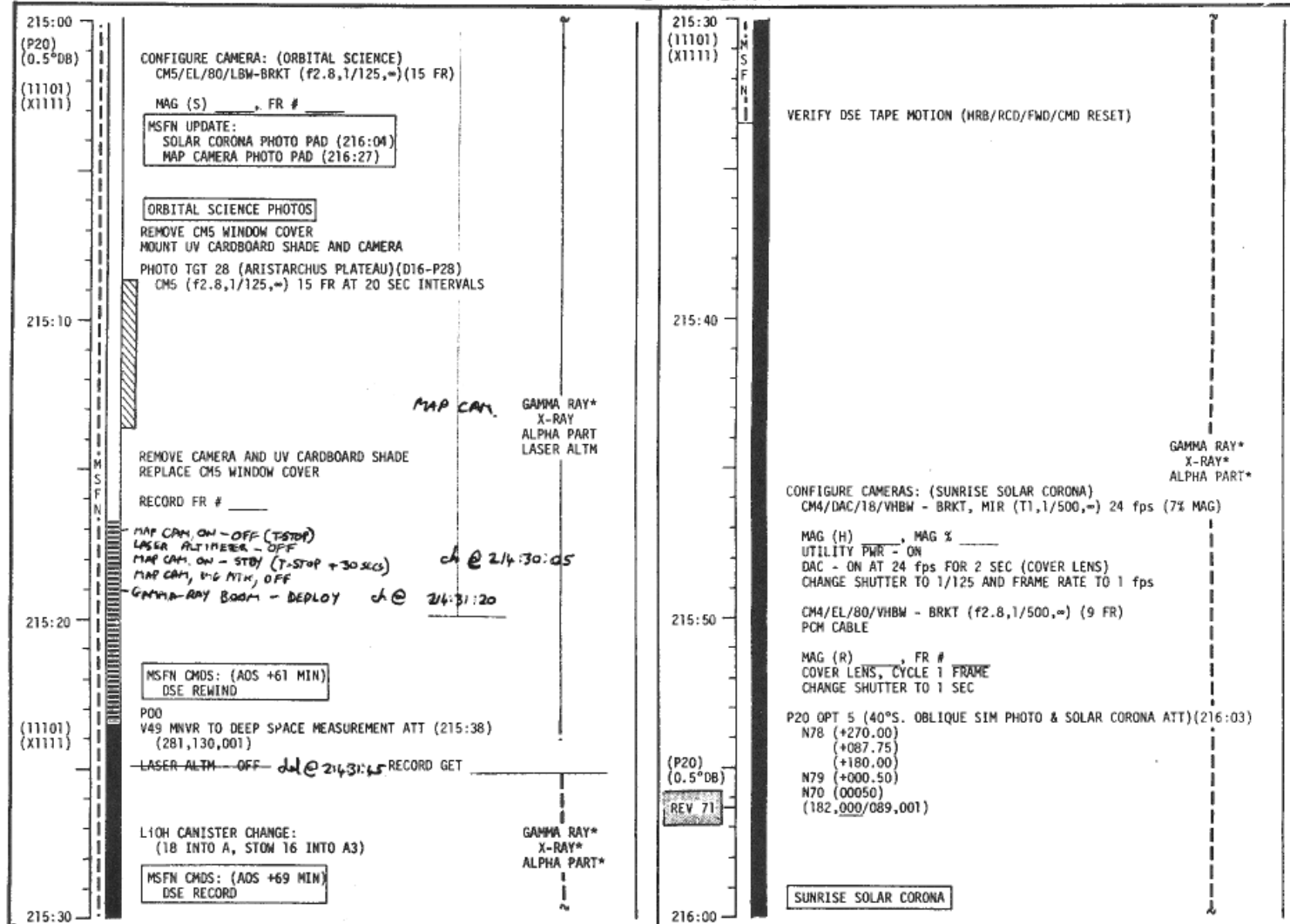
CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-326

0734

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-327

0834 CDT

CSM FLIGHT PLAN

<p>216:00 (P20) (0.5°DB) (11101) (X1111)</p>	<p>GAMMA RAY BOOM RETRACT tb-BP (~3:15)/GRAY then OFF (CTR) LASER ALTM - ON ^{dcl} 214:31:59 RECORD GET</p> <p>0:00 - MISSION TIMER: RESET/START (T START) (SR -8 MIN)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>SOLAR CORONA PHOTO PAD (SR) ^{GIVEN @} 214:59:52 T-START: <u>216:03:55</u> START MISSION TIMER AT SUNRISE -8 MIN</p> </div> <p>CMC MODE - FREE DIM INTERIOR LIGHTS</p> <p>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</p> <p>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 CMC MODE - AUTO RECORD MAG # _____; RECORD FR # _____ CONFIGURE CAMERA: (ORBITAL SCIENCE) CM/EL/250/CEX (f8,1/250,=) (48 FR) MAG (P) _____, FR # _____</p> <p>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 LASER ALTM - ON ch @ 214:31:59</p> <p>ACQ MSFN HGA: MAN, WIDE P 3, Y 18 S-BD ANT IND > 1/2 SCALE HGA: REACQ, NARROW</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>ORBITAL SCIENCE PHOTOS</p> </div> <p>REMOVE CMS WINDOW COVER PHOTO TGT 13 (HUMBOLT)(D7-P13) CMS (f8,1/250,=) 15 FR AT 15 SEC INTERVALS</p> <p>MAP CAMERA S. OBLIQUES</p> <p>CONFIGURE DSE (STOP/CMD RESET/REWIND) REPLACE CMS WINDOW COVER</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>MSFN CUE: (~ AOS +6 MIN) HGA AUTO</p> </div>	<p>216:30 (P20) (0.5°DB) (11101) (X1111)</p>	<p>MSFN CMDS: (AOS +12 MIN) DSE PLAYBACK</p> <p>PAN CAMERA: MODE - STBY, PWR - ON tb-BP (2 SEC)/GRAY</p> <p>MAP CAMERA S. OBLIQUES</p> <p>GAMMA RAY* X-RAY* ALPHA PART* LASER ALTM*</p> <p>PAN CAMERA: POWER - OFF (MSFN CUE)</p>
<p>216:10</p>	<p>216:40</p>	<p>216:40</p>	<p>216:50</p>
<p>216:20</p>	<p>216:50</p>	<p>216:50</p>	<p>217:00</p>
<p>216:30</p>	<p>217:00</p>	<p>217:00</p>	<p>217:00</p>

MAP CAMERA PHOTO PAD

T-START: 216:18:30

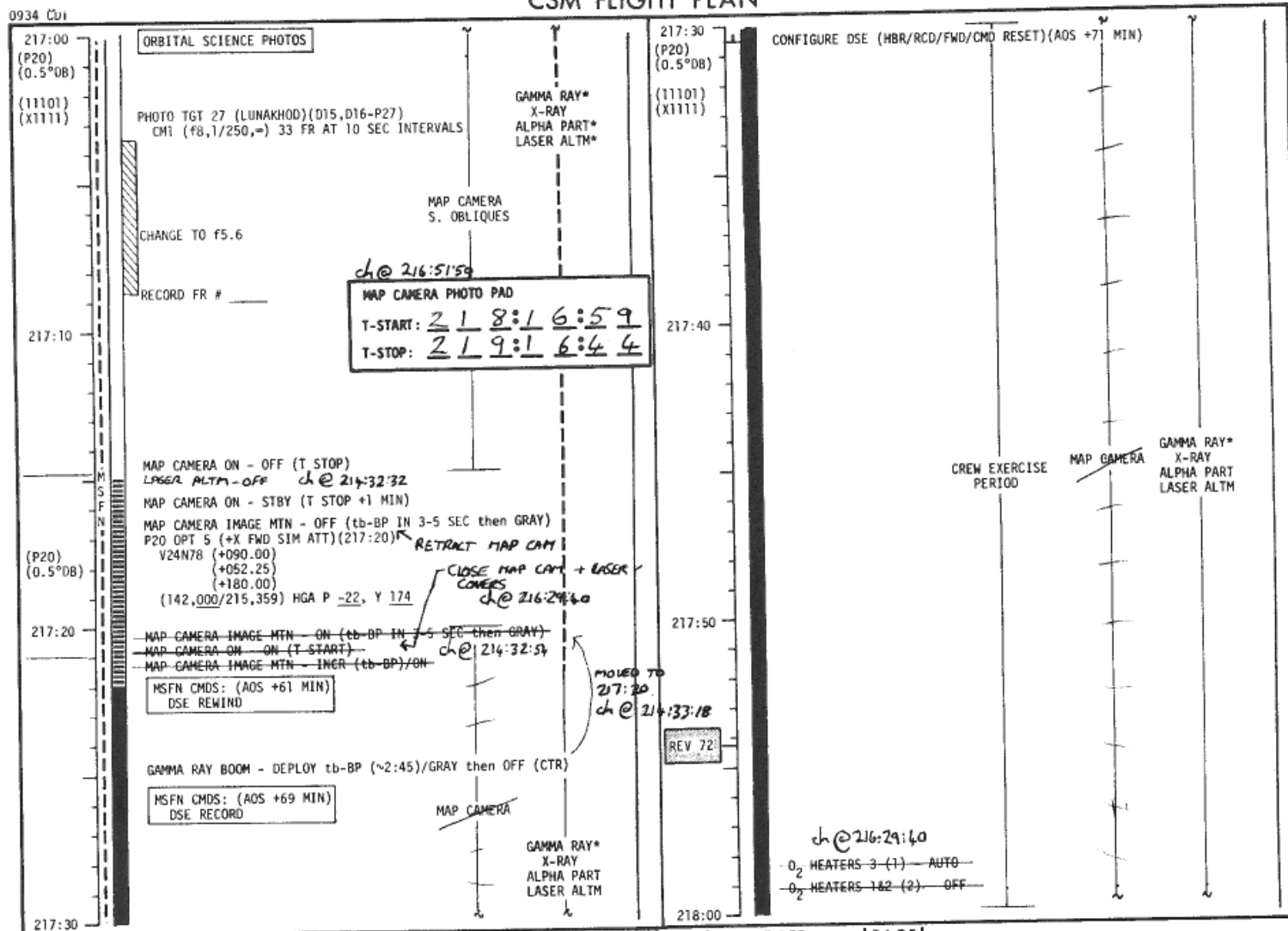
T-STOP: 217:18:15

MSFN UPDATE:

MAP CAMERA PHOTO PAD (217:10)
 TERMINATOR PHOTO PAD (218:07)
 PAN CAMERA PHOTO PAD (218:39)
 TEI 73 PAD

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-328

CSM FLIGHT PLAN



0934 Cui

217:00
(P20)
(0.5°DB)
(11101)
(X1111)

217:10

(P20)
(0.5°DB)

217:20

217:30

ORBITAL SCIENCE PHOTOS

PHOTO TGT 27 (LUNAKHOD)(D15,D16-P27)
CMI (f8,1/250,=) 33 FR AT 10 SEC INTERVALS

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

MAP CAMERA
S. OBLIQUES

CHANGE TO F5.6

RECORD FR # _____

ch @ 216:51:59

MAP CAMERA PHOTO PAD

T-START: 21 8:16:59

T-STOP: 21 9:16:44

MAP CAMERA ON - OFF (T STOP)
LASER ALTM - OFF *ch @ 214:32:32*

MAP CAMERA ON - STBY (T STOP +1 MIN)

MAP CAMERA IMAGE MTN - OFF (tb-BP IN 3-5 SEC then GRAY)

P20 OPT 5 (+X FWD SIM ATT)(217:20)
V24N78 (+090.00)
(+052.25)
(+180.00)
(142,000/215,359) HGA P -22, Y 174

RETRACT MAP CAM

CLOSE MAP CAM + USER CONECS ch @ 216:29:40

MAP CAMERA IMAGE MTN ON (tb-BP IN 3-5 SEC then GRAY)

MAP CAMERA ON ON (T START) *ch @ 214:32:54*

MAP CAMERA IMAGE MTN INCR (tb-BP)/ON

MSFN CMDS: (AOS +61 MIN)
DSE REWIND

MOVED TO 217:20 ch @ 21:33:18

REV 72

GAMMA RAY BOOM - DEPLOY tb-BP (~2:45)/GRAY then OFF (CTR)

MSFN CMDS: (AOS +69 MIN)
DSE RECORD

MAP CAMERA

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

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

217:30
(P20)
(0.5°DB)
(11101)
(X1111)

217:40

217:50

218:00

CREW EXERCISE PERIOD

MAP CAMERA

GAMMA RAY*
X-RAY
ALPHA PART
LASER ALTM

ch @ 216:29:40

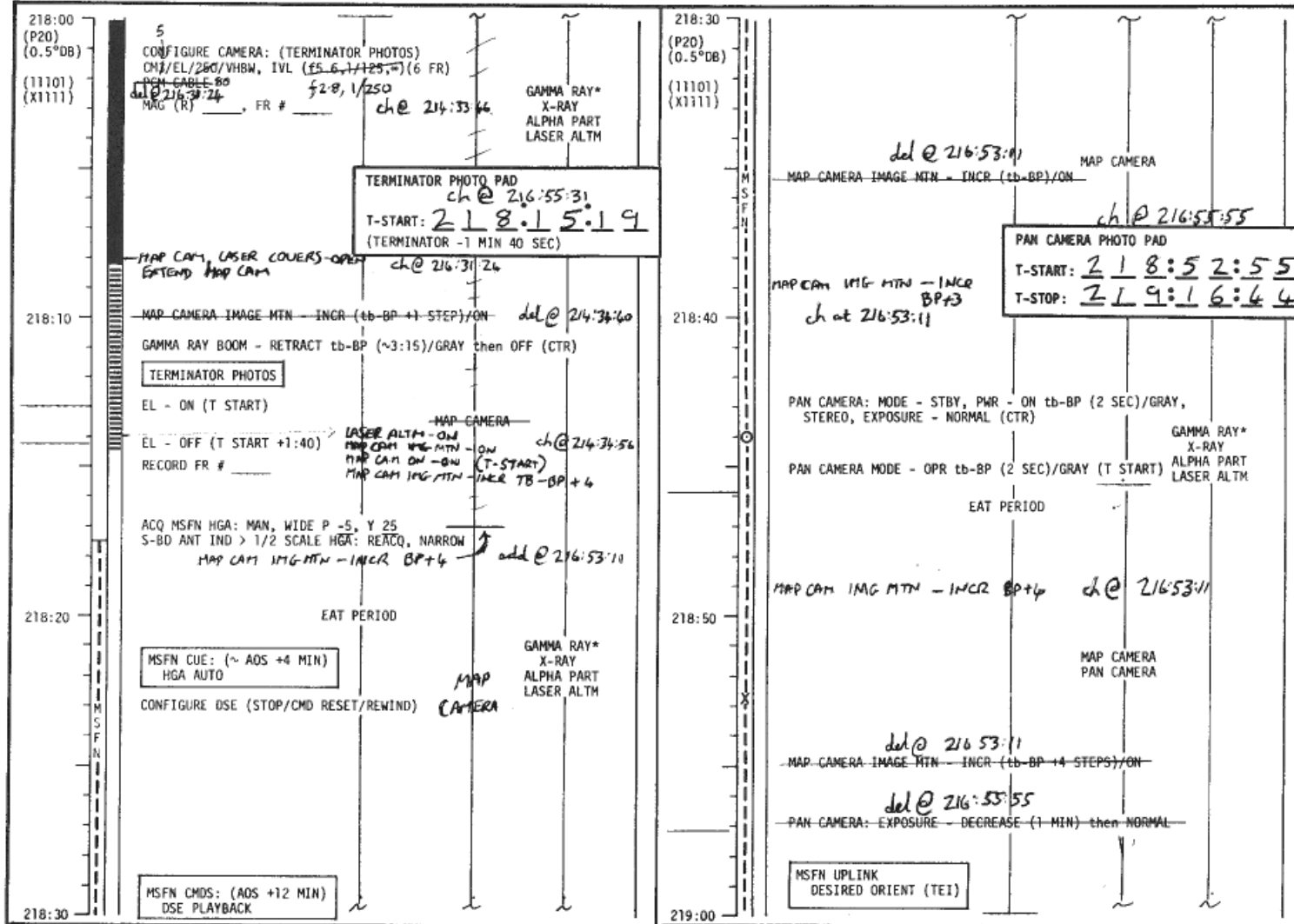
0₂ HEATERS 3 (1) - AUTO

0₂ HEATERS 1&2 (2) - OFF

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-329

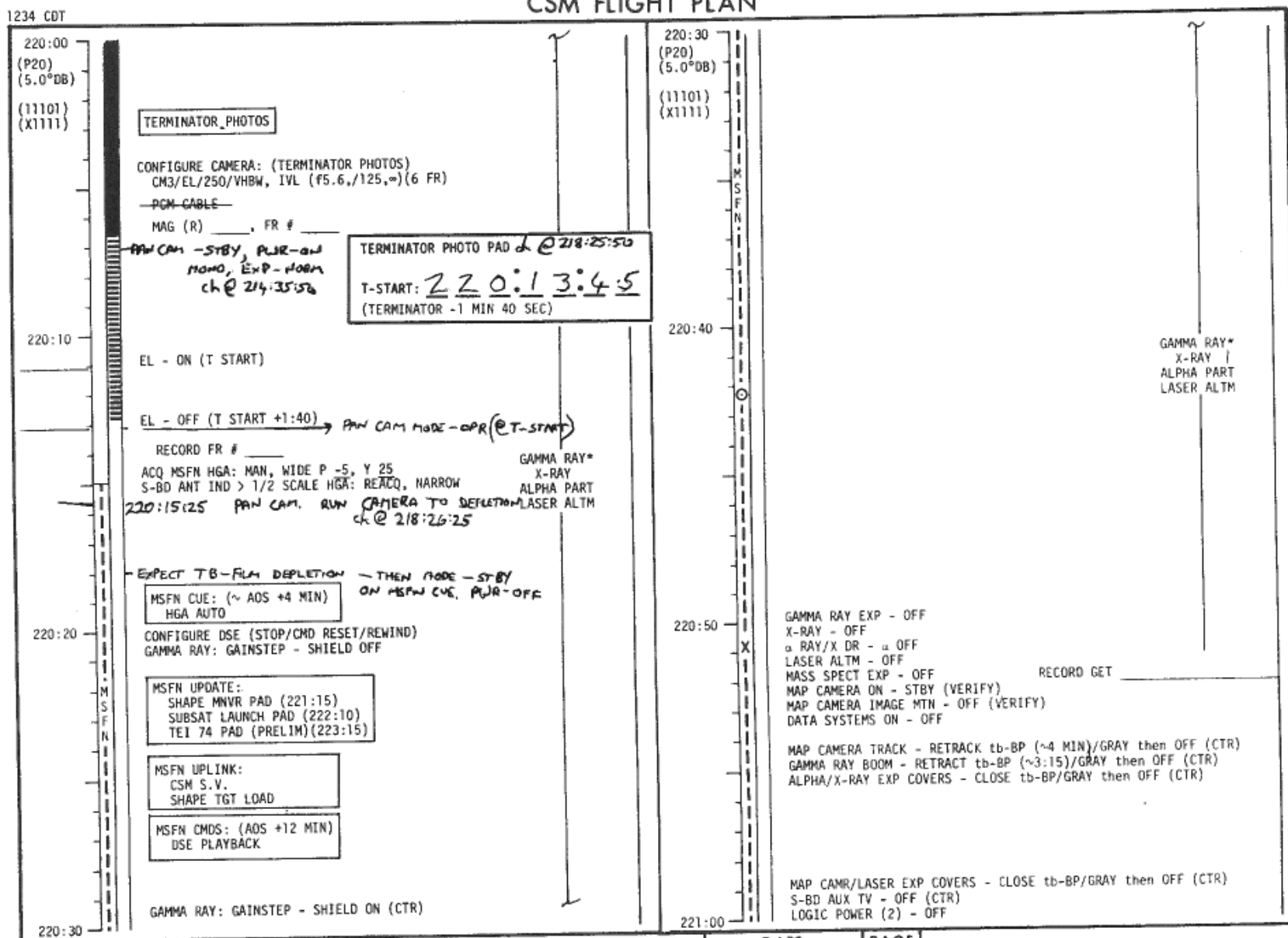
1034 CDT

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	3-332

1404 CDT

CSM FLIGHT PLAN

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

H₂ & O₂ 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

H₂ PURGE LINE HEATERS - OFF

REV 74

GAMMA RAY*
ALPHA PART*

222:00

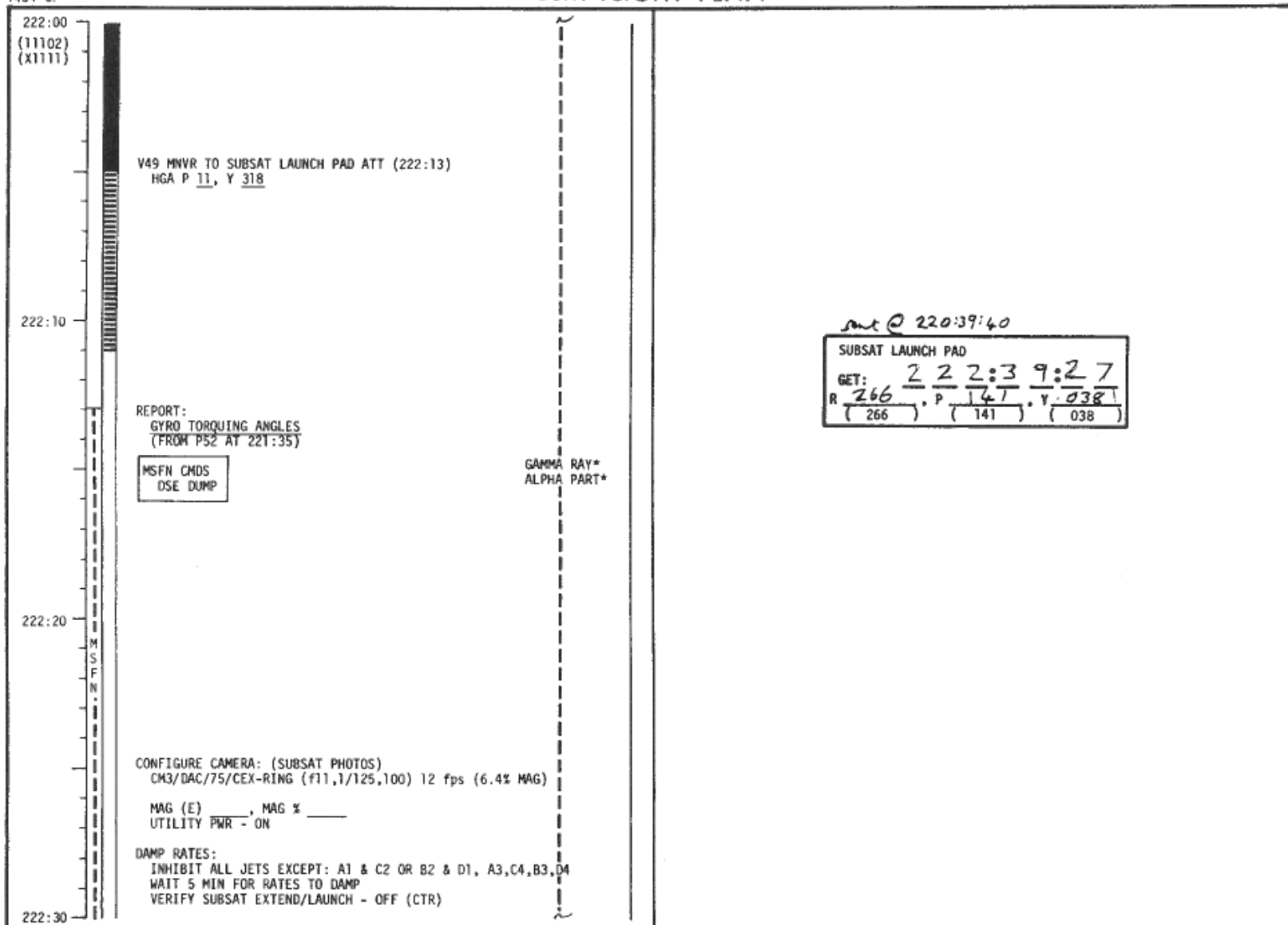
O₂ HEATERS 1&2 (2) - AUTO
O₂ HEATERS 3 (1) - OFF
CB O₂ TANK 100 W (3) MH B, CLOSED

cl @ 218:26:25

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-334

1434 c.

CSM FLIGHT PLAN



MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-335

1504 CDT

CSM FLIGHT PLAN

<p>222:30 (11102) (X1111)</p> <p>SUBSAT LAUNCH 222:40</p> <p>M S F N</p> <p>X</p> <p>222:50</p> <p>223:00</p>	<p>VERIFY: cb PYRO A/SEQ A - CLOSE cb PYRO B/SEQ B - CLOSE cb LOGIC POWER (2) - CLOSE LOGIC POWER (2) - JETT</p> <p>MSFN: VERIFY SIM PYRO BUS (2) ARMED AND RATES < .05°/SEC</p> <p>CMC MODE - FREE</p> <p>SUBSAT - EXTEND/LAUNCH (LAUNCH -12 SEC) tb-BP UNTIL LAUNCH</p> <p>SUBSAT LAUNCH 222:36:13</p> <p>MSFN: VERIFY SUBSAT LAUNCH</p> <p>PHOTO SUBSAT FOR ~ 30 SEC STARTING AT LAUNCH +9 SEC</p> <p>CMC MODE - AUTO</p> <p>SUBSAT - RETRACT tb-BP (~ 12 SEC)/GRAY then OFF (CTR) LOGIC POWER (2) - OFF</p> <p>RECORD DAC MAG % _____</p> <p>ENABLE ALL JETS</p> <p>MSFN UPDATE: TEI 74 PAD (NOMINAL)(223:15) TEI 75 PAD MAP UPDATE REV 75 (223:17)</p> <p>MSFN UPLINK: CSM S.V. & V66 TEI 74 TGT LOAD</p> <p>GAMMA RAY* ALPHA PART*</p> <p>CSM SYSTEM CHECKLIST</p> <p>CONTAMINATION CONTROL PAGE S/1-16</p> <p>C&WS OPERATIONAL CHECKS S/1-17</p> <p>CM RCS MONITORING CHECK S/1-1</p> <p>SM RCS MONITORING CHECK S/1-1</p> <p>SPS MONITORING CHECK S/1-1</p>
---	--

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-336

CSM FLIGHT PLAN

223:00 (13102) (X1111)	P30 VERIFY TEI TIG AND ΔV 's V49 MNVR TO TE1 PAD BURN ATT (223:12) OMNI <u>D</u>	GAMMA RAY* ALPHA PART*
223:10	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)	
223:20	SXT STAR CHECK	
(P40) (0.5°DB)	P40 TRIM MSFN CMDS: DSE RECORD	
223:30	VERIFY DSE TAPE MOTION (LBR/RCD/FWD/CMD RESET)	

MAP UPDATE REV <u>75</u>	
LOS	<u>2 2 3:2 9:4 5</u>
180°	<u>2 2 3:5 2:5 7</u>
AOS WITH TEI	<u>2 2 4:0 3:0 3</u>
AOS WITHOUT TEI	<u>2 2 4:1 5:3 0</u>

ch @ 222:19:30

P30 MANEUVER					
VEGA, DENE B SET STARS	T	E	I		PURPOSE
	S	P	S	G & N	PROP/GUID
	+	3	5	7 6 8	WT N47
R ALIGN <u>1 0 2</u>	+	0	0 0 5 7		P TRIM N48
P ALIGN <u>1 7 8</u>	+	0	0 0 8 8		Y TRIM
Y ALIGN <u>0 2 8</u>	+	0	0 2 2 3		HRS GETI
	+	0	0 0 4 8		MIN N33
	+	0	4 5 0 5		SEC
ULLAGE <u>+X</u>	+	2	9 4 5 2		ΔV_x N81
<u>12 secs</u>	-	0	7 6 1 3		ΔV_y
	-	0	1 7 1 4		ΔV_z
	X	X	X 0 0 0		R (000)
	X	X	X 0 0 0		P (000)
	X	X	X 0 0 0		Y (000)
	+				H _A N44
	+	0	0 2 2 1		H _P
	+	3	0 4 6 8		ΔVT
	X	X	X 2 2 1		BT
	X	3	0 2 8 5		ΔVC
	X	X	X X 3 7		SXTS
	+	2	2 4 3 0		SFT
	+	3	0 5 0 0		TRN
	X	X	X 0 5 3		BSS
	X	X	1 0 3		SPA
	X	X	X 3 1		SXP

1604 CDT

CSM FLIGHT PLAN

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)
~~(320,030,026)~~
 (127,270,030) ch@2224848

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

1634 CDT

224:00
(11102)
(X1111)

ACQ MSFN OMNI *BC* *ch* @ 222:49:49
 REPORT: BURN STATUS
 INHIBIT ALL JETS EXCEPT: A1 & C2 OR B2 & D1, 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

MSFN UPDATE:
 MAP CAMERA PHOTO PAD

PCM BIT RATE - HIGH
 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 then OFF (CTR)

MAP CAMERA PHOTO PAD
 T-START: 224:03:00
 T-STOP: MSFN R: : : :

DATA SYSTEMS ON - ON
 GAMMA RAY: GAINSTEP - SHIELD ON (CTR), EXP - ON
 X-RAY - STBY
 a RAY/X DR - a ON
 MASS SPECT EXP - STBY

MAP CAMERA IMAGE MTN ON (tb-BP IN 3.5 SEC then GRAY)
ch @ 223:18:31

MAP CAMERA ON - ON (T START)
 MAP CAMERA IMAGE MTN - INCR (tb-BP $\frac{1}{2}$ STEPS)/OFF
 MONITOR FOR FILM DEPLETION (tb-BP)
ch @ 222:49:49

GAMMA RAY*
 ALPHA PART*

MAP CAMERA

224:20

-V49 MNR TO VISUAL TARGET ATT (224:30) -
 --(006,125,005) HGA P 25, Y 19 -

Solutions
 @ 222:49:49

-MAP CAMERA TRACK - RETRACT tb-BP (~4 MIN)/GRAY then OFF (CTR)-

MASS SPECT BOOM - DEPLOY tb-BP (~2:40)/GRAY then OFF (CTR)

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

MASS SPECT: EXP - ON, ION SOURCE - STBY
 RECORD GET

224:30

224:30
(11102)
(X1111)

VISUAL TGT 12 & 13 EASTERN MARIA

MSFN CMDS:
 DSE DUMP

MSFN UPLINK:
 DESIRED ORIENT (PTC)

V49 MANEUVER TO 127, 295, 030
 HGA P23 Y229

224:40

GAMMA RAY: GAINSTEP - SHIELD OFF

GAMMA RAY*
 ALPHA PART*
 MASS SPECT OUTGAS

224:50

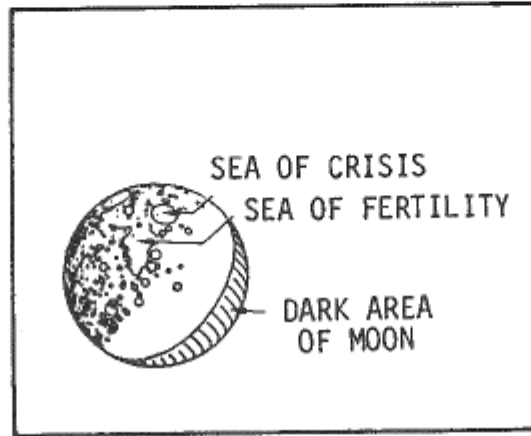
GAMMA RAY: GAINSTEP - SHIELD ON (CTR)

225:00

MISSION	EDITION	DATE	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	3-339

FOV = 50°

GET 225:40



FINAL (7/26)

6/21/71

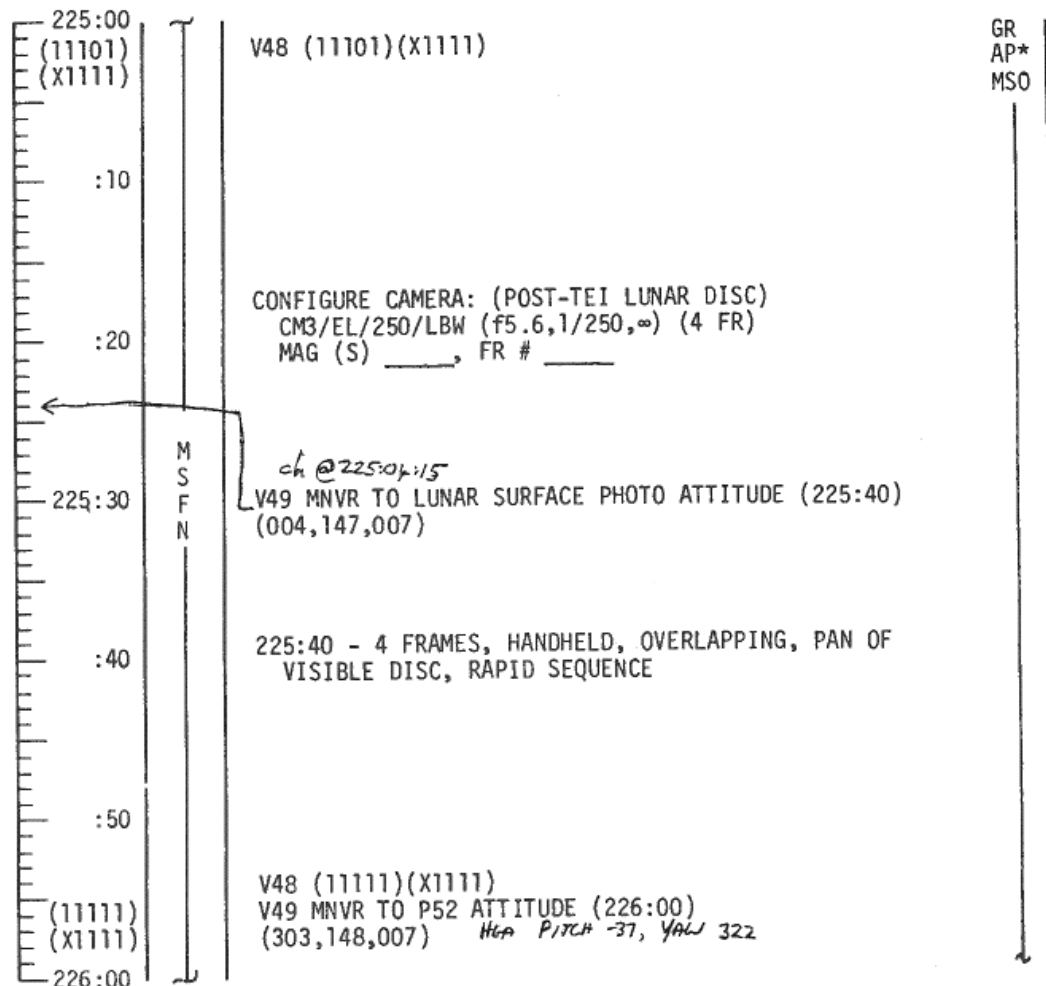
3-340

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

MCC-H

1834 CDT

FLIGHT PLAN

GR
AP*
MSO

NOTES

226:00
(11111)
(X1111)

:10

:20

226:30

:40

:50

227:00

M
S
F
N

P52 IMU REALIGN
OPTION 3 REFSMMAT
TEI ORIENTATION

STARS _____
SA _____
TA _____

REPORT: GYRO TORQUING ANGLES

P52 IMU REALIGN
OPTION 1 PREFERRED
PTC ORIENTATION

V49 MVR TO X-RAY POINTING ATTITUDE (226:28)
(327,143,055) HGA P+13, Y 212 *ch* @ 225:27 58

X-RAY -OFF for 1 second, then *ch* @ 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 _____

L10H CANISTER CHANGE
(19 INTO B, STOW 17 IN A4)

CMP DON BIOMED HARNESS
LMP DOFF BIOMED HARNESS

EAT PERIOD

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

GR
XR
AP
MSO

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	226:00 - 227:00	10/TEC	3-342

FLIGHT PLAN BRANCH

FLIGHT PLAN

MCC-H

1934 CDT

NOTES

227:00
(11111)
(X1111)

:10

:20

227:30

MSFN

:40

:50

228:00

EAT PERIOD

GR
XR
AP
MSO

X-RAY - STANDBY ch @ 225:29:42
(V48 line missing)

ALPHA/X-RAY EXP COVERS - CLOSE to 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

GR
AP*
MSO

PTC

EARTH DISTANCE
~ 193,584 NM

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS

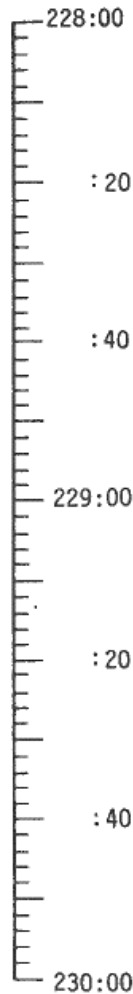
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	227:00 - 228:00	10/TEC	3-343

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2034 CDT



M
S
F
N

CSM SYSTEMS CHECKLIST
PRE-SLEEP CHECKLIST
COMM - HGA

PAGE S/1-26

REST PERIOD
(8 HOURS)

GR
AP*
MS

PTC

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

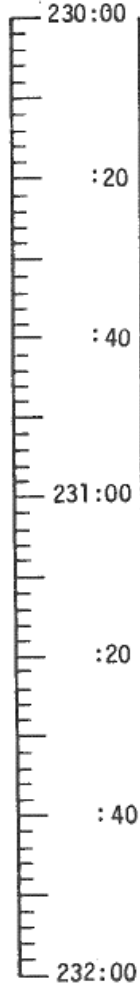
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2234 CDT

NOTES



M
S
F
N

REST PERIOD
(8 HOURS)

GR
AP*
MS

PTC

DAP LOAD STATUS
(11111)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	230:00 - 232:00	10/TEC	3-345

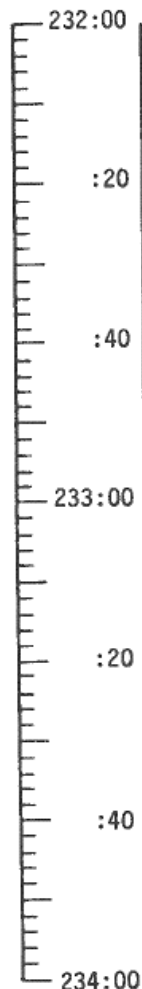
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0034 CDT

NOTES



M
S
F
N

REST PERIOD
(8 HOURS)

GR
AP*
MS

PTC

DAP LOAD STATUS
(11111)(X1111)

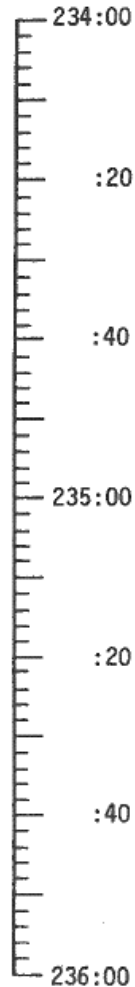
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	232:00 - 234:00	10/TEC	3-346

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0234 CDT



M
S
F
N

REST PERIOD
(8 HOURS)

PTC

GR
AP*
MS

DAP LOAD STATUS
(11111)(X1111)

NOTES

CSM SYSTEMS CHECKLIST

POST-SLEEP CHECKLIST

PAGE S/1-26

CSM CONSUMABLES UPDATE

GET: _____ : _____

RCS TOTAL _____

QUAD A _____ B _____

C _____ D _____

H₂ TOTAL _____

O₂ TOTAL _____

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

MCC-H

0434 CDT

FLIGHT PLAN

cl @ 235:53:42

NOTES

236:00
 (11111)
 (X1111)
 :10
 (11101)
 (X1111)
 :20
 236:30
 :40
 :50
 237:00

M
S
F
N

GAMMA-RAY GAIN-STEP, SHIELD - OFF

GAMMA-RAY Boom RETRACT

P52 IMU REALIGN
OPT 3 REFSMMAT
PTC ORIENTATION

GAMMA-RAY BOOM -RETRACT ON MSFN CUE

REPORT: GYRO TORQUING ANGLES

CYCLE CMC MODE - FREE/AUTO
 V48 (11101)(X1111)
 V67 (+99000)(+00020)(+00003)
 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
 (084,120,330) HGA P -57, Y 360
 P23 CISELUNAR NAVIGATION
 3 MARKS ON EACH STAR

1. N70 (00000) (00000) (00120)
 N88 (+15707)(+98142)(+11018)

X-RAY - ON cl @ 235:54:58
 2. N70 (00000) (00000) (00110)
 N88 (-38535)(+79355)(+47094)

3. N70 (00013) (00000) (00120)

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.

LOAD W-MATRIX
 GR AP* EARTH DISTANCE
 MS ~ 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

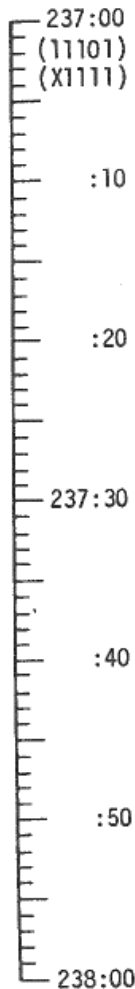
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0534 CDT

NOTES



M
S
F
N

V49 MNVR TO X-RAY POINTING ATTITUDE (237:15)
 () HGA P , Y
 LOGIC POWER (2) - DEPLOY/RETR
 ALPHA/X-RAY EXP COVERS - OPEN tb BP/GRAY then OFF (CTR)

GR
XR
AP
MS

EAT PERIOD

CONFIGURE FOR URINE DUMP
 VERIFY REPRESS PKG O₂ PRESSURE - 865-935 PSI

EARTH DISTANCE
 ~ 178,796 NM

UPLINK TO CSM
 CSM S.V. (MSFN)
 TO LM SLOTS
 MCC-5 TGT LOAD
 UPDATE TO CSM
 MCC-5 MNVR PAD

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

FLIGHT PLAN

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

FINAL(7/26)

6/21/71

3-350

MCC-H

0634 CDT

FLIGHT PLAN

NOTES

238:00
(11101)
(X1111)

:10

:20

238:30

:40

:50

239:00

M
S
F
N

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 238-0634
 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 MNR 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

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
 L10H CANISTER CHANGE
 (20 INTO A, STOW 18 IN A4)

BURN STATUS REPORT			
X	X		ATIG
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: 238:46:06
 BT: NOM ZERO
 ΔVT: NOM ZERO
 ULLAGE: N/A
 ORBIT: N/A

TEI +15 HR

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	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)
~~(090,077,025)~~ HGA P ~~69~~, Y ~~197~~ 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 PINS, 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~~

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

~~INHIBIT ALL JETS EXCEPT A1 & C2 or B2 & D1, A4, C3, B4, D3~~ del @ 247:04:59

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

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

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

FINAL (7/26)

6/21/71

1-352

MCC-H

0734 CDT

FLIGHT PLAN

NOTES

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*

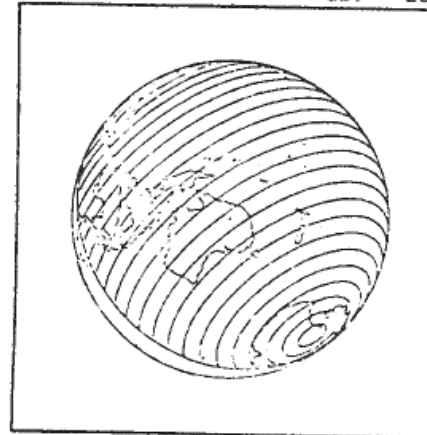
CORONA WINDOW CALIBRATION

UV PHOTOS

postponed to 247:36

FOV = 3°

GET = 239



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

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

MCC-H

0834 CDT

FLIGHT PLAN

NOTES

240:00	M S F N	
(11101)		
(X1111)		
:10		
:20		
240:30		CONCLUDE CABIN PREP FOR CSM EVA PREPARE TV/DAC POLE
:40		PREPARE EVA EQUIPMENT
:50		DON PGA'S CDR & LMP DON BIOMED HARNESES
241:00		

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

MCC-H

0934 CDT

FLIGHT PLAN

NOTES

241:00
 (11101)
 (X1111)

:10

:20

241:30

:40

:50

242:00

M
S
F
N

S-BAND AUX TV - TV
 COMM CHECK

SYSTEM PREP FOR DEPRESS
 DISABLE ALL JETS EXCEPT:
 QUAD C, D1, D3, D4
 O₂ HEATERS 1,2, & 3 (3) - AUTO
 O₂ TANK 1, 50 W/ HEATER, MIN B (1) - OPEN
 O₂ TANKS 2+3, 50 W/ HEATERS, MIN A (2) - OPEN

CONCLUDE DONNING PGA'S
 CMP DON EVA EQUIPMENT

CDR/LMP INTEGRITY CHECK

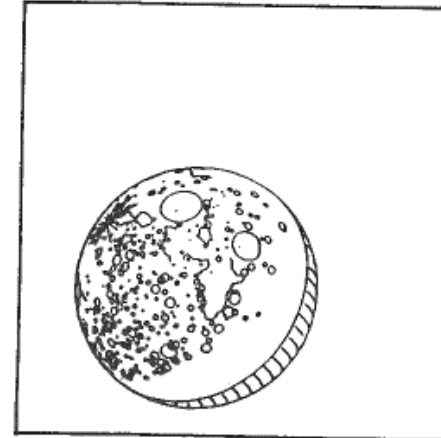
CMP INTEGRITY CHECK

CABIN DEPRESS

HATCH OPENING

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

242:00	M S F N		CMP EGRESS
(11101)			FAMILIARIZATION
(X1111)			INSTALL TV/DAC, ADJUST
:10			RETRIEVE MAPPING CAMERA CASSETTES
:20			REST
242:30			RETRIEVE PAN CAMERA CASSETTES
:40			REST
:50			REMOVE TV/DAC
243:00			INGRESS
			HATCH CLOSING
		CABIN REPRESS	

CSM EVA LENGTH
1 HR. MAX

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

MCC-H

1134 CDT

FLIGHT PLAN

NOTES

243:00
 (11101)
 (X1111)

:10

:20

243:30

:40

:50

244:00

M
S
F
N

OPS DEPLETION

CONCLUDE CABIN REPRESS

DOFF PGA'S
CMP & LMP DOFF BIOMED HARNESSSES

CLEANUP PROCEDURES
O₂ HEATERS 3 (1) - OFF

STOW EQUIPMENT

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

244:00
 (11101)
 (X1111)
 :10
 :20
 244:30
 :40
 :50
 245:00

M
S
F
N

WASTE WATER DUMP & O₂ FUEL CELL PURGE
 CHARGE BATT B.
 DELAYED FROM 239 HRS
 ch @ 237:37:23

CONCLUDE EQUIPMENT STOWAGE
 RECONFIGURE CABIN

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	244:00 - 245:00	11/TEC	3-358

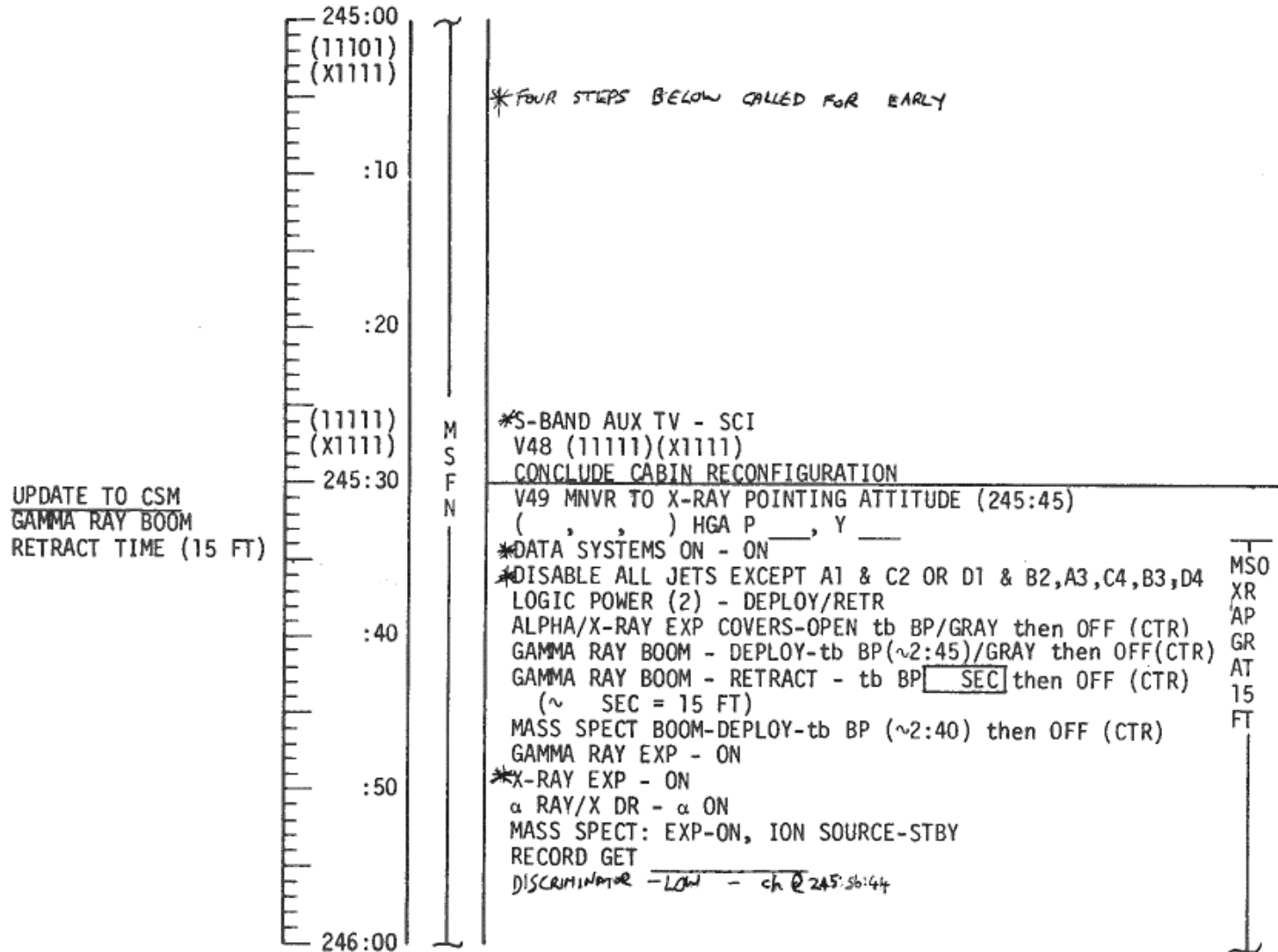
FLIGHT PLAN TRAINING BRANCH

FLIGHT PLAN

MCC-H

1334 CDT

NOTES



MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	245:00 - 246:00	11/TEC	3-359

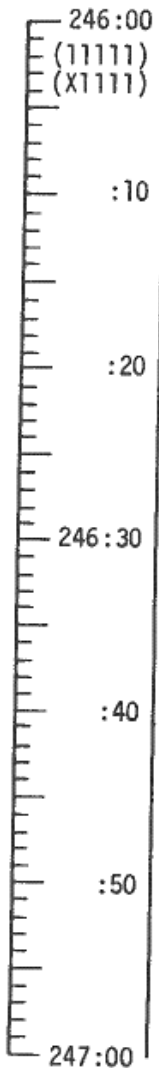
FLIGHT PLANNING BRANCH

MCC-H

1434 CDT

FLIGHT PLAN

NOTES



(11111)
(X1111)

M
S
F
N

CREW EXERCISE PERIOD

V49 MNVR TO X-RAY POINTING ATTITUDE (246:35)
(, ,) HGA P 00, Y 240 ch @ 2455623

EAT PERIOD

MASS SPECT: EXP-ON, ION SOURCE-ON, DSCRM-HIGH, MULT-LOW
RECORD GET

MSO
XR
AP
GR
AT
15
FT

MS
XR
AP
GR
AT
15
FT

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	246:00 - 247:00	11/TEC	3-360

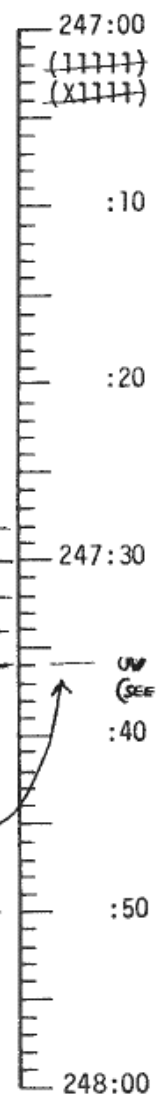
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1534 CDT

NOTES



M
S
F
N

del @ 235:59:59

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)

QUADS C&D WILL BE USED FOR PTC RATE DAMPING, JETS B2 & D2 FOR PTC SPINUP

X-RAY - STBY ch @ 246:00:33

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 _____

MS
XR
AP
GR
AT
15
FT

del @ 245:57:23

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.

PTC
MS
XR
AP
GR
AT
8
FT

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

MCC-H

1634 CDT

FLIGHT PLAN

NOTES

248:00
 STEP 1
 :10
 STEP 2
 32sec
 :20
 STEP 3
 32sec
 248:30
 STEP 4
 32sec
 :40
 STEP 5
 32sec
 :50
 249:00

M
S
F
N

MASS SPECTROMETER BOOM RETRACTION SEQUENCE
 MASS SPECT BOOM RETRACT tb-BP 33 SEC then OFF (CTR)
 (~42 SEC) *update @ 247:36:23*

ABOVE SEQUENCE MUST BE REPEATED
 5 TIMES BETWEEN GET 248:00 AND
 GET 249:30 WITH LAST STEP TO
 FULLY RETRACTED POSITION. EACH
 SAMPLE PERIOD WILL LAST ~~32~~ *20* MINUTES. *ch @ 246:01:32*

XR
 AP
 MS
 GR
 AT
 8
 FT
 PTC

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

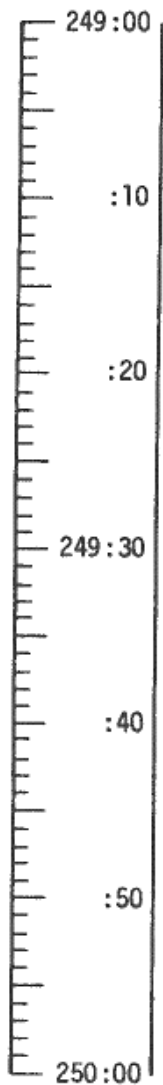
FLIGHT PLANNING BRANCH

MCC-H

1734 CDT

FLIGHT PLAN

NOTES



CSM SYSTEMS CHECKLIST

CONTAMINATION CONTROL PAGE 5/1-16
 MASS SPECT BOOM-DEPLOY tb-BP(~2:40)/GRAY then OFF (CTR)

MOVE TO 249:30 (ch @ 246:02:50)

CDR DOFF BIOMED HARNESS
 LMP DON BIOMED HARNESS
 ALPHA/X-RAY EXP COVERS-CLOSE tb-BP/GRAY then OFF (CTR)
 GAMMA RAY BOOM - RETRACT tb-BP/GRAY THEN OFF (CTR)
 RECORD GET

*63 sec deploy
 ch @ 247:38:04*

EAT PERIOD

XR
 AP
 MS
 GR
 8
 FT

 PTC

 MS
 AP*
 GR
 AT
 0
 FT

DAP LOAD STATUS
 (1111)(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

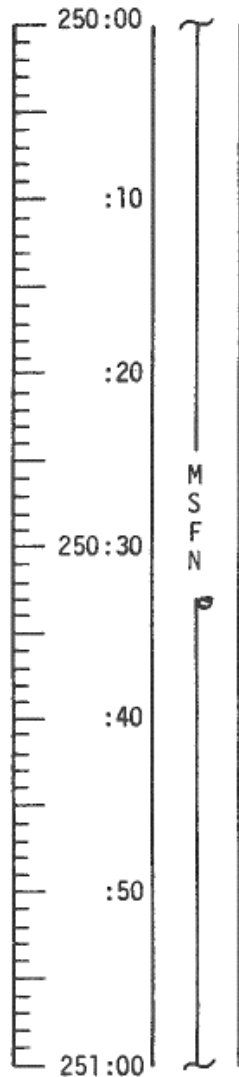
FLIGHT PLANNING BRANCH

MCC-H

1834 CDT

FLIGHT PLAN

NOTES



EAT PERIOD

P52 IMU REALIGN
 OPTION 3 REFSMMAT
 PTC ORIENTATION

REPORT: GYRO TORQUING ANGLES

MS
 AP*
 GR
 AT
 0
 FT

DAP LOAD STATUS
 (11111)(X1111)
 11101 ck @ 236:00:15

PTC

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

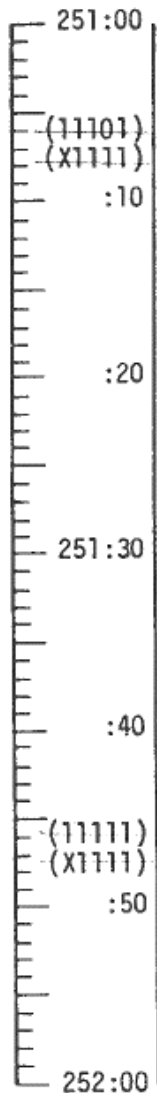
FLIGHT PLANNING BRANCH

MCC-H

1934 CDT

FLIGHT PLAN

NOTES



M
S
F
N

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 6/8-2
COMM HGA REACQ MODE P -40, Y 90
V49 MNVR TO PTC ATTITUDE
(N20,090,000)

Y
PTC
I

XR
AP*
MS
GR
AT
O
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

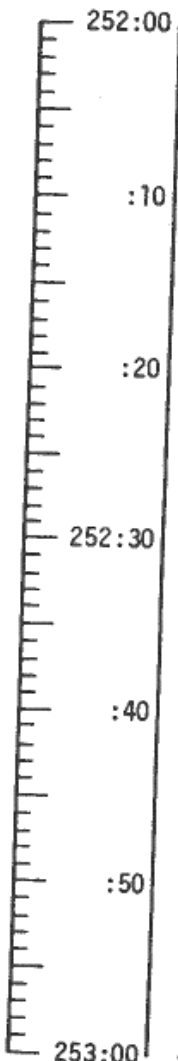
FLIGHT PLANNING BRANCH

MCC-H

2034 CDT

FLIGHT PLAN

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS



M
S
F
N

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)

GR
XR
AP*
MS

GR
AP*
MS

PTC

11101 **NOTES**
 dt @ 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

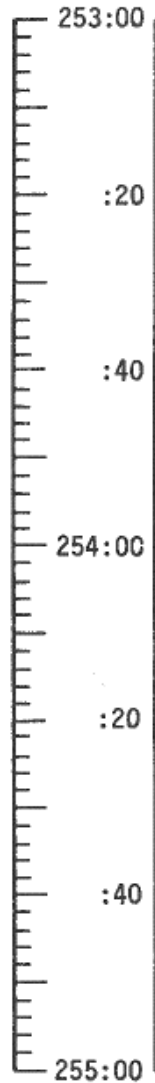
FLIGHT ANNING BRANCH

MCC-H

2134 CDT

FLIGHT PLAN

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

GR
AP* DAP LOAD STATUS
MS (-11111)(X1111)
11101 ck @ 236:02:57

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	253:00 - 255:00	11/TEC	3-367

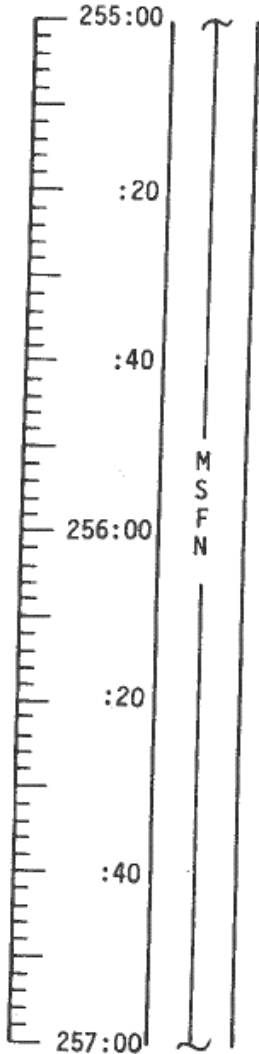
FLIGHT PLANNING BRANCH

MCC-H

2334 CDT

FLIGHT PLAN

NOTES



REST PERIOD
(9 HOURS)

PTC

GR
AP*
MS

DAP LOAD STATUS
(11111)(X1111)
ch @ 236:02:57

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	255:00 - 257:00	11/TEC	3-368

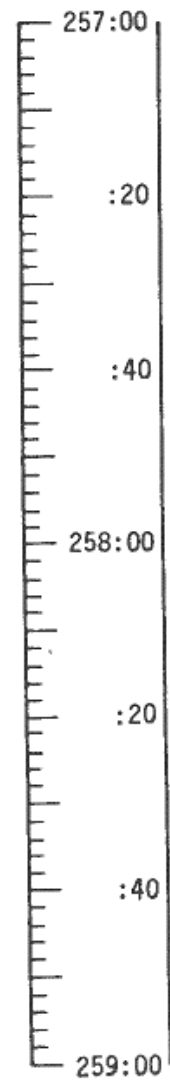
FLIGHT PLANNING BRANCH

MCC-H

0134 CDT

FLIGHT PLAN

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

GR
AP*
MS

PTC

DAP LOAD STATUS
(11111)(X1111)
ch @ 236:02:57

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	257:00 - 259:00	11/TEQ	3-369

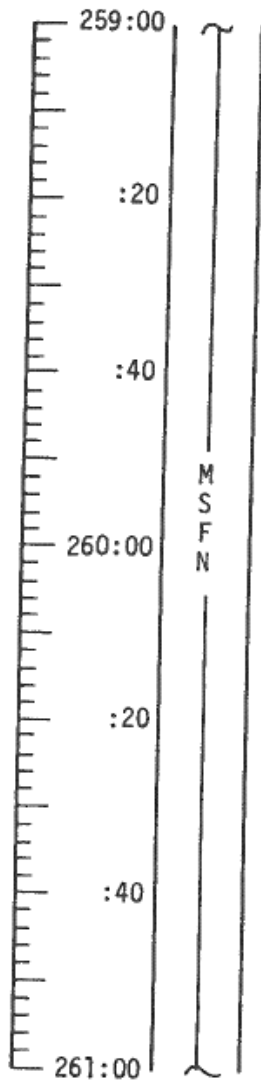
FLIGHT PLANNING BRANCH

MCC-H

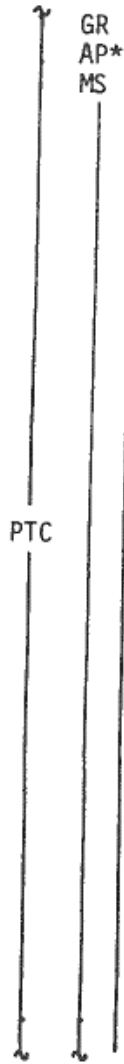
0334 CDT

FLIGHT PLAN

NOTES



REST PERIOD
(9 HOURS)



DAP LOAD STATUS
(11111)(X1111)
@ 236:02:57

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	259:00 - 261:00	11/TEC	3-370

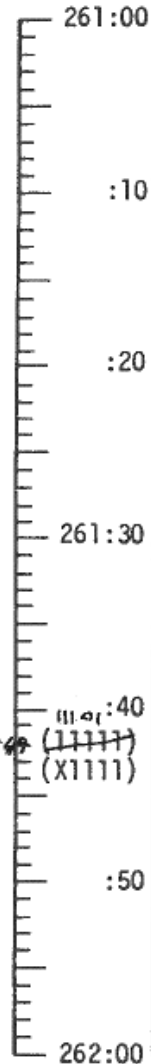
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

0534 CDT

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

GR
AP*
MS

PTC

DAP LOAD STATUS
(11111)(X1111)
cl @ 236:02:57

EARTH DISTANCE
~ 133,473 NM

UPDATE TO CSM
CONSUMABLES
LIGHT PLAN

cl @ 261:40
(11111)
(X1111)

CSM SYSTEMS CHECKLIST

PAGE S/1-26

- POST-SLEEP CHECKLIST
- 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

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

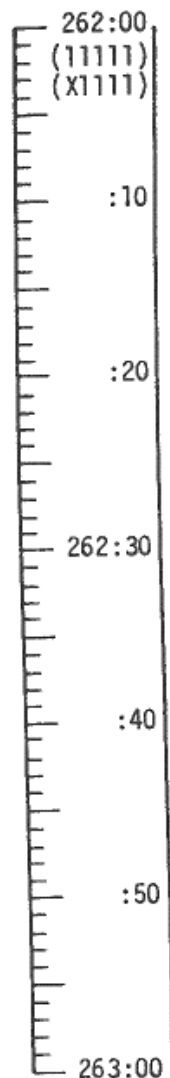
FLIGHT PLANNING BRANCH

MCC-H

0634 CDT

FLIGHT PLAN

NOTES



GAMMA RAY GAINSTEP - SHIELD ON (CTR) *2 STEPS*
ch @ 261:50:37

EAT PERIOD

P52 IMU REALIGN
 OPTION 3 REFSMMAT
 PTC ORIENTATION

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

MCC-H

0734 CDT

FLIGHT PLAN

NOTES

263:00
 (11111)
 (X1111)
 (11101)
 (X1111)
 :10
 :20
 263:30
 :40
 :50
 (11111)
 (X1111)
 264:00

M
S
F
N

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)
 P00
 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

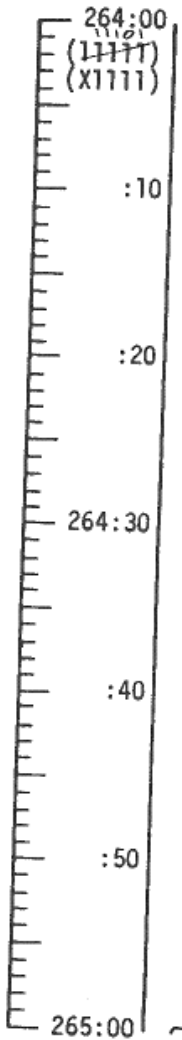
FLIGHT PLANNING BRANCH

MCC-H

0834 CDT

FLIGHT PLAN

NOTES



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

QUADS C&D WILL BE USED FOR PTC RATE DAMPING, JETS B2 & D2 FOR PTC SPINUP

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

GR
AP*
MS

PTC

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.

M
S
F
N

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	264:00 - 265:00	12/TEC	3-374

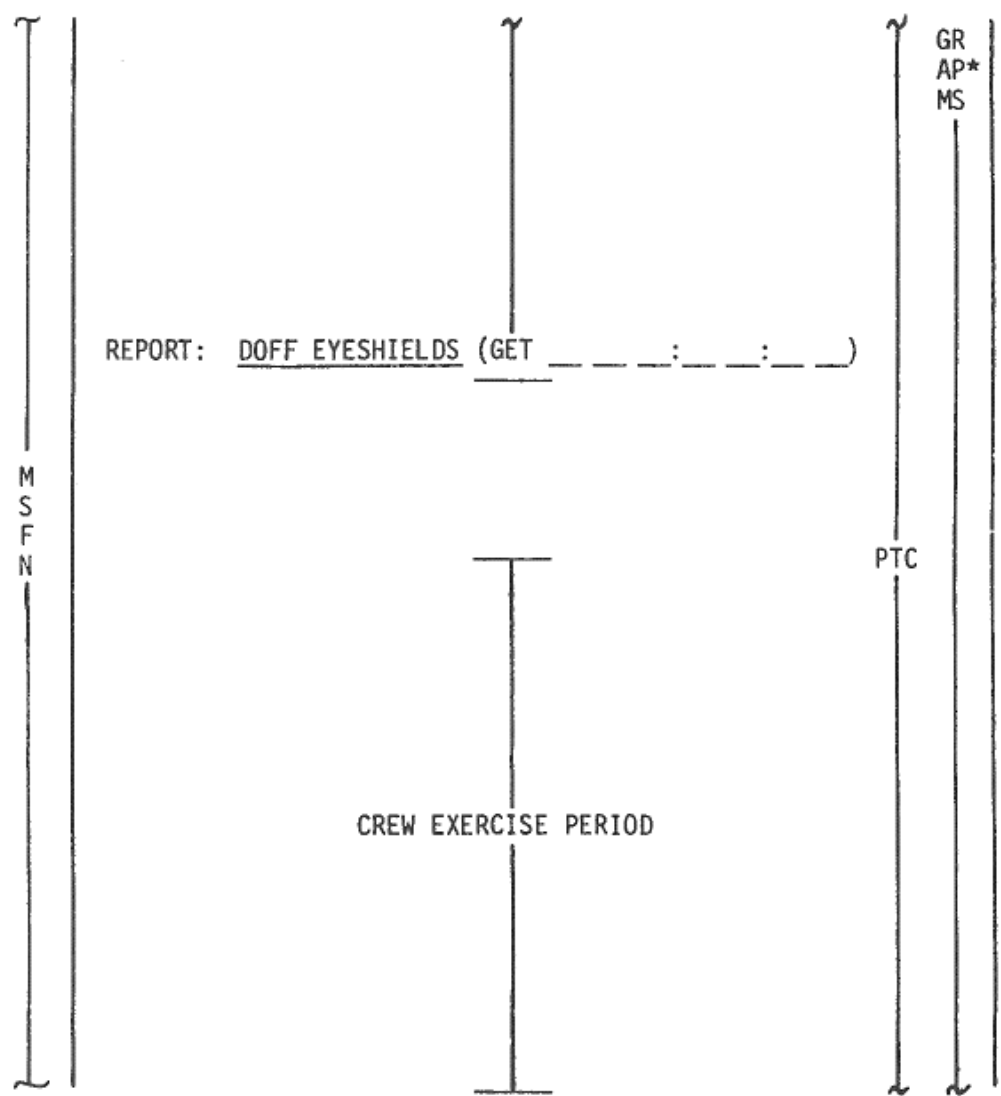
FLIGHT PLAN TRAINING BRANCH

FLIGHT PLAN

MCC-H 0934 CDT

NOTES

ch @ 2615245
 265:00
 11101
 X1111
 ↓
 For 2 :10
 Hours
 :20
 265:30
 :40
 :50
 266:00



GR
 AP*
 MS
 DAP LOAD STATUS
 (11111)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	265:00 - 266:00	12/TEC	3-375

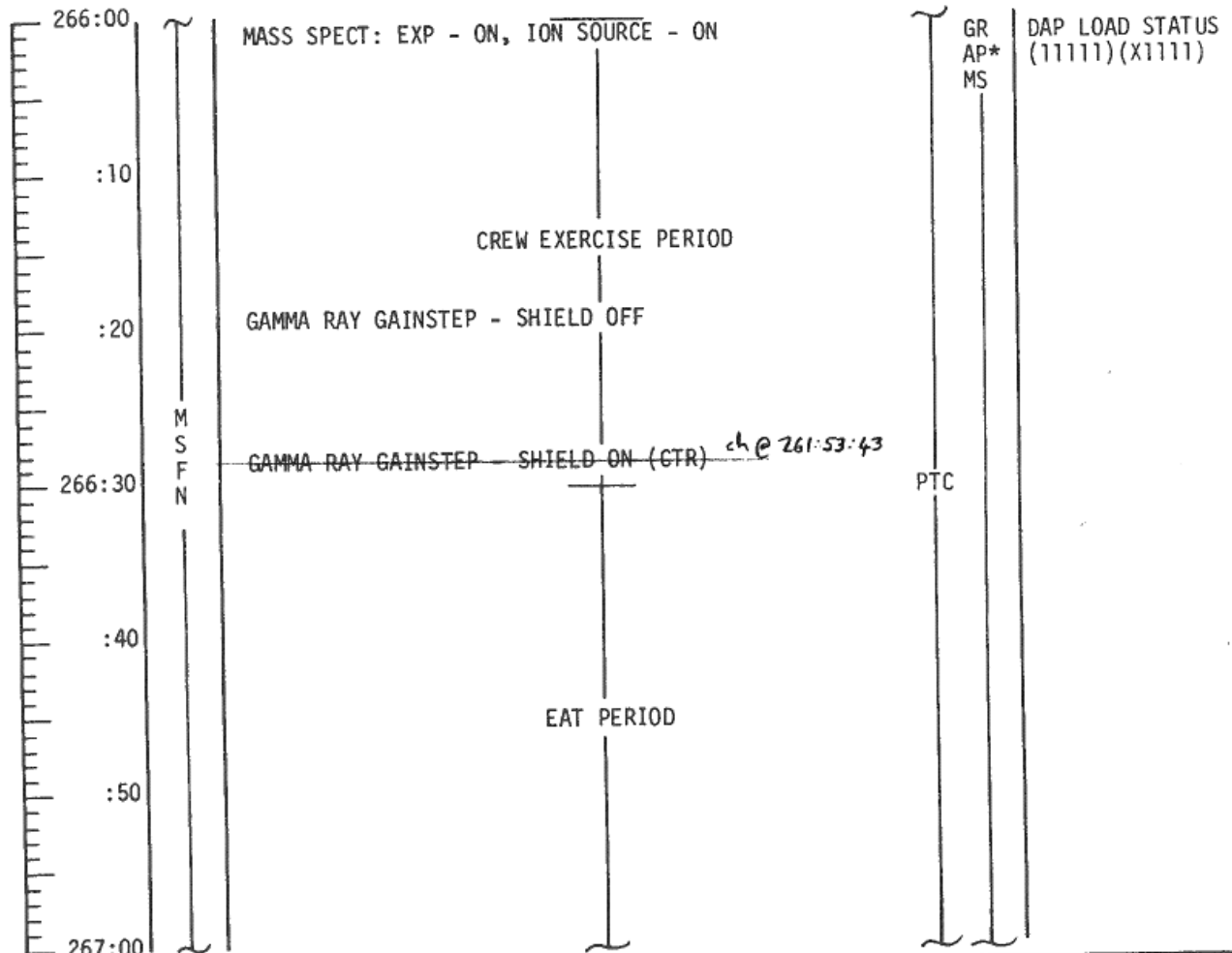
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

1034 CDT

NOTES



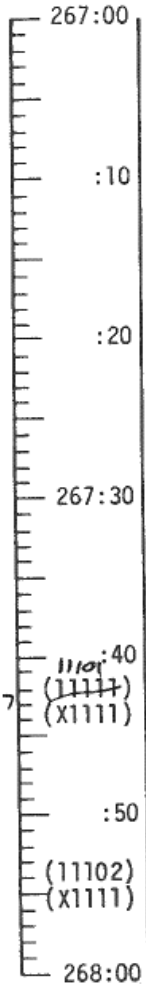
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	266:00 - 267:00	12/TEC	3-376

FLIGHT PLAN BRANCH

FLIGHT PLAN

MCC-H

1134 CDT



M
S
F
N

EAT PERIOD

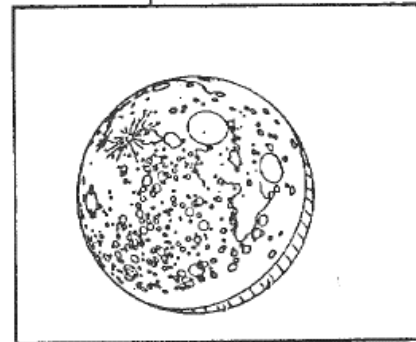
GAMMA-RAY DOOR RETRACT, TB-BP 2.5 MINUTES - GRAY - OFF
 GAMMA-RAY GAINSTEP - SHIELD OFF *ch @ 261:57:10*

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 CISELUNAR NAVIGATION
 OPTICS CALIBRATION STAR N70 (00020)
 P00, V48 (11102) (X1111)
 V49 MNVR TO SIGHTING ATTITUDE
 (081,176,330) HGA P -59, Y 000
 P23 CISELUNAR NAVIGATION

NOTES

GR | DAP LOAD STATUS
 AP* | (11111)(X1111)
 MS
 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 $<0.2^\circ/\text{SEC}$ IN ALL AXES
REMOVE CM5 WINDOW COVER AND MOUNT UV CARDBOARD SHADE AND CAMERA

2 FRAMES, FILTER 1, CHANGE SHUTTER TO B
1 ~~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) _____, FR # _____
1 FRAME, FILTER 4
RECORD FR # _____
REMOVE CAMERA AND UV CARDBOARD SHADE

ch @ 21:57:49

NOTE: COMMENTS AS TO CONDITION OF WINDOW 5
REPLACE CM5 WINDOW COVER
ENABLE ALL JETS

3-378

FINAL(7/26)

6/21/71

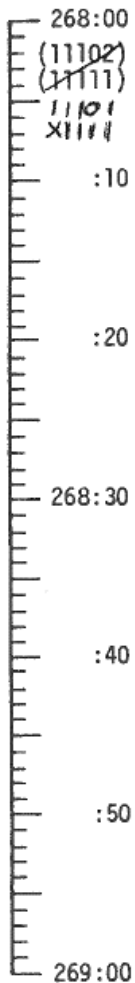
FLIGHT PLAN

MCC-H

1234 CDT

NOTES

ch@ 261:55:43



M
S
F
N

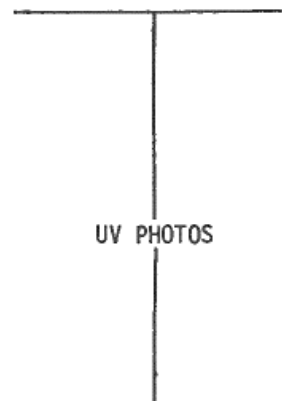
3 MARKS ON EACH STAR

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



GR
XR
AP
MS

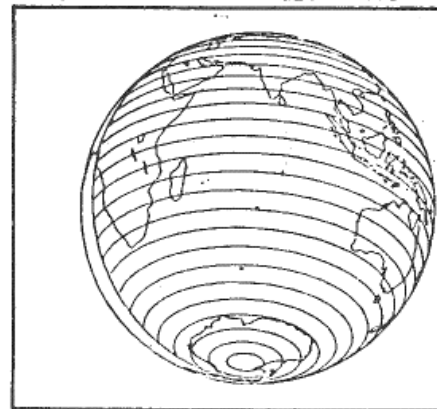
60 EL NATH (EFH)

13 CAPELLA (EFH)

21 ALPHARD (ENH)

FOV 4°

GET = 268



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)

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 # _____

FINAL (7/26)

6/21/71

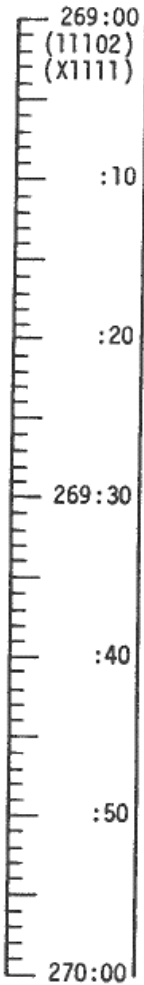
3-380

MCC-H

1334 CDT

FLIGHT PLAN

NOTES



M
S
F
N

LUNAR ECLIPSE PHOTOS

ENTRY CHECKLIST

EMS ENTRY CHECK PAGE E/1-3

GR
XR
AP
MS

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 % _____
~~PGM CABLE~~
UTILITY POWER - ON

dh@ 261:58:18

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)

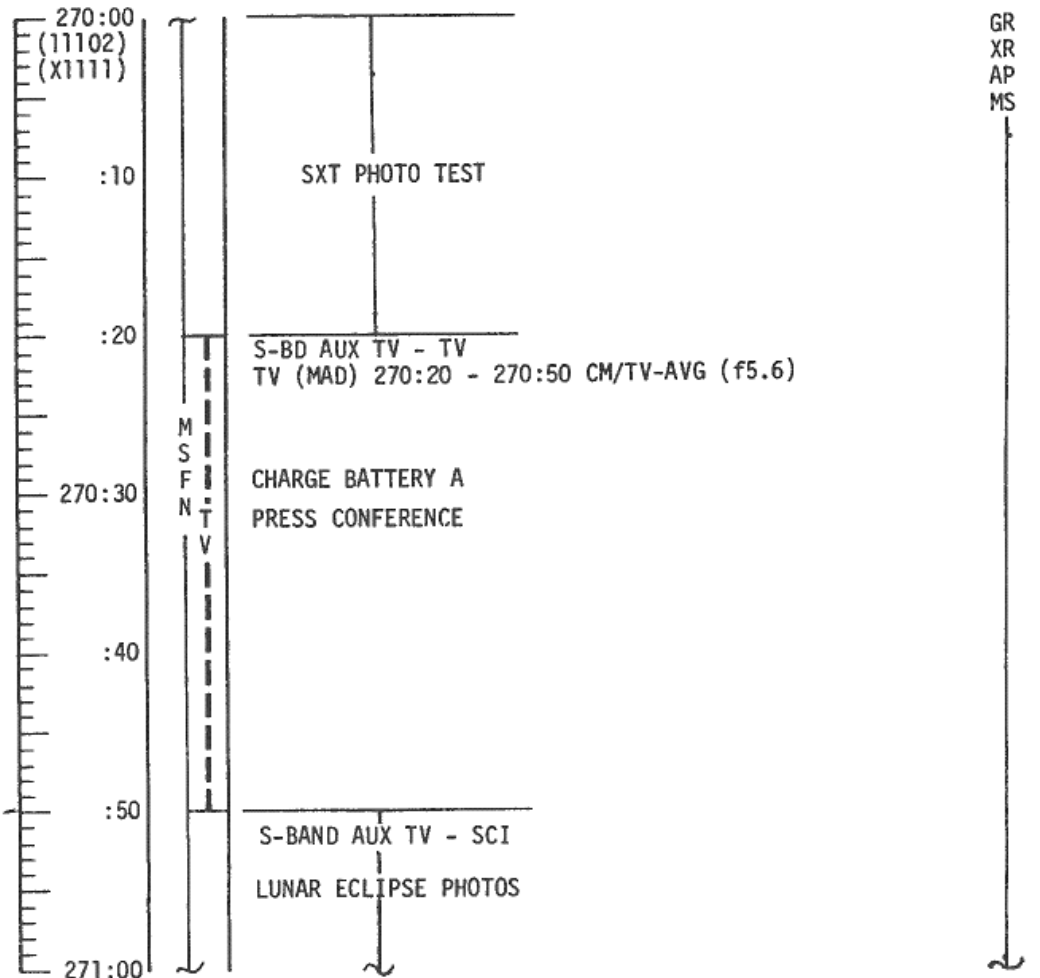
(040,011,041) HGA P -22, Y 227

MCC-H

1434 CUT

FLIGHT PLAN

NOTES



270:49:53
T-START
read up @ 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

:20

271:30

:40

:50

(11101)
(X1111)
272:00

M
S
F
N

LUNAR ECLIPSE PHOTOS

~~MASS SPECT EXP STBY ION SOURCE OFF~~ ch @ 268:39:09
~~CONFIGURE FOR URINE DUMP~~

~~CAUTION: WAIT 5 MIN BEFORE MASS SPECT BOOM RETRACT~~
~~GAMMA RAY BOOM - RETRACT to BP (~3:15)/GRAY then OFF (CTR)~~
~~MASS SPECT BOOM - RETRACT to BP (~2:30)/GRAY then OFF (CTR)~~
~~ALPHA/X-RAY EXP COVERS - CLOSE to BP/GRAY then OFF (CTR)~~
~~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

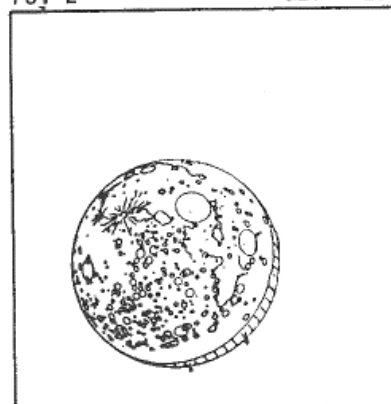
all deleted @ 268:39:18

V48 (11101)(X1111)
~~CONFIGURE FOR URINE DUMP~~

GR
XR
AP
MS

FOV 2°

GET = 272



ch @ 268:39:02
"Just under S-band Ant, TV, Science add
V48 - MNVR TO CONTAMINATION PHOTO ANT
014, 195, 016. NGA - 23, 252"

ch @ 268:39:48
V48 (11101, 01111)
PSL, 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

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)

:10

:20

273:30

:40

:50

(11111)
(X1111)
274:00

M
S
F
N

ch @ 268:44:25

~~BURN STATUS REPORT~~ *X-RAY-ON, CONES-OPEN, RECORD GET*

~~GR, XR, AP, MSO ON~~

V49 MNVR TO OPTICS CALIBRATION ATTITUDE
(066,152,350) HGA P -67, Y 314
P23 CISELUNAR NAVIGATION
OPTICS CALIBRATION STAR N70 (00020)
POO

V49 MNVR TO SIGHTING ATTITUDE
(079,185,330) HGA P -59, Y 359
P23 CISELUNAR 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)

ch @ 268:45:05

~~GAMMA-RAY BOOM, DEPLOY~~

V48 (11111)(X1111)

NOTES

GR
XR
AP
MSO

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

MCC-H

1834 CDT

FLIGHT PLAN

NOTES

274:00
 (11111)
 (X1111)

:10

:20

274:30

:40

:50

275:00

M
S
F
N

V49 MNVR TO X-RAY POINTING ATTITUDE (274:15)
 (
)
~~MASS SPECT: MULT-LOW, DSCRM-HIGH, EXP-ON, ION SOURCE-ON~~ *del @ 274:05:21*
 RECORD GET *Low*
~~LOGIC POWER (2) - OFF~~ *del @ 263:45:47*

GR
XR
AP
MS

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)

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

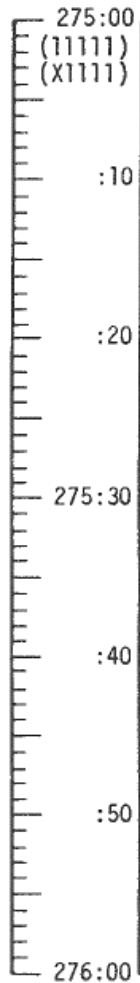
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	274:00 - 275:00	12/TEC	3-390

FLIGHT PLAN BRANCH

FLIGHT PLAN

MCC-H

1934 CDT



M
S
F
N

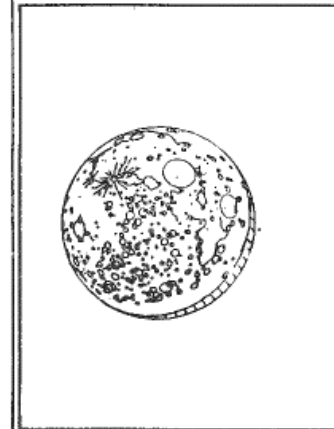
EAT PERIOD

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

MCC-H

2034 CDT

FLIGHT PLAN

NOTES

276:00
 (11101)
 (X1111)

:10

:20

276:30

:40

:50

(11111)
 (X1111)
 277:00

M
S
F
N

V49 MNVR TO OPTICS CALIBRATION ATTITUDE
 (066,152,350) HGA P -66, Y 317
 P23 CISELUNAR NAVIGATION
 OPTICS CALIBRATION STAR N70 (00020)
 P00

V49 MNVR TO SIGHTING ATTITUDE
 (078,191,330) HGA P -59, Y 359
 P23 CISELUNAR 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

EARTH DISTANCE
~ 93,233 NM

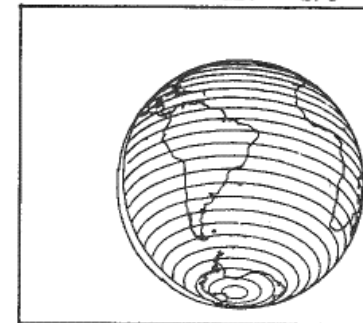
60 EL NATH (EFH)

13 CAPELLA (EFH)

21 ALPHARD (ENH)

FOV- 7°

GET = 276



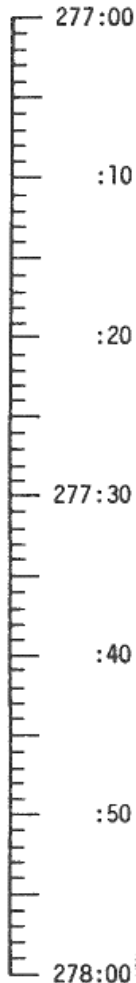
MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	276:00 - 277:00	12/TEC	3-392

FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H 2134 CDT

NOTES



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

CSM SYSTEMS CHECKLIST

PRE-SLEEP CHECKLIST PAGE S/1-26
 COMM - HGA

REST PERIOD (9 HOURS)

XR
AP
MS

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

UPLINK TO CSM
 CSM S.V. (MSFN)
 TO LM SLOTS

M
S
F
N

PTC

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	277:00 - 278:00	12/TEC	3-393

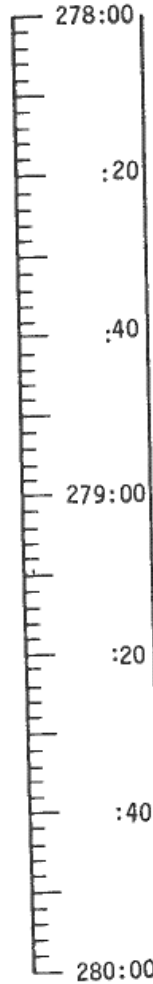
FLIGHT PLANNING BRANCH

FLIGHT PLAN

MCC-H

2234 CDT

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

GR
XR
AP
MS

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

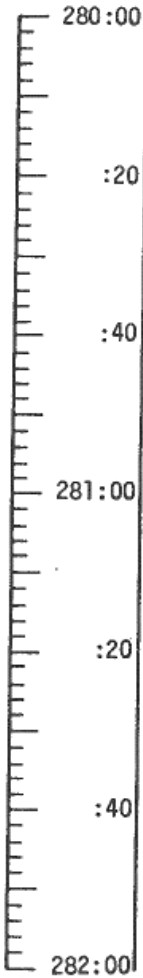
FLIGHT PLANNING BRANCH

MCC-H

0034 CDT

FLIGHT PLAN

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

GR
XR
AP
MS

DAP LOAD STATUS
(11111)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	280:00 - 282:00	12/TEC	3-395

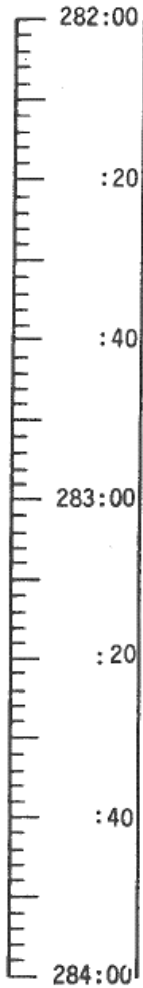
FLIGHT PLANNING BRANCH

MCC-H

0234 CDT

FLIGHT PLAN

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

PTC

GR
XR
AP
MS

DAP LOAD STATUS
(11111)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	282:00 - 284:00	12/TEC	3-396

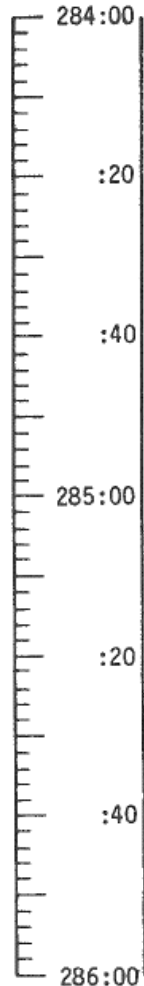
FLIGHT PLANNING BRANCH

MCC-H

0434 CDT

FLIGHT PLAN

NOTES



MSFN

REST PERIOD
(9 HOURS)

GR
XR
AP
MS

PTC

DAP LOAD STATUS
(11111)(X1111)

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	284:00 - 286:00	12/TEC	3-397

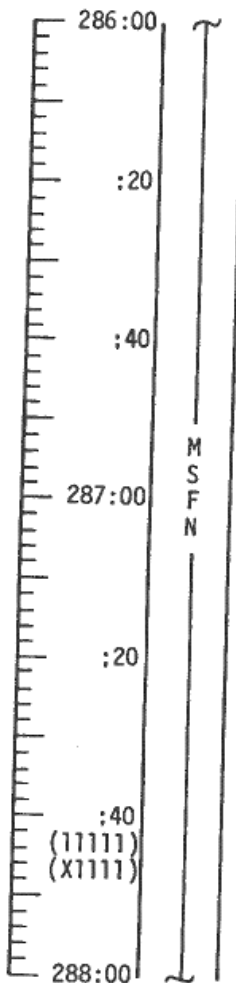
FLIGHT PLANNING BRANCH

MCC-H

0634 CDT

FLIGHT PLAN

NOTES



M
S
F
N

REST PERIOD
(9 HOURS)

CSM SYSTEMS CHECKLIST
POST SLEEP CHECKLIST PAGE S/1-26

EAT PERIOD

PTC

GR
XR
AP
MS

DAP LOAD STATUS
(11111)(X1111)

UPDATE TO CSM
CONSUMABLES
FLIGHT PLAN

:40
(11111)
(X1111)

EXIT G&N PTC AT ROLL ANGLE 071
GAMMA RAY GAINSTEP - SHIELD OFF

GAMMA RAY GAINSTEP - SHIELD ON (CTR)

CSM CONSUMABLES UPDATE	
GET: _____	: _____
RCS TOTAL	_____
QUAD A	_____
QUAD B	_____
QUAD C	_____
QUAD 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

NOTES

288:00
(11111)
(X1111)

:10

:20

288:30

:40

GO/NO-GO FOR MCC-7

(11102)
(01111)

:50

EI-6 HR

289:00

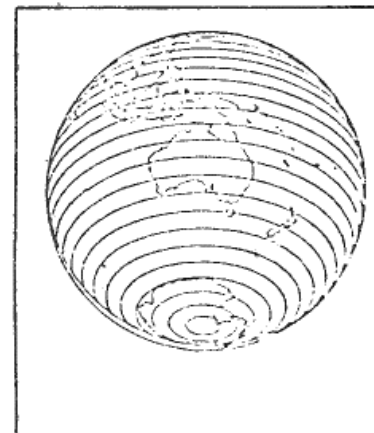
M
S
F
N

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

GR
XR
AP
MS

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

FOV 12° GET = 289



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

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

P52 IMU REALIGN
OPTION 3 REFSMMAT
PTC ORIENTATION

P52 IMU REALIGN

N71: _____
N05: _____
N93: _____
X _____
Y _____
Z _____
GET _____

REPORT: GYRO TORQUING ANGLES

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

X-RAY - OFF
ALPHA PART - OFF
ch @ 286:52:44

MCC-H

0934 CDT

FLIGHT PLAN

NOTES

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 CISELUNAR NAVIGATION
 OPTICS CALIBRATION STAR N70 (00001)
 P00

V49 MNVR TO SIGHTING ATTITUDE
 (297,044,000) OMNI D
 P23 CISELUNAR 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)

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
1 ~~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 # _____

CONFIGURE CAMERA: (UV COLOR)
CM5/EL/105/CEX, BRKT, CONT (f8,1/250,∞) (1 FR)
RINGSLIDE
MAG (~~N~~ 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

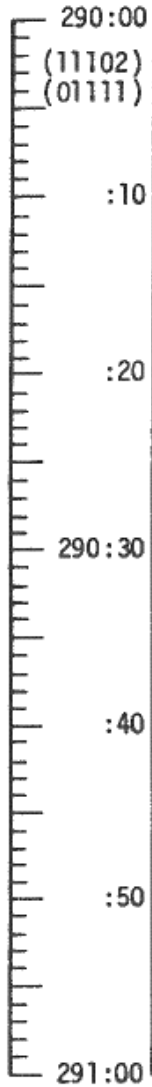
11:40:01

FLIGHT PLAN

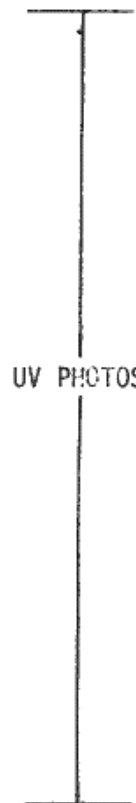
MCC-H

1034 CDT

NOTES



M
S
F
N



UV PHOTOS

UPDATE TO CSM
MCC-7 MNVR PAD &
ENTRY PAD

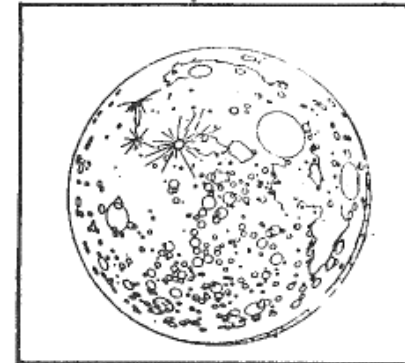
UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS
MCC-7 TGT LOAD
DESIRED ORIENT
(ENTRY)

EI-4 HR

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

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

MCC-H

1134 CDT

FLIGHT PLAN

NOTES

291:00
 (11102)
 (01111)

:10

:20

291:30

M
S
F
N

:40

:50

292:00

P52 IMU REALIGN
 OPTION 3 REFSMMAT
 PTC ORIENTATION

STARS __, __
 SA __, __
 TA __, __

REPORT: GYRO TORQUING ANGLES

P52 IMU REALIGN
 OPTION 1 PREFERRED
 ENTRY ORIENTATION

P52 IMU REALIGN

N71: __, __

N05: _____

N93: _____

X _____

Y _____

Z _____

GET _____:_____:_____

SC CONT - CMC
 BMAG (3) - RATE 2
 P30 EXTERNAL ΔV
 V49 MNVR TO PAD BURN ATT

SXT STAR CHECK
 P40 SPS THRUSTING OR
 P41 RCS THRUSTING

BURN STATUS REPORT

X	X	<input type="checkbox"/>	•	ΔTIG
X	X	<input type="checkbox"/>	•	BT
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•	V _{gx}
TRIM				
X	X	X		R
X	X	X		P
X	X	X		Y
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•	V _{gx}
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•	V _{gy}
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•	V _{gz}
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	•	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

MCC-7

EI - 3 HR

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	291:00 - 292:00	13/T&C	3405

FLIGHT PLANNING BRANCH

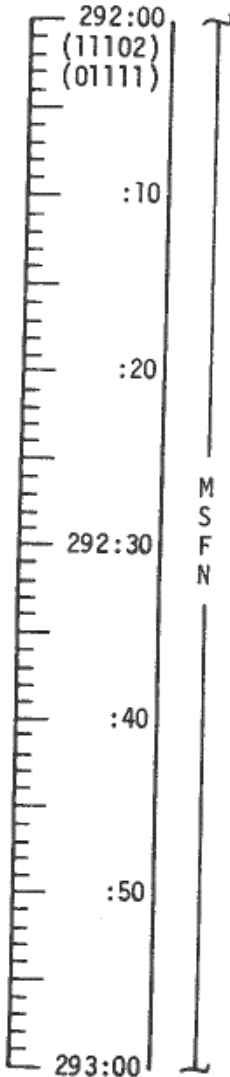
MCC-H

1234 CDT

FLIGHT PLAN

NOTES

UPLINK TO CSM
CSM S.V. (MSFN)
TO LM SLOTS



BURN STATUS REPORT
 V49 MNVR TO OPTICS CALIBRATION ATTITUDE
 (060,235,330) HGA P -12, Y 214
 P23 CISELUNAR NAVIGATION
 OPTICS CALIBRATION STAR N70 (00001)
 P00
 V49 MNVR TO SIGHTING ATTITUDE
 (038,267,000) OMNI C
 P23 CISELUNAR 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)

EARTH DISTANCE
~ 24,776 NM

126 GAMMA PEGASI (M)
(MNH)

120 ALPHA GRUIS (MF)
(MFH)

40 ALTAIR (MFH)

FOV 1° GET = 292:30



LOGIC SEQUENCE CHECK. PAGE E/1-2
 GO/NO-GO FOR PYRO ARM (CUE MSFN)
 LOGIC ON

EI - 2 HR
GO/NO-GO FOR PYRO
ARM SEQUENCE

MISSION	EDITION	DATE	TIME	DAY/REV	PAGE
APOLLO 15	FINAL (7/26)	6/21/71	292:00 - 293:00	13/TEC	3-406

FLIGHT MANNING BRANCH

FLIGHT PLAN

MCC-H

1334 CDT

NOTES

293:00
(11102)
(01111)

:10

:20

293:30

:40

:50

294:00

M
S
F
N

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

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

EI - 1 HR

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

MCC-H

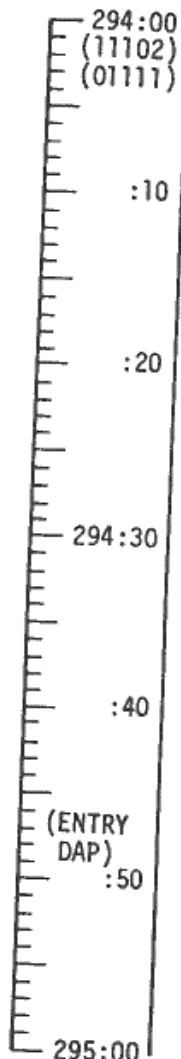
1434 CDT

FLIGHT PLAN

NOTES

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



M
S
F
N

TERMINATE RCS PREHEAT
CM RCS ACTIVATION
GO/NO-GO FOR PYRO ARM (CUE MSFN)
LOGIC ON
SET DET (UP, TO EI)
EMS INITIALIZATION
RSI ALIGNMENT
CM RCS CHECK

PAGE E/1-5
PAGE E/1-6
PAGE E/2-1
PAGE E/2-1
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

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