

APOLLO SATURN V AS 501/2 UNMANNED FLIGHTS PRIMARY OBJECTIVES

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- DEMONSTRATE STRUCTURAL AND THERMAL INTEGRITY OF LAUNCH VEHICLE AND SPACECRAFT
 - DEMONSTRATE STAGE SEPARATIONS
 - VERIFY OPERATION OF CRITICAL SUB-SYSTEMS
 - EVALUATE PERFORMANCE OF THE EMERGENCY DETECTION SYSTEM
 - DEMONSTRATE MISSION SUPPORT FACILITIES CAPABILITIES

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FIGURE 18

PROGRAM HARDWARE AND SOFTWARE

Space vehicle ground qualification and certification for flight have been a major Apollo effort during 1966. This extensive qualification and test program is conducted to assure that the hardware has reached a point of maturity where subsequent flight verification tests are likely to be successful.

Ground qualification and flight certification for the Apollo Saturn I launch vehicle were completed in 1966 while similar effort for the Saturn V launch vehicle is nearing completion.

The spacecraft for the AS-204 mission had gone through the scheduled exhaustive test program, beginning with spacecraft subsystem acceptance tests. Further testing was conducted from the time the subsystems had been assembled in the Command Module in March 1966, through a series of integrated tests at the factory ending in August 1966, and continuing at Kennedy Space Center after delivery of the Command Module in August.

During the entire fabrication and test program leading toward the scheduled launch of this Apollo spacecraft, a number of Qualification Tests or Certification Test Requirements were completed on the most critical components to ensure the adequacy of the spacecraft for manned flight. All of these test conditions are more exacting than those the spacecraft components would be expected to encounter during an actual mission.

Approximately one-half of the qualification and certification testing for the Block I Command-Service Module is applicable to the Block II configuration. The testing required to complete the certification of the Block II Command-Service Module and Lunar Module is progressing.

I would like next to describe the work and the progress of our studies and designs. I will cover our activities in reviewing the Apollo design as well as specific actions being taken in fire detection, fire extinguishing, materials, cabin configuration, emergency egress, spacecraft atmospheres, and environmental control systems.