

For AAP-1, a manned flight, the launch vehicle will be the uprated Saturn I. Spacecraft equipment will include the Command and Service Modules and a Lunar Mapping and Survey System.

For AAP-2, an unmanned flight, the launch vehicle will be the uprated Saturn I. Spacecraft equipment will include the Airlock Module and Multiple Docking Adapter.

AAP-1 will have a 3 man crew in the Apollo Command Module. The crew will perform several days of operations in low earth orbit for qualification of the Lunar Mapping and Survey System which is launched in an adapter of the Saturn space vehicle (Figure 1). The Lunar Mapping and Survey System will be used in later AAP operational missions for mapping and geological survey of the lunar surface from lunar orbit.

After these tests, AAP-2 (Figure 2) will be launched unmanned into a higher, circular orbit about 300 statute miles altitude where the orbital lifetime will be greater than 1 year. The crew from AAP-1 will transfer the Command and Service Module and the Lunar Mapping and Survey System to the higher orbit and rendezvous with and dock to the Multiple Docking Adapter from the second launch (Figure 3). The spent S-IVB stage from AAP-2 will then be activated into an Orbital Workshop. Through use of the Airlock Module, the crew will transfer equipment into the workshop and erect the crew quarters (Figures 4 & 5). Orbital Workshop operations and experiments will be performed for a period of up to four weeks, when the crew will deorbit in the Command Module, leaving the Orbital Workshop, Multiple Docking Adapter and Airlock Module in orbit in a gravity gradient stabilized condition for later usage.

OBJECTIVES FOR FIRST APOLLO APPLICATIONS MISSION

In summary, the five objectives of the first Apollo Applications mission are (1) to test the Lunar Mapping and Survey System photographic equipment and spacecraft subsystems in earth orbit for subsequent lunar mapping and survey missions; (2) to determine feasibility of operating the Orbital Workshop as a habitable space structure for a period of up to four weeks; (3) to evaluate

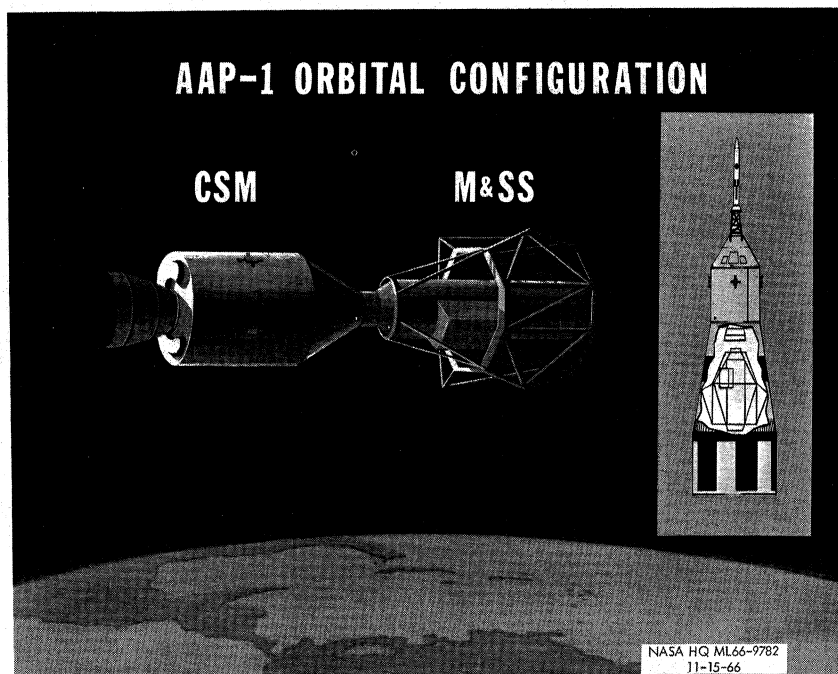


FIGURE 1