

to retain some momentum in the unmanned planetary program; and the importance of preserving the options to move ahead in areas such as nuclear propulsion in the future—all of these factors have forced us to reduce still further the Apollo Applications program.

Accordingly, we have included in the operating plan \$150 million for this program. This amount is required to work toward the important but sharply limited and deferred Apollo Applications program we now propose.

Under the plan, production of the Saturn I-B launch vehicle will terminate upon completion of the 14th launch vehicle, Saturn 214. This will leave nine Saturn I-B's if we are able to proceed with the Apollo schedule I discussed earlier. The 12th Saturn I-B has been completed, and the last two are well along in fabrication and assembly.

Production of the Saturn V will be discontinued at the end of the first 15 vehicles, which are being procured as part of the Apollo program. Of these 15 Saturn V's, six have been manufactured and four more will be completed this fiscal year.

In the revised Apollo application program, we will work toward launching, in the early 1970's, a single Saturn I workshop and a single Apollo telescope mount (ATM) of the types we have discussed in the past. A backup unit for each will be prepared. There will be one revisit to the workshop before the ATM is joined to it. Later, we hope to proceed with the Saturn V workshop; but work toward that goal under this operating plan will be limited to studies.

Advanced Missions.—In this third element of the manned space flight program, we plan to utilize \$2.5 million, one-half of the budget request, for continued studies related to manned earth-orbital and lunar missions.

SPACE SCIENCE AND APPLICATIONS

Physics and Astronomy.—The amount of \$141.9 million was requested for the physics and astronomy program, and \$136.9 million was authorized.

The operating plan provides \$132.1 million for this program. At this level, the program includes the geophysical, solar, and astronomical observatories, all on-going Explorers, and the Pioneer F and G missions. The small astronomy satellite (SAS-B), and a prototype Sunblazer (using the phased-array antenna to be funded from the Construction of Facilities appropriation) are also included. The sounding rocket program is continued at a level equivalent to that of fiscal year 1968. At the reduced level for physics and astronomy, the level of effort in supporting research and technology and data analysis will be approximately 10 percent lower than in fiscal year 1968.

Lunar and Planetary Exploration.—The amount of \$92.3 million was authorized for the Lunar and Planetary Exploration program, a reduction of \$15 million from the budget request. NASA's interim operating plan for fiscal year 1969 includes \$75.8 million for this program of which \$6.8 million is for lunar and \$69.0 million for planetary. The \$69.0 million for planetary programs is required to support the Mariner-Mars 1969 mission, the reacquisition of telemetry from the Mariner V, and the Mariner-Mars 1971 mission.

Our plan also supports in fiscal year 1969, at a reduced funding level, the capability to conduct a mission to Mars during the 1973