programs designed to help meet those needs.

At least ten other federal agencies are engaged in abstracting and indexing, translating, preparation of technical reports, and research related to information needs. These agencies are asked to cooperate in providing or arranging for acquisition and reference programs, clearinghouse functions, and evaluation studies of existing programs. Research on new and improved methods of information handling will be emphasized, and the Department of State will take the lead in encouraging cooperation among the United States, foreign, and international scientific information organizations.

Subcommittee on Scientific Information

The President's Science Advisory Committee considered the whole problem of such importance that earlier this year it appointed a special subcommittee to consider the subject at length. Headed by W. O. Baker, vice president (research), Bell Telephone Laboratories, the subcommittee comprises the following members: Curtis Benjamin, president McGraw Hill Book Company; Caryl P. Haskins, president, Carnegie Institution of Washington; Elmer Hutchisson, director, American Institute of Physics; Warren C. Johnson, dean, Division of Physical Sciences, University of Chicago; Don K. Price, dean of the School of Public Administration and Littauer professor, Harvard University; H. Scoville; and Alan T. Waterman, director, National Science Foundation.

In submitting its findings, the subcommittee paid special tribute to the work of individual scientists and engineers in selecting, interpreting, and abstracting scientific and technical information. It noted the fact that the services rendered by many of the scientific societies and professional institutions to the scientific community in the information field are world famous for their quality. It expressed the hope that such private groups would continue to cooperate with and assist the Federal Government in the achievement of long-range solutions to scientific information problems. The subcommittee's conclusions form the basis for the recommendations submitted to the President by the Science Advisory Committee.

Pioneer III

The United States space probe rocket Pioneer III, which was fired from Cape Canaveral, Fla., on 6 December, reentered the atmosphere and burned up due to aerodynamic heating on 7 December, after a flight of 38 hours, 6 minutes. William H. Pickering, director of the Jet Propulsion Laboratory, operated by California Institute of Technology for the National Aeronautics and Space Administration, made the following statement about the results of the flight.

"Pioneer III . . . provided us with an unexpected dividend of information of great value. The Puerto Rico Tracking Station was in contact with Pioneer III . . . until it fell below the Puerto Rico horizon on its long journey back to earth. Puerto Rico lost the signal from the probe . . . when it was approximately at 2000 miles altitude above the earth over French Equatorial Africa.

"This means, of course, that the telemetry from the probe was heard by Puerto Rico as the probe passed through the radiation belt discovered by the Explorer satellites. The telemetry tapes from Puerto Rico for both the launch and the trip back to earth show solid data which will give us, for the first time, information as to some of the energy levels in the radiation belt as well as some idea of the physical limits of the belt.

"While the results of the launch of Pioneer were disappointing to the engineering specialists in that the probe did not reach the moon, the scientific benefit to be obtained from this dividend of two long instrumented passes through the Van Allen radiation belt more than compensates for this disappointment.

"I am greatly pleased with this significant result of the experiment, as well as by the evidence that the tracking network proved itself most efficiently. The large computer at the Jet Propulsion Laboratory in Pasadena was able to predict most accurately the time and place when Pioneer III would rise like a star on the horizon so that the tracking antenna at Goldstone and Puerto Rico could be positioned to receive the signal.

"Telemetry also shows that the method used by JPL to control the interior temperature of the instrumentation also worked perfectly. White paint was used on the outer surface of the probe to control the amount of heat received from the sun and the amount radiated to space. In order to preserve the instrumentation, it was necessary to control the temperature within 10 and 50 degrees Centigrade. Telemetry shows that the temperature reached 43 degrees Centigrade (100 degrees Fahrenheit) shortly after launch and remained at that level throughout the life of the probe."

AAAS Board of Directors

The Council of the American Association for the Advancement of Science has elected Chauncey D. Leake, assistant dean of the College of Medicine at Ohio State University, as president-elect of the Association. Leake has been a member of the Board of Directors since 1955, a member of the Publications Committee since 1955, and chairman of the Committee on the Social Aspects of Science since 1957. In 1942 and 1954 he served as vice president and chairman of Section L—History and Philosophy of Science.

H. Bentley Glass, professor in the department of biology at Johns Hopkins University, was elected as a member of the Board of Directors, and Margaret Mead, associate curator of ethnology at the American Museum of Natural History, was elected to a second 4-year term on the board.

The new officers will begin their terms on 15 January 1959.

Grants, Fellowships, and Awards

General. The National Academy of Sciences–National Research Council has announced a program of postdoctoral resident research associateships to be offered for 1959–60. The participating laboratories are the National Bureau of Standards (Boulder, Colo., and Washington, D.C.); the Naval Ordnance Laboratory (White Oak, Silver Spring, Md.); the Naval Research Laboratory (Washington, D.C.); the Navy Electronics Laboratory (San Diego, Calif.); and the U.S. Army Chemical Corps Biological Warfare Laboratories (Fort Detrick, Frederick, Md.).

The Air Research and Development Command is also participating in this program at four Air Force installations. These associateships are tenable at Air Force Cambridge Research Center (Bedford, Mass.); Air Force Missile Development Center (Alamogordo, N.M.); Rome Air Development Center (Rome, N.Y.); and Wright Air Development Center (Dayton, Ohio). In addition, the ARDC is sponsoring a program of postdoctoral university research associateships tenable at 21 universities in the United States.

The resident research associateships have been established to provide young scientists of unusual ability and promise an opportunity for advanced training in basic research in a variety of fields. Modern facilities are available in specified areas of the biological, physical, and mathematical sciences, and engineering. In addition to the above, research in certain areas of psychology is available.

Applicants must be citizens of the United States. They also must produce evidence of training in one of the listed fields equivalent to that represented by the Ph.D. or Sc.D. degree and must have demonstrated superior ability for creative research. Remuneration for these associateships is from $5985 to $7510 a year, subject to income tax.

Application materials may be secured by writing to the Fellowship Office, National Academy of Sciences–National Research Council, 2101 Constitution Ave., NW, Washington 25, D.C. Applications must be filed at the Fellowship Office before *19 January 1959*. Awards will be announced about 1 April by the participating laboratories and research centers.

Teaching. The National Science Foundation has announced the initiation, on an experimental basis, of a program to encourage appropriate groups to set up specially devised study opportunities in the fields of science and mathematics for secondary school students of high ability. Proposals are invited from colleges, universities, and nonprofit research organizations for the summer of 1959. Proposals sponsored by secondary schools are not eligible under this program. However, the facilities of secondary schools can be utilized in college-sponsored, off-campus programs where this is mutually acceptable.

A wide variety of programs will be supported, including but not limited to one or more of the following features: classwork, laboratory visits, field trips, special orientation lectures in the fields of scientific endeavor, and research participation activities in which students work with experienced scientific investigators.

Under this program foundation support may include expenses of some or all of the student participants for room, board, travel (including commuting), and other essential items. Support may also be given for costs of the sponsoring institution. Direct costs may include fractions of staff salaries properly attributable to the program, payments to high school science teachers as auxiliary participants and counselors, and other necessary administrative expenses and supply costs.

Proposal for 1959 summer programs of this type must be received not later than *5 January 1959* by the Special Projects in Science Education Section, Division of Scientific Personnel and Education, National Science Foundation, Washington 25, D.C. Suggestions for the preparation of proposals are available from the same source.

Travel grants. The National Science Foundation will award individual grants to assist in defraying travel expenses for a limited number of scientists to the following scientific meetings: International Conference on Coordination Chemistry, sponsored by IUPAC, London, 6–11 April 1959—application deadline, *19 January 1959*; International Symposium on Electrolytes, sponsored by the Italian Society for the Progress of Science, Trieste, 4–8 June 1959—application deadline, *2 February 1959;* International Symposium on Fluorine Chemistry, sponsored by the Chemical Society of London, Birmingham, England 15–17 July 1959—application deadline, *2 February 1959*; Meeting of the European Molecular Spectroscopy Group, Bologna, Italy, 24–29 August—application deadline, *2 February 1959;* 17th International Congress of Pure and Applied Chemistry, Munich, Gremany, 30 August–6 September 1959—application deadline *2 February 1959*.

Scientists in the News

CHIEN-SHIUNG WU, professor of physics at Columbia University, is to receive the 1958 Research Corporation Award for her valuable contribution to the knowledge of beta-decay and particularly for her part in research that resulted in the overthrow of the "parity law." Dr. Wu is the first woman to receive the annual $2500 award, which will be presented in January.

The recently held parity law stated that objects which are mirror images of each other must behave in the same way. Tsung-Dao Lee, of Columbia, and Chen Ning Yang, of the Institute of Advanced Study at Princeton, N.J., Dr. Wu's Nobel Prize-winning collaborators, suggested that the validity of the law in weak interactions should be checked. Dr. Wu, together with coworkers, devised and carried out an unequivocal proof and thus backed up the Lee-Yang contention with experiments that proved the failure of the law. Her experiments were conducted with the cooperation of Ernest Ambler and co-workers at the U.S. Bureau of Standards in Washington, D.C.

THOMAS B. MAGATH, senior consultant in clinical pathology, Mayo Clinic, and professor of clinical pathology, Mayo Foundation, University of Minnesota, was awarded the Ward Burdick Medal "for the most meritorious contribution to Clinical Pathology" at the recent meeting of the American Society of Clinical Pathologists. He delivered the Burdick lecture on "The Antigen of Echinococcus."

E. TRIER MORCH, professor of surgery and director of the section on anesthesiology at the University of Chicago for the past 6 years, has been made chief and professor of anesthesiology at Cook County Hospital, Chicago.

ROBERT E. MAIZELL has been named to the staff of the American Institute of Physics to direct research on the problems of publishing and documentation in the field of physics. Maizell, who has been in charge of the Research Library of the Olin Mathieson Chemical Corporation's Industrial Chemical Division in Niagara Falls, N.Y., is at the institute under a grant from the National Science Foundation and supplementary funds from the Atomic Energy Commission.

Colonel JOHN H. RUST, chief of the veterinary pathology section of the Armed Forces Institute of Pathology, retired on 1 December and has become a member of the staff of the Massachusetts Institute of Technology. There he is to serve as director of a recently inaugurated research project sponsored by the Atomic Energy Commission that relates to new and extended uses for radioisotopes in the food industries. His new duties will necessitate extended travels in the United States previous to making his headquarters in Cambridge, Massachusetts.

HOWARD GEST, associate professor of microbiology at Western Reserve University, has been appointed professor of microbiology in the Henry Shaw School of Botany at Washington University, St. Louis.

The New York Academy of Medicine has announced that HUBERTUS STRUGHOLD, professor of space medicine and adviser for research, U.S. Air Force School of Aviation Medicine, Randolph Air Force Base, San Antonio, Tex., will deliver the 1959 Hermann M. Biggs Memorial Lecture. The lecture, which will be on space medicine, will be presented on the evening of 5 February at the academy headquarters in New York. The Biggs lecture was established in 1925 by the family of H. M. Biggs, who served as health commissioner of both New York City and New York State and was responsible for many important advances in public health practice. He died in 1923.

C. WARREN THORNTHWAITE, director of the Laboratory of Climatology, Centerton, N.J., has been awarded the American Geographical Society's Cullum Geographical Medal. The award is made for exceptional research in the field of geography. It will be formally presented at a dinner of the society in New York on 20 January.

Thornthwaite is the originator of a system for classifying climates that has been adopted by scientists in many parts of the world. He is also noted for his experimental studies of the effects of microclimatic conditions on plant growth and crop yields. These studies have proved highly successful in their application to commercial market gardening.