

Keyworth proposed science adviser

President Reagan has nominated George A. Keyworth II to be his science adviser and the Director of the Office of Science and Technology Policy.

Keyworth was educated at Yale (BS 1963) and Duke (PhD 1968). After five years as a researcher at Duke, he joined the Los Alamos National Laboratory, where he has worked since 1968. He became assistant group leader, neutron physics, in 1973, group leader in 1974, alternate physics division leader in 1978 and was acting laser fusion division leader 1980-81. He is currently leader of the physics division. His research interests are nuclear structure, isobaric analog states, polarization experiments, fission and neutron physics.

The position of science adviser has been vacant since the resignation of Frank Press last winter. Press, currently President of the National Academy of Sciences, was professor of earth and plane-



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tary science at MIT until President Carter appointed him in 1977 to be his science adviser.

of the poorer countries' technological capacities as catalysts for growth.

Negotiations continue for further funds. "We are opening up arrangements with a variety of banks and funds to broaden our financial base." Many, such as the OPEC Development Fund, are interested in supporting energy-related research and development projects. In many cases the Interim Fund and another agency might cofinance a particular project; in others, an outside agency might provide all the money necessary. Altogether, these monies could be a significant addition to the \$40-45 million already raised.

The fund, and whatever will succeed it, aims at more than providing technological assistance. It is attempting to assist developing countries in building indigenous scientific technological capabilities in a "coherent and sustained way." On the one hand, new sources of money are being sought, especially from such nongovernmental organizations as regional agencies and development banks. On the other hand, the Fund is providing a focus for the support of science programs for development at the UN. Working with other agencies such as UNESCO in the execution of projects, it is trying to achieve a balance in developmental programs both in geography and in fields of technology.

Accordingly, in selecting from the enormous and unanticipated number of proposals received from developing countries—850—Lees and his staff of 10 professionals are concentrating on "the critical elements involved in the application of science and technology for development, which have so far received inadequate attention and on which the Fund could make an optimal impact," in the words of a UN document.

The projects. Many of the approved projects are helping national governments and regional organizations assess their technical needs and strengthen their science policy-making in such areas as food processing, industrial techniques and energy sources. Others are developing information systems: A technical lexicon in the national language of Ethiopia is being produced. In Mexico a high-level technology forecasting unit will review international trends to aid in setting priorities for technical development.

While nearly all projects will have technical training components, some will be entirely educational. Two programs, supported by UNESCO, are being orga-

UN fund for science and technology

A United Nations fund for science and technology for developing countries started operation in May 1980, began approving proposed projects in November, and by now has provided money for 25 projects that have begun to function. As of May 1981, out of 850 proposals received, the fund has approved 44; fifteen more are on the way.

The fund was formulated at the UN Conference on Science and Technology for Development held in Vienna August 1979 (see *PHYSICS TODAY*, November 1979, page 92) and approved by the UN General Assembly that December. Developing nations had proposed the establishment of an agency that would provide \$2 billion a year for science and technology for development. The industrialized countries came up with a counterproposal that was adopted: An interim fund would operate for two years with a budget of \$250 million from voluntary contributions. Meanwhile negotiations would take place to establish permanent financial arrangements.

Funds raised. At a conference in March 1980 between \$40 and \$50 million was pledged. The amount disappointed

many from the developing countries and from the scientific community in developed nations.

As of this writing, between 80 and 90 countries have pledged money; most of them, developing, are able to promise only limited amounts. Some OPEC countries have already pledged to the fund and are engaged in consultations for future contributions. While Italy (\$8-9 million), the Netherlands, Canada, and Scandinavian countries have committed themselves, France and the UK have not. Through a special arrangement, West Germany will support specific projects.

Although at the pledging conference the US said it would match 20% of other funds raised, no money has been committed. R. Martin Lees, the Director of the Interim Fund, says "pressing the Reagan Administration at the present time might be counterproductive," while much larger amounts of money are being cut from the national budget. Still, says Lees, some members of Congress are in favor of the US coming through with a contribution because they acknowledge the US did promise money and because they are committed to the development

nized by the International Centre for Theoretical Physics in Trieste. One will offer a course in monsoon dynamics in Bangladesh. Another, in Ghana, is a Colloquium of Solid-State Physics in Africa that will instruct in basic properties of solids and liquids, electronic and vibrational structures in solids, lattice defects, surface physics, amorphous solids and liquids.

Among ventures aimed at developing productive capacities are the following that have some relevance to physics:

The Fund is assisting the China State Commission for Science and Technology in establishing a central coordinating system for remote-sensing services for national resource exploitation.

In Pakistan laboratories and training programs for industrial silicon production are to lead to manufacture of semiconductor photovoltaic cells for converting solar radiation into electrical power.

Carbon filter technology is being developed in Brazil. This project, executed

by the UN Industrial Development Organization and assisted financially by a Brazilian national agency, is engaged in research and development of materials for application to the construction of boats and propellers for wind power.

In the Seychelles a project will diminish the island group's dependence on imported oil by adapting solar, wind and biomass methods of energy production. A demonstration generator providing 50–100 kW will be built.

Owing to limits of its money, the Interim Fund is so far concentrating on small projects and ones proposed by governments. In each case money sufficient to carry a project to completion is allocated because no one can be certain what will happen when the Fund ends. To make limited funds stretch further, when possible, projects are chosen that can be of relevance in other countries.

The process by which proposals become formulated and accepted involves Fund personnel or consultants at every step.

For some countries the Fund has provided the technical and procedural expertise needed to formulate proposals. In all cases the Fund cooperates in assessing proposals with the local UN Development Program, the focal point for UN activities in a country. Lees's staff often seeks the assistance of other expert UN Agencies, such as UNESCO and the World Health Organization, and the views from country experts of the UN Development Program in New York. Once approval is obtained and documents are signed, funds are made available.

The Interim Fund will come to an end on 31 December 1981. What follows it is now being negotiated within a complicated apparatus formulated at the Vienna Conference. Lees is confident that the program will continue, even at a time of economic recession for much of the world. And if it is to continue, he maintains, "if the effort is to be considered seriously, more money than currently available will have to be provided." —DG

To NASA: Beggs, head; Mark, deputy

President Reagan has nominated James M. Beggs to be Administrator of NASA and Hans Mark to be his Deputy. Beggs succeeds Robert A. Frosch, who is now President of the American Association of Engineering Societies.

Beggs, a 1947 graduate of the US Naval Academy, served in the Navy until 1954.



BEGGS

In 1955 he received a master's degree at the Harvard Graduate School of Business Administration. He has worked at Westinghouse, the NASA Office of Advanced Research and Technology as associate administrator, Summa Corporation and, most recently, General Dynamics Corporation as an executive vice-president.

Hans Mark received a bachelor's degree in physics from Berkeley in 1951 and a PhD in physics from MIT in 1954. He

was assistant professor of physics at MIT, and at Berkeley he was professor of nuclear engineering and physicist at the Lawrence Radiation Lab. In 1969 he became the Director of the Ames Research Center. He was Undersecretary of the Air Force from 1977 and its Secretary from 1979. His fields of research



MARK

have been nuclear and atomic physics, nuclear instrumentation and astrophysics.

Poll: what is the chance of nuclear war?

In a recent PHYSICS TODAY poll of APS members on the threat of nuclear war almost two-thirds estimated that there was a 20% or greater chance of nuclear war

before the year 2000; one-quarter indicated the chance was 50% or more.

The survey was mailed to 300 persons randomly selected from the most recent (1979) APS Directory; 109 returned the survey (in postage-paid envelopes); 8 came back, undeliverable. Responses ranged from 0 to 90% chance of nuclear war. The single figure indicated by the greatest number was 10% (stated by 21 of the respondents). The second most frequently cited number was 50% (by 16).

Respondents were asked "How, in your opinion, can the probability of nuclear war be substantially reduced?" Of the 87 who answered the question, over half specified negotiated arms limitations. Twenty mentioned preventing proliferation of weapons to minor powers. Nineteen mentioned disarmament, abolition of nuclear weapons or unilateral arms reduction. According to one respondent, "There is only one way—complete disarmament." Twelve of the respondents recommended military deterrence, defensive weapons or civil defense. One, for example wrote "the physics community should try to convince both the people and the government that we need a civil defense program against nuclear attack, using passionless logic and hard data as we normally do as a profession. Serious nuclear arms reduction can only hope to begin when nuclear attack no longer assures the total annihilation of the intended enemy." With a quite different view on civil defense, another respondent replied "provide no fall-out shelters for the military planners."

Seventy-five answered the survey's other open-ended question, "What contribution could the physics community and physicists as individuals make to this effort?" The most frequent response—from half of those responding—was, in