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MAY 15 1969

Internal Notes 69-FM-140

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MSC INTERNAL NOTE NO. 69-FM-140

May 14, 1969

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RTACF WORK SCHEDULE FOR APOLLO 10

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(NASA-TM-X-69674) RTACF WORK SCHEDULE FOR APOLLO 10 (NASA) 104 p

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MSC INTERNAL NOTE NO. 69-FM-140

PROJECT APOLLO

RTACF WORK SCHEDULE FOR APOLLO 10

By Hector Garcia, Jr. and Larry D. Davis
Flight Analysis Branch

May 14, 1969

MISSION PLANNING AND ANALYSIS DIVISION
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

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RTACF WORK SCHEDULE FOR APOLLO 10

By Hector Garcia, Jr. and Larry D. Davis

SUMMARY AND INTRODUCTION

The Real-Time Auxiliary Computing Facility (RTACF) work schedule for Apollo 10 is presented in this document. The plots reflect the latest spacecraft operational trajectory (ref. 1). The plots are generated primarily for the RTACF, but they are designed to assist Flight Control Division and Flight Crew Support Division personnel plan their work schedules.

Discussion of Work Schedule

The radar data consist of the three call letters for each station and the maximum elevation angle for each pass. The sun data appear in the column marked SN and display sunrise and sunset times and terminator rise and terminator set times. The moon data appear in the column marked MN and display moonrise and moonset times. In lunar orbit, earthrise and earthset times are displayed in this column. The computed events column displays apogee and perigee altitudes in n. mi. above a spherical earth, their subsatellite points are displayed to the nearest degree, and the right ascension of the ascending node is displayed in hours and minutes. In lunar orbit, the corresponding data are referenced to a spherical moon.

The data are plotted versus Greenwich mean time (G.m.t.) and ground elapsed time (g.e.t.) on a 2-hour per page time scale. The G.m.t. scale is modulated every 24 hours.

The radar acquisition and loss data were computed for a 0° elevation angle. The earth orbit portion contains the current Apollo 10 radar stations (table I) and the translunar, lunar orbit, and transearth phases contain only the three JPL deep space radar stations located in Goldstone, California; Madrid, Spain; and Canberra, Australia; in addition to the Hawaii station. The daylight/darkness and moon data were computed for lift-off at $16^h48^m35.345^s$ G.m.t. on May 18, 1969.

The RTACF work schedule processor will be available in the ACR (Auxiliary Computing Room) during the mission for generation of work schedule time lines. These time lines will be generated as requested through the RTACF Trajectory Support Chief.

There are five scales available.

1. 2 hours per page

2. 1 hour per page

3. 42 minutes per page

4. 30 minutes per page

5. 15 minutes per page

There are three times available for these scales.

1. g.e.t.

2. G.m.t.

3. RET (retro or maneuver elapsed time)

The work schedule plots requested during real time will include comments submitted on MSC form 2331. These forms are available from the Mission Support Section of the Flight Analysis Branch.

TABLE I.- RADAR STATION SYMBOLS

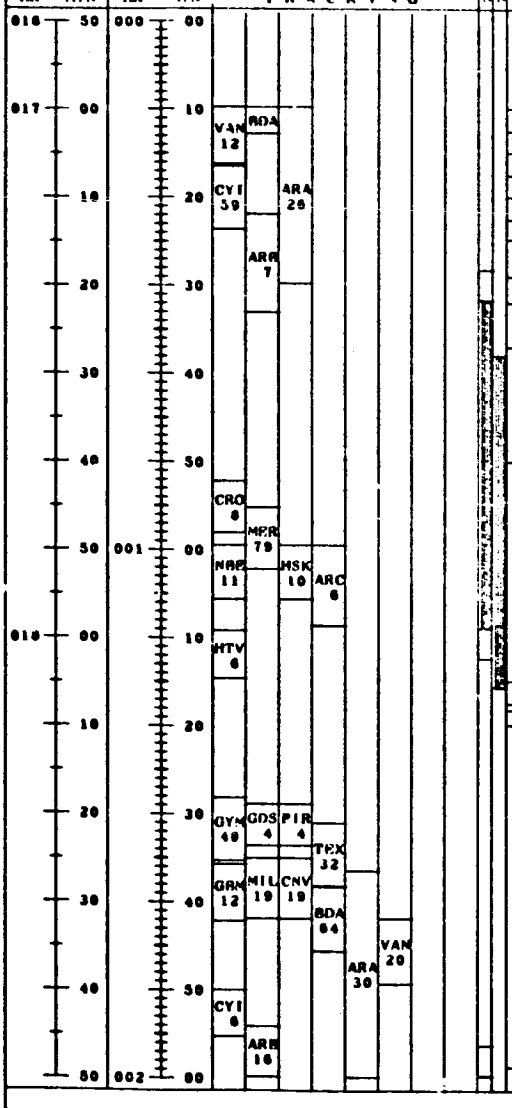
ANG	Antigua
ACN	Ascension
BDA	Bermuda
CNV	Cape Kennedy
CRO	Carnarvon
CYI	Canary Island
GBM	Grand Bahama Island
GDS	Goldstone
GWM	Guam
GYM	Guaymas
HAW	Hawaii
HSK	Honeysuckle Creek
HTV	Huntsville (ship)
MAD	Madrid
MER	Mercury (ship)
MIL	Merritt Island
NBE	Canberra (JPL)
PIR	Goldstone (JPL)
RID	Madrid (JPL)
RED	Redstone (ship)
TEX	Texas
VAN	Vanguard (ship)

TABLE I.- RADAR STATION SYMBOLS - Concluded

ARA	ARIA-A
ARB	ARIA-B
ARC	ARIA-C
ARD	ARIA-D

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 001



COMPUTED EVENTS

- EARTH ORBIT INSERTION INTO 100 NM CIRCULAR ORBIT,LO TO NORAD
- DURING LAUNCH COMPUTE NODAL TARGETS,LO REFSMMAT
- UPDATE DATA BANK
- COMPUTE WITH INSERTION VECTOR-DEORBIT DATA FOR AREAS 2-1,2-4
  GROUNDTRACKS FOR REVS 3 THROUGH 10
  VECTOR TO NORAD,PFAO-PAO DATA,NAV UPDATE-CMC OR LO
- COMPUTE WITH TLI CUTOFF VECTOR, VECTOR TO TRACK FOR JPL-GDS
  TLI+10 MINUTE CREW CHART UPDATE
- COMPUTE REF BODY DATA,AGOP OP 2,GET 05 00 00 TO 11 30 00
- COMPUTE WITH POST TLI VECTOR- 4 00 00- TLI+90 MINUTE ABORT
- COMPUTE WITH POST TLI VECTOR- 5 00 00- MCC-1 BAP,TLI+4 HOUR
  ABORT,VECTOR TO TRACK FOR JPL-GOLDSTONE
  AGOP OPTION 1,P-23 STARS 33,40,42,MGA 0,20 FROM 5 TO 6 HRS

STACK WORK SCHEDULE

MISSION AS-505/CSM106/LM6 VEHICLE CSM106 DATE 8/18/69 PAGE 002

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPLETED EVENTS
016	40	002	00		VERIFY TLI+10 MINUTE CREW CHECK LPDATE
	50		10		MCC-1 RAP AND PRAO/PMI DATA TLI IGN
019	00		20		GO-NO GO FOR TLI
	10		30	CRO 11, HSK 10	S-IVB TLI IGN
	20		40	ARC 12, BPO 11	MCC-1 RAP AND VERIFY TLI+90 MINUTE ABORT
					ASC NOW 23 HRS 26 MIN
	30		50		COMPUTE STAR SIGHTING SCHEDULE LTP-ORION BY GET 03 30 00
	45	003	00		CSM-SIVB SEP AND CO-NO GO FOR T+D
					TV THROUGH GDS,03 00 TO 03 15
	50		10		DOCKING
					VERIFY TLI+4 HR ABORT AND MCC-1 OPTIMIZATION,MCC-1 SCAN
020	00		20	ARO 17, HTV 13, HAW 67, GDS 64, PIR 64, GYM 64, TEX 72	
	10		30	BAK 13, BPA 13, ANG 32, VAN 20, ARA 13	DOCKING ANGLE REPORT
	20		40		
					COMPUTE TLI+11 HR BLOCK DATA WITH MCC-1
	30		50		
	40	004	00		

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 003

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
020	40	004	00		TRAN 2 ON
					PRAO-PAO DATA FOR TLI ULTOPP,COPY MSK 494,966 BEFORE,AFTER
	50		10		LM EJECTION
021	00		20		PRAO-PAO DATA FOR EVASIVE MANEUVER IGNITION
	10		30		EVASIVE MANEUVER GET 4 29 00
					COMPUTE MCC-1 BAP,VERIFY TLI+11 HR BLOCK DATA-NO MCC-1
	20		40		S-IVB SLINGSHOT MNVR
					VECTOR TO NORAD-GOLDSTONE
	30		50		
	40	005	00		VERIFY TLI+11 HR BLOCK DATA WITH MCC-1
					COMPUTE CSM-LM S-IVB RELATIVE MOTION
	50		10		
					MCC-1 OPTIMIZATION
022	00		20		ALTITUDE 23260 N. MI.
					ALTITUDE 23604 N. MI.
					VERIFY MCC-1 SCAN,CHECK SELECTED POINTS
	10		30		P23 CISLUNAR NAVIGATION EARTH HORIZON
	20		40		GENERATE POST FLIGHT EPHEMERIS TAPE,GET 7 TO 21 HRS 2 COPIES
	30		50		AGOP OPTION 2,REF BODY GET 12 TO 26 30 HRS DELTA T 15 MIN
	40	006	00		

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 004

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	SN	COMPUTED EVENTS
022	40	006	00				COMPUTE EMS LOOK ANGLES AND COMPUTE PTC REFSMMAT,12,16,24 HR
	50		10				
023	00		20				COMPUTE WORLD-WIDE TELESCOPE DATA GET 7 TO 36 HRS
	10		30				ALTITUDE 30525 N. MI.
							MCC-1 CUTOFF VECTOR TO TRACK FOR GOLDSTONE
	20		40				
	30		50				COMPUTE TELESCOPE DATA FOR LICK AND BLDG 16, 8 TO 75 HRS
	40	007	00				
	50		10				
024	00		20				
	10		30				ALTITUDE 36403 N. MI.
							PPAO-PAO DATA FOR EVASIVE MANEUVER CUTOFF
	20		40				
							COMPUTE EMS LOOK ANGLES FOR MCC-1 ATTITUDE
	30		50				
	40	008	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 005

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
000	40	008	00			
	50		10			
						COMPUTE TL1+25 HR BLOCK DATA
001	00		20			
	10		30			VERIFY MCC-1 BAP
						COMPUTE TL1+35 HR,TL1+44 HR,TL1+53 HR BLOCK DATA
	20		40			
	30		50			
	40	009	00			
						COMPUTE DMT FOR MCC-1 USING RTCC TARGETS
	50		10	NAB 23		
002	00		20			PPAO-PAO DATA FOR MCC-1 IGN,COPY MSK 894,966 BEFORE,AFTER
	10		30			MCC-1
						CONFIRMATION WITH RESIDUALS
	20		40			
						PROCESS P-23 STAR SIGHTING DATA-HOPE
	30		50			
						PPAO-PAO DATA FOR MCC-1 CUTOFF
	40	010	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/68 PAGE 006

GMT HR	GMT MIN	GRT HR	GRT MIN	RADAR TRACKING	SYM	COMPLETED EVENTS
002	40	010	00			VERIFY TLI+11 HR BLOCK DATA
	50		10			VECTOR TO NORAD-GOLDSTONE
003	00		20			MCC-1 MANEUVER EVALUATION
	10		30			VERIFY TLI+25 HR BLOCK DATA,COMPUTE MCC-2 BAP
	20		40			VERIFY TLI+35 HR,TLI+44 HR,TLI+53 HR BLOCK DATA
	30		50			
	40	011	00			TEAM 3 ON
	50		10			
004	00		20			ALTITUDE 56007 N. MI.
	10		30			
	20		40			UPDATE PTC REFSMMAT
	30		50			
	40	012	00			

STACK WORK SCHEDULE

MISSION AS-501/CSM106/LM5 VEHICLE CM106 DATE [illegible] PAGE 007

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SS MM	COMPLETED EVENTS
004	40	012	00			ESTABLISH PTC MODE IN G-N,P,Y PLANE-MINUS 20.0 RATE [illegible]
	50		10			
005	00		20			COMPLETE MEC-2 MAP
						ALTITUDE 60653 N. MI.
	10		30			
	20		40			
	30		50			
	40	013	00			UPDATE MASS PROPERTIES IF REQUIRED
						BEGIN CREW 9 HOUR REST PERIOD
	50		10			
006	00		20			
						ALTITUDE 64721 N. MI.
	10		30			
	20		40			
	30		50			
	40	014	00			

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 006

GMT HR	GMT MIN	GPT HR	GPT MIN	RADAR TRACKING	S	K	COMPUTED EVENTS
006	40	014	00				
	50		10				
007	00		20				ALTITUDE 68832 N. MI.
	10		30				
	20		40				
	30		50				COMPUTE CSM RCS USAGE PROFILE-MRS
	40	015	00				
	50		10				
008	00		20				COMPUTE MCC-2 BAP
							ALTITUDE 72801 N. MI.
	10		30				
	20		40				
	30		50	RID 76			
	40	016	00				

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 009

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
008	40	016	00			GENERATE POSTFLIGHT EPHEMERIS TAPE GET 19 TO 33 HRS 2 COPIES
						OUTPUT REQUIRED BY 16 HRS GET
	50		10			
009	00		20			ALTITUDE 76643 N. MI.
	10		30			
	20		40			
						VECTOR TO NORAD-GOLDSTONE
	30		50			
	40	017	00			TEAM 1 ON
	50		10			
010	00		20			ALTITUDE 80369 N. MI.
	10		30			
	20		40			
	30		50			
	40	018	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM6 VEHICLE CM106 DATE 05/10/69 PAGE 010

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
010	40	016	00			
	50		10			
011	00		20			ALTITUDE 63969 N. MI.
	10		30			
	20		40			COMPUTE STAR SIGHTING SCHEDULE LTP-ORION
	30		50			
	40	019	00			
	50		10			
012	00		20			ALTITUDE 87511 N. MI.
	10		30			
	20		40			AGOP OPTION 4,CSM HI GAIN ANTENNA DATA FOR GET 26 45 00
	30		50			
	40	020	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 011

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S/N	COMPLETED EVENTS
012	40	020	00			AGOP OP 1,P-23 STARS 33,37,44,45-EARTH HORIZON,25 TO 27 HRS
						AGOP OP 2,REF BODY LOCATIONS, 54 TO 69 30,DELTA T 15 MIN
	50		10			
013	00		20			
						ALTITUDE 90942 N. MI.
	10		30			
						COMPUTE WORLDWIDE TELESCOPE DATA,GET 24 TO 60 HRS
	20		40			
	30		50			MCC-2 BAP AND MCC-2 OPTIMIZATION,MCC-2 SCAN,MCC-2 XYZT MODE
	40	021	00			
	50		10			
014	00		20			
						ALTITUDE 94268 N. MI.
	10		30			END 9 HOUR CREW REST PERIOD
	20		40			
						COMPUTE MODEL DATA FOR MCC2,SECOND VEHICLE SIVB
	30		50			
	40	022	00			

RTACF WORK SCHEDULE

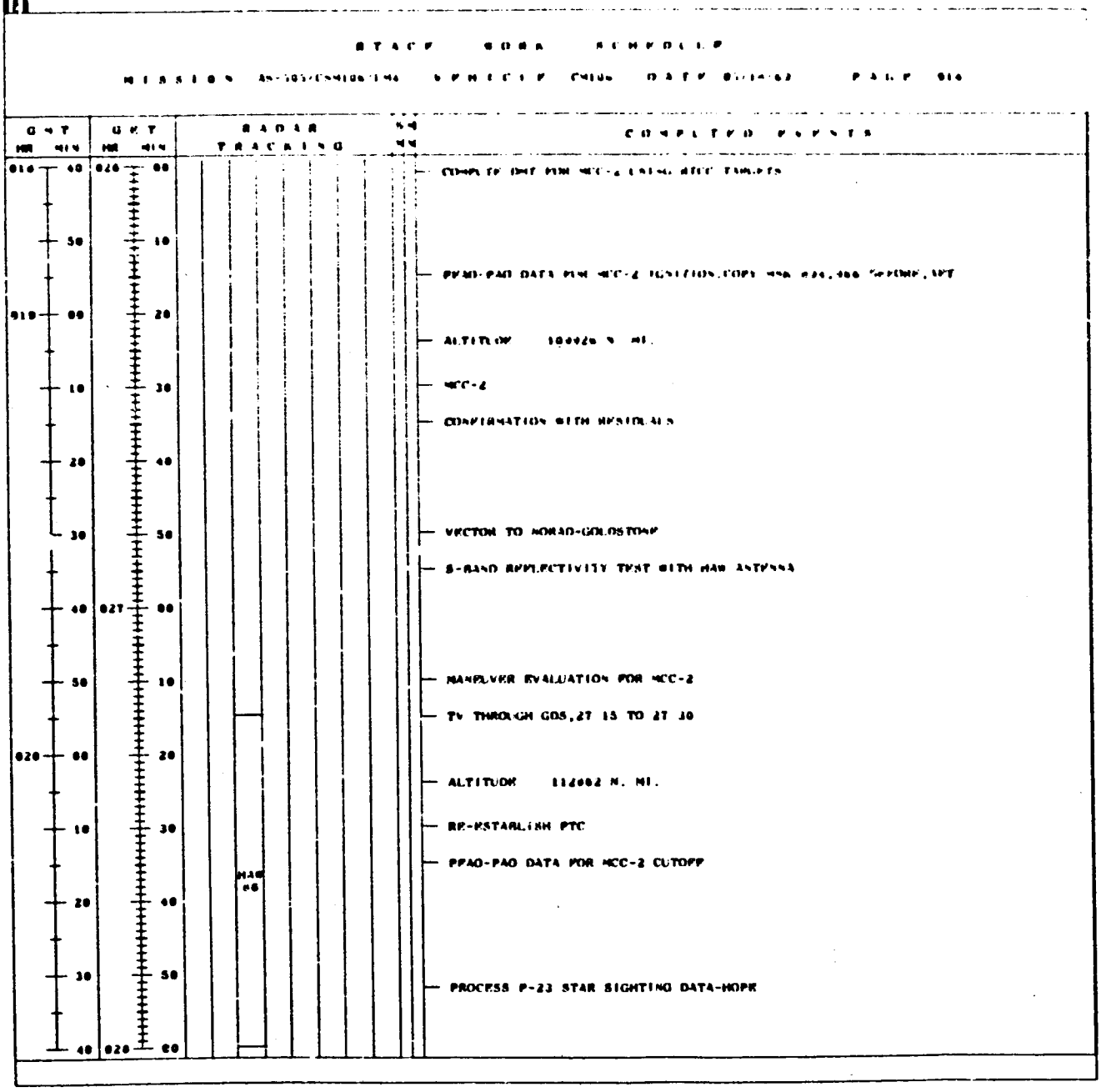
MISSION SS-505/CSM106/LM6 VEHICLE CSM106 DATE 05/18/69 PAGE 012

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SKN	COMPUTED EVENTS
014	40	022	00			
	50		10			
015	00		20			VERIFY TLI+25 HR BLOCK DATA
						ALTITUDE 97255 N. MI.
	10		30			
	20		40			
	30		50			COMPUTE EMS LOOK ANGLES FOR MCC-2,PTC AND TV ATTITUDES
	40	023	00			
	50		10			VECTOR TO NORAD-GOLDSTONE
016	00		20			
						ALTITUDE 100749 N. MI.
	10		30			
	20		40			MCC-2 CUTOFF VECTOR TO TRACK FOR GOLDSTONE
	30		50	PIR 00		
	40	024	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 013

GMT HR	GMT MIN	CET HR	CET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
016	40	024	00			VERIFY MCC-2 BAP
	50		10			
017	00		20			ALTITUDE 103872 N. MI.
	10		30			
	20		40			P52 IMU REALIGN-END PTC
	30		50			
	40	025	00			TRAM 2 ON
	50		10			P2. CISLUNAR NAVIGATION EARTH HORIZON
018	00		20			VERIFY MCC-2 BAP ALTITUDE 106930 N. MI.
	10		30			
	20		40			
	30		50			
	40	026	00			


GMT HR MIN
GET HR MIN
RADAR TRACKING
COMPLETED EVENTS
ALTITUDE
MCC-2
CONFIRMATION WITH RESIDUALS
VECTOR TO NORAD-GDS/STDAP
S-BAND REFLECTIVITY TEST WITH HAM ANTENNA
MANEUVER EVALUATION FOR MCC-2
TV THROUGH GDS,27 15 TO 27 30
ALTITUDE
RE-ESTABLISH PTC
PFAO-PAO DATA FOR MCC-2 CUTOFF
PROCESS P-23 STAR SIGHTING DATA-HOPE

RTACP WORK SCHEDULER

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 015

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S	COMPUTED EVENTS
020	45	028	00			VERIFY TLI+35 HR BLOCK DATA
	50		10			
021	00		20			GENERATE POSTFLIGHT EPHEMERIS TAPE.31 TO 45 HRS TWO COPIES
						OUTPUT REQUIRED BY 30 00 00 GET
	10		30			
						COMPUTE FLY-BY ABORT
	20		40			
	30		50			
	40	029	00			
	50		10			
022	00		20			
						ALTITUDE 118588 N. MI.
	10		30			
	20		40			
	30		50			
	40	030	00			

STAGE WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 0:0

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
022	40	030	30			
	50		10			
023	00		20			ALTITUDE 121344 N. MI.
	10		30			
	20		40			
	30		50			
	40	031	00			
	50		10			
024	00		20			ALTITUDE 124070 N. MI.
	10		30			
	20		40			
	30		50			
	40	032	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 017

GMT HR MIN	GET HR MIN	RADAR TRACKING	SYM	COMPLETED EVENTS
000 40	032 00			
50	10			
001 00	20			ALTITUDE 126749 N. MI.
10	30			
20	40			
30	50			
40	033 00			TEAM 3 ON
50	10			VERIFY FLY-BY ABORT,REQUIRED BY 35 HRS GET
002 00	20			ALTITUDE 129344 N. MI.
10	30	NRE 28		
20	40			
30	50			
40	034 00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CSM106 DATE 05/18/69 PAGE 010

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
002	40	034	00		CREW 4 HOUR REST PERIOD
	50				
003	00		20		ALTITUDE 131975 N. MI.
	10		30		
	20		40		VECTOR TO SORAC-GOLDSTONE
	30		50		
	40	035	00		
	50		10		
004	00		20		ALTITUDE 134525 N. MI.
	10		30		
	20		40		
	30		50		
	40	036	00		

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/14/63 PAGE 019

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SYMBOLS	COMPUTED EVENTS
004	40	036	00			
	50		10			
005	00		20			ALTITUDE 137034 N. MI.
	10		30			
	20		40			
	30		50			
	40	037	00			
	50		10			
006	00		20			ALTITUDE 139505 N. MI.
	10		30			
	20		40			
	30		50			
	40	038	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 020

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
006	40	038	00			
	50		10			
007	00		20			ALTITUDE 141939 N. MI.
	10		30			
	20		40			
	30		50			
	40	039	00			
	50		10			
008	00		20			ALTITUDE 144337 N. MI.
	10		30			COMPUTE CSM RCS USAGE PROFILE,MRS
	20		40			
	30		50			COMPUTE CSM SENNA DATA
	40	040	00			

STACK WORK SCHEDULE

MISSION AS-503/CS410A/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 021

GMT HR	GMT MIN	GMT HR	GMT MIN	RADAR TRACKING	SM MM	COMPLETED EVENTS
008	40	040	00			GENERATE POSTFLIGHT EPHEMERIS TAPE,GMT 41 TO 57 HRS 2 COPIES
						OUTPUT REQUIRED BY 42 00 00 GMT
	50		10			
009	00		20			
						ALTITUDE 146700 N. MI.
	10		30			
	20		40			
						VECTOR TO NORAD-GOLDSTONE
	30		50			
	40	041	00			TRAM 1 ON
	50		10	RID 74		
010	00		20			
						ALTITUDE 149030 N. MI.
	10		30			
	20		40			
	30		50			
	40	042	00			

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 022

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	LM	COMPUTED EVENTS
010	40	042	00				
	50		10				
011	00		20				ALTITUDE 151327 N. MI.
	10		30				
	20		40				
	30		50				
	40	043	00				END 9 HOUR CREW REST PERIOD
	50		10				
012	00		20				ALTITUDE 153592 N. MI.
	10		30				
	20		40				
	30		50				
	40	044	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CSM106 DATE 05/16/69 PAGE 023

GMT HR MIN	GET HR MIN	RADAR TRACKING	SM	COMPUTED EVENTS
012 40	044 00			
50	10			
013 00	20			ALTITUDE 155827 N. MI.
10	30			
20	40			
				COMPUTE WORLDWIDE TELESCOPE DATA GET 46 TO 82 HRS
30	50			DATA REQUIRED BY 47 00 00 GET
40	045 00			
50	10			
014 00	20			ALTITUDE 158032 N. MI.
10	30			
20	40			
30	50			
40	046 00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 024

GMT HR MIN	GET HR MIN	RADAR TRACKING	SIM MM	COMPUTED EVENTS
014 40	046 60			
50	10			
015 00	20			ALTITUDE 160203 N. MI.
10	30			
20	40			VECTOR TO NORAD-GOLDSTONE
30	50			
40	047 00			COMPUTE MCC-3 BAP
50	10			
016 00	20			COMPUTE MCC-3 XYZT ALTITUDE 162357 N. MI.
10	30			COMPUTE MCC-3 OPTIMIZATION
20	40			
30	50			COMPUTE MCC-3 SCAN
40	048 00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE C4106 DATE 05/14/69 PAGE 025

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
016	40	048	00			
	50		10			VERIFY MCC-3
017	00		20			ALTITUDE 164479 N. MI.
	10		30			
	20		40			
	30		50			
	40	049	00	PIR 79		TEAM 2 ON
	50		10			
018	00		20			ALTITUDE 166574 N. MI.
	10		30			
	20		40			COMPUTE EMS LOOK ANGLES FOR MCC-3,TV,AND PTC ATTITUDES
						COMPUTE MODEL DATA FOR MCC3,SECOND VEHICLE SIVB
	30		50			
	40	050	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 026

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	MN	COMPUTED EVENTS
016	40	050	00				
	50		10				MCC-3 CUTOFF VECTOR TO TRACK FOR GOLDSTONE
3:3	00		20				ALTITUDE 166644 N. MI.
	10		30				
	20		40				COMPUTE REF BODY AGOP OP 2,GET 54 TO 69 30 HRS,DELTA T 15 MN
	30		50				
	40	051	00				
	50		10				
020	00		20				ALTITUDE 170689 N. MI.
	10		30				
	20		40	MAW 88			
	30		50				
	40	052	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CSM106 DATE 05/18/69 PAGE 027

GMT HR MIN	GET HR MIN	RADAR TRACKING	SM	COMPUTED EVENTS
020 40	052 00			
50	10			
				VERIFY MCC-3
021 00	20			
				GENERATE POSTFLIGHT EPHEMERIS TAPE,GET 55 TO 69 HRS 2 COPIES
10	30			
20	40			P52 IMU REALIGN-END PTC
30	50			
40	053 00			
				COMPUTE DNT FOR MCC-3 USING RTCC TARGETS
50	10			
022 00	20			
				COMPUTE PFAO-PAO DATA FOR MCC-3 IGN,COPY MSK 894,966 REP-APT
10	30			
20	40			
				MCC-3
30	50			
				CONFIRMATION WITH RESIDUALS
40	054 00			

RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CSM106 DATE 05/16/69 PAGE 020

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
022	40	054	00		TV THROUGH GDS,54 00 TO 54 15
					VECTOR TO NORAD-GOLDSTONE
	50		10		
023	00		20		MCC-3 MANEUVER EVALUATION
					ALTITUDE 176683 N. MI.
	10		30		
	20		40		PPAO-PAO DATA FOR MCC-3 CUTOFF
	30		50		
	40	055	00		
	50		10		
024	00		20		
					ALTITUDE 178637 N. MI.
	10		30		
	20		40		
	30		50		
	40	056	00		

STACK WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 029

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
000	40	056	00		
	50		10		
001	00		20		ALTITUDE 180569 N. MI.
	10		30		
	20		40		
	30		50		
	40	057	00		TEAM 3 ON
	50		10		
002	00		20		ALTITUDE 182482 N. MI.
	10		30	NAB 30	
	20		40		
	30		50		
	40	058	00		

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 010

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
002	40	058	00			BEGIN CREW 10 HOUR REST PERIOD
	50		10			
003	00		20			ALTITUDE 184374 N. MI.
	10		30			
	20		40			VECTOR TO NORAD-GOLDSTONE
	30		50			
	40	059	00			
	50		10			
004	00		20			ALTITUDE 186248 N. MI.
	10		30			
	20		40			
	30		50			
	40	060	00			

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CSM106 DATE 05/16/69 PAGE 031

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S/C	COMPUTED EVENTS
004	40	060	00			
	50		10			
005	00		20			ALTITUDE 166104 N. MI.
	10		30			
	20		40			
	30		50			
	40	061	00			
	50		10			
006	00		20			ALTITUDE 189943 N. MI.
	10		30			
	20		40			
	30		50			
	40	062	00			

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 032

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S/C	COMPUTED EVENTS
006	40	062	00			
						BEGIN MASS PROPERTIES UPDATE FOR LOI-1,LOI-2
						SHOULD BE COMPLETED BY APPROXIMATELY 64 00 00 GET
	50		10			
007	00		20			
						COMPUTE MCC-4 NAP
	10		30			
	20		40			COMPUTE MCC-4 XYZT
	30		50			COMPUTE LOI-1,DMT
	40	063	00			TEAM 1 ON
	50		10			
						COMPUTE PC+2 BLOCK DATA
008	00		20			
						ALTITUDE 29934 N. MI.
	10		30			
						GENERATE POSTFLIGHT EPHEMERIS TAPE,GET 67 TO 82 HRS 2 COPIES
						INCLUDE LOI-1 AND LOI-2 PLUS MCC-4,OUTPUT BY 66 00 00 GET
	20		40			
	30		50			
	40	064	00			

R T A C K W O R K S C H E D U L E

M I S S I O N AS-503/CSM106/LM4 V E H I C L E CM106 D A T E 05/18/69 P A G E 033

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	COMPUTED EVENTS
008	40	064	00			COMPUTE EMS LOOK ANGLES FOR MCC-4, TV,LOI-1 ATTITUDES
	50		10			
009	00		20			COMPUTE MCC-4 BAP
						ALTITUDE 27676 N. MI.
	10		30			COMPUTE MCC-4 XYZT
	20		40			VECTOR TO NORAD-GOLDSTONE
	30		50			
						COMPUTE CSM HI GAIN ANTENNA DATA,AGOP OP 4
	40	065	00			
						COMPUTE LOI-1,DMT
	50		10	RID 73		
						COMPUTE CSM RCS USAGE PROFILE,MRS
010	00		20			
						COMPUTE LOI CREW CHART DATA-LOI+15
	10		30			
	20		40			
						COMPUTE LOI MONITER DATA
	30		50			
	40	066	00			

STACK WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CSM106 DATE 05/14/69 PAGE 030

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
010	40	066	00		
					VERIFY MCC-4
	50		10		MCC-4 OPTIMIZATION,MCC-4 SCAN
011	00		20		
					ALTITUDE 23128 N. MI.
	10		30		GENERATE LUNAR ORBIT PHASE GROUNDTRACK TAPE AND PRINTOUT FOR
					CSM,INCLUDE MCC-4,LOI-1,LOI-2,SEP,GET 75 46 TO 137 20 HRS
	20		40		COMPUTE MODEL DATA FOR MCC4,SECOND VEHICLE SIVB
					COMPUTE MODEL DATA FOR LOI-1 AND LOI-2
	30		50		
					COMPUTE LOI-1,DMT
	40	067	00		
					MCC-4 CUTOFF VECTOR TO TRACK FOR GOLDSTONE
	50		10		
					VERIFY LOI+15 MINUTE CREW CHART DATA
012	00		20		
					ALTITUDE 20833 N. MI.
	10		30		
					COMPUTE PC+2 BLOCK DATA
	20		40		
					VERIFY LOI MONITOR DATA
	30		50		
	40	068	00		

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 035

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S-N	COMPUTED EVENTS
012	40	068	00			END CREW 10 HOUR REST PERIOD
						COMPUTE TRI-1 BLOCK DATA
	50		10			
						COMPUTE TRI-4 BLOCK DATA
013	00		20			
						ALTITUDE 18521 N. MI.
	10		30			
						COMPUTE CSM HI GAIN ANTENNA DATA,AGOP OP 4 SEVERAL CASES
	20		40			
	30		50			
	40	069	00			NOTE-GROUNDTRACK TAPES SHOULD BE READY BY THIS TIME
						UPDATE STATE VECTOR,LLS 2 REFSMMAT
	50		10			
014	00		20			
						COMPUTE CSM SENNA DATA
	10		30			
	20		40			P52 IMU REALIGN TO LLS 2 REFSMMAT,END PTC
	30		50			
	40	070	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 03A

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
014	40	070	00		TRAM 2 ON
	50		10		COMPUTE DMT FOR MCC-4 USING RTCC TARGETS
015	00		20		ALTITUDE 13821 N. MI.
	10		30		COMPUTE PPAO-PAO DATA,MCC-4 IGN,COPY MSK 894,968 REPORE-AFT
	20		40		MCC-4
	30		50		CONFIRMATION WITH RESIDUALS
	40	071	00		
	50		10		
016	00		20		VERIFY LOI-1,DMT
	10		30		LOI-1 CUTOFF VECTOR TO TRACK FOR GOLDSTONE
	20		40		VERIFY LOI+15 MINUTE CREW CHART UPDATE
	30		50		VERIFY TEI-1 AND TEI-4
	40	072	00		

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 037

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
016	40	072	00			
						VERIFY LOI-1,DMT
	50		10			
						VECTOR TO NORAD-GOLDSTONE
017	00		20			TV THROUGH GDS, 72 20 TO 72 35
						ALTITUDE 8963 N. MI.
	10		30			
						VERIFY PC+2 BLOCK DATA
	20		40			
						MCC-4 MANEUVER EVALUATION
	30		50			
						COMPUTE PFAO-PAO DATA FOR MCC-4 CUTOFF
	40	073	00			
				PIR 37		
	50		10			LOI MONITOR DATA IF REQUESTED
018	00		20			
						ALTITUDE 8428 N. MI.
	10		30			VERIFY LOI-1 AND COMPUTE LOI-2,DMT
	20		40			
	30		50			VERIFY LUNAR ORBIT GROUNDTRACK DATA IS STILL VALID
	40	074	00			

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/63 PAGE 016

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
018	40	074	00		
	50		10		COMPUTE TEI-5
019	00		20		
	10		30		ALTITUDE 3766 N. MI.
	20		40		
	30		50		GO-NO GO FOR LOI-1
	40	075	00		
	50		10		COMPUTE DMT FOR LOI-1 USING RTCC TARGETS
020	00		20		
	10		30		
	20		40		PFAO-PAO DATA FOR LOI-1 IGN,COPY MSK 894,966 BEFORE,AFTER
	30		50		LOI-1 NO ULLAGE BT 6 01,DELTA V 2978 FPS 60 BY 170
	40	076	00		

RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 001

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
019	40	075	00		
	50		10	RID 47	COMPUTE DMT FOR LOI-1 USING RTCC TARGETS
020	00		20	PIR 40	
	10		30		
	20		40		PRAO-PAO DATA FOR LOI-1 IGN,COPY MSK 894,966 BEFORE,AFTER
	30		50		LOI-1 NO ULLAGE RT 6 01,DELTA V 297.6 FPS 60 BY 170 ASC NODE 19 HRS 19 MIN * PKR ALT 59 LON 176 LAT 1
	40	076	00		
	50		10		
021	00		20		
	10		30	MAN 24	
	20		40	PIR 65 RID 31	
	30		50		
	40	077	00		APO ALT 168 LON -11 LAT 0

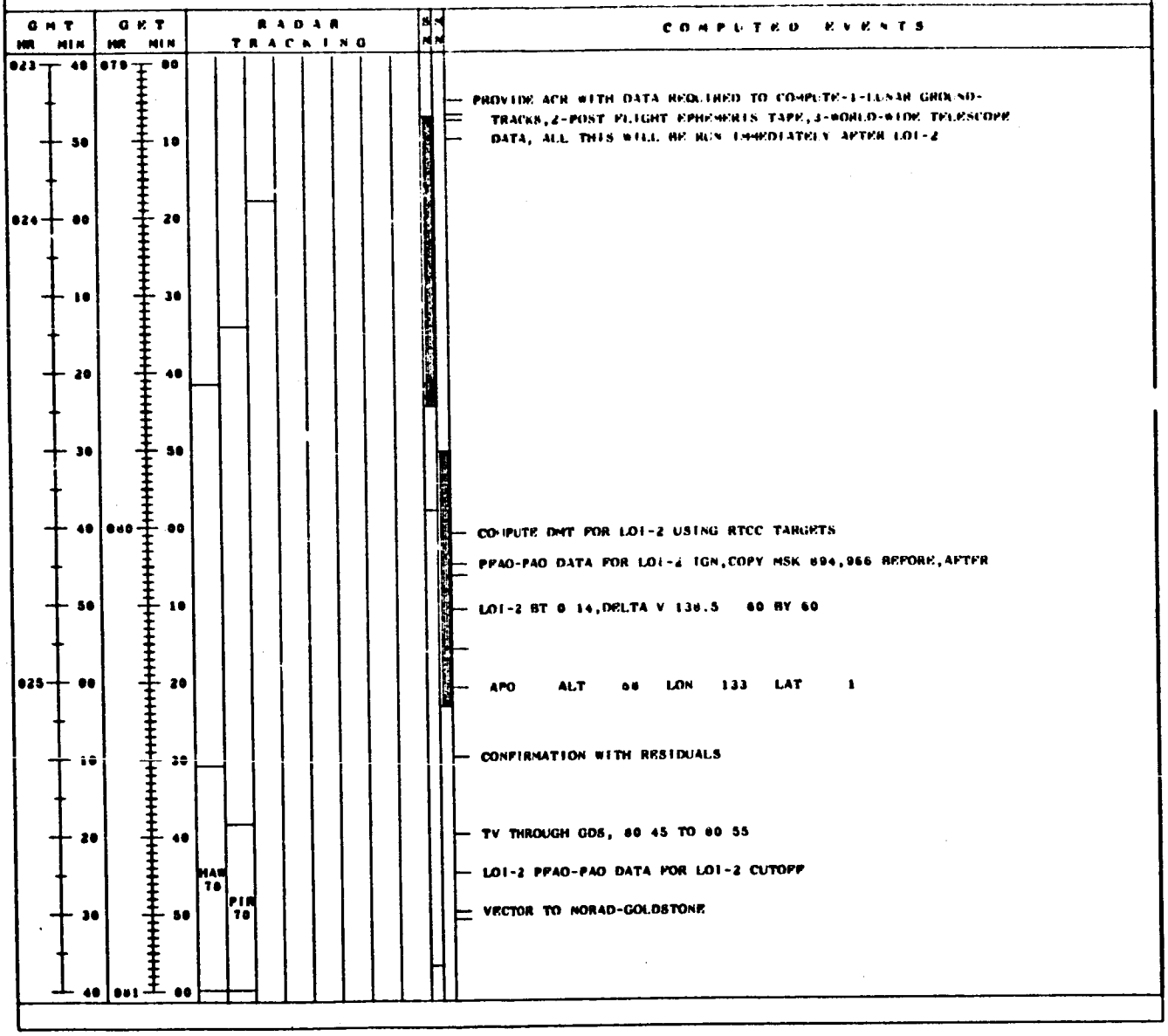
STACK WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/68 PAGE 002

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPLETED EVENTS
021	40	077	00		
	50		10		
022	00		20		
	10		30		
	20		40		
	30		50		
	40	078	00		ASC NODE 7 HRS 40 MIN
					PER ALT 58 LON 167 LAT 0
	50		10		
023	00		20		COMPUTE TKI-3
	10		30		GO-NO GO FOR LOI-2
	20		40	HAW 52	
				PIR 78 RID 7	
	30		50		
	40	079	00		

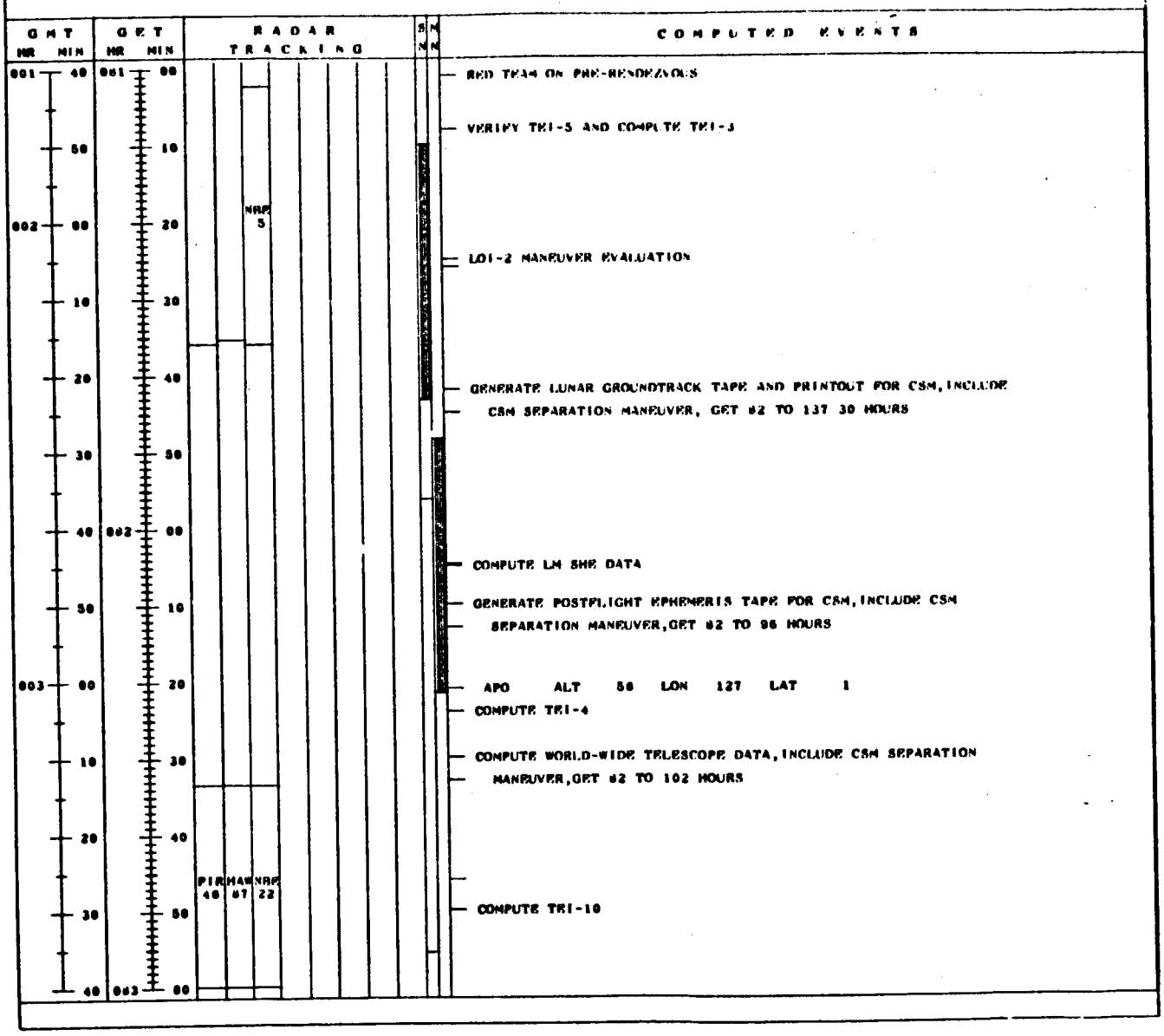
RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 003



RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CSM106 DATE 05/16/69 PAGE 004



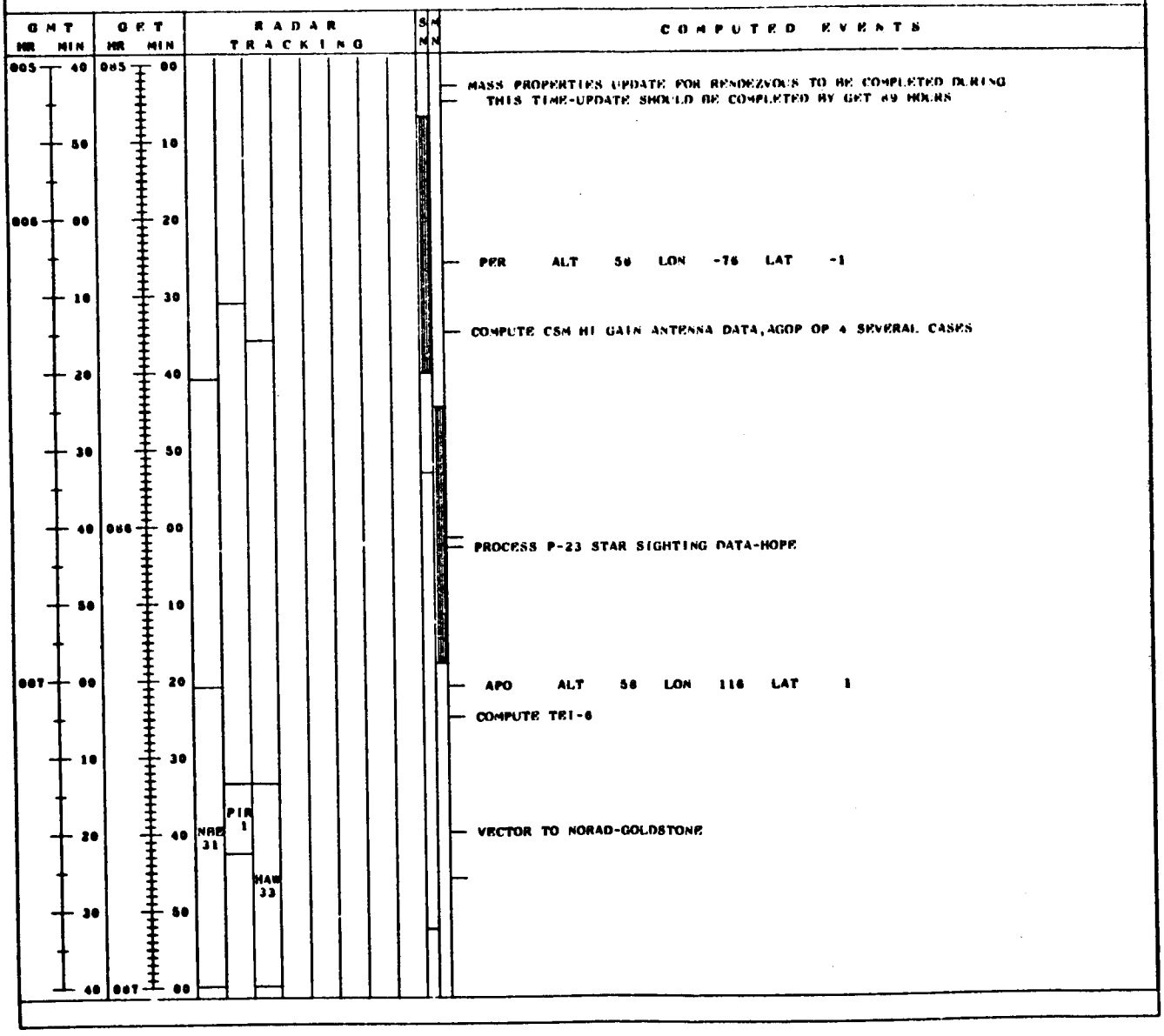
RTACP WORK SCHEDULE

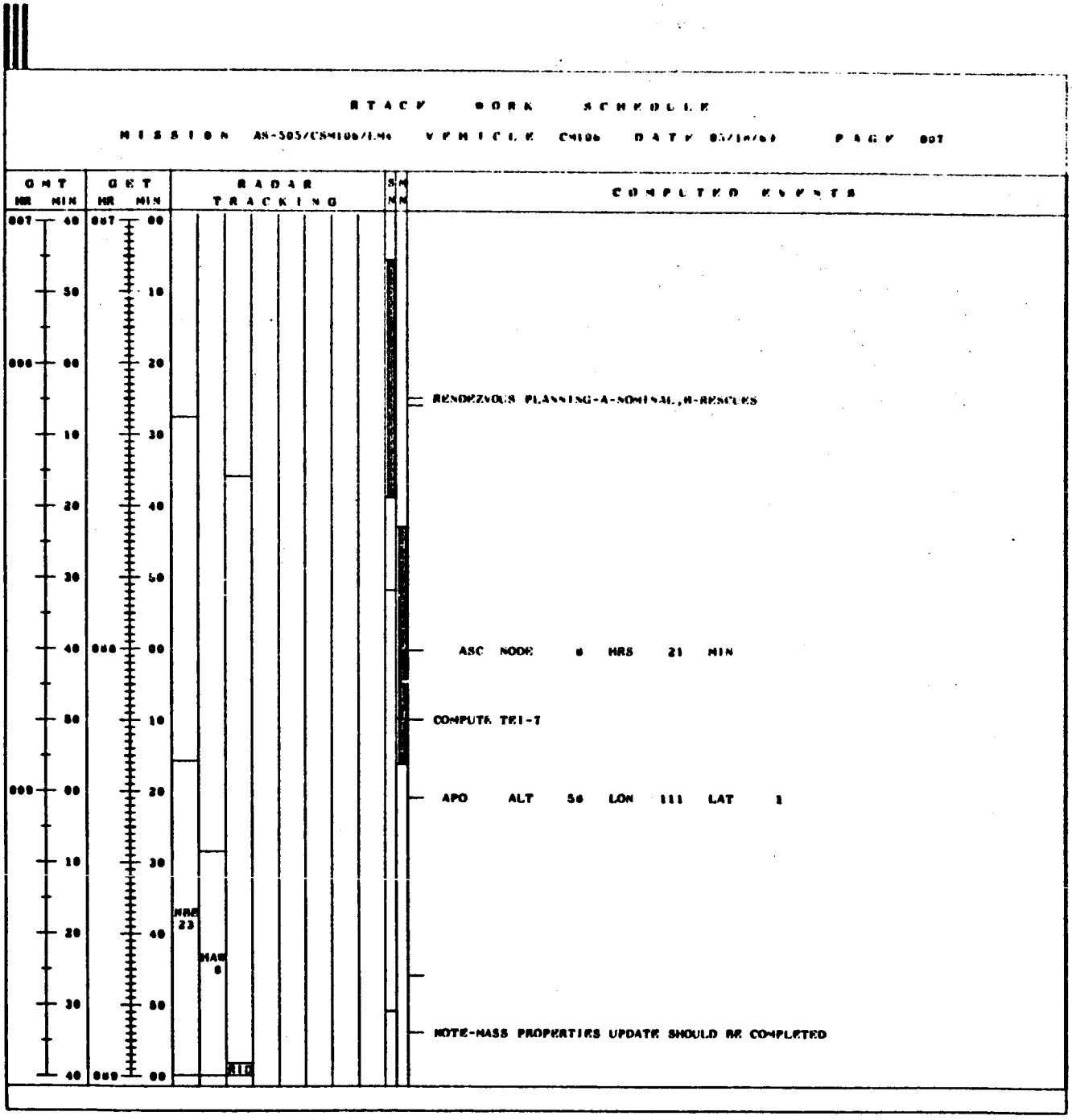
MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 005

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	KN	COMPUTED EVENTS
003	40	063	00				
	50		10				PROCESS RTCC TRAJECTORY DATA-HOPE
004	00		20				COMPUTE NOMINAL RENDEZVOUS
							PER ALT 58 LON -71 LAT -1
	10		30				
	20		40				COMPUTE LM SENNA DATA
	30		50				
	40	064	00				
							ASC NODE 18 HRS 58 MIN
							POSSIBLE COMPUTATION OF NON-NOMINAL RENDEZVOUS PLANS OR
							NOMINAL CSM RESCUE PLANS
	50		10				
005	00		20				APO ALT 58 LON 122 LAT 1
	10		30				VERIFY TPI-5
	20		40				
				MAW NRE PIR 60 31 24			BEGIN CREW 8 HOUR REST PERIOD
	30		50				
	40	065	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 006




STACK WORK SCHEDULE
MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 03/10/69 PAGE 007
GMT HR MIN
GET HR MIN
RADAR TRACKING
S M HR MIN
COMPUTED EVENTS
RENDEZVOUS PLANNING-A-NOMINAL,B-RESCUES
ASC NODE 0 HRS 21 MIN
COMPUTE TEI-7
APO ALT 50 LON 111 LAT 1
NOTE-MASS PROPERTIES UPDATE SHOULD BE COMPLETED
HRE 23
HAW 8
RID

STACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 000

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
009	40	069	00		
	50		10		
010	00		20		PER ALT 58 LON -72 LAT -1
	10		30		COMPUTE SM RCS USAGE PROFILE-MRS
	20		40		
	30		50		
	40	070	00		ASC NODE 3 HRS 5 MIN GENERATE POSTFLIGHT EPHEMERIS TAPE FOR CSM-INCLUDE SEP MANEUVER,GET 93 TO 109 HOURS
	50		10		
011	00		20		APO ALT 58 LON 120 LAT 1 COMPUTE TEI-8
	10		30	NRF 6 RID 25	
	20		40		GENERATE WORLD-WIDE TELESCOPE DATA FOR CSM INCLUDE SEP MANEUVER,GET 96 TO 130 HOURS
	30		50		
	40	071	00		

RTACS WORK SCHEDULER

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 009

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
011	40	091	00			
	50		10			
012	00		20			PER ALT 58 LON -78 LAT -1
	10		30			
	20		40			
	30		50			
	40	092	00			ASC NODE 16 HRS 13 MIN
						COMPUTE CSM SEP MODEL DATA
						COMPUTE MODEL DATA FOR CSI,CDH,TPI,SECOND VEHICLE CSM
	50		10			COMPUTE TEI-9
						APO ALT 58 LON 115 LAT 1
013	00		20			
	10		30			VECTOR TO NORAD-GOLDSTONE
	20		40	RID 49		
	30		50			COMPUTE RENDEZVOUS PLANS-A-NOMINALS,B-RESCUES
	40	093	00			

STACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 010

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
013	40	093	00		END CREW 8 HOUR REST PERIOD
	50		10		
014	00		20		PER ALT 58 LON -83 LAT -1
	10		30		
	20		40		
	30		50		
					ASC NODE 16 HRS 30 MIN
	40	094	00		BLUE TEAM ON-RENDEZVOUS
	50		10		COMPUTE TEI-16 FOR ABORT RENDEZVOUS
015	00		20		COMPUTE TEI-17 FOR NOMINAL RENDEZVOUS
	10		30		
					COMPUTE NOMINAL RENDEZVOUS PLAN
	20		40	RID 68	
	30		50		
	40	095	00		

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 011

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	MN	COMPUTED EVENTS
015	40	095	00				COMPUTE PDI ABORT-LM ACTIVE DKI
	50		10				
							VECTOR TO TRACK AT CSM SEPARATION CUTOFF FOR GOLDSTONE
016	00		20				PER ALT 50 LON -89 LAT -1
	10		30				COMPUTE CSM INSERTION RESCUE-MIRROR IMAGE
	20		40				
	30		50				
							ASC NODE 20 HRS 3 MIN
	40	096	00				
	50		10				
017	00		20				APO ALT 50 LON 00 LAT 1
	10		30				
							COMPUTE NOMINAL RENDEZVOUS PLAN
	20		40	RID 70			
	30		50				
							COMPUTE PDI ABORT
	40	097	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 012

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S N	M N	COMPUTED EVENTS
017	40	097	00				
	50		10	PIR 2			COMPUTE CSM INSERTION RESCUE
018	00		20				PER ALT 58 LON -95 LAT -1
							GO-NO GO FOR UNDOCKING AND SEPARATION
	10		30				
							COMPUTE LM SHE DATA
	20		40				
	30		50				ASC NODE 21 HRS 58 MIN
	40	098	00				
	50		10				UNDOCKING, INERTIAL ATTITUDE HOLD
							TV THROUGH GDS, 98 13 TO 98 23
019	00		20				POSSIBLE COMPUTATION OF TPI-16 FOR ABORTED RENDEZVOUS
	10		30				
				PIR 25			CSM SEPARATION BURN IGNITION, INERTIAL ATTITUDE HOLD
	20		40	RID 59			
							RECOMPUTE NOMINAL RENDEZVOUS WITH POST SEPARATION VECTOR
	30		50				
	40	099	00				

RTACP WORK SCHEDULE

MISSION A5-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 013

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
019	40	099	00			
	50		10			RECOMPUTE PDI ABORT WITH POST SEP VECTOR
						GO-NO GO FOR DOI
020	00		20			
						RECOMPUTE CSM INSERTION RESCUE WITH POST SEP VECTOR
	10		30			
						LM DOI BURN, IGN 99 33 59, CUTOFF 99 34 27
	20		40			
						POSSIBLE COMPUTATION OF CSM RESCUE 2
	30		50			
						ASC NODE 23 HRS 52 MIN
						VECTOR TO NORAD-GOLDSTONE
	40	100	00			
						POSSIBLE COMPUTATION OF TRI-16 WITH POST SEPARATION VECTOR
	50		10			
						RECOMPUTE PDI ABORT WITH POST DOI VECTOR
021	00		20			GO-NO GO FOR PDI ABORT
	10		30			
						COMPUTE CSM RESCUE-2 WITH POST DOI VECTOR
	20		40	PIR 51 RID 37 MAR 10		GO-NO GO FOR PHASING
						DPS PHASING BURN, IGN 100 46 21, CUTOFF 100 47 03
	30		50			COMPUTE LM RCS USAGE PROFILE
	40	101	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 014

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SUN	COMPUTED EVENTS
021	40	101	00			RECOMPUTE CSM INSERTION RESCUE WITH POST PHASING VECTOR
	50		10			
022	00		20			RECOMPUTE NOMINAL RENDEZVOUS-INS,CSI,COH,TPI,TPF
	10		30			
	20		40			
	30		50			ASC NODE 1 HRS 47 MIN POSSIBLE COMPUTATION OF TPI-17 WITH POST SEP VECTOR
	40	102	00			APO ALT 58 LON 119 LAT 1
	50		10			COMPUTE INSERTION RESCUE-CSM-WITH LGC VECTOR AT LOS
023	00		20			GO-NO GO FOR STAGING
	10		30	HAW 35		BEGIN DESCENT STAGE JETTISON
						COMPUTE LM SENNA DATA
	20		40	RIO PIR 15 72		APS INSERTION BURN,IGN 102 43 18,CUTOFF 102 43 33
	30		50			
	40	103	00			POSSIBLE COMPUTATION OF CSM RESCUE 2

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 015

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
023	40	103	00		
					COMPUTE COMPLETION OF NOMINAL RENDEZVOUS-CSI,CDH,TPI,TPF
	50		10		
					GO-NO GO FOR CSI
024	00		20		
	10		30		
					CSI RCS BURN,IGN 103 33 46,CUTOFF 103 34 18
	20		40		
					COMPUTE CDH,TPI,TPF AND SM RCS USAGE PROFILE
					ASC NODE 3 HRS 42 MIN
	30		50		
	40	104	00		APO ALT 58 LON 129 LAT 1
	50		10		COMPUTE TEI-17
					GO-NO GO FOR CDH
025	00		20		
	10		30		CDH RCS BURN,IGN 104 31 42,CUTOFF 104 31 45
				HAW 63 PIR 74	
	20		40		
					COMPUTE TPI-TPF WITH POST CDH VECTOR
	30		50		
	40	105	00		

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 016

GMT HR	GMT MIN	GRT HR	GRT MIN	RADAR TRACKING	SN	KN	COMPUTED EVENTS
001	40	105	00				COMPUTE TRI-22
	50		10				TPI RCS BURN,IGN 105 06 57,CUTOFF 105 09 13
							VERIFY TRI-17
002	00		20				CSM VECTOR TO NORAD AND GOLDSTONE
	10		30				COMPUTE PFAO-PAO DATA FOR RENDEZVOUS MANEUVER,IGN AND CUTOFF
	20		40				
							ASC NODE 5 HRS 36 MIN
	30		50				TPF RCS BURN,IGN 105 50 14,CUTOFF 105 50 30
	40	106	00				TRAM 1 ON
							GENERATE POST FLIGHT EPHEMERIS TAPE FOR CSM,106 00 TO 119 00
	50		10				
003	00		20				CSM/LM DOCKING,INERTIAL HOLD
	10		30				
				MAN 07	NRE 16	PIR 50	
	20		40				
							COMPUTE LM RCS USAGE PROFILE
	30		50				
							PROCESS LM PHASING DATA-HOPE
	40	107	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 017

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
003	40	107	00		PER ALT 57 LON -60 LAT -1
	50		10		
004	00		20		COMPUTE TEI-18
	10		30		COMPUTE TEI-31,NOMINAL TEI
	20		40		ASC NODE 7 HRS 31 MIN
	30		50		
	40	108	00		APO ALT 58 LON 117 LAT 1
	50		10		LM JETTISON
005	00		20		* APO ALT 58 LON 74 LAT 1
	10		30		COMPUTE PPAO-PAO DATA FOR UNMANNED APS IGNITION
				MAW 74 NRE 31 PIR 35	TV THROUGH GDS, 108 35 TO 108 50
	20		40		UNMANNED APS BURN TO DEPLETION
	30		50		
	40	109	00		

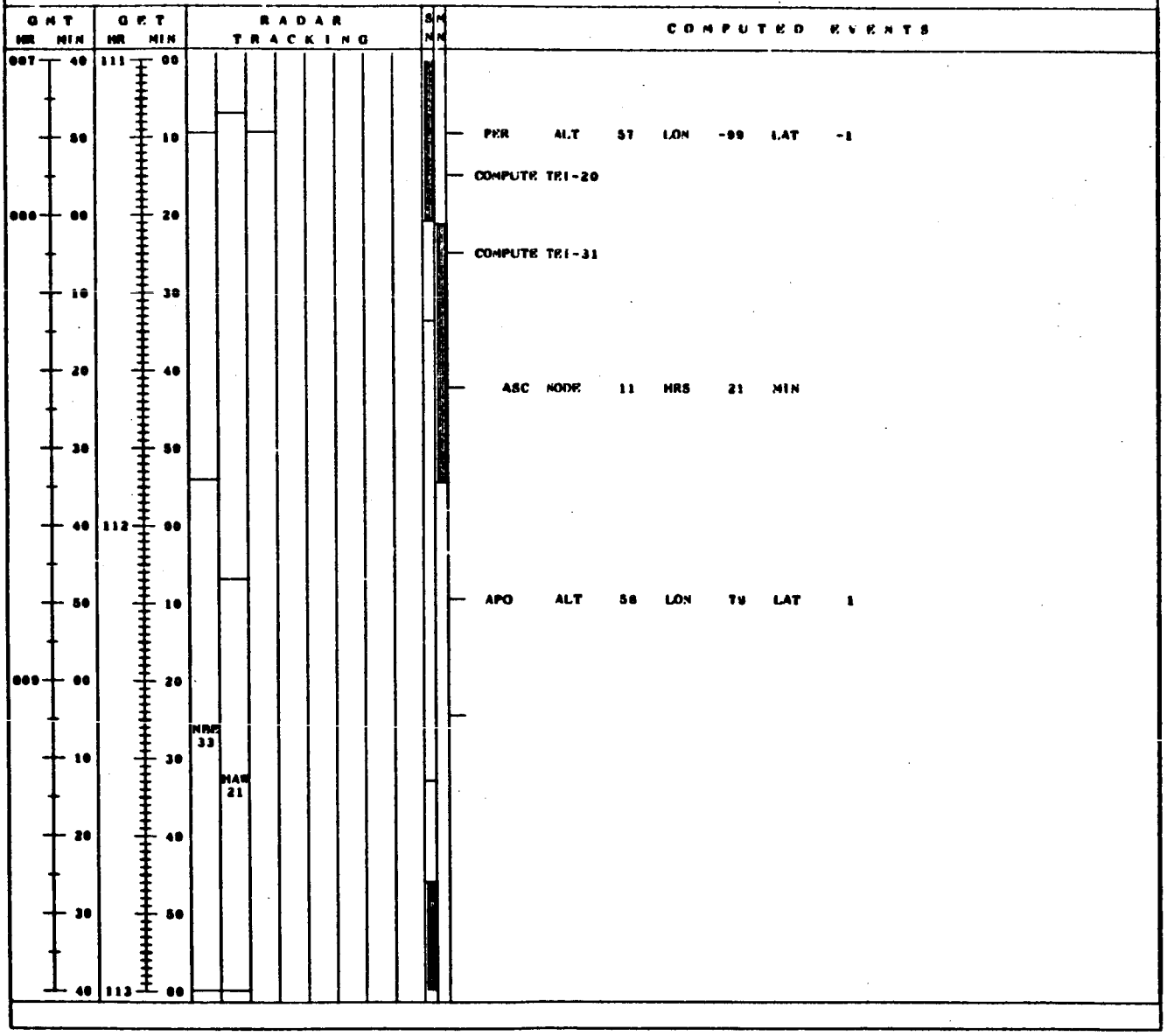
STACK WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE C5106 DATE 03/18/69 PAGE 010

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
005	40	109	00		COMPUTE PEMO-PAO DATA FOR UNMANNED APS BURNS
	50		10		PER ALT 51 LON -91 LAT -1
					COMPUTE TEI-19
006	00		20		
	10		30		
	20		40		ASC NODE 9 HRS 26 MIN
	30		50		COMPUTE CSM HI GAIN ANTENNA DATA, AGOP OPTION 4
	40	110	00		
	50		10		APO ALT 56 LON 69 LAT 1
007	00		20		
	10		30	MAD 40, NRE 30, PIR 11	
	20		40		
	30		50		VECTOR TO NORAD AND GOLDSTONE
	40	111	00		

RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 019



RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 020

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S N	M N	COMPUTED EVENTS
009	40	113	00				COMPUTE TEI-21
	50		10				PER ALT 57 LON -104 LAT -1
							COMPUTE TEI-31
010	00		20				
	10		30				
	20		40				ASC NODE 13 HRS 16 MIN
	30		50				
	40	114	00				
							GENERATE POST FLIGHT EPHEMERIS TAPE,GET 117 TO 131 HOURS
	50		10				APO ALT 50 LON 73 LAT 1
011	00		20	NRE 20			
	10		30	RID 10			
	20		40				
	30		50				
	40	115	00				

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/10/69 PAGE 021

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
011	40	115	00		
	50		10		COMPUTE TEI-22
					PER ALT 57 LON -110 LAT -1
					COMPUTE TEI-31
012	00		20		
	10		30		
	20		40		ASC NODE 15 HRS 11 MIN
	30		50		
	40	116	00		
	50		10		APO ALT 58 LON 67 LAT 1
013	00		20		
					COMPUTE WORLD-WIDE TELESCOPE DATA,GET 120 TO 156 HRS NOM TEI
	10		30	RID 33	
	20		40		PROCESS P-23 STAR SIGHTING DATA-HOPE
	30		50		
	40	117	00		

RTACF WORK SCHEDULE

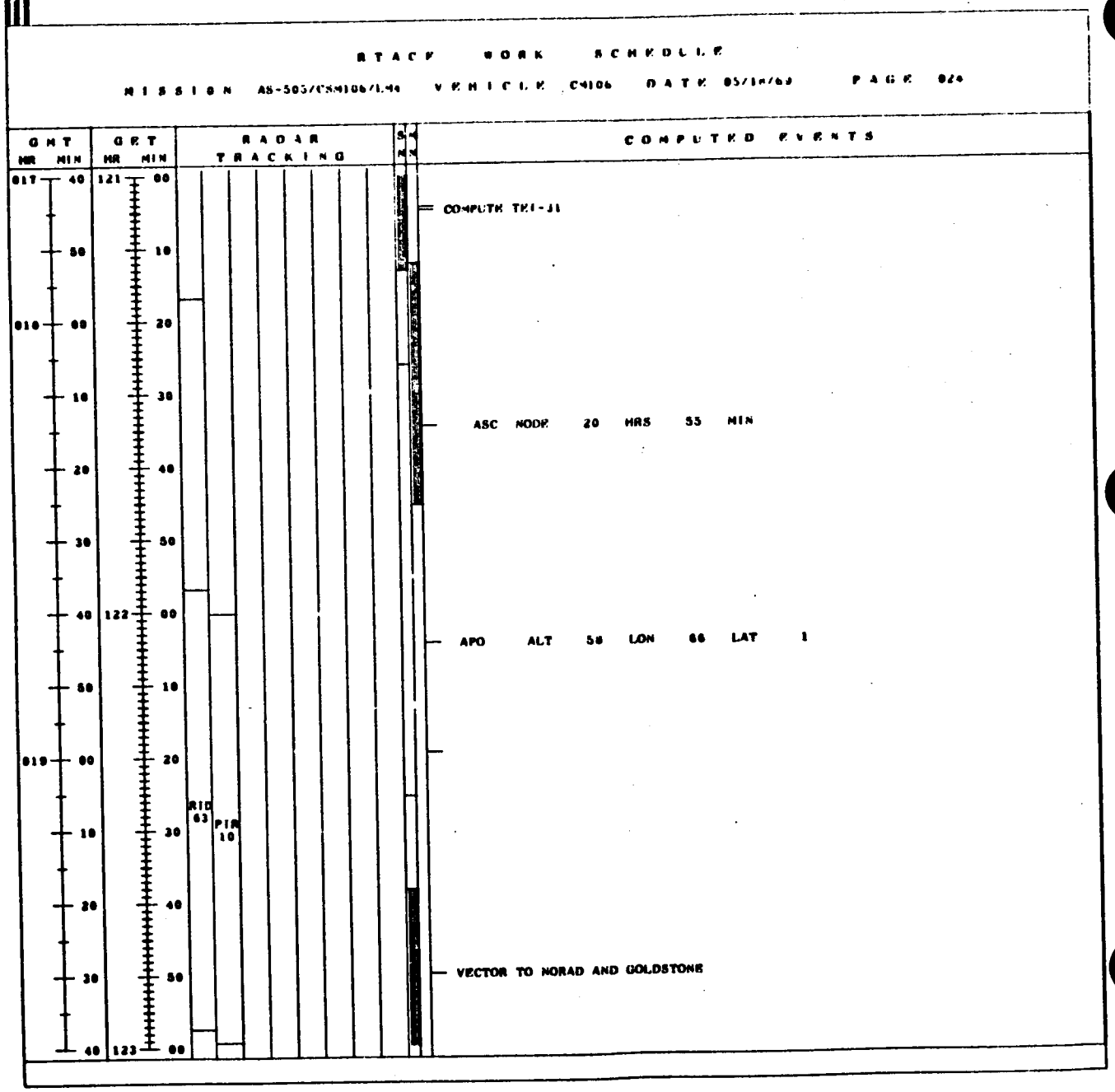
MISSION AS-503/CSM106/LM4 VEHICLE CSM106 DATE 05/18/69 PAGE 022

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPLETED EVENTS
013	40	117	00		TRANS 2 ON
					END CREW 9 HOUR REST PERIOD
	50		10		VECTOR TO NORAD AND GOLDSTONE
014	00		20		
					COMPUTE TRI-23
	10		30		
					COMPUTE TRI-31
					ASC NODE 17 HRS 5 MIN
	20		40		
	30		50		
	40	118	00		
	50		10		APO ALT 50 LON 52 LAT 1
015	00		20		
	10		30	RID 55	
	20		40		
	30		50		
	40	119	00		

RTACF WORK SCHEDULE

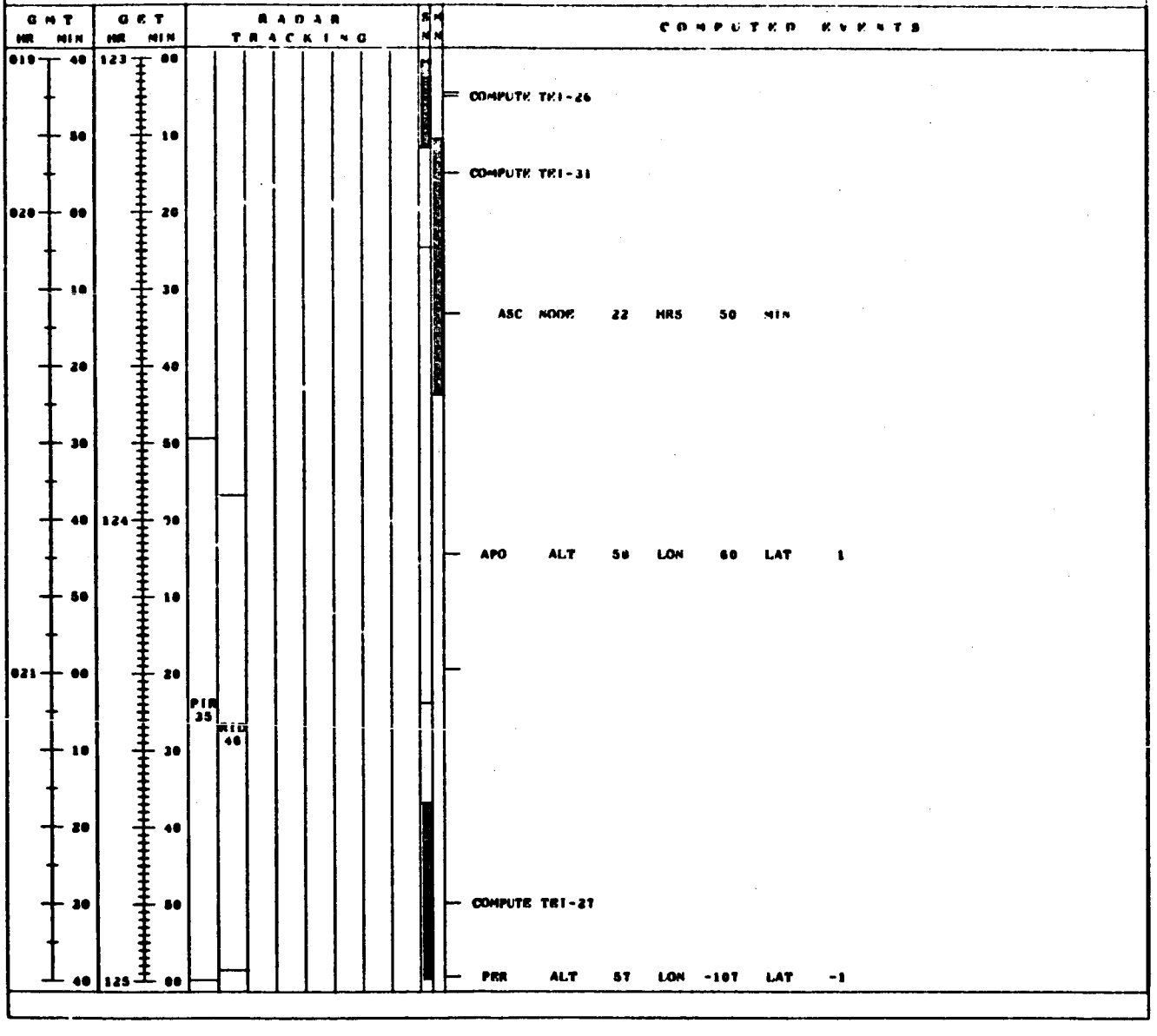
MISSION AS-503/CS4106/L34 VEHICLE C4106 DATE 05/14/64 PAGE 023

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SK MN	COMPUTED EVENTS
015	40	119	00			
	50		10			COMPUTE TRI-24
						COMPUTE TRI-31
016	00		20			
	10		30			
						ASC NODE 19 HRS 0 MIN
	20		40			
	30		50			
	40	120	00			
						APO ALT 58 LON 71 LAT 1
	30		10			
017	00		20			
	10		30	RID 65		
	20		40			
	30		50			COMPUTE TRI-25
	40	121	00			


STACK WORK SCHEDULE
MISSION AS-503/CSM106/LM4 VEHICLE C4106 DATE 05/18/69 PAGE 024
GMT HR MIN
GET HR MIN
RADAR TRACKING
COMPUTED EVENTS
COMPUTE TEI-31
ASC NODE 20 HRS 55 MIN
APO ALT 58 LON 66 LAT 1
VECTOR TO NORAD AND GOLDSTONE
RID 63
PIR 10

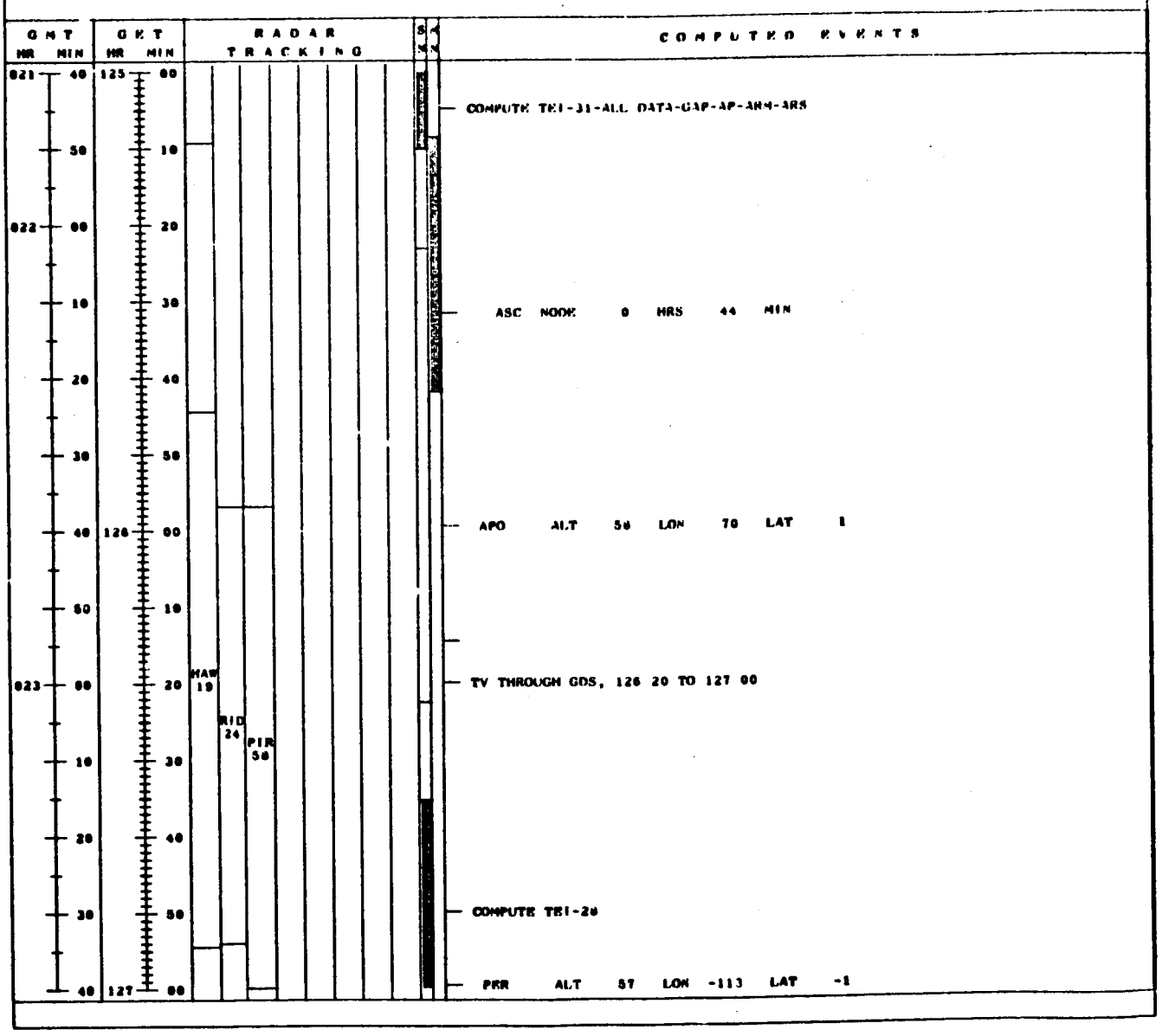
RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 025



RTACP WORK SCHEDULE

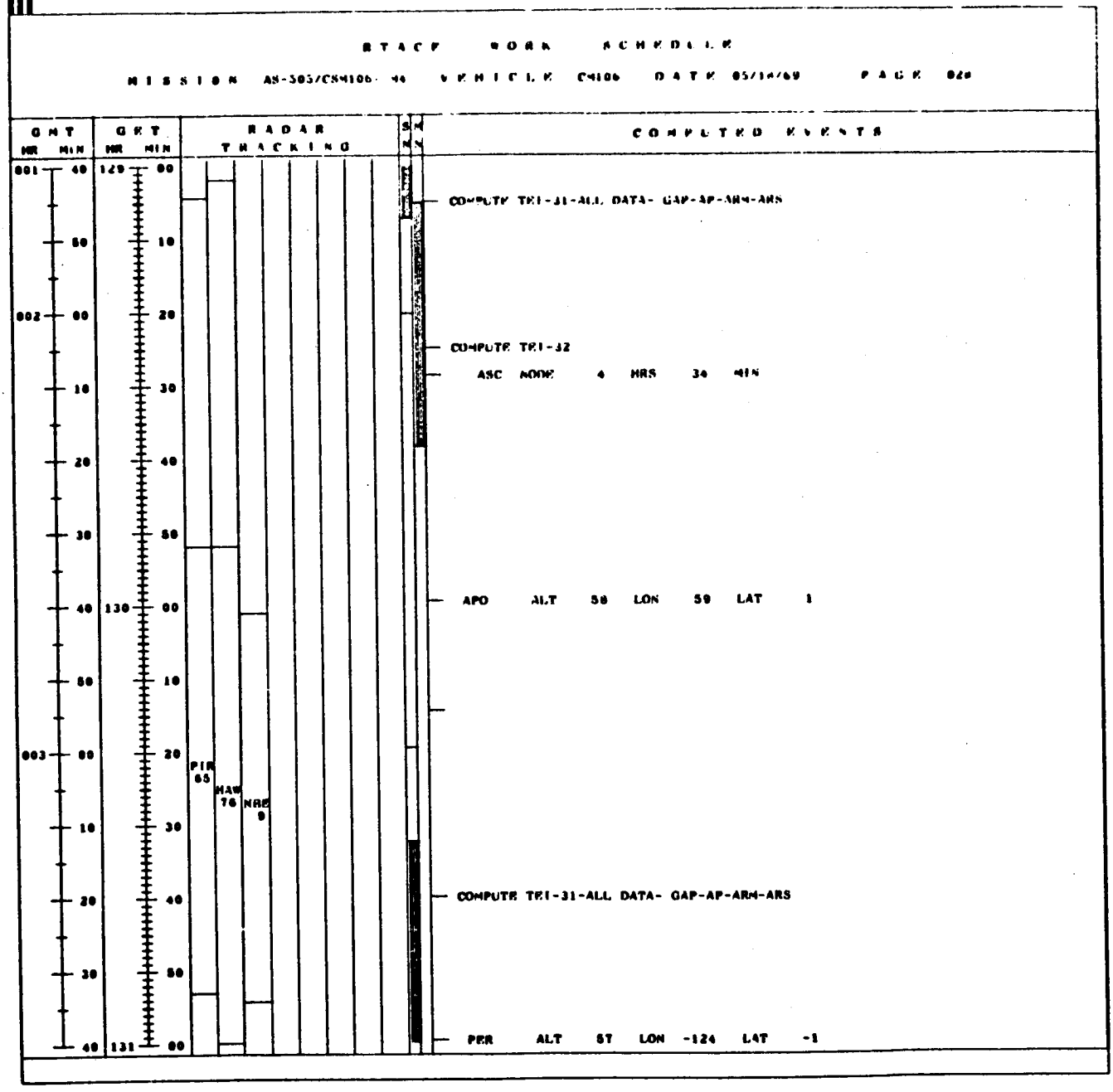
MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 026



RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 027

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
023	40	127	00			TEAM 3 ON
	50		10			COMPUTE TEI-31
						COMPUTE TEI-32-BACKUP REV
024	00		20			
	10		30			ASC NODE 2 HRS 39 MIN
						COMPUTE CSM RCS USAGE PROFILE
	20		40			
	30		50			
	40	128	00	RID 3		APO ALT 58 LON 64 LAT 1
						GENERATE POSTFLIGHT EPHERMERIS TAPE,131 TO 141 HRS,NOM TEI
	50		10			
025	00		20	HAW 49 PIR 29		BEGIN MASS PROPERTIES FOR TEI,SHOULD BE COMPLETED BY 131 HRS
	10		30			
	20		40			VECTOR TO NORAD AND GOLDSTONE * BEGIN CREW 3 AND ONE HALF HOUR REST PERIOD
	30		50			
	40	129	00			PER ALT 57 LON -118 LAT -1


STACF WORK SCHEDULE
MISSION AS-503/CSM106-44 VEHICLE CM106 DATE 05/14/69 PAGE 020
GMT HR MIN
GET HR MIN
RADAR TRACKING
COMPUTED EVENTS
COMPUTE TRI-31-ALL DATA- GAP-AP-ARM-ARS
COMPUTE TRI-32
ASC NODE 4 HRS 34 MIN
APO ALT 58 LON 59 LAT 1
COMPUTE TRI-31-ALL DATA- GAP-AP-ARM-ARS
PER ALT 57 LON -124 LAT -1
PIR 65
HAW 76
NRE 9

STACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 029

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
003	40	131	00		
					COMPUTE TEI-32-ALL DATA- GAP-AP-ARM-ARS
	50		10		
004	00		20		
					ASC NODE 6 HRS 29 MIN
	10		30		
	20		40		
	30		50		END CREW REST PERIOD
	40	132	00		APO ALT 58 LON 53 LAT 1
	50		10		
005	00		20	HAW 02 NRP 28 PIR 45	
	10		30		
	20		40		VERIFY TEI-31
	30		50		VERIFY TRI-32
					PER ALT 57 LON -114 LAT -1
	40	133	00		

STACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CSM106 DATE 05/16/69 PAGE 030

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
005	40	133	00		TEI CUTOFF VECTOR TO TRACK FOR GOLDSTONE
	50		10		
006	00		20		ASC NODE 6 HRS 23 MIN
	10		30		
	20		40		COMPUTE REF BODY LOCATIONS, AGOP OPTION 2
					COMPUTE RMS LOOK ANGLES
	30		50		APO ALT 58 LON 63 LAT 1
	40	134	00		
	50		10		
007	00		20	PIR 22, HAW 61, NRP 40	
	10		30		
	20		40		VECTOR TO NORAD AND GOLDSTONE
	30		50		VERIFY TEI-31
					PER ALT 57 LON -120 LAT -1
	40	135	00		

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 031

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	COMPUTED EVENTS
007	40	135	00			
						VERIFY TEI-32
	50		10			COMPUTE MODEL DATA FOR TEI
008	00		20			
						ASC NODE 10 HRS 16 MIN
	10		30			
	20		40			
	30		50			
						APO ALT 58 LON 57 LAT 1
	40	136	00			
	50		10	NRP 41		
				MAW 34		
009	00		20			
	10		30			COMPUTE DMT FOR TEI USING RTCC TARGETS
	20		40			GO-NO GO FOR TEI
						COPY MSK 894,966,ETC
	30		50			PER ALT 57 LON -126 LAT -1
	40	137	00			

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/1[illegible]/69 PAGE 032

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	MN	COMPUTED EVENTS
009	40	137	00				TEAM 1 ON
							VERIFY CREW CHART DATA,LTP-ORION
	50		10				
							COMPUTE PFAO-PAO DATA FOR TEI IGNITION
010	00		20				TEI IGN 137 20 22.41 BT 2 40,DELTA V 3622
							ASC NODE 12 HRS 13 MIN
	10		30				
							CONFIRMATION WITH RESIDUALS
	20		40				COMPUTE MCC-5,OPTIMIZED MIDCOURSE,IGNITION APPROX 141 HRS
							TV THROUGH HSK, 137 45 TO 138 00
	30		50				
							UPDATE PTC REFSMMAT
				HAW 9			
	40	138	00				
							COMPUTE MCC-5 ATP TO MPL IGNITION APPROX 141 HRS
	50		10				
				NRE 32			
011	00		20				GENERATE POSTFLIGHT EPHEMERIS TAPE WITH MCC-5,141 TO 154 HRS
							ALTITUDE 3076 N. MI.
	10		30				
							COMPUTE MCC-5 OPTIMIZED MIDCOURSE,IGNITION APPROX 152 HRS
							ALTITUDE 3915 N. MI.
	20		40				ESTABLISH PTC MODE IN G+N,P,Y PLUS-MINUS 20,R RATE 0.1 DPS
	30		50				COMPUTE MCC-5 ATP TO MPL IGNITION APPROX 152 HRS
	40	139	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 033

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	MN	COMPUTED EVENTS
011	40	139	00				
	50		10				COMPUTE PFAO-PAO DATA FOR TEI CUTOFF
012	00		20				
							ALTITUDE 6370 N. MI.
	10		30				COMPUTE CSM SENNA DATA
	20		40				
	30		50				PROCESS P-20 DATA,HOPE
	40	140	00				
	50		10				
013	00		20				
							ALTITUDE 9546 N. MI.
	10		30				BEGIN CREW 5 AND ONE HALF HR REST PERIOD
	20		40				
	30		50				
							COMPUTE TELESCOPE DATA FOR LICK,INCLUDE MCC-5,GET 142 TO 192
	40	141	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE C4106 DATE 05/16/69 PAGE 036

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	COMPUTED EVENTS
013	40	141	00			COMPUTE TELESCOPE DATA FOR BLOCK 16, INCLUDE MCC-5, 142 TO 192
	50		10			
014	00		20			ALTITUDE 12654 N. MI.
	10		30			
	20		40			MANEUVER EVALUATION FOR TEI
	30		50			
	40	142	00			COMPUTE ENTRY POINTING DATA FOR TRACK, USE ARS GUIDED ENTRY
	50		10			
015	00		20			ALTITUDE 15720 N. MI.
	10		30			
	20		40			
	30		50			
	40	143	00			

STACK WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/10/69 PAGE 035

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	MN	COMPUTED EVENTS
015	40	143	00				VECTOR TO NORAD AND GOLDSTONE
	50		10				
016	00		20				ALTITUDE 16757 N. MI.
	10		30				
	20		40				
	30		50				
	40	144	00				
	50		10				
017	00		20				ALTITUDE 21773 N. MI.
	10		30				COMPUTE MCC-5
	20		40				
	30		50				COMPUTE P-23 STAR LUNAR LANDMARK DATA, AGOP OPTION 1
	40	145	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 036

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	MN	COMPUTED EVENTS
017	40	145	00				TEAM 2 ON
	50		10				
018	00		20				ALTITUDE 24775 N. MI.
	10		30				COMPUTE MCC-5 ALL DATA, 1-TERRA ARS OR 2-ARM ARS
	20		40				
	30		50				
	40	146	00				
	50		10				VERIFY MCC-5
019	00		20				ALTITUDE 27766 N. MI.
	10		30				
	20		40				
	30		50	PIR 66			
	40	147	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 037

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM MN	COMPUTED EVENTS
019	40	147	00			END CREW REST PERIOD
	50		10			
020	00		20			ALTITUDE 30749 N. MI.
	10		30			
	20		40			
						COMPUTE REF BODY LOCATIONS,AGOP OPTION 2
	30		50			
	40	148	00			COMPUTE MODEL DATA FOR MCC5
						COMPUTE MCC-5
	50		10			
021	00		20			ALTITUDE 33727 N. MI.
						CUTOFF VECTOR FOR MCC-5 TO TRACK FOR GOLDSTONE
	10		30			
	20		40			
						COMPUTE EMS LOOK ANGLES FOR MCC-5 AND TV ATTITUDES
	30		50			
	40	149	00			

STACK GORA SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 030

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SS MN	COMPUTED EVENTS
021	40	149	00			
	50		10			VECTOR TO NORAD AND GOLDSTONE
022	00		20			ALTITUDE 176932 N. MI.
	10		30			
	20		40			
	30		50			
	40	150	00			
	50		10			COMPUTE MCC-5 ALL DATA,1-TERRA ARS,2-ARM ARS
023	00		20	MAN 00		ALTITUDE 174064 N. MI.
	10		30			
	20		40			P23 ONBOARD NAVIGATION STAR LUNAR LANDMARKS
	30		50			
	40	151	00			

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 039

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	SM	COMPUTED EVENTS
023	40	151	00				
	50		10				
024	00		20				ALTITUDE 171177 N. MI.
	10		30				COMPUTE SM RCS USAGE PROFILE
	20		40				
	30		50				COMPUTE DMT FOR MCC-5 USING RTCC TARGETS
							COPY MSK 894,966 ETC
	40	152	00				MCC-5
							COMPUTE PFAO-PAO DATA FOR MCC-5 IGNITION
	50		10				
							CONFIRMATION WITH RESIDUALS
025	00		20				COMPUTE MCC-6 OPTIMIZED MCC
							ALTITUDE 168267 N. MI.
							GENERATE POSTFLIGHT EPHEMERIS TAPE,GET 154 TO 168 HRS
	10		30				
							TV THROUGH GDS, 152 35 TO 152 45
	20		40				
	30		50				ESTABLISH PTC
	40	153	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/10/69 PAGE 040

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SNN	COMPUTED EVENTS
001	40	153	00			TRAM 3 ON
	50		10			COMPUTE MCC-6 OPTIMIZED MCC
002	00		20			ALTITUDE 165335 N. MI.
	10		30			COMPUTE MCC-6 ATP TO MPL
	20		40			
	30		50			
	40	154	00			BEGIN CREW 9 HR REST PERIOD
						COMPUTE ENTRY POINTING FOR TRACK WITH GUIDED ENTRY
	50		10			
003	00		20			ALTITUDE 162378 N. MI.
	10		30	NRE 42		
	20		40			
	30		50			
	40	155	00			

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 041

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	MN	COMPUTED EVENTS
003	40	155	00				VECTOR TO SORAD AND GOLDSTONE
	50		10				
004	00		20				ALTITUDE 159396 N. MI.
	10		30				
	20		40				
	30		50				
	40	156	00				
	50		10				
005	00		20				ALTITUDE 156386 N. MI.
	10		30				COMPUTE NOMINAL ENTRY DATA- 1-ARM ARS,2-CM-SM REL MOTION 3-CM POINTING DATA,4-SM POINTING DATA,5-SM IMPACT POINT 6-NOMINAL GROUNDTRACKS,7-OVERPLY GROUNDTRACKS
	20		40				
	30		50				
	40	157	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/10/69 PAGE 042

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	S N	M N	COMPUTED EVENTS
005	40	157	00				
	50		10				
006	00		20				ALTITUDE 153348 N. MI.
	10		30				
	20		40				
	30		50				
	40	158	00				
	50		10				COMPUTE MCC-6
007	00		20				ALTITUDE 150280 N. MI.
	10		30				
	20		40				
	30		50				
	40	159	00				

RTACP WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 043

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SK MN	COMPUTED EVENTS
007	40	159	00			
	50		10			
008	00		20			
						ALTITUDE 147161 N. MI.
	10		30			
	20		40			
						COMPUTE P-23 STAR-EARTH HORIZON DATA,AGOP OPTION 1
	30		50			
	40	160	00			
	50		10			
009	00		20			
						ALTITUDE 144049 N. MI.
	10		30			
	20		40			
						VECTOR TO NORAD AND GOLDSTONE
	30		50			
	40	161	00			

STACK WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CSM106 DATE 05/15/69 PAGE 044

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	SM	COMPUTED EVENTS
009	40	161	00				TRANS ON
	50		10				
010	00		20				ALTITUDE 140002 N. MI.
	10		30				
	20		40				
	30		50				
	40	162	00				
	50		10				COMPUTE NOMINAL ENTRY DATA-1-ARM ARS,2-CM-SM REL MOTION 3-CM POINTING DATA,4-SM POINTING DATA,5-SM IMPACT POINT 6-NOMINAL GROUNDTRACKS,7-OVERFLY GROUNDTRACKS
011	00		20				ALTITUDE 137000 N. MI.
	10		30				
	20		40				
	30		50				
	40	163	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE C4106 DATE 05/16/69 PAGE 045

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
011	40	163	00		END CREW REST PERIOD
	50		10		
012	00		20		ALTITUDE 134440 N. MI.
	10		30		
	20		40		
	30		50		
	40	164	00		
	50		10	RID 59	COMPUTE MCC-6
013	00		20		ALTITUDE 131160 N. MI.
	10		30		
	20		40		GENERATE POSTFLIGHT EPHEMERIS TAPE, INCLUDE MCC-6,168 TO 182
	30		50		
	40	165	00		

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE C4106 DATE 05/18/69 PAGE 046

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	SN	COMPUTED EVENTS
013	40	165	00				
	50		10				COMPUTE WORLD-WIDE TELESCOPE DATA,INC MCC 6,MCC 7,166-192 HR
							P23 ONBOARD MIDCOURSE NAVIGATION,STAR-EARTH HORIZON
014	00		20				ALTITUDE 127838 N. MI.
	10		30				
	20		40				
	30		50				
	40	166	00				
	50		10				
015	00		20				ALTITUDE 124472 N. MI.
	10		30				
	20		40				
	30		50				
	40	167	00				

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM6 VEHICLE CM106 DATE 05/16/69 PAGE 847

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SLEEP	COMPUTED EVENTS
015	40	167	00			VECTOR TO NORAD AND GOLDSTONE
	50		10			
016	00		20			ALTITUDE 121059 N. MI.
	10		30			P23 ONBOARD MIDCOURSE NAVIGATION,STAR-EARTH HORIZON
	20		40			
	30		50			
	40	168	00			
	50		10			
017	00		20			ALTITUDE 117598 N. MI.
	10		30			
	20		40			
	30		50			
	40	169	00			

STACK WORK SCHEDULE

MISSION AS-505/CSM106/LM6 VEHICLE CM106 DATE 05/18/69 PAGE 004

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SYM	COMPUTED EVENTS
017	40	169	00			TEAM Z ON
	50		10			COMPUTE MCC-6
018	00		20			ALTITUDE 114085 N. MI.
						COMPUTE NOMINAL ENTRY DATA-SEE WORK SCHEDULE AT GET 157 HRS
	10		30			
	20		40			
	30		50			
	40	170	00			
	50		10			
019	00		20			ALTITUDE 110516 N. MI.
	10		30			
	20		40			
	30		50			
	40	171	00			

MTACF WORK SCHEDULER

MISSION AS-505/CSM106/LM4 VEHICLE CSM106 DATE 05/16/63 PAGE 049

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	RK	COMPUTED EVENTS
019	40	171	00			COMPUTE MCC-6
	50		10			P23 ONBOARD MIDCOURSE NAVIGATION,STAR-EARTH HORIZON
020	00		20			ALTITUDE 106669 N. MI.
	10		30			
	20		40			
	30		50			
	40	172	00	PIR 63		COMPUTE MODEL DATA FOR MCC6
	50		10			
021	00		20			ALTITUDE 103200 N. MI.
	10		30			COMPUTE EMS LOOK ANGLES FOR MCC-6 AND TV ATTITUDES
	20		40			
	30		50			
	40	173	00			VECTOR TO NORAD AND GOLDSTONE

STACF WORK SCHEDULE

MISSION AS-305/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 050

GMT HR MIN	GET HR MIN	RADAR TRACKING	S N	S N	COMPUTED EVENTS
021 40	173 00				
50	10				MCC-6 CUTOFF VECTOR TO TRACK FOR GOLDSTONE
022 00	20				ALTITUDE 99444 N. MI.
10	30				
20	40				
30	50				
40	174 00				COMPUTE MCC-6 ALL DATA
50	10				
023 00	20				ALTITUDE 95616 N. MI.
10	30	MAW 76			P23 ONBOARD MIDCOURSE NAVIGATION STAR-EARTH HORIZON
20	40				
30	50				
40	175 00				

RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 051

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	MN	COMPUTED EVENTS
023	40	175	00				
	50		10				
024	00		20				ALTITUDE 91711 N. MI.
	10		30				
	20		40				COMPUTE CSM RCS USAGE PROFILE
	30		50				
	40	176	00				
	50		10				
025	00		20				COMPUTE DMT FOR MCC-6 USING RTCC TARGETS ALTITUDE 87723 N. MI.
	10		30				
	20		40				COMPUTE PPAO-PAO DATA FOR MCC-6 IGNITION
	30		50				COPY MSK 894,966 ETC
	40	177	00				MCC-6

RTACF WORK SCHEDULE

MISSION AS-505/CSM106/LM6 VEHICLE CM106 DATE 05/16/69 PAGE 052

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	COMPUTED EVENTS
001	40	177	00		
					TRANS ON
	50		10		
					CONFIRMATION WITH RESIDUALS
002	00		20		
					ALTITUDE 83643 N. MI.
	10		30		
					COMPUTE PFAO-PAO DATA FOR MCC-6 CUTOFF
	20		40		
	30		50		
					MANEUVER EVALUATION FOR MCC-6
	40	178	00		
					BEGIN CREW 8 HOUR REST PERIOD
					COMPUTE ENTRY GROUNDTRACKS FOR RECOVERY ASAP,POST MCC-6 VEC
	50		10		
003	00		20		
					COMPUTE MCC-7 OPTIMIZED MCC
					ALTITUDE 72465 N. MI.
	10		30		
					VECTOR TO NORAD AND GOLDSTONE
	20		40	NRF 46	
	30		50		
					GENERATE POSTFLIGHT EPHEMERIS TAPE INCLUDE MCC-7,182 TO 192
	40	179	00		

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/18/69 PAGE 053

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	MN	COMPUTED EVENTS
003	40	179	00				
	50		10				
							COMPUTE CM ENTRY POINTING DATA FOR TRACK WITH GUIDED ENTRY
004	00		20				
							ALTITUDE 75170 N. MI.
	10		30				
	20		40				
	30		50				
	40	180	00				
							COMPUTE MCC-7 OPTIMIZED MCC
	50		10				
005	00		20				
							ALTITUDE 70770 N. MI.
							COMPUTE MCC-7 ATP TO MPL
	10		30				
	20		40				UPDATE MASS PROPERTIES AND AEROS AS REQUIRED
	30		50				
	40	181	00				

STACK WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/10/69 PAGE 054

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	SN	COMPUTED EVENTS
005	40	101	00				COMPUTE NOMINAL ENTRY DATA-SEE WORK SCHEDULE GET 157 HRS
	50		10				
006	00		20				ALTITUDE 66227 N. MI
	10		30				
	20		40				
	30		50				
	40	102	00				
	50		10				
007	00		20				ALTITUDE 61532 N. MI.
							COMPUTE MCC-7
	1[illegible]		30				
	20		49				
	30		50				
	40	103	00				

RTACP WORK SCHEDULE

MISSION AS-505/CSM106/LM6 VEHICLE CM106 DATE 05/18/69 PAGE 055

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	MN	COMPUTED EVENTS
007	40	183	00				
	50		10				COMPUTE ENTRY REFSMMAT
008	00		20				ALTITUDE 56663 N. MI.
	10		30				
	20		40				
	30		50				
	40	184	00				COMPUTE MODEL DATA FOR MCC7
	50		10				
009	00		20				COMPUTE EMS LOOK ANGLES FOR MCC-7 ATTITUDE ALTITUDE 51592 N. MI.
	10		30				
	20		40				
	30		50				VECTOR TO NORAD AND GOLDSTONE
	40	185	00				

RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 056

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SN	SN	COMPUTED EVENTS
009	40	105	00				TRAM 1 ON
	50		10				
							COMPUTE MCC-T ALL DATA
010	00		20				ALTITUDE 46203 N. MI.
	10		30				
							UPDATE MASS PROPERTIES AND AEROS IF REQUIRED
	20		40				
	30		50				
	40	106	00				END CREW REST PERIOD
	50		10				
011	00		20				ALTITUDE 40686 N. MI.
	10		30				
	20		40				
	30		50				TV THROUGH HSK, 106 50 TO 107 05
	40	107	00				

RTACF WORK SCHEDULE

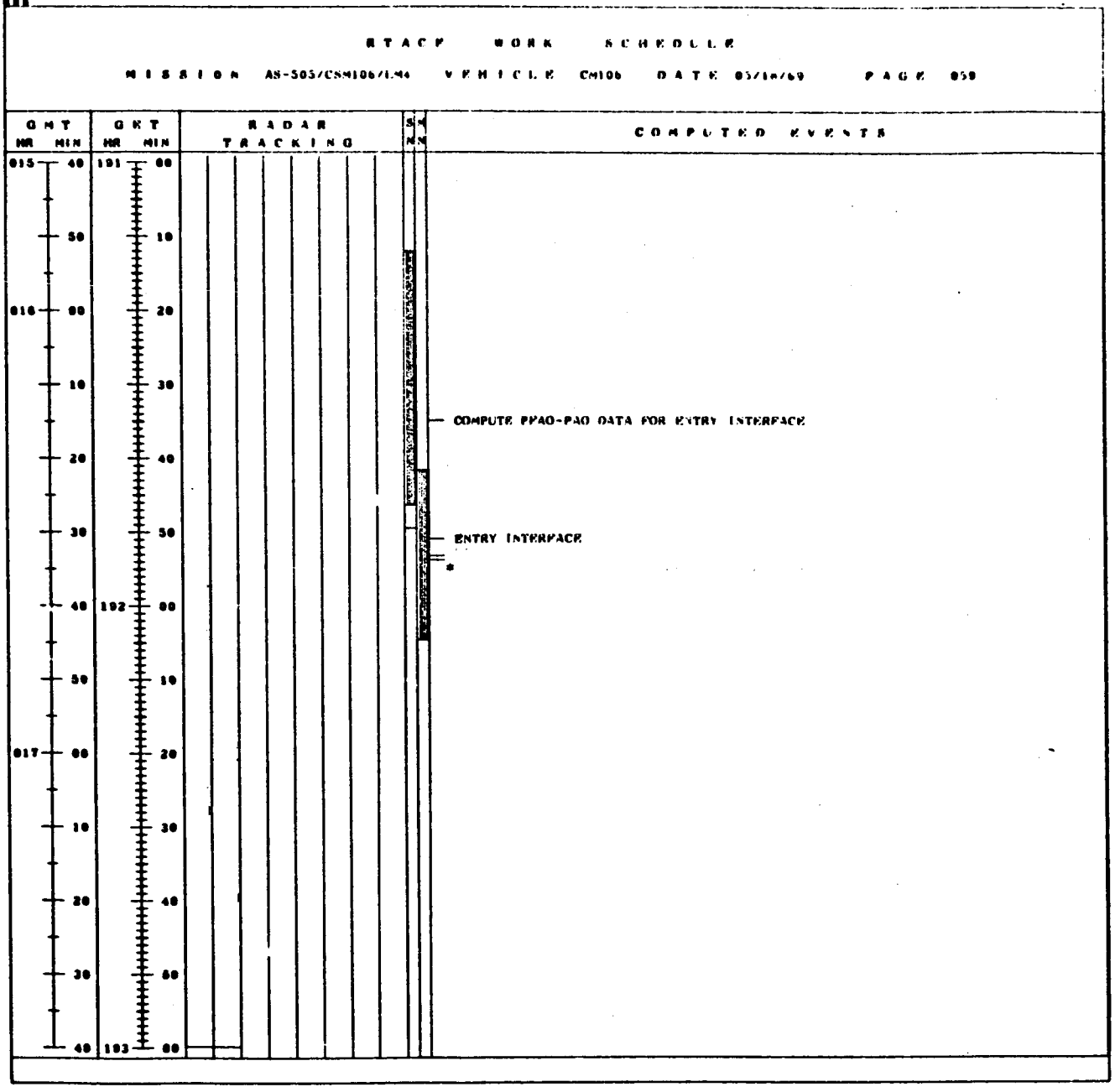
MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/14/69 PAGE 057

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SM	MN	COMPUTED EVENTS
011	40	167	00				
							VERIFY MCC-7 AND ENTRY USING L. TEST AEROS
	50		10				
012	00		20				
							ALTITUDE 34730 N. MI.
	10		30				UPDATE ENTRY REFSMMAT,ALIGN TO ENTRY REFSMMAT
	20		40				
	30		50				
	40	168	00				
	50		10				
							COMPUTE DMT FOR MCC-7 USING RTCC TARGETS
013	00		20				
							ALTITUDE 28304 N. MI.
	10		30				COMPUTE PPAO-PAO DATA FOR MCC-7 IGNITION
	20		40				COPY MSK 894,966 ETC
	30		50				MCC-7
	40	169	00				

RTACF WORK SCHEDULE

MISSION AS-503/CSM106/LM4 VEHICLE CM106 DATE 05/10/63 PAGE 050

GMT HR	GMT MIN	GET HR	GET MIN	RADAR TRACKING	SK	SK	COMPUTED EVENTS
013	40	189	00				
							CONFIRMATION WITH RESTORAUS
	50		10				
							COMPUTE GUIDED ENTRY POINTING DATA FOR TRACK
014	00		20				
							ALTITUDE 21221 N. MI.
							COMPUTE ENTRY DATA-SEE WORK SCHEDULE GET 157 HRS
	10		30				
	20		40				
							UPDATE AEROS AS REQUIRED
	30		50				
	40	190	00				
							RECOMPUTE ENTRY FOR LARGE CHANGE IN AEROS
	50		10				
015	00		20				
							COMPUTE PFAO-PAO DATA FOR MCC-7 CUTOFF
	10		30				
	20		40				
	30		50				
	40	191	00				


RTACP WORK SCHEDULE
MISSION AS-505/CSM106/LM4 VEHICLE CM106 DATE 05/16/69 PAGE 059
GMT HR MIN
GET HR MIN
RADAR TRACKING
S M HR MN
COMPUTED EVENTS
COMPUTE PPAO-PAO DATA FOR ENTRY INTERFACE
ENTRY INTERFACE
*

REFERENCES

1. Lunar Mission Analysis Branch, Landing Analysis Branch, and Orbital Mission Analysis Branch: Revision 1 of the Spacecraft Operational Trajectory for Apollo 10 (Mission F), Volume II - Trajectory Listing, Part 1 - CSM Parameters. MSC IN 69-FM-97, April 28, 1969.