

NASA's future under Reagan

Marsha Freeman outlines the funding options and argues that the space program is key to national security and prosperity.

Since the presidential election on Nov. 4, many Americans have been looking forward to a sorely needed revitalization of the nation's space program. Sen. Harrison Schmitt (R-N.M.) has taken the lead in Congress in trying to impress upon the new administration that the future economic, scientific, and military health of the country depends directly on its commitment to NASA and its space programs. The senator has met with President Reagan and is re-introducing his National Space and Aeronautics Policy Act into the 97th Congress.

In the motivating section of that bill, Senator Schmitt states: "The retrenchment of United States' space and aeronautical activities since the early 1970s has resulted in a serious threat to our economic progress, our national defense, and to our leadership role in the establishment of the facilities of our civilization in space." The bill continues, "The gradual acceleration of well-managed space and aeronautical activities by the United States, state and local governments, public and private institutions, and industry will further benefit the Nation far exceeding the cost of such activities."

There is no question that the technological innovation spurred by the NASA Apollo project of the 1960s revolutionized our data-handling and processing capabilities, virtually created electronic and computer miniaturization, and led to improved productivity and new technology in all aspects of manufacturing industry, transportation, and agriculture.

The opposition

Who opposes returning the nation's space program to its former leadership role in economic progress?

Though the antigrowth, antitechnology extremism of the four-year Carter administration is being replaced by a commitment to get the U.S. economy back on its feet, there are radical proposals coming from the equally extreme Heritage Foundation. Under the guise of "free enterprise," the Heritage Foundation is recommending

that the United States give up its most effective and precious scientific and technological resource, by turning important aspects of NASA over to "private industry." Certainly, if President Eisenhower thought that private industry could take mankind into space, NASA would never have been created.

Industry must certainly be increasingly more involved in commercializable aspects of the Space Shuttle and communications technology; but the focus of NASA and the set of laboratories and university programs that NASA has developed should continue to be in space science, education, and technology utilization.

There is no lack of important space programs to implement. Over the past four years, crucial programs that would teach us about our solar system as well as outer parts of our universe, have been systematically delayed or threatened with cancellation. These have included joint programs with the European Space Agency (ESA), which has invested significant amounts of money in these ventures.

In addition, therefore, to Senator Schmitt's call for the 1980s to be the decade to develop a world information system, the 1990s to create supportive capabilities for using the space environment, and the beginning of the next century to undertake further exploration of the solar system, NASA programs in all three of these areas, which have not gotten the support they need, should be upgraded immediately.

For example, the Solar Polar Mission, in collaboration with ESA, would give scientists a three-dimensional view of the sun for the first time in history. Yet, NASA has not gotten the funding required to keep the mission on schedule.

The Halley's Comet mission is still under debate, although the Western Europeans, the Soviets, and the Japanese plan to go ahead to get a close look at the comet when it approaches in 1986. After all, it is only within mankind's physical grasp once every 76 years.

The Origin of Plasma in the Earth's Neighborhood,

or OPEN, mission is another possible undertaking, consisting of four satellites to monitor the energy flows and throughput in the near-earth environment. Such a system of measurements of energy input from the sun and ionosphere, energy storage in the earth's magnetic tail, and release of energy into the earth's atmosphere will give scientists data that will help determine both weather and climate on the globe. Delaying such a mission only delays receiving this vital information.

Postponement of the Galileo mission to Jupiter, the Venus and Mars programs, and scientific instrument deployments, such as the Large Space Telescope, will only throw the United States further behind the ambitious space programs being developed by every other advanced nation, and many nations in the developing sector.

There is no budget justification for cutting or delaying these space projects. Though the decade of the 1980s will indeed take man himself back into space in the Space Shuttle, we must also direct our attention to taking man beyond the protective system of the earth to explore other solar system planets and bodies. The technology exists, by and large, to do this, certainly by the year 2010. Can we afford such an ambitious space program?

Competent investment

No other area of government expenditure of federal dollars creates more economic growth and stability than the frontiers of science and technology. This was proven by the return on federal investment of dollars in the Apollo years, estimated conservatively to have been in the ratio of 1:14.

In conjunction with an aggressive fusion-power engineering program, already mandated in the Magnetic Fusion Energy Engineering Act of 1980, an upgraded NASA can restore the nation's economy to a real rate of growth in productivity. As Senator Schmitt stated in a recent letter to *Science* magazine, "'(Milton) Friedman's solution to the imbalance [between government and private R&D] would be catastrophic to the future of the country, its economy, and freedom itself. To advocate the abolishment of the National Science Foundation, the National Institute of Health, and federal support of higher education, is like treating a brain tumor with a guillotine.'"

If the NASA budget had only kept up with inflation since 1965, the budget today would be \$14 billion. The fiscal year 1982 budget request that former NASA head Robert Frosch submitted, calling for a 21 percent increase to bring NASA up to a budget level of \$6.7 billion, is a good beginning. The fight for excellence in U.S. space science, technology, and commercial exploitation will surely center around the budgetary process in the next six months.

House Science chairman looks to growth budget

EIR's Robert Zubrin interviewed Rep. Donald Fuqua (D-Fla.) last month on the future of the nation's space program. Representative Fuqua is chairman of the House Science and Technology Committee.

EIR: What type of space program do you think this country should have?

Fuqua: Well, I think it has to be an orderly, planned program and not one which is subject to a lot of ups and downs and layoffs, not a crash program. It needs to be a well-thought out program that takes care of the development of high technology, but at the same time, that we have a program of space sciences that we try to give maximum opportunity to private enterprise for the development of space industrialization and communications; a program that is certainly oriented toward human needs, that is, earth resources, mineral exploration.

In terms of technologies, they seem to follow when you set goals. . . . In terms of missions, those that have been announced in the budget this year, including the continuation and the purchase of the fifth orbiter of the Space Shuttle, we must get the Shuttle program moving and operational for many reasons, for many payloads that are waiting for launch. I think the VOIR [Venus Orbiting Imaging Radar] is a very important program. I would like to see us moving toward some type of space station, a large, manned structure in space; I think that is a logical step that we can utilize, possibly for the development of a solar-powered satellite.

EIR: What do you think NASA budgeting ought to look like?

Fuqua: I don't think there has to be a significant increase, I think there must be growth. Certainly there has to be compensation for inflation. I think we can accomplish a great deal with a budget of \$6 to \$7 billion. The shuttle will be coming off its spending curve hopefully this coming year. And we can devote some of those funds to other payloads, the space station, as I said, maybe a return visit to Mars—missions of that type.

EIR: In his outgoing statement, NASA Director Robert Frosch called for a funding increase by 20 to 25 percent.

Fuqua: I think you could justify that. My only concern is with the constraints we are facing with the budget this year, whether that will be an achievable goal. We are going to go for what was recommended in the budget last week by Frosch.

EIR: While the Schmitt bill does not have any concrete authorizations in it, it does say that Congress should commit itself to spending one-half of 1 percent of GNP on space over time. Would you support that?

Fuqua: Well, we would have to look at that, and the question of whether it should be ½ percent, or 1 percent or 0.7 percent or whatever, I think it would be good, after hearings and review by the administration with scientists and others, that we could establish some long-range goals. Say, if we did decide it should be ½ percent and tried to pursue that, and not be going up and down like a window shade, that would be a positive step.

EIR: Do you think that spinoffs from the space program can have any impact on helping to technologically revitalize U.S. industry?

Fuqua: Oh, I think it could. I wouldn't say it would be the sole thing, but I think it could help. Look at computers. I think computers really came of age through the space program, the development of microcomputers, miniaturization, pocket calculators, we wouldn't have any of that stuff without NASA. Used to be, you had to have a heavy adding machine, now you buy a pocket calculator for \$15 and carry it around in your shirt pocket. And in using computers, we have also unlocked other avenues, for example, computer models, and using computers for medical diagnoses. All of these are spinoffs of the space program

EIR: What are you doing to see that the McCormack fusion bill passed last year gets its funds appropriated?

Fuqua: We're certainly trying to support that. I happen to have been one of the cosponsors of that bill last year and helped get it through. And I think fusion is very important, and I hope and trust that the administration thinks so too. Fusion is an opportunity for the United States to expand its energy supplies, and I think it is a viable alternative that we cannot afford to ignore.

EIR: What kind of response have you gotten from the new administration on this?

Fuqua: I have discussed it with [OMB Director] David Stockman and [Energy Secretary] James Edwards, and I have received encouraging words. I didn't ask for a commitment, but they have indicated their support for it, though at what level I don't know.

EIR: Do you think that NASA should expand its research for nuclear-propelled or fusion-propelled rocket systems for deep-space missions?

Fuqua: I think NASA is going to have to do something about propulsion systems for deep space. There are several types, ion drive, electric propulsion. We had the SNAP program several years ago before it got canceled. I think we have to look at all options for some type of propulsion system for deep space. In the budget this year,

the SEPS [Solar Electric Propulsion System] program was recommended.

EIR: The Heritage Foundation recently put out a report in which they advocated that the space program be taken up by the private sector and that the government need not be involved. Could you comment on that?

Fuqua: Well, no, the whole space program could not be taken up by the private sector. However, there are some areas that can. We are approaching in the Landsat area the point where it can be turned over to private enterprise in a couple of years. I also think that the Space Shuttle, once it gets through its developmental flight, that it is a transportation system and it should be turned over to some type of group.

I have introduced a space industrial corporation bill that would start looking at ways that some type of corporation could be developed that would ultimately phase over to private enterprise, for the industrialization of space. I think they can do a better job. I think that NASA, being a basic research organization, needs to be an operational organization. They don't need to run railroads and a truck line. That's for private enterprise. Now, as to time frame, I do not think we have reached that point yet, but I think we are approaching it. And it's time to start talking about it, and making some kinds of policy decisions.

EIR: What kind of role do you see for cooperation with the Europeans and Soviets in space?

Fuqua: I think that we do have an opportunity to cooperate with the Europeans in many areas of space as we are in the space lab program. There are other programs that we can cooperate on with the Europeans, like developing satellite systems for regulating sea traffic, Seasat, and weather satellites. There is no way you can look at weather without looking at global weather. As for the Soviets, because of the continued military threat they represent to the United States, I think we ought to be very careful in those programs that we cooperate with them about giving up technology, or cooperating in programs that only benefit them and do not benefit us. The Soviets have had a lot of experience in space, and we do exchange information with the Soviets. There may come programs that we could mutually share.

EIR: Do you think that continuation of the space program is vital in terms of U.S. defense?

Fuqua: Yes I do, very much so. Particularly in the areas of communications and observation, reconnaissance and intelligence are very important for our defense effort. I don't want to see space filled with space rockets fighting each other, but I do think that we should keep abreast as the leader in the world of what is going on in space. To do otherwise is admitting a secondary role, and I don't think we can afford that.