

that by 1969 this assembly, which, in effect, is an embryonic economical space station, can be successfully established and used for a one month mission and can be left in orbit and functioning for reactivation and reuse on a later mission.

In the Apollo Applications program planning we have classified the flight activity into two categories—alternate missions and follow-on missions. The mission planning will be discussed in detail later, however.

The program of investigations and development to be carried forward in the Apollo Applications program will meet two basic objectives: to make unique contributions to practical applications, operational capabilities, science, and technology; and, at the same time, to place the nation in a position to assess, on the basis of valid scientific experimentation and actual experience, the value and feasibility of future space flight and the interrelated roles of manned and unmanned systems.

In support of these objectives, the principal areas toward which the fiscal year 1968 effort will be directed are the development of an extended flight capability, the conduct of manned astronomical observations from space, and the extended exploration of the moon.

Objectives

The major Apollo Applications objectives are shown in this chart (fig. 64, MC67-5412). The usefulness of man in space will be tested and evaluated in a large, controlled space station-like environment to evaluate human performance and engineering requirements. Man will perform scientific and applications experiments in this embryo space station to assess the value and feasibility of future space flight operations and the interrelated roles of manned and unmanned systems.

The acquisition of maximum yield of solar data during the next solar maximum is an alternate mission task under astronomy observations. During the alternate mission time cycle, operating modules for reuse will be placed in orbit.

Reuse of hardware and long duration flight

In the past I have described the all-up concept of testing; that is, to flight test the entire hardware system on one flight instead of incremental flight-testing of subsystems, modules and stages. I have already described in this presentation

MAJOR APOLLO APPLICATIONS OBJECTIVES

- USE APOLLO DEVELOPMENT TO:
 - DETERMINE USEFULNESS OF MAN IN SPACE.
 - CONDUCT ASTRONOMY OBSERVATIONS.
 - DEVELOP CAPABILITY FOR ECONOMICAL SPACE FLIGHT THROUGH HARDWARE REUSE AND LONG DURATION FLIGHT.
 - EXTEND LUNAR EXPLORATION.

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FIGURE 64