

LOGIC DEFIES COMPREHENSION

Congress Reverses Space Program Priorities

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WASHINGTON

Following logic which defies comprehension, Congress is cutting off virtually all funds for preliminary exploration of the planets while voting to buy a nuclear rocket designed to fly men to Mars.

This curious way of running the national space program flies in the face of scientific priorities and leaves unmanned planetary programs in such disarray that they will require a major overhaul.

Part of the blame belongs to the National Aeronautics and Space Administration because it was caught with nearly all of its eggs in one planetary basket — namely, Project Voyager—when the financial crisis hit.

Congress, in view of present circumstances, had no choice but to cut the civilian space budget this year. And with the nation already committed to land men on the moon, it could not cut Project Apollo, the most expensive of all space efforts.

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That left only one alternative—"no new starts."

For its part in the economy drive, the space agency now says it will not go into development of the Nerva II nuclear engine, even though the House has voted \$46.5 million for it. NASA had originally asked for \$74 million.

The appropriations measure has not yet been passed by the Senate, but it is expected to go through in generally the same form as the House-passed bill.

Voyager is given no chance of being restored by the Senate, where it has faced stiff opposition. When Congress passed the NASA authorization bill earlier this year, the Senate version included no Voyager funds. The Senate was persuaded to go along with a \$42 million authorization during a conference with members of the House to work out a compromise authorization measure.

But when the House got around to actually appropriating money, the project was out again.

Now NASA, miffed because its \$74 million request for the nuclear rocket was cut, says it won't push the program. But the Senate may well appropriate money for it anyway. It is the favorite project of the powerful Senate Space Committee chairman, Sen. Clinton F. Anderson (D-N.M.).

In killing Voyager while appropriating money for a nuclear rocket, Congress would be ignoring what the scientific community says is the first priority of the American space exploration program—to find whether there is life on other planets.

That was Voyager's mission. Beginning in 1973, NASA had planned to launch laboratories with sophisticated life detection equipment for landings on Mars. It had also planned to fly a Mariner spacecraft with a small landing capsule, to Mars in 1971, but that has been killed by Congress, too.

As a result, the United States has

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only one planetary mission of significant importance now in the planning stage—flights to Mars by two less sophisticated Mariner spacecraft in 1969.

It is hardly a program to reflect the urgency which scientists attach to unmanned planetary exploration.

Small Vehicle Exploration

Some members of Congress who have opposed Voyager, which would cost more than \$2.3 billion, have long argued that NASA should conduct rather extensive exploration with smaller, less expensive vehicles first. They have some strong support in the scientific community.

Earlier this year, Dr. James Van Allen of the University of Iowa testified before the House Space Committee that "we favor sending a number of well-equipped scouting parties to the several planets before we send out the wagon train with all of our women and children and a full set of household furnishings as Voyager proposes to do eventually."

But NASA has continued to insist upon getting started with Voyager. In the last fiscal year its request for funds was killed by the Budget Bureau before the budget was submitted to Congress.

Now that it has been denied again, NASA must look for other ways to continue planetary exploration.

Meanwhile, it will probably transfer enough funds from other programs to continue design studies on Voyager. (It started these studies with funds from a special budget for future missions.)

Among the alternatives are modifications of the present Mariner or Lunar Orbiter spacecraft so they could be placed in orbit around Mars or Venus. Studies have been conducted along this line already, but they had not been assigned for priority because NASA had hoped Voyager would get started in earnest this year.

The elimination of funds from this year's budget means Voyager will not fly in 1973, and there is little, if any hope for 1975, the next opportunity to send robots to Mars.

The plan had been to launch two Voyager spacecraft simultaneously, using one Saturn 5 rocket.

Exploration More Expensive

If Voyager missions finally develop toward the end of this decade, the exploration of Mars certainly will be a far more expensive business than it would in 1973.

Because of the relative position of the earth and Mars, far more energy will be required in the late 1960s to send a Voyager to drop an automated laboratory and then orbit the red planet. As a result, a Saturn 5 may be able to launch only one spacecraft instead of two. The cost

of building and launching a single Saturn 5 approaches \$200 million.

Some members of Congress who fear an ever increasing spiral in space spending see development of a nuclear rocket as an insidious attempt by NASA and the aerospace industry to prepare for manned flights to Mars without the consent of Congress or the public.

There can be no doubt that manned planetary flights appear to be the most likely use for nuclear propulsion.

Scientists Cautious

Although a great deal of explanation has been made about how much a nuclear third stage would increase the Saturn 5 earth orbital payload, scientists are not anxious to see a nuclear rocket stage orbiting the earth, even if it takes centuries for it to fall back to earth.

That leaves planetary missions as the only foreseeable use for a nuclear rocket.

And until the planets are explored quite thoroughly by Voyager or some other unmanned machine capable of landing on Mars and Venus, it is stupid to even think seriously of sending men.

If the programs funded by the House last week were carried to their absurd conclusion, they would end with astronauts going to Mars with only a telescopic view of what awaits them.