

best be done by measuring his metabolic rate for various work outputs using a calibrated device similar to a bicycle exerciser to provide reproducible levels of work.

IMPORTANCE OF AAP-1 AND AAP-2

For the long term, the AAP-1 and AAP-2 flights will provide a test bed for the systems and subsystems required for future unmanned and manned space stations and for long duration manned planetary exploration flights.

The AAP-1 and AAP-2 flights are designed to take full advantage of the Apollo/Saturn system to make significant contributions to a wide range of objectives.

The major benefits to be derived from the AAP-1 and AAP-2 flights are (1) to develop capability for reuse of space hardware which will reduce program costs; (2) to determine effects of extended duration space environment on men and systems; (3) to conduct a large number of important experiments; and gain operational experience with manned space systems to put this nation in a position to define and evaluate further manned and unmanned exploration and operational space systems; and (4) to develop effective manned extra-vehicular capability.

If the AAP-1 and AAP-2 flights are not accomplished, there would be an indefinite hiatus in achieving the benefits mentioned above. The timing of the AAP-1 and AAP-2 flights will have a most important effect on the future of our space program. Use of the Apollo developed hardware for the AAP-1 and AAP-2 flights, as now scheduled, will give the United States the means to operate effectively and economically in space for long periods of time at an early date and in an orderly fashion.

Our Advanced Manned Mission planning involving future earth orbital manned space station operations and manned planetary flights relies heavily on tests, experiments and operational data to be gained from these Apollo Applications flights.

Cancellation or postponement of the AAP-1 and AAP-2 flights will disrupt the orderly pace of our progress in space and would dissipate a capability assembled in painstaking fashion over the period of a decade.

RESOURCES

The fiscal year 1967 and 1968 increments of funding required for the AAP-1 and AAP-2 flights are tabulated as follows:

Apollo Applications program—Resources summary

[In millions of dollars]

	Fiscal year 1967	Fiscal year 1968
Apollo Applications:		
AAP-1.....	2.6	10.0
AAP-2.....	19.6	19.9
Subtotal.....	22.2	29.9
Basic Apollo hardware: ¹		
AAP-1.....	58.5	14.3
AAP-2.....	24.1	6.7
Subtotal.....	82.6	21.0
Total.....	104.8	50.9

¹ Apollo procured equipment for alternate use by AAP.

SECOND APOLLO APPLICATIONS MISSION—AAP-3 AND AAP-4

In the short term, the AAP-3 and AAP-4 flights will provide three major benefits: (1) solar astronomical observations will be obtained during the period of maximum solar activity; (2) man's effectiveness as an astronomical observer in space will be determined; and (3) alternate operating modes for future large orbital telescopes will be tested.