DEPARTMENT OF THE AIR FORCE
OFFICE OF THE SECRETARY

MEMORANDUM

Col Ford July 22

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Keep as part of our AAP file

APOLLO APPLICATIONS

PRESENTATION TO PSAC / STAC

July 19, 1968 - - - - - MSFC - - - - - Mr. H. T. Luskin

APOLLO APPLICATIONS
BASIC OBJECTIVES

- LONG DURATION SPACE FLIGHTS OF MEN AND SYSTEMS
  - UNIQUE CAPABILITIES OF MAN
  - HABITABILITY
  - BIOMEDICAL/BEHAVIORAL
  - SYSTEMS DEVELOPMENT
- SCIENTIFIC INVESTIGATIONS IN EARTH ORBIT
  - SOLAR ASTRONOMY
  - EARTH OBSERVATIONS
  - STELLAR ASTRONOMY
- APPLICATIONS IN EARTH ORBIT
  - METEOROLOGY
  - EARTH RESOURCES
  - COMMUNICATIONS
- EFFECTIVE AND ECONOMICAL APPROACH TO THE DEVELOPMENT OF A BASIS FOR POTENTIAL FUTURE SPACE PROGRAMS

NASA HQ M63-015
3-26-63

APOLLO APPLICATIONS SCHEDULE

	1970	1971	1972	1973
28-DAY MISSION: SATURN I WORKSHOP ACTIVATION AND OPERATIONS; MEDICAL, SCIENCE AND TECHNOLOGY EXPERIMENTS		△ CSM △ SAT I WORK-SHOP	△ CSM △ SAT I WORKSHOP BACKUP	
56-DAY MISSION: REVISIT AND REUSE SATURN I WORKSHOP; MEDICAL SCIENCE AND TECHNOLOGY EXPERIMENTS		△ CSM		
56-DAY MISSION: SOLAR ASTRONOMY (ATM); REVISIT AND REUSE SATURN I WORKSHOP		△ CSM △ ATM		
LONG DURATION MISSION: ASTRONOMY, EARTH SCIENCES AND ADVANCED TECHNOLOGY				SAT V △ WORKSHOP

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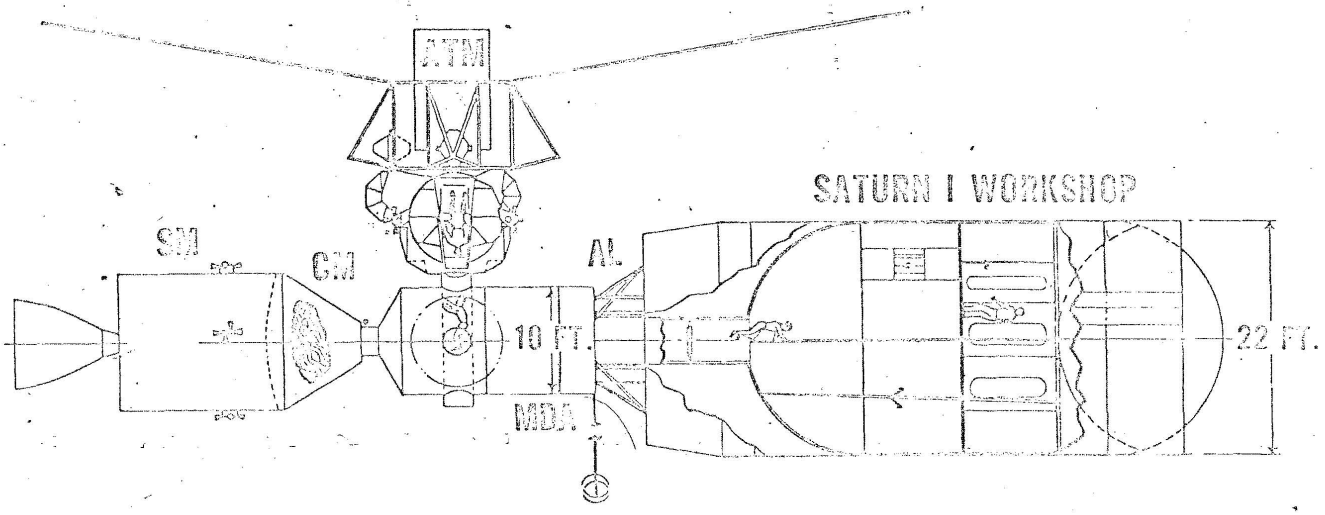
REV. 7-18-68

AAP ORBITAL CLUSTER



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APOLLO APPLICATIONS
HARDWARE REQUIREMENTS

QUANTITY	ITEM	
7	SATURN IB LAUNCH VEHICLE	ALL PLANNED TO BE AVAILABLE FROM APOLLO
7	SLA	
3	NOSECONES	
1	LM-ASCENT STAGE	
4	CM-SM	
2	AIRLOCK MODULES	o McDONNELL-DOUGLAS
2	MULTIPLE DOCKING ADAPTER	o MSFC
AAP PECULIAR 2	SATURN I WORKSHOP MOD PACKAGES	o McDONNELL-DOUGLAS
1	LM-ASCENT STAGE MOD PACKAGE	o GRUMMAN o CONTROLS AND DISPLAYS WITH MARTIN & BENDIX
4	CM-SM MOD PACKAGES	o CONTRACT APPROACH TO BE DETERMINED
1	ATM	o MSFC o CMG WITH BENDIX
	EXPERIMENTS	o BALL BROTHERS, HAO, HCO, NRL, AS & E

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REV. 7-17-68

MANNED SP[illegible] FLIGHT SCHEDULE

APOLLO APPLICATIONS
MAJOR TECHNICAL MILESTONES

	MILESTONES	CY 1967												CY 1968												CY 1969											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	BASELINE CONFIGURATION REVIEWS										⌒		⌒		⌒					⌒																		
2																																					
3	CSM																			○			◫						△								
4																																					
5	MDA													◻							△																
6																																					
7	AIRLOCK												◻															△									
8																																					
9	SAT 1 WS					◻									◻								◻				△										
10																																					
11	LM																	○				◫					△										
12																																					
13	ATM													○						◫							△										
14																																					
15	ATM EXPERIMENTS:																																				
16	S052						○						◻			△																					
17	S054						○						◻						△																		
18	S056			○										◻	△																						
19	S082							○						◻					△																		
20	S055									○				◻																							

NOTES
- ○ PRELIMINARY REQUIREMENTS REVIEW
- ◻ PRELIMINARY DESIGN REVIEW
- △ CRITICAL DESIGN REVIEW

APOLLO APPLICATIONS PROGRAM

○ EXTENDED DURATION MANNED SPACEFLIGHT	○ ONE 28 DAY AND TWO 56 DAY FLIGHTS--3 MAN CREW ○ COMPREHENSIVE MEDICAL MEASUREMENTS ○ CREW TASK PERFORMANCE MEASUREMENTS
○ COMPLEX MAN-MACHINE RELATIONSHIP OPERATIONS	○ ACTIVATING WORKSHOP ○ ASSEMBLE EXPERIMENTS ○ PERFORMS EXPERIMENTS ○ C&C ATM EXPERIMENTS
○ EVA - IVA	○ 70 HOURS EVA, EXPERIMENT SUPPORT, JET SHOES, MMU ATM
○ OPERATIONAL DEVELOPMENTS	○ 10,000 MAN HOURS IN SPACE ○ 8 MONTHS WORKSHOP OPERATIONS ○ 105K# CLUSTER ○ AUTOMATED RENDEZVOUS AND DOCKING
○ SYSTEM DEVELOPMENTS	○ MOL SIEVE ○ LARGE SOLAR ARRAYS ○ 11,000 CU. FT VOLUME WORKSHOP ○ 22 FT. DIAMETER-WORKSHOP ○ CMG'S ○ 2 GAS ECS ○ 56 DAY CM AND SM
○ EXPERIMENTS	○ UV AND X-RAY SOLAR ASTRONOMY ○ MEDICAL HABITABILITY ○ TECHNOLOGY ○ OTHER SCIENCE

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APOLLO APPLICATIONS
MAJOR TECHNICAL MILESTONES

	MILESTONES	CY 1967 J F M A M J J A S O N D	CY 1968 J F M A M J J A S O N D	CY 1969 J F M A M J J A S O N D
1	BASELINE CONFIGURATION REVIEWS			
2				
3	CSM			
4				
5	MDA			
6				
7	AIRLOCK			
8				
9	SAT 1 WS			
10				
11	LM			
12				
13	ATM			
14				
15	ATM EXPERIMENTS:			
16	S052			
17	S054			
18	S056			
19	S082			
20	S055			

NOTES
- ○ PRELIMINARY REQUIREMENTS REVIEW
- □ PRELIMINARY DESIGN REVIEW
- △ CRITICAL DESIGN REVIEW

GPO 917-132

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