George Charles De Hevesy

his son, Edsel Ford, in response to President Eisenhower's appeal at Geneva for international efforts to develop nuclear energy for peaceful purposes. The Ford Motor Company has set aside $1 million for the awards, the first of which was presented to Niels Bohr on 24 October 1957.

The awards are administered by a Board of Trustees, which with the assistance of an Advisory Committee on Nominations, selects the annual winner "without regard for nationality, politics, or any other consideration except the merit of the contribution." Trustees of the award, in addition to Bronk, are Ralph J. Bunche, Arthur H. Compton, Mildred McA. Horton, James R. Killian, Jr. (inactive), and Alan T. Waterman. The Advisory Committee on Nominations for the 1958 Award were Robert A. Lovett, Robert F. Bacher, Robert F. Loeb, Robert E. Marshak, and Charles A. Thomas.

FAS Urges Permanent Cessation of Nuclear Tests

The Council of the Federation of American Scientists, at a meeting in New York on 23 November, released a statement urging the permanent cessation of nuclear tests. The federation now has a membership of approximately 2200 scientists and engineers of all fields. Its Executive Committee this year includes: chairman, Augustus H. Fox, professor of mathematics, Union College (Schenectady, N.Y.); vice chairman, Walter Selove, professor of physics, University of Pennsylvania; secretary, Harry Palevsky, physicist, Brookhaven National Laboratory; treasurer, Leonard Herzenberg, biochemist, National Institutes of Health; Paul M. Doty, professor of chemistry, Harvard University; and Frank Ham, physicist, General Electric Research Laboratory. The FAS statement follows.

"Recent calculations, based on official information, indicate that there are probably enough large nuclear bombs in present stockpiles to destroy the human race. This could be accomplished by the blanket of radioactive material which could be laid down by the explosion of a massive number of nuclear bombs. For example, if even a fraction of present stockpiles were exploded on the territory of even a large country, a deposit of radioactive material would be produced of such intensity that all life in the open would be destroyed, and life would not be possible on the surface of the earth until about one to three years had passed.

"It would furthermore be possible for a fanatical ruler to pull down the entire human race to destruction. With a stockpile of the size that now exists, it is possible to cover the entire earth with a radiation level which for ten years would remain sufficiently intense to prove fatal to all living beings on land. This could be brought about by a decision of a small number of people.

"The argument has been advanced that continued testing is important to develop defensive weapons that would be effective in providing protection. But expert opinion has been given to the effect that there is not, and very likely never will be, any meaningful defense against massive attack. It may be possible to inflict destruction on an opponent, but no nation can any longer give protection and security to its own people. Only a 100 percent defense can prevent annihilation, and 100 percent defense can never be expected, especially in the first stage of an intensive attack.

"We have thus come to a new period in history, in which the human race can destroy itself. The new weapons of mass destruction are too dangerous to be left under sovereign national control. In these circumstances our primary goal must be to bring these weapons under international control. A universal test cessation, under international inspection, offers promise of being the most practicable first step toward international control of mass destruction weapons.

"Although it is the responsibility of the military to seek further development of weapons of all types, it must be stressed that security is not available through military means. Therefore an objective of moving toward effective disarmament must come before considerations of technical improvements which further testing might produce in nuclear weapons.

"We urge that the parties negotiating on a test cessation agreement not stand on any narrow position which will impede an agreement leading toward the major goal. The negotiators must adopt all reasonable measures which will provide satisfactory assurance to all parties that no further significant nuclear weapons development will occur.

"An acceptable agreement must include the immediate establishment of an effective test detection system, which the experts' conference reported to be technically feasible. As to the initial period of test cessation, we should agree to a permanent ban, subject only to the condition that the detection system be put into operation within an agreed period. Certainly any cessation period limited in duration must be longer than the period required merely to prepare another series of test explosions. The people of all countries may rightly demand that the governments of all nuclear powers show clearly that they sincerely desire to end the testing of nuclear weapons."

Research Advisory Service

The National Science Foundation has announced the establishment of a Research Information Center and Advisory Service on Information Processing to be operated jointly by the foundation and the National Bureau of Standards. The new service is designed to bring together research and development data on methods and equipment for the automatic processing of scientific information. It is further designed to foster closer cooperation among groups in industry, private foundations, universities, professional societies, and the Federal Government concerned with developing and improving methods of rapid and efficient handling of large volumes of information.

Initiation of the service is a part of a broad program being developed by the National Science Foundation to improve the quality of scientific information services and shorten the time spent by scientists in searching the literature. Other phases of the broad program include the support of scientific publications, translations of foreign scientific literature, and support of information and data-processing centers.

The foundation has made a grant of $105,000 to the National Bureau of Standards for the establishment and first year's operation of the service, and will establish policies for its use. The service will be staffed by NBS personnel, who will analyze materials received and furnish requested technical advice. The Council on Library Resources has contributed $20,000 toward operating costs during the first 2 years. The council, which supports research on library problems, was established in 1956 with the Ford Foundation's financial support.

During the first 6–9 months, the serv-

ice will assemble and organize research and development data on methods and equipment for the automatic processing of information expressed in words, diagrams, or other non-numerical forms. Continuing tasks, to be begun as rapidly as possible, will be as follows.

1. Explore known sources and locate undeveloped sources of information on current research and development activities.

2. Establish and maintain a central reference file of information on current projects, researchers, and publications in the field. Descriptive information on work in progress will continue to be published in the foundation's semiannual report on *Current Research and Development in Scientific Documentation.*

3. Follow developments closely, analyze collected information, and from time to time prepare and publish reviews of progress.

4. Test and compare various procedures and techniques for the manipulation or searching of information.

5. Provide federal agencies and cooperating private organizations with requested technical advice on information-processing problems and on proposed research in the field. The service will not undertake to evaluate research proposals, but will furnish advice on the relation of proposed programs of research to other activities in progress and will suggest specialists believed to be particularly well-qualified to evaluate proposed research.

Eventually, it is hoped the service will be able to provide cooperating private organizations and federal agencies with consulting services regarding the use of machines as aids in research on information processing, the availability of machine facilities for testing theories and techniques, and the availability for research purposes of texts and other source data in a form suitable for machine processing.

Organizations and individuals engaged in research and development activities or planning programs in these areas may request further information about the new service and the procedures to be followed in requesting advice or information by writing to the Research Information Center and Advisory Service on Information Processing, Program for Documentation Research, National Science Foundation, Washington 25, D.C.

Illinois Radio Telescope

A radio telescope with a larger receiving area than that of any similar existing instrument will be constructed by the University of Illinois. University trustees have recently approved purchase of a 220-acre site near Union Corner, Ill., 35 miles east of the Urbana–Champaign campus. In the area, on the northeast bluff of the Vermilion River, is a ravine in which the university will build a trough-shaped reflector that will be 600 feet long, north and south. The trough will be 400 feet wide and 65 feet deep. The facility is being financed by a $233,000 grant from the Navy.

The new instrument, which will be similar in design to the other large radio telescopes being considered in England, Australia, and the United States, will have 160,000 square feet of receiving area. This is from two to three times more receiving area than the radio telescope now in use at Manchester, England. However, unlike the British instrument, the Illinois telescope will not be steerable. Observers using it will have to wait until the object they want to examine is brought over the telescope once a day as the earth rotates on its axis. A fairly large area of the sky will be observable.

WHO Procedural Guide

A guide to procedures and practices of the World Health Organization, Geneva, Switzerland, will be compiled during the next 3 years with the aid of a $25,000 grant from the Rockefeller Foundation. The guide will cover both the internal administration of WHO and its political and program relationships with the member governments of the United Nations. In addition, the "repertory of practice" will include the historical aspects of the development of international health activities and of the establishment of WHO.

The repertory of practice is needed to preserve in factual form the current practices of WHO and to serve as a basis for operation and understanding. The document will be valuable not only to WHO and the UN but also to health agencies throughout the world in formulating programs and policies relating to WHO.

Planet Earth

A new teaching aid designed to help stimulate science interest in the schools was announced recently by the National Academy of Sciences. Known as "Planet Earth," the new aid covers the scientific fields studied during the International Geophysical Year. It has three major components. The first includes six large, full-color posters entitled "The Earth," "The Oceans," "The Poles,' "Sun and Earth," "Weather and Climate," and "Space."

The second component is a profusely illustrated 44-page student brochure that reproduces the posters and describes the work of scientists in a dozen or more fields. The third component is a teacher's kit containing suggestions for classroom experiments, background material on aspects of the IGY and the earth sciences, a description of teaching methods related to the IGY in the Baltimore County schools, a list of scholarships available to students in the field of science, and other materials.

"Planet Earth" was prepared under the direction of Hugh Odishaw, executive director of the United States National Committee for IGY. A ten-member advisory committee that included AAAS education director John R. Mayor assisted in shaping the project. Financial support was provided by the National Science Foundation and the Ford Foundation. The academy was also guided in the early stages of the project by advice and assistance from Ellsworth Obourn, U.S. Office of Education; Robert Carleton, executive secretary, National Science Teachers Association; and officials of the National Science Foundation. The final materials were reviewed by scientists engaged in the US-IGY program.

After a year in preparation, "Planet Earth" is now ready for distribution to the schools. The package and its components are priced at cost. A classroom package—6 posters, 30 student brochures, and a teacher's kit—is priced at $9.50. Distribution is through the National Academy of Sciences Publications Office, Washington, D.C.

Waste Disposal

The University of California at Berkeley will host the first International Conference on Waste Disposal in the Marine Environment during the summer of 1959. The 3-day meeting will provide a forum for the international exchange of knowledge among scientists and engineers of many disciplines, interests, and organizations who are concerned with marine pollution research throughout the world. A tentative agenda lists as discussion topics (i) Waste Disposal, (ii) Public Health, (iii) Nearshore Oceanography, (iv) Receiving Water Analysis, (v) Marine Biota, and (vi) Estuarine Hydrography.

The program is presented by the U.C. Sanitary Engineering Research Laboratory, the Institute of Marine Resources, and University Extension in cooperation with the California State Water Pollution Control Board. Conference chairman is Erman A. Pearson, associate professor of sanitary engineering at the university and chairman of the Research Consulting Board of the State Water Pollution Control Board.

This conference will provide the first opportunity for an international exchange of information on marine waste