

Scientist, astronaut, Senator

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cy" since the end of the Apollo program. His National Space and Aeronautics Act, which he feels has gained strong support in Congress, sets forth a comprehensive national space policy for the next 30 years. The bill would build, over the next decade, "a technological groundwork for further exploration of the solar system" in the early 21st century. The first step toward his space policy would be the creation of a commercial Earth resources satellite corporation, as proposed in his Earth Resources Information Corporation Act. The corporation would be investor-owned, FCC-regulated and modeled after COMSAT, the private telecommunications corporation. The corporation would take over from NASA responsibility for monitoring the Earth's resources from space, and would market raw and preprocessed data on Earth resources. Schmitt feels that if we can minimize governmental activity in space by encouraging commercial space initiatives, we will be able to do much more in the way of research with the Federal space dollar. He thinks there is both the need and the willingness to expand our efforts in space. "The more the other nations move into space, the more important it is that we remain competitive... There is a growing realization in Congress that space is one of the least controversial ways to expand technologies."

Schmitt has also introduced bills concerned with nuclear waste transportation and Federal regulatory reform. The Nuclear Waste Transportation Safety Act would remove the confusion over which

agency has jurisdiction over the transportation of nuclear materials by designating the Department of Transportation the lead agency for overseeing transportation safety. The Nuclear Regulatory Commission would retain its responsibility for certifying the safety of shipping casks and packages. The act charges the Secretary of Transportation with the responsibility of formulating plans to react to shipping accidents or sabotage.

"Regulation is the fastest growing contributor to inflation," according to Schmitt. His Regulatory Reduction and Congressional Control Act would give Congress the option of ruling on any proposed regulation or existing regulation costing more than \$100 million per year. Should a regulation be "disapproved" by both houses of Congress because it is inconsistent with law or Congressional intent or is too costly, the department or agency that wrote the rule will be "encouraged to take a different approach to the problem," according to Schmitt.

Schmitt is also drafting a nuclear power plant bill that would call for the evaluation of existing or soon-to-be existing plants and a study to determine the best design for the next generation of land-based reactors. "We have never systematically looked at that issue," Schmitt said. He suggests such a study pay special attention to air-cooled reactor designs.

Schmitt noted that the success of these bills depends in part on his ability to work against the disadvantages of being a freshman Senator and a member of the minority party and how much support he can muster from those wielding more power on Capitol Hill.

—MEJ

the post. (Gamota's title was later changed to Director for Research.)

Last May, Brown carried out another of the panel's recommendations by drafting a memorandum clarifying the official DOD position on the subject of research. The directive asks all Service and Defense Agencies to review their research programs to ensure that the programs emphasize long-term projects and are relevant to "broad science and engineering areas with potential relationships to a military function or operation." The memorandum also states that these policy guidelines should be reflected in each agency's fiscal year 1981 budget request.

According to Gamota, the memorandum "quite clearly takes away some of the misconceptions the research community had had about lack of interest on the part of the Department in supporting research," particularly, he said, as viewed in light of the Mansfield amendment; the memorandum helps clarify the official DOD interpretation of the amendment, answering another Galt panel suggestion. "The Mansfield Amendment is to be interpreted as saying that those areas of research that you select to fund should be areas that you feel have a potential for a defense mission. It does not mean that you have to scrutinize every research task and point your finger to a definite weapons system that will benefit from it," Gamota said.

Another intent of the memorandum was to convince university researchers that DOD is ready to renew its role as a major supporter of university research and to reopen lines of communication with the universities that have long been essentially closed. To this end, DOD is also sponsoring a series of topical reviews of various areas of research. In July, a meeting was held on DOD-sponsored mathematics and information-science research; in September, a meeting on physics research was held, and this month one on chemistry is scheduled.

The September meeting, which was organized by physicists from the "OXR's" (a generic term for the Army, Navy and Air Force Research offices), focused on DOD's annual investment in physics-related research of about \$80 million and included invited talks by representatives of in-house DOD laboratories that perform or contract for physics research. The meeting also gave researchers who attended the opportunity to voice their concerns on certain subjects. Conference chairman Robert Lontz, of the Army Research Office, told PHYSICS TODAY that the DOD has placed high priority on several issues raised at the meeting by the audience, including the support of young investigators, the need for laboratory equipment, continuity of research support, large interdisciplinary programs and specific proposal procedures within the Defense Agencies.

—MEJ □

DOD basic research: an uphill climb

The Department of Defense, which was one of the principal supporters of basic research in the 1950's and early 1960's, is attempting a comeback in that regard, as witnessed by a memorandum on the subject from the Secretary of Defense and a series of public meetings on DOD research interests.

DOD support of basic research has been on the decline since 1965, partly as a result of inflation's effect on the Federal budget in general, and partly because of the Vietnam War's effect on academic attitudes towards defense contracts. Also affecting DOD's relations with the research community was the ambiguous Mansfield amendment, which ostensibly restricted those areas of research that could be funded by DOD to those solving specific defense problems. As a result of these influences, between 1965 and 1975 DOD support for basic research dropped 50% in inflation-corrected dollars.

In 1976, the Defense Science Board examined DOD funding of university re-

search and issued a report calling for a major rejuvenation of the Department's research program, particularly with regard to university relations (PHYSICS TODAY, February 1976, page 77). In 1977, Secretary of Defense Harold Brown, a PhD physicist, announced a goal of seeking 10% real growth per year for 6.1 (basic) research through 1987. That goal suffered a setback last month when the Congressional appropriation for FY 1980 research fell considerably short of the 10% growth mark because of underestimates of inflation and Congressional cuts.

In 1978 a Presidential advisory panel headed by John Galt made several recommendations for improving the status quo of DOD research support (PHYSICS TODAY, October 1978, page 93). Several of those recommendations have since been implemented. Last winter the Department created the post of Assistant for Research—the need for which was cited by the Galt panel—and appointed George Gamota, a former Bell Labs physicist, to