Apollo Applications will maintain the orderly pace of our progress in the space age at a time when there may be opportunities to move ahead of the Soviets in space achievement. This program will guard against the possibility of technological "surprise" by supporting the continued advancement of an industrial technology. At the same time, it will maintain the forward momentum that space technology has given our competitive position in the world market place through research and development for our industrial technology.

Apollo Applications will support the broad base of research and development vital to our security as a nation. It will avoid the waste, the dissipation of a space capability assembled in painstaking fashion over the period of a decade. Furthermore, it will hold open the opportunity to return direct benefits to man on earth in the next phases of space activity, maintaining the momentum achieved thus far.

This first post-Apollo program will take advantage of the tremendous opportunities for expansion of knowledge at a time when space-based astronomy and exploration embracing the whole field of space science show promise of breaking through into an era of real discovery. It will provide the means to meet the challenge of the future in space at a relatively modest cost as measured against a percentage of the gross national product. The peak was in fiscal year 1966, when NASA expenditures totaled 0.83 of 1 percent of the gross national product. In the current fiscal year they are 0.73 of 1 percent. In the budget proposed for fiscal year 1968, the total would be 0.66 of 1 percent.

Finally, Apollo Applications will provide the capability to expand our space activity if the international situation should change. The resulting stabilizing benefits would thus be insured because this proposed program would keep the space team together, and in a position to respond to economic developments on the national scene.

Background

Through the Mercury and the Gemini programs, we have learned much about man's capabilities and limitations in space flight. We have demonstrated the utility of space crews and their ability to carry out complex mission plans, to conduct experiments, to accomplish extra-vehicular activity and to navigate in space both with and without ground based assistance. We will learn much more from the early Apollo missions.

Prior to 1970, the Gemini and Apollo programs, building on results of Mercury and Saturn I, will have provided the capability to explore space out to 250,000 miles from earth and to conduct manned operations and experiments on flights of up to two weeks duration. The uprated Saturn I and Saturn V boosters will have injected 20 to 140 tons of payload per launch, respectively, into near-earth orbit. The Saturn V will have sent 49 tons to the vicinity of the moon. The Apollo spacecraft will have sustained a three-man crew for two weeks in a two-compartment, modular, maneuverable vehicle and will have landed two men on the moon and returned them, with samples of lunar material, to earth. The U.S. manned space flight programs will have logged more than 500 man days in space, during which data and experience will have been acquired from more than 100 in-flight experiments.

Prospects

There are many exciting prospects for manned and unmanned space activities which potentially could reap great benefits, not only for this nation, but for the entire world.

Such possibilities could include meterological stations to track and study the nature and behavior of the atmosphere and the effects of solar activity on weather. It has been estimated by the National Academy of Sciences that through better weather forecasting alone, farmers, fuel producers, public utilities, construction industries, and water managers can save about $2.5 billion annually.

A second possibility is research stations to map and study the earth's resources which could provide a better way of life for millions of people and prepare to meet the future needs resulting from the current population "explosion."

Astronomical observatories to conduct solar and stellar observations outside the filtering effects of the earth's atmosphere are a third possibility. A fourth is assembly, maintenance and operaton of communication stations potentially capable of significantly increasing reliable world-wide communications and television coverage.