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M-D E 8000.005 A

OFFICE OF MANNED SPACE FLIGHT

PROGRAM DIRECTIVE

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[redacted]

APOLLO FLIGHT MISSION ASSIGNMENTS

[redacted]

APRIL 9, 1963

[redacted]

CLASSIFICATION CHANGE

TO = UNCLASSIFIED

By authority of [redacted] GDS Bkt

Changed by O. L. Merritt Date 11/7/75

NASA

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

WASHINGTON, D.C.

[redacted]

[redacted]

M-D E 8000.005A

APOLLO FLIGHT MISSION ASSIGNMENTS

Date Effective:

April 9, 1963

Office of Manned Space Flight
National Aeronautics & Space Administration
Washington 25, D. C.

[redacted] QUARTERS ONLY

[redacted]

Office of Manned Space Flight

DIRECTIVE

M-D E 8000.005A

PROGRAM REQUIREMENT DOCUMENT

This document is an official release of the Office of Manned Space Flight, and its requirements shall be implemented by all cognizant elements of the Manned Space Flight Program.

The effective date of this document is April 9, 1963.

LIMIT ACCESS TO:

COGNIZANT NASA AND
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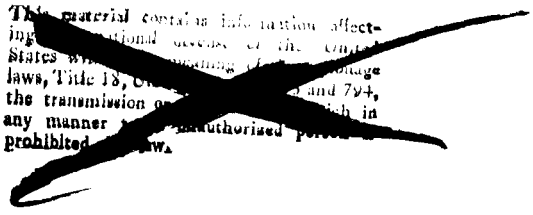

UNITED STATES GOVERNMENT

Memorandum

National Aeronautics and Space Administration

TO : Distribution List

DATE: April 9, 1963
M-M M 1410.003

FROM : Director, Office of Manned Space Flight

SUBJECT: Apollo Flight Mission Assignment Document

This document contains the approved Flight Mission Assignments Summary and Configuration and Flight Data Summary Charts for the Apollo/Saturn and Apollo/Little Joe II flight programs. The Preliminary Apollo Flight Mission Assignment document dated February 14, 1963, is superseded with this issue.

D. Brainerd Holmes
Director of Manned Space Flight

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TABLE OF CONTENTS

INTRODUCTION

This document contains Flight Mission Assignment Summary and Configuration and Flight Data Summary Charts for Apollo/Saturn and Apollo/Little Joe II flight programs.

Proposed changes to this document shall be submitted to OMSF for review and coordination. Changes, where significant, will be discussed in System Review Meetings and subject to final approval by the Management Council.

Periodic revisions will be made to the Apollo Flight Mission Assignment document to reflect approved changes and to depict flight missions as they are better defined.

APOLLO/SATURN I FLIGHT MISSION ASSIGNMENT SUMMARY

1. LAUNCH DATE	OCT 61	APR 62	NOV 62	MAR 63	AUG '63	DEC '63	MAR '64	JUN '64	OCT '64	DEC '64	MAR '65	JUN 65	SEP 65	DEC 65	MAR 66	JUN 66
2. LAUNCH VEH.	SA 1	SA 2	SA 3	SA 4	SA-5	SA-6	SA-7	SA-9	SA-8	SA-10	SA-111	SA 112	SA 113	SA 114	SA 115	SA 116
3. SPACE CRAFT.	-	-	-	-	—	BP-13	BP-15	BP-16	BP-26	AFRM-009	AFRM-011	AFRM 012	AFRM 013	AFRM 014	AFRM 015	AFRM 016
4. MISSION OBJECTIVES (P-PRIMARY S-SECONDARY)	UNMANNED										MANNED					
a. LAUNCH VEHICLE (LV) (MSFC Responsibility)	P 1. Structures 2. Propulsion (165K Engines)				P 1. Structures 2. Propulsion (1st 188K Engine) 3. Guidance (Passengers) 4. S-I/S-IV Stg. Separation	P 1. Structures 2. Propulsion 3. Guidance (1st Active Sys) 4. S-I/S-IV Stg. Separation	P 1. Structures 2. Propulsion 3. Guidance (Active) 4. S-I/S-IV Stg. Separation	P 1. Structures (1st to Accommodate 22,500# P/L Capab. in 100 N. Mi. Orbit) 2. Propulsion 3. Guid (Active) 4. EDS (Dev't) 5. S-I/S-IV Stg. Separation	P 1. Structures 2. Propulsion 3. Guid. (Active) 4. EDS Full Capability 5. S-I/S-IV Stg. Separation	S LV QUALIFICATION 1. Structures 2. Propulsion 3. Guidance (Active) 4. S-I/S-IV Stage Separation 5. EDS Full Capab.	S Without R&D Instrumentation	S	S	S		
b. SPACE CRAFT (SC) (MSC Responsibility)	NONE				NONE	S 1. Launch & Exit Environmental Parameters 2. LES Struct. Character. 3. LES Jettison Character.	S 1. Launch & Exit Environmental Parameters 2. LES Struct. Character. 3. LES Jettison Character.	S	S Alternate Mission (With BP 18) 1. Dem. Struct. integrity of Prod. SM and Adapter 2. Production CSM/Adapter Separation 3. Crew Safety	S SC QUALIFICATION 1. Structures 2. SC Systems Opn'l Characteristics 3. SM Prop. (off-load) Includ. Restart 4. CM Re-entry 5. LES Jettison 6. SM-CM Separat. 7. Crew Safety 8. Recovery Sys. 9. Guid. & Navig.	P 1. Manned Orbital Flight 2. Opn. CSM Sys. w/Man. Control 3. Evaluation of Guid. System 4. Evaluate Multiman Inflight Crew Performance 5. Maneuvering Capability of CM RCS During Reentry 6. Complete Recovery Operation	P	P	P		
c. SPACE VEHICLE (SV)	NONE				NONE	S 1. Physical & Flt. Compatibility of LV & SC 2. Compatibility of R&D Communications & Instrumentation Between SV and Ground	S 1. Physical & Flt. Compatibility of LV & SC 2. Compatibility of R&D Communications & Instrumentation Between SV and Ground	S	S Alternate Mission (With BP-18) 1. CSM/LV Separation	P SV QUALIFICATION 1. EDS Full Capab. 2. Physical & Flight Compatibility of LV & SC 3. LV-SC Separation 4. Instrumentation, Communications, Tracking	S	S	S	S	SPARE	SPARE
d. OTHER								S Micrometeoroid Experiment	S Micrometeoroid Experiment							

[redacted] PART 2 - CONFIG. & FLT. DATA SUMMARY)

PART 1 OF 2

OMSF
NO. G-27 | DATE JAN. 10, 1963
REV. 8 | REV. DATE
PREPARED BY: SYSTEMS ENGINEERING HUNTSVILLE OFFICE M-HME
APPROVED:

APOLLO/SATURN I CONFIGURATION AND FLIGHT DATA SUMMARY

	OCT 61	APR 62	NOV 62	MAR 63	AUG 63	DEC 63	MAR 64	JUN 64	OCT 64	DEC 64	MAR 65	JUN 65	SEP 65	DEC 65	MAR 66	JUN 66
1. LAUNCH DATE																
2. LAUNCH VEHICLE NO.	SA 1	SA 2	SA 3	SA 4	SA-5	SA-6	SA-7	SA-9	SA-8	SA-10	SA-111	SA-112	SA-113	SA-114	SA-115	SA-116
3. SPACE CRAFT NO.	–	–	–	–	–	BP-13	BP-15	BP-16	BP-26	AFRM-009	AFRM-011	AFRM-012	AFRM-013	AFRM-014	AFRM-015	AFRM-016
4. SPACE VEH. CONFIG.															SPARE	SPARE
A. LAUNCH VEH. (LV)																
(1) FIRST STAGE (S-I)	DEV.				PROTO.	PROTO.	PROTO.	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.		
(2) SECOND STAGE (S-IV)	DEV.(INERT)				PROTO. 1st	PROTO.	PROTO.	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.		
(3) INSTRUMENTATION UNIT (I.U.)	DEV.				DEV.	DEV.	DEV.	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.		
B. SPACE CRAFT (SC)																
(1) LUNAR EXCUR. MOD. (LEM)	NONE				NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE		
(2) SERVICE MODULE (SM)	NONE				NONE	← DEV. (PROD External Configuration) →				PROD. (First Compl)	PROD.	PROD.	PROD.	PROD.		
(3) COMMAND MODULE (CM)	← INERT JUPITER NOSE CONE →					← DEV. (PROD External Configuration) →				PROD. (First Compl)	PROD.	PROD.	PROD.	PROD.		
(4) LAUNCH ESCAPE SYS. (LES)	NONE				NONE	← PROD. (Tower Jettison Motor Active Only) →				PROD. (First Compl)	PROD.	PROD.	PROD.	PROD.		
5. LV PAYLOAD CAP. (LBS) (ORBITAL)	–				18,500	18,600	18,600	16,600	16,600	22,000+	22,500	22,500	22,500	22,500		
6. SC ORBITAL WT. (LBS)	–				–	12,360 BALLAST 12,360	12,360 BALLAST 18,600	12,360	12,360	22,000	22,500	22,500	22,500	22,500		
7. FLIGHT DATA																
A. FLIGHT AZIMUTH	100°				105°	105°	105°	105°	105°	72°/105°	72°	72°	72°	72°		
TRACKING NETWORK	AMR				AMR	AMR	AMR	AMR	AMR		MERCURY	MERCURY	MERCURY	MERCURY		
B. PROFILE (BASED ON INSERTION CONDITIONS.)	BALLISTIC				ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORB. OR SUB. ORB.	ORBITAL	ORBITAL	ORBITAL	ORBITAL		
	–				ELLIPT.	●	●	ELLIPT.	ELLIPT.	●	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR		
C. ORBIT. ALT. (N. Mi.-NOM.)	–				100/>100			255/675	255/675		100	100	100	100		
D. STAY TIME (MINIMUM)					1 DAY	1 DAY	1 DAY	1 YR.	1 YR.		3 ORBITS					
8. RECOVERY	NO				NO	NO	NO	NO	NO	YES (WATER)	YES (WATER)	YES (WATER)	YES (LAND)	YES (LAND)		
9. LAUNCH COMPLEX	34				37B	37B	34	37B	37B	34	34	34	34	34		

● UNDER STUDY

[redacted]

PART 2 OF 2
(PART I – FLT. MISSION ASSIGN. SUMMARY)

OMSF
NO. G-27 | DATE JAN. 10, 1963
REV. 8 | REV. DATE
PREPARED BY: SYSTEMS ENGINEERING HUNTSVILLE OFFICE M-VMO
APPROVED:

APOLLO/SATURN I-B FLIGHT MISSION ASSIGNMENT SUMMARY

1. LAUNCH DATE	AUG '65	NOV '65	JAN '66	MAR '66	MAY '66	AUG 66	NOV 66	FEB 67	MAY 67	AUG 67	NOV 67	FEB 68
2. LAUNCH VEH.	SA-201	SA-202	SA-203	SA-204	SA-205	SA 206	SA 207	SA 208	SA 209	SA 210	SA 211	SA 212
3. SPACE CRAFT												
4. MISSION OBJECTIVES (P-PRIMARY S-SECONDARY)	UNMANNED			Manning of SA-204 to be Considered	MANNED							
a. LAUNCH VEHICLE (LV) (MSFC Responsibility)	P 1. Structures 2. Propulsion 3. Guid. (Sat. I Guid. Sys. Active) 4. S-I/S-IVB Stage Separation 5. EDS	P 1. Structures 2. Propulsion 3. Guid. (Sat. I Guid. Sys. Active) 4. S-I/S-IVB Stage Separation 5. EDS	P 1. Structures 2. Propulsion 3. Guid. (Saturn V Guid. Sys. Active) 4. S-I/S-IVB Stage Separation 5. EDS	S LV QUALIFICATION 1. Structures 2. Propulsion 3. Guid. (Saturn V Guid. Sys. Active) 4. S-I/S-IVB Stage Separation 5. EDS	S Without R & D Instrumentation	S	S	S	S	S		
b. SPACE CRAFT (SC) (MSC Responsibility)	S 1. Launch & Exit. Environmental Parameters 2. LES Structural Characteristics 3. Structural Evaluation 4. LES Jettison 5. EDS	S	S 1. LES Structural Characteristics 2. Structural Evaluation 3. LES Jettison 4. EDS	S SC QUALIFICATION 1. Structures 2. SC Systems Opn'l Characteristics 3. SM Prop. (Off-Load) Includ. Re-start 4. LEM/LV Separat'n 5. LEM Propulsion 6. Recovery System 7. LES Jettison 8. Crew Safety	P 1. Manned Orbital Flights 2. Operation of SC Systems 3. Operational Techniques 4. Crew Training 5. Recovery Systems, Complete 6. CM & LEM Rendezvous and Docking 7. LEM Short Excursions, Rendezvous, and Docking 8. LEM Propulsion	P	P	P	P	P		
c. SPACE VEHICLE (SV)	S 1. Physical & Flight Compatibility of LV and SC 2. Compatibility of R & D Communications, Instrumentation and Tracking Between SV and Ground	S	S 3. SC/LV Separation	P SV QUALIFICATION 1. Physical & Flt. Compatibility of LV and SC. 2. Communications, Instrumentation and Tracking Between SV & Gnd. 3. EDS, 4. LV & SC Separat.	S	S	S	S	S	S	SPARE	SPARE
d. OTHER												

PART 1 OF 2 - (PART 2=CONFIG. & FLT. DATA SUMMARY)

OMSF
NO. G-28 | DATE JAN. 10, 1963
REV. B | REV. DATE
PREPARED BY: SYSTEMS ENGINEERING HUNTSVILLE OFFICE M-HME
APPROVED:

APOLLO/SATURN I-B CONFIGURATION AND FLIGHT DATA SUMMARY

1. LAUNCH DATE	AUG'65	NOV'65	JAN'66	MAR'66	MAY'66	AUG'66	NOV'66	FEB'67	MAY'67	AUG'67	NOV'67	FEB'68
2. LAUNCH VEHICLE NO.	SA-201	SA-202	SA-203	SA-204	SA-205	SA-206	SA-207	SA-208	SA-209	SA-210	SA-211	SA-212
3. SPACE CRAFT NO.												
4. SPACE VEH. CONFIG.											SPARE	SPARE
A LAUNCH VEH. (LV)												
(1) FIRST STAGE (S-I)	PROTO. (Thirteenth)	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.		
(2) SECOND STAGE (S-IV B)	PROTO. (First)	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.		
(3) INSTRUMENTATION UNIT (IU)	DEV.	DEV.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.		
B SPACECRAFT (SC)												
(1) LUNAR EXCUR. MODULE (LEM)	← DEV. (PROD. LEM Adapter) →			← PROD. (Ascent Stage Only) →								
(2) SERVICE MODULE (SM)	← DEV. Or (PROD. Structure →			PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.		
(3) COMMAND MODULE (CM)	← DEV. Or (PROD. Structure) →			PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.		
(4) LAUNCH ESCAPE SYS. (LES)	← PROD. (Tower Jettison Motor Active Only) →			PROD. (1st Compl.)	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.		
5. LV PAYLOAD CAP. (LBS) (ORBITAL)	30,000	30,000	30,000	32,000	32,500	32,500	32,500	32,500	32,500	32,500		
6. SC ORBITAL WT. (LBS)												
7. FLIGHT DATA												
A. FLIGHT AZIMUTH	105°	105°	105°	72°	72°	72°	72°	72°	72°	72°		
A. TRACKING NETWORK	AMR	AMR	AMR	MERCURY	MERCURY	MERCURY	MERCURY	MERCURY	MERCURY	MERCURY		
B. PROFILE (BASED ON INSERTION CONDITIONS)	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL	ORBITAL		
B. PROFILE (BASED ON INSERTION CONDITIONS)	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR		
C. ORBIT. ALT. (N. Mi.-NOM.)	105	105	105	105	105	105	105	105	105	105		
D. STAY TIME (MINIMUM)												
8. RECOVERY	NO	NO	NO	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND		
9. LAUNCH COMPLEX	37A	37B	37A	37B	37A	37B	37A	37B	37A	37B		

[redacted]

PART 2 OF 2
(PART I - FLT. MISSION ASSIGN. SUMMARY)

OMSF
NO. G-28 | DATE JAN 10, 1963
REV. B | REV. DATE
PREPARED BY: SYSTEMS ENGINEERING HUNTSVILLE OFFICE M-SME
APPROVED:

[redacted]

APOLLO/SATURN V FLIGHT MISSION ASSIGNMENT SUMMARY

1. LAUNCH DATE	MAR '66	JUL '66	OCT '66	DEC '66	FEB '67	APR '67	JUN '67	AUG 67	OCT 67	DEC 67	FEB 68	APR 68	JUN 68	AUG 68	OCT 68
2. LAUNCH VEH.	SA-501	SA-502	SA-503	SA-504	SA-505	SA-506	SA-507	SA 508	SA 509	SA 510	SA 511	SA 512	SA 513	SA 514	SA 515
3. SPACE CRAFT															

P-PRIMARY
S-SECONDARY

4. MISSION OBJECTIVES — UNMANNED — Manning To Be Considered — MANNED

a. LAUNCH VEHICLE (LV) (MSFC Responsibility)	P 1. Structures 2. Propulsion 3. Guidance (Active) 4. EDS	P 1. Structures 2. Propulsion 3. Guidance (Active) 4. S-IC/S-II Stage Separ. 5. EDS	P 1. Structures 2. Propulsion 3. Guidance (Active) 4. S-IC/S-II/S-IVB Stage Separ.'s 5. EDS 6. S-IVB Re-start (First)	P 1. Structures 2 Propulsion (S-IVB Prop. Mission to be Defined so as to Satisfy CM Re-entry Requirements) 3. Guidance (Active) 4. S-IC/S-II/S-IVB Stage Separations 5. EDS	P	S LV QUALIFICATION 1. Struct. (Full Prop. Loading) 2. Propulsion 3. S-IVB Re-start 4. Guidance (Active) 5. S-IC/S-II/S-IVB Stage Separ's 6. EDS	S								
b. SPACE CRAFT (SC) (MSC Responsibility)	S 1. LES Jettison	S 1. Launch & Exit Environmental Parameters 2. LES Jettison	S 1. Launch & Exit Environmental Parameters 2. LES Jettison	S 1. CM Re-entry at 36,000 fps (Max Heat Rate) (Max Total Heat Load) 2. LES Jettison 3. CM & SM Structures 4. CM/SM Separation 5. Recovery Systems 6. SM Propulsion (to be Defined so as to Satisfy CM Re-entry Requirements)	S	S SC QUALIFICATION 1. Struct. (Compl. SC, Full Prop. Load) 2. LES Jettison 3. CM/SM Separ. 4. LEM/SM Separ. 5. LEM Prop. 6. SM Prop. (Long Duration - and Multiple Re-start) 7. CM Re-entry 8. Recovery Systems	P 1. Manned Flight 2. SC Operation 3. Opn'l Techniques 4. Potential Lunar Mission							
c. SPACE VEHICLE (SV)	S 1. Physical and Flight Compatibility of LV & SC and SV & Gnd.	S 1. Physical and Flight Compatibility of LV & SC and SV & Gnd.	S 1. Physical and Flight Compatibility of LV & SC and SV & Gnd. 2. LV/SC Separ.	S 1. Physical and Flight Compatibility of LV & SC and SV & Gnd. 2. LV/SC Separ.	S 1. Physical and Flight Compatibility of LV & SC and SV & Gnd. 2. LV/SC Separ.	P SV QUALIFICATION 1. Physical and Flight Compatibility of LV & SC and SV & Gnd. 2. LV/SC Separ. 3. EDS	S Without R & D Instrumentation							
d. OTHER															

PART 1 OF 2

[redacted] PROG. & FLT. DATA SUMMARY)

OMSF
NO. G-29 | DATE JAN. 10, 1963
REV. B | REV. DATE
PREPARED BY: SYSTEMS ENGINEERING HUNTSVILLE OFFICE M-MHE
APPROVED:

APOLLO/SATURN V CONFIGURATION AND FLIGHT DATA SUMMARY

	MAR'66	JUL'66	OCT'66	DEC'66	FEB'67	APR'67	JUN'67	AUG'67	OCT'67	DEC'67	FEB'68	APR'68	JUN'68	AUG'68	OCT'68
1. LAUNCH DATE															
2. LAUNCH VEHICLE NO.	SA-501	SA-502	SA-503	SA-504	SA-505	SA-506	SA-507	SA-508	SA-509	SA-510	SA-511	SA-512	SA-513	SA-514	SA-515
3. SPACE CRAFT NO.															
4. SPACE VEH. CONFIG.															
A. LAUNCH VEH. (LV)															
(1) FIRST STAGE (S-IC)	PROTO. (FIRST)	PROTO.	PROTO.	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
(2) SECOND STAGE (S-II)	PROTO. (INERT)	PROTO. (FIRST)	PROTO.	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
(3) THIRD STAGE (S-IVB)	← PROTO. (INERT) →		PROTO. (SEVENTH)	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
(4) INSTRUMENTATION UNIT (IU)	PROTO.	PROTO.	PROTO.	PROTO.	PROTO.	PROTO.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
B. SPACECRAFT (SC)															
(1) LUNAR EXCUR. MODULE (LEM)	← DEV. (PROD. LEM Adapter) →					PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
(2) SERVICE MODULE (SM)	← DEV. (PROD. Struct. External Config) →			PROD. (Config. Depends on Re-entry Req.)		PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
(3) COMMAND MODULE (CM)	← DEV. (PROD. Struct. External Config) →			PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
(4) LAUNCH ESCAPE SYS. (LES)	← PROD. (Tower Jettison Motor Active Only) →			PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.	PROD.
5. LV PAYLOAD CAP. (LBS) ESCAPE	—	—	⟨90,000	⟨90,000	⟨90,000	90,000 (-)	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
6. SC ORBITAL WT. (LBS)															
7. FLIGHT DATA															
A. FLIGHT AZIMUTH	90°	105°	105°												
TRACKING NETWORK	AMR	AMR	AMR												
B. PROFILE (BASED ON INSERTION CONDITIONS)	BALLISTIC	BALLISTIC	ORBITAL	●	●										
	—	—	CIRCULAR												
C. ORBIT. ALT. (N. Mi.-NOM)	—	—	100												
D STAY TIME (MINIMUM)	—	—													
8. RECOVERY	NO	NO	NO	YES WATER	YES WATER	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND	YES LAND
9. LAUNCH COMPLEX	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39

● UNDER STUDY

[redacted]

PART 2 OF 2
(PART I-FLT. MISSION ASSIGN. SUMMARY)

[redacted]

OMSF
NO. G-29 | DATE JAN. 10, 1963
REV. B | REV. DATE
PREPARED BY: SYSTEMS ENGINEERING HUNTSVILLE OFFICE M-MAE
APPROVED:

APOLLO/LITTLE JOE II FLIGHT MISSION ASSIGNMENT SUMMARY

1. LAUNCH DATE	MAY 63	JUL 63	AUG 63	OCT 63	APR 64	JUN 64	SEP 64	NOV 64
2. MISSION NO.	PA-1	NONE	A-001	—	NONE	A-002	PA-2	A-003
a. LAUNCH VEH.	NONE	LJ II-1	LJ II-2	LJ II-3	LJ II-4	LJ II-5	NONE	LJ II-6
b. SPACECRAFT	BP-6	NONE	BP-12	BP 23	NONE	BP-22	AFRM 010	AFRM 002
3. MISSION OBJECTIVES	PRIMARY 1. Det. aerodyn. stability char. of escape config. during pad abort. 2. Dem. cap. of escape syst. to propel the CM safe dist. from the LV during pad abort. 3. Dem. launch escape tower release mech. 4. Dem. oper. of tower jettison motor. 5. Dem. parachute recovery system. SECONDARY 1. Dem. abort & recovery timing sequence. 2. Det. dyn. of CM during jettison of ecape tower. 3. Dem. op. of R&D instrm. & comm. equipt. used on subs. flts. 4. Dem. compat. of prot. GSE with CM. 5. Det. init. sep. traj. of the escape tower. 6. Det. escape tower vib. during pad abort.	PRIMARY Launch Veh. qualification only	PRIMARY 1. Dem. struct. integrity of escape tower. 2. Dem. cap. of escape syst to propel CM to a predetermined distance from LV. 3. Det. aerodyn. stability char. of escape config. for Max "Q" abort condition. 4. Dem. oper'n of CM-SM separation mechanism. 5. Dem. of parachute recovery system. SECONDARY 1. Dem. LJ II spacecraft compatibility. 2. Det. aerodynamic loads due to fluctuating pressures on the CM & SM during LJ II launch.	PRIMARY Back-up to LJ II-1 and LJ II-2	PRIMARY Launch Veh. control system qualification.	PRIMARY 1. Det. aerodyn. stability of CM during an abort, simulating a Sat-I trajectory prior to tower jettison. 2. Dem. cap. of LES to propel CM to safe distance from LV prior to tower jettison. 3. Det. cap. of RCS to rate stabilize the CM for reentry. SECONDARY 1. Dem. parachute recovery systems.	PRIMARY 1. Dem. structural integ. of the production CM during pad abort. 2. Det. operational characteristics of CM subsystems during pad abort. 3. Demonstrate CM/SM separation mechanisms. SECONDARY 1. Dem. abort and recovery sequence. 2. Det. stability of escape config.	PRIMARY 1. Dem. struct. integ. of the prod. CSM under an abort at high dyn. pressures in transonic speed ranges. 2. Det. opn'l char. of sub-systems at high dyn. pressure incurred by escape config. during an abort. 3. Det. cap. of RCS to rate stabilize CM for reentry. SECONDARY 1. Det. dyn. of CM during an abort resulting in high dynamic pressure on escape config. 2. Dem. abort and recovery sequences 3. Dem. parachute recovery system

[redacted]

PART 1 OF 2

(PART 2-CONFIG. & FLT. DATA SUMMARY)

OMSF
NO. G-33 | DATE FEB. 14, 1963
REV. A | REV. DATE
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APOLLO/LITTLE JOE II CONFIGURATION AND FLIGHT DATA SUMMARY

1. LAUNCH DATE	MAY-63	JUL-63	AUG-63	OCT-63	APR-64	JUN-64	SEP-64	NOV-64
2. MISSION NO.	PA-1	NONE	A-001	—	NONE	A-002	PA-2	A-003
A. LAUNCH VEH. NO.	NONE	LJ II-1	LJ II-2	LJ II-3	LJ II-4	LJ II-5	NONE	LJ II-6
B. SPACE CRAFT NO.	BP-6	NONE	BP-12	BP-23	NONE	BP-22	AFRM 010	AFRM 002
3. SPACE CRAFT CONFIGURATION								
A. COMMAND MODULE (CM)	DEV.	—	DEV.	—	—	DEV.	PRODUCTION	PRODUCTION
B. SERVICE MODULE (SM)	DEV.	—	DEV.	—	—	DEV.	PRODUCTION	PRODUCTION
C. LAUNCH ESCAPE SYSTEM (LES)	PRODUCTION	—	PRODUCTION	—	—	PRODUCTION	PRODUCTION	PRODUCTION
4. LAUNCH COMPLEX	WSMR	WSMR	WSMR	WSMR	WSMR	WSMR	WSMR	WSMR

PART 2 OF 2
(PART I - FLT. MISSION ASSIGN. SUMMARY)

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GLOSSARY OF TERMS

The purpose of this glossary is to explain the terms used in describing launch vehicle and spacecraft configurations and the assignment of flight mission priorities.

1. PRODUCTION (PROD.)

   a. Production as used for the launch vehicle is defined as an item incorporating the final design. All systems have been flight qualified for manned flight applications of the item. R&D instrumentation has been removed. Manufacturing is accomplished utilizing production techniques.

   b. Production as used for the spacecraft is defined as an item that is representative of the final design to a degree sufficient to start flight qualification of the item. Systems (e.g., crew safety, abort, re-entry, recovery, etc.) essential to the safety of the astronaut are flight qualified prior to the first manned flight. Other systems are qualified during manned flights. Extensive design changes and refinements may be expected. Manufacturing is accomplished utilizing production techniques.

2. PROTOTYPE (PROTO.) is defined as an item representative of the final design, but possibly requiring design changes and refinements. Systems are operating to the extent and degree necessary to flight qualify the item for manned flight applications.

3. DEVELOPMENTAL (DEV.) is defined as an item similar in characteristics and performance, but not necessarily representative of the final design. Systems are functioning only to the extent necessary to accomplish a particular flight mission objective. Certain systems may be essentially inert, but instrumented for obtaining flight data necessary for defining the final design while other systems may be carried as passengers for the purpose of evaluating flight performance prior to activating, or closing the loop for, the system.

4. PRIORITY OF MISSION OBJECTIVES - The purpose of the terms, primary (P) and secondary (S), as used in defining priorities of mission objectives, is to provide a guide for depicting the area where major consideration will be given in defining flight mission assignments, flight profiles, propellant loading, instrumentation, etc. The mission priority does not necessarily infer that the primary missions are over-riding the secondary missions, but rather that they are given principle consideration in integrating and implementing the mission objectives.

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