curator of Palaeolithic archaeology, Peabody Museum, Harvard University; Severo Ochoa, professor of biochemistry, New York University Medical College; Roger R. D. Revelle, director, Scripps Institution of Oceanography, La Jolla, Calif.; Leonard I. Schiff, professor of physics, Stanford University; John C. Sheehan, professor of organic chemistry, Massachusetts Institute of Technology; Joseph E. Smadel, director, Communicable Diseases Division, Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington, D.C.; Cyril S. Smith, professor of metallurgy, University of Chicago; Robert R. Wilson, professor of physics, Cornell University; Jerrold R. Zacharias, professor of physics, Massachusetts Institute of Technology.

Newly elected foreign associates are Heinz Hopf, professor of higher mathematics, Swiss Federal Institute of Technology, Zurich, Switzerland; Axel H. Theorell, head of biochemistry department, Nobel Medical Institute, Stockholm, Sweden; Edgar W. R. Steacie, president, National Research Council, Ottawa, Canada; N. F. Mott, professor of experimental physics, Cavendish Laboratory, Cambridge, England.

Army Package Power Reactor

The Army Package Power Reactor (APPR) prototype stationary nuclear power plant developed by the Atomic Energy Commission for the Department of Defense, generated electricity for the first time during test operations last month at the U.S. Army Engineer Center, Fort Belvoir, Va. The reactor is termed a "package" power plant because it is designed so that its components may be transported by air for use at remote military installations, such as arctic bases.

AEC Field Inspection Groups

The U.S. Atomic Energy Commission has established inspection groups in nine of its operations offices located throughout the United States. Each office has been assigned a specific geographic area and is responsible for the inspection in that area of access permit holders and users of uranium, thorium, and radioisotopes under commission license. Inspection of licensed production and utilization facilities, such as reactors, will continue to be made by the Division of Inspection in Washington, D.C.

Each field office will be responsible for gathering information to show whether or not commission licensees and access permit holders are in compliance with the commission's rules and regulations and with special conditions in the permit or license. (Permits authorize access to classified information and licenses authorize possession and use of radioactive materials.) Field inspection groups will work closely with state inspection agencies. It is anticipated that federal and state cooperation in inspection activities will be enlarged as the inspection program is further developed.

NSF Institute Program

The National Science Foundation has announced that it will accept proposals for support of summer institutes in 1958 and of academic-year institutes during 1958–59. The institute program is designed to help teachers of science and mathematics improve their subject matter knowledge and their teaching capabilities. The current program will support 96 summer institutes this year, and 16 academic-year (1957–58) institutes in colleges and universities throughout the nation.

Academic-year institutes offer full-time work during the regular school year that is designed especially for secondary-school teachers. The foundation supports attendance of such teachers; this support includes dependency, book, and travel allowances. In addition, proposals may request funds for tuition and fees and other operating costs.

Summer institutes also offer work in the subject matter of the sciences and mathematics especially designed for teachers. Proposals may be presented that are designed for the special needs of high-school teachers, college teachers, or science supervisors. Foundation support may be requested for stipend, dependency, and travel allowances, tuition and fees, and other operating costs.

Directions for preparing proposals and forms to be used in making application may be obtained by interested institutions of higher education from the Division of Scientific Personnel and Education, National Science Foundation, Washington 25, D.C. Deadlines are *1 Aug. 1957* for submission of proposals for institutes to be held in the summer of 1958; *1 Sept. 1957* for proposals for support of academic-year institutes during 1958–59.

Stellarator at Princeton

The U.S. Atomic Energy Commission has approved plans for the design and construction of a large experimental device for research on controlled thermonuclear reactions at the Forrestal Research Center at Princeton University. The machine, named the Model C Stellarator (coined from *stellar* and *generator*), will not be a pilot plant or prototype of a thermonuclear power plant. It will be exclusively a research tool, making possible experimental work which cannot be performed as effectively with smaller models. Experiments with the stellarator are expected to begin late in 1960 or in 1961.

The stellarator consists essentially of a hollow tube containing ionized gas. Around the tube are external coils which produce a magnetic field to confine the gas. The objective of the research program is to heat the gas to temperatures of millions of degrees and at the same time to confine the heated gas within the tube for enough time to allow fusion reactions to take place.

A research team at Princeton has been engaged since 1951 in the controlled fusion research program under contract with the AEC. In addition to theoretical work, the Princeton group has conducted extensive experimentation with small stellarator models. The controlled thermonuclear project at Princeton is under the direction of Lyman Spitzer, Jr., and the work is under the general supervision of a committee headed by H. D. Smyth, formerly a member of the AEC.

Southward Flow under Gulf Stream

A massive deep current flowing to the south under the Gulf Stream has been measured recently as a result of cooperation between the royal research ship *Discovery II* of the British National Institute of Oceanography and the research vessel *Atlantis* of the Woods Hole Oceanographic Institution. The use of an instrument designed by J. C. Swallow of the National Institute of Oceanography, together with a theory suggested by Henry Stommel of the Woods Hole Oceanographic Institution, has changed fundamental concepts concerning ocean currents. Observations to be made by some 70 ships during the International Geophysical Year will be much more meaningful as a result of this work.

An operating plan was decided upon by the chief scientists of both ships, H. F. P. Herdman and L. Valentine Worthington; then an area in the Gulf Stream east of Charleston, S.C., near the Blake Plateau was studied.

Swallow's new research device consists of a fairly simple electronic system sending out "pings" similar to those in use by echo-sounding. Encased in a 9-foot-long aluminum alloy pipe, 2 inches in diameter, the apparatus is neutrally buoyant, meaning that it can be made to sink to a predetermined depth where its density is equal to that of the surrounding water. There, the float remains, being carried away at the same rate and in the same direction as the subsurface ocean current.