hardware for sample retrieval or reconnaissance missions, and have provided us with spacecraft concepts for manned Mars landing missions in the future.

The fiscal year 1968 study program will focus on continued definition of technology requirements and concepts for a Mars sample-retrieval mission. This type of manned mission offers the unique advantage of bringing samples of the Martian surface and atmosphere back to earth for scientific analysis. The manned spacecraft, which would also allow for scientific research and observations on the way to and returning from the planet, would be used to aim, launch, and retrieve an unmanned sample return probe. During FY 1968, the study effort will include preliminary definition of the mission spacecraft, and the associated propulsion stages, in addition to the onboard experiments that could be conducted by the crew members during the mission. The studies will define the total system for Mars sample retrieval in enough depth to permit definitive planning of the funding requirements, the technological development program required to support this mission, and the total program support required within NASA.

Fiscal year 1968 Lunar Mission Studies will provide for updating the current plan for lunar exploration so that the accompanying conceptual designs can be developed. This integrated exploration plan will review the basis for a continuing series of manned and unmanned missions.

Finally, Launch Vehicles Studies to support earth orbital, planetary and lunar missions will be continued during fiscal year 1968. These studies will stress preliminary definition of improved Saturn vehicles, analysis of reusable reentry vehicles, and determination of the facilities and support requirements.

Conclusion

Now, in conclusion, why does the manned space flight program merit support at this time? I believe there are many reasons.

It 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.

It will guard against the possibility of technological "surprise" by supporting the continued advancement of an industrial technology.

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.

It 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.

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.

It 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, it 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.

To summarize, I have reviewed the major activities of the manned space flight program. As you recall, I began by citing our general objectives in manned space flight. These are the broad objectives that have motivated our efforts in specific programs. We have worked for the establishment of man's capabilities; for development of a national competence for manned space flight as represented by an industrial base, trained personnel, ground facilities, launch vehicles, spacecraft, and operational experience, for the exploration of space; and for United States leadership in space. Now we propose we move forward and use this national capability.