particularly with respect to radioactive fallout and strontium-90. The committee did not attempt at this time a quantitative assessment of the genetic hazards of radiation. The fundamental purpose of the discussion on this topic was to obtain a consensus of opinion on a number of fundamental points which enter into the field of assessing genetic hazards of radiation. An equally important objective was to define and to exchange views on certain gaps in the existing knowledge of this matter.

"Before the committee were 74 reports submitted by 27 governments up to 8 April 1957, as well as the report of a study group of the World Health Organization and a report from the World Meteorological Organization. A free exchange of ideas on a purely scientific level was held. This discussion was very useful and revealed that there was little divergence among the participating scientists.

"It is hoped that the first draft of the committee's report to the General Assembly will be prepared between now and the committee's next session, which is expected to take place at the end of 1957. The committee fully expects that further information received from governments during this period may cause it to change this preliminary draft but feels that the draft will be most useful as a working paper for the next session. A tentative decision was taken to subdivide the report into the following chapters: Introduction; General; Radiological Data and Methods of Measurement; Fundamental Cellular Radiobiology; Genetic Effects; Somatic Effects; Collected Evaluations; Conclusions and Recommendations.

"It is expected that the somatic effects of radiation will be the principal topic of discussion at the committee's next session."

First South Pole Temperature Report

The results have been announced of the first soundings of the temperature at the 10,000-foot-high Amundsen-Scott South Pole Station of the International Geophysical Year. Temperatures of −71°F at the surface, −31°F at 3300 feet, and −62°F at 11,500 feet above the surface were reported on 27 Mar. The temperatures were taken by a thermometer attached to a balloon sent aloft with a radiosonde, an instrument that broadcasts information in the form of tone signals to a listening post on the ground.

Because late March roughly corresponds to September in the Northern Hemisphere, temperatures are expected to drop further as the South Pole midwinter approaches. The station scientific leader, Paul Siple, has estimated that the temperatures may go down to -120°F.

The lowest temperature observed thus far at the South Pole is −89°F on 2 Apr. 1957. This temperature exceeds the lowest ever recorded for North America, −81°F observed at Snag, Yukon Territory, Canada, in February 1947, and is 1° above the all-time world's record of −90°F set in northeastern Siberia in February 1933.

The study of temperatures and the circulation of air in the Antarctic will yield knowledge of the polar icecap and its effect on the world's weather and, over a longer period of time, world climate. Comparison of the relatively clean air of the Antarctic with the atmosphere of coal and oil-consuming regions is expected to give data on the suspected "greenhouse" effect caused by the release of large amounts of carbon dioxide.

Meteorological data from all the IGY Antarctic stations are relayed to the Weather Central at Little America Station, where for the first time in history twice-daily weather maps of the Antarctic are being prepared. The results of the first South Pole sounding were given to Harry Wexler, chief scientist of the US-IGY Antarctic Program, by Edwin C. Flowers of the U.S. Weather Bureau, chief meteorologist at the IGY Amundsen-Scott South Pole Station.

Occupational Health Information Exchange

To help industry protect its workers from health hazards arising from the great number of chemicals introduced each year, an Occupational Health Information Exchange is now being set up by the U.S. Public Health Service. The Exchange will be part of the Occupational Health Field Headquarters in Cincinnati, Ohio.

It is estimated that from 1000 to 10,000 new compounds are being developed annually for industrial application. There is need for one central agency to collect and disseminate specific information on the toxicity of these new materials as well as on the substances and processes that have long been used in industry. Sickness absenteeism in industry is equivalent to 2 million workers being off the job each day. Part of this absenteeism is directly related to occupation.

A fund of unpublished information is available from scattered sources. By bringing together this information, it will be possible to predict answers to questions on how new materials and processes may be related to occupational diseases.

The Occupational Health Information Exchange will serve as a clearinghouse on the nature and extent of new disease problems in industry, total occupational health resources available, and methods for stimulating research in problems under investigation. Data will be provided by industrial establishments, insurance companies, private research organizations, governmental occupational health programs, labor unions, and other federal agencies.

Scandinavian Nuclear Research

The foreign ministers of Sweden, Norway, Denmark, and Finland announced in April that their countries would cooperate in atomic research and that a Scandinavian institute for atomic research would be established in Copenhagen. The four nations also plan to form a joint organization for the exchange of practical applications of nuclear energy.

Radiation Biology

Argonne National Laboratory has announced a special summer course in radiation biology, 1–26 July, at Lemont, Ill. Intended primarily for a limited number of persons with previous experience in biological research, the course will stress general experimental theory and design. Dosimetry and instrumentation needed in doing bioresearch with ionizing and low-energy radiations, and the effect of these radiations on widely diverse biological systems, will be a part of the course. Although not intended as comprehensive preparation in health physics or isotopic tracer techniques, certain special topics of basic interest to these fields will be presented—for example, very low level radiation measurements; multiple tracer techniques; and biosynthetic methods utilizing plants.

Inquiries about the course, for which the fee will be $25, should be addressed to the Office of the Director, Division of Biological and Medical Research, Argonne National Laboratory, Lemont, Ill. Applications will be accepted from foreign countries as well as the United States. Applications, accompanied by a brief account of educational background, must be received *by 1 June.*

Army Radio Transmitter

The Department of the Army has announced that a powerful new short-wave transmitter that is effective even when there is severe interference has been developed and will be installed for use by the Pentagon. Called the "World Spanner," the transmitter was designed for the Army's international communication network by the U.S. Army Signal Engi-

neering Laboratories at Fort Monmouth, N.J., and by Continental Electronics, Inc., of Dallas, Tex. The new equipment is almost 50 times more effective than the loudest commercial broadcasting station.

It owes its great power to single sideband design. This is an electronic technique that concentrates the power of a transmitter's signal. Conventional transmitters broadcast three separate signals —a carrier wave and two duplicate sidebands. Single sideband circuits filter out the carrier wave and one sideband, thus funneling all of the power into the remaining sideband. This provides 8 times the strength of conventional transmitters with the same power supply. With ordinary design the World Spanner would have a power of 300,000 watts; with the new single sideband refinements and a new beam antenna now under development, effective power will reach 24 million watts.

Changing channels on a high-power station is usually a major job, but the new transmitter will be almost as easy to tune as a push-button radio. An operator can go on the air at any one of ten previously set frequencies by turning a single switch. The new facility can easily send 64 teletypewriter messages or four separate voices at the same time. It also can transmit at any frequency in the short-wave spectrum from 4 to 30 megacycles, and a second version will cover the range from 20 to 65 megacycles.

Compact design makes the unit smaller than transmitters with far less power; it can be housed in a 50-foot square room. Development of the transmitter was directed by Ralph O. Johnson of the U.S. Army Signal Engineering Laboratories Radio Division.

Proposed Legislation

Of the many bills introduced in Congress, some have a special relevance to science and education. A list of such bills introduced recently follows:

S 1242. Amend National Science Foundation Act to authorize award of scholarships and graduate fellowships to individuals who are not citizens of United States. Jackson (D Wash.) Senate Labor and Public Welfare.

S 1157. Authorize and request President to undertake to mobilize in U.S. an adequate number of world's outstanding experts; coordinate and utilize their services in a supreme endeavor to discover means of curing and preventing cancer. Neely (D W. Va.) Senate Labor and Public Welfare.

HR 4646. Provide for additional research and technical assistance on public health problems created by mosquitoes and other blood-sucking arthropods. Dixon (R Utah) House Interstate and Foreign Commerce.

HR 4820. Provide for research, study and prevention and treatment of effects of atomic and nuclear radiation on human health, development, and living conditions. Porter (D Ore.) House Interstate and Foreign Commerce.

HR 4752. Amend titles I, IV, X, and XIV of Social Security Act to further assist states in extending aid for medical care to persons eligible for public assistance under such titles. Burns (D Hawaii) House Ways and Means.

HR 4638. Provide a defense cloud-modification program. Berry (R S.D.) House Armed Services.

S 1176. Establish on public lands of U.S. a National Wilderness Preservation System and a National Wilderness Preservation Council. Humphrey (D Minn.), *et al.* Senate Interior and Insular Affairs.

HR 4819. Establish a National Outdoor Recreation Resources Review Commission to study the outdoor recreation resources of public lands and other land and water areas of U.S. Pfost (D Idaho) House Interior and Insular Affairs.

S 1262. Amend Federal Water Pollution Control Act to remove $250,000 limitation on construction grants under such act. Allott (R Colo.) Senate Public Works.

Scientists in the News

PAUL C. AEBERSOLD, who has been director of the Atomic Energy Commission's Isotopes Extension at Oak Ridge, Tenn., has been transferred to the commission's Washington headquarters as assistant director for isotopes and radiation, Division of Civilian Application. E. E. FOWLER, deputy director of the Isotopes Extension before his transfer to Washington last year, becomes deputy assistant director. The isotopes Extension was made part of the Division of Civilian Application in January 1956, when administrative responsibility for the isotopes distribution program was transferred to the division from the Oak Ridge Operations Office.

CLIFFORD GROBESTEIN, biologist at the National Cancer Institute, Bethesda, Md., has been appointed professor of biology at Stanford University. He is a specialist in developmental physiology and tissue culture.

ROGER ADAMS, past president of the AAAS and head of the chemistry department at the University of Illinois from 1926 to 1954, will be awarded an honorary degree of doctor of science by the university at its June commencement. Adams, who asked in 1954 to be relieved of administrative duties in the chemistry department to devote full time to research, will retire this fall. He has been a member of the Illinois faculty since 1916.

GAIL M. DACK, director of the Food Research Institute and professor of bacteriology at the University of Chicago, has won the 1957 Pasteur award, which is presented annually by the Society of Illinois Bacteriologists, Inc., to an outstanding bacteriologist in the Midwest.

DESMOND D. BONNYCASTLE, formerly professor of pharmacology at Yale University, is professor and director of the department of pharmacology at Seton Hall College of Medicine and Dentistry.

Another appointment at Seton Hall is that of HUGH G. GRADY as professor and director of pathology, effective 1 June. He is at present scientific director, American Registry of Pathology, Armed Forces Institute of Pathology, Washington, D.C., and professor of pathology (part time) at Howard University Medical School.

EDWARD P. ABRAHAM of Oxford University, Oxford, England, presented the recent CIBA lectures in microbial biochemistry at the Institute of Microbiology at Rutgers University. At present senior research officer at the Sir William Dunn School of Pathology, Oxford, Abraham is known for his contributions to the chemistry of antibiotic substances, especially for his early work on the chemical structure of penicillin and his more recent studies of the chemical composition of peptide and steroid antibiotics, including those of the bacitracin and cephalosporin types.

Distinguished Civilian Service awards, the highest civilian honor in the Department of Defense, have been presented by the Secretary of Defense to six employees. Recipients included WERNHER VON BRAUN and OTTO WALCHNER, German scientists who came to the United States after World War II. Von Braun is director, Development Operations Division of the Army Ballistic Missile Agency, Huntsville, Ala.; Walchner is a physicist with the Air Force's Air Research and Development Command, Wright Air Development Center, Wright-Patterson Air Force Base, Dayton, Ohio.

The other recipients were ROBERT E. MIEDEL, deputy director of procurement, Headquarters, Air Research and Development Command, Baltimore, Md.; HARRY KRUTTER, chief scientist, Naval Air Development Center, Johnsonville, Pa.; MAURICE R. HILLEMAN, supervisory bacteriologist, Communicable Diseases Division, Army