form, from the library itself. Complete information on the scope and functioning of this report reference service can be obtained from the Science Division, Library of Congress, Washington 25, D.C., attention of John Sherrod, Acting Chief, or from the NSF Clearinghouse.

Salaries for Chemists

Salaries for chemists just out of college have risen more than 23 percent in the past 4 years, according to a nation-wide survey conducted by the American Chemical Society. For the same period, the U.S. Department of Labor figures indicate a rise in the cost of living of about 3 percent. The median starting pay for chemists who were graduated last June with the bachelor's degree is $400 a month, as compared with $325 in 1952.

For beginning chemical engineers with the bachelor's degree, the median figure has climbed from $343 in 1952 to $425 this year, a gain of 23.9 percent. Graduates with the master's and doctor's degrees have enjoyed similar percentage gains. The survey report, which appeared in the 3 Sept. issue of *Chemical and Engineering News,* was prepared by B. R. Stanerson, of Washington, D.C., assistant secretary of the ACS. ACS surveys conducted since 1952 have shown a steady increase of 3 to 8 percent a year in starting salaries for chemists and chemical engineers.

Mauna Loa Observatory

A high-altitude observatory on the slope of the Hawaiian volcano, Mauna Loa, was dedicated this summer. It is being operated jointly by the National Bureau of Standards and the U.S. Weather Bureau. Located at a height of 11,134 feet in the tropics, where the upper atmosphere is very clear and usually of low moisture content, the new observatory offers special advantages for many types of astronomical and upper-air studies. It will make possible continuous observation of atmospheric phenomena with manned instruments rather than with the unmanned meteorological balloons that have been used to such a great extent in high-altitude work.

Among the advantages of the Mauna Loa observatory are its ready accessibility and relatively warm climate. Most of the other comparable observatory sites are buried in snow during winter and part of the summer. Also, the Mauna Loa observatory has the required altitude without the ruggedness that imparts turbulence to the surrounding air, and it is situated at a key point for studying the huge air masses of the tropics.

The chief research results to be expected from the observatory are improved long-range weather forecasting and greater knowledge of solar and atmospheric radiation. Because the air masses of the Pacific are responsible for much of the weather that occurs in other parts of the world, data on these air masses may make it possible to forecast conditions in distant places.

There is some evidence that the ozone content of the lower atmosphere in the tropics is associated with the formation of the large low-pressure areas that produce typhoons. Continuous measurement of atmospheric ozone may thus be of assistance in forecasting typhoons in advance.

The observatory also offers possibilities for study of cosmic rays, total solar radiation, snow crystals, air glows, and possibly radioactive fallout. In July, C. C. Kiess and C. H. Corliss of NBS began a study of the moisture content of the planet Mars under the auspices of the National Geographic Society. They used spectroscopic techniques to investigate the light reflected to the earth from Mars. The advantageous location of the Mauna Loa observatory made it possible to reduce the effect of the earth's atmosphere on the planet's spectrum.

During the coming year Ralph Stair of NBS expects to begin a study at Mauna Loa on the distribution of the spectral energy from the sun. Such information will be of value in determining the effect of the sun's rays in connection with high-altitude equipment, space flights, and man-made satellites. This work will also furnish data on the solar constant and information on solar intensities that may be useful in many fields.

The observatory is a concrete-block structure that cost $25,000; it is situated about 2500 feet below the summit of the mountain. The building contains five rooms in addition to a tower and a broad open platform for observational use. Present accommodations permit the use of the buildings by a maximum of six observers at any one time.

A smaller structure was built at the summit in 1951–52, but the limited observations that were taken there were discontinued in 1954 because of the extreme difficulty of traversing the trail to the summit. It is hoped that at some future time a functional unit can be established at the summit.

News Briefs

■ A large radiotelescope was mounted near Bonn, Germany, early this month. The parabolically shaped antenna, which measures 82 feet in diameter, rests on a 52-foot-high cone-shaped cement structure.

■ The Swiss Federal Solar Observatory has predicted that the highest number of sunspots hitherto recorded will be surpassed in January 1957. Observations are important because of sunspot effects on the ionosphere, the ionized layer in the sky that reflects radio waves.

■ The United States has transmitted to the United Nations a report on *Radioactive Fallout through September 1955* [M. Eisenbud and J. H. Harley, *Science* **124,** 251 (10 Aug. 1956)]. This summarizes data obtained by the Atomic Energy Commission in the period 1951–55 from its network of 88 monitoring stations here and abroad. The AEC's experience in the collection and analysis of radioactive fallout, as well as the necessary apparatus, has been offered to United Nations members to assist in current world-wide investigations of the effects of radiation on human health and safety.

Scientists in the News

RICHARD G. AXT, study director for institutional research at the National Science Foundation, has been appointed assistant director of the Western Interstate Commission for Higher Education. The commission, which is supported by 11 western states and territories, has offices at the University of Colorado, Boulder.

RAYMOND C. MOORE, professor of geology at the University of Kansas, will receive the 29th Hayden memorial geological award of the Academy of Natural Sciences of Philadelphia, on 15 Nov. The award, a medal and $300 honorarium, is given every 3 years for the "best publication, exploration, discovery or research in the science of geology and paleontology, or in such particular branches thereof as may be designated."

CHARLES D. HENDLEY, formerly pharmacologist for the Wallace Laboratories division of Carter Products Incorporated, New Brunswick, N.J., has joined the pharmacology department of the Schering Corporation, Bloomfield, N.J.

H. J. EMELEUS, professor of inorganic chemistry at the University of Cambridge (England), will be the Baker lecturer in chemistry at Cornell University this fall. He will lecture on the halogens each Tuesday and Thursday from 2 Oct. to 6 Dec. Recent research by Emeleus has been chiefly on the chemistry of fluorine compounds and on the chemistry of hydrides. His earlier work was on chemical kinetics, preparative inorganic chemistry, and problems of the chemiluminescence of phosphorus, arsenic, sulfur, and organic compounds.

WARDELL B. POMEROY and PAUL H. GEBHARD have been named codirectors of the Indiana University Institute for Sex Research, where they have been long-time staff members. They will carry on the work of ALFRED C. KINSEY, founder of the institute, who died on 25 Aug.

CHARLES D. W. THORNTON, for 13 years in the U.S. Atomic Energy Commission, has been appointed director of research for Farnsworth Electronics Company, Fort Wayne, Ind.

RAYMOND A. HEISING, radio pioneer and consulting engineer, who was associated with the Western Electric Company and Bell Telephone Laboratories from 1914 until his retirement in 1953, is to receive the Founders award of the Institute of Radio Engineers for his "leadership in Institute affairs, for his contributions to the establishment of the permanent IRE Headquarters, and for originating the Professional Group system." Presentation will be made at the annual IRE banquet to be held at the Waldorf-Astoria Hotel, New York, on 20 Mar. 1957 during the institute's national convention.

JULIUS A. STRATTON, chancellor of the Massachusetts Institute of Technology, is also to be honored at the banquet. He will be presented with the IRE medal of honor, the highest technical award in the radio and electronics field, for his "inspiring leadership and outstanding contributions to the development of radio engineering as a teacher, physicist, engineer, author, and administrator."

TORBEN H. MEISLING, formerly with the Lincoln Laboratory at the Massachusetts Institute of Technology, has joined the Stanford Research Institute as a senior research engineer in the computer laboratory. Meisling, who is a native of Copenhagen, Denmark, is a specialist in systems design and was in charge of transistor procurement, testing, and circuits theory at the Lincoln Laboratory.

McKEEN CATTELL, head of the department of pharmacology at Cornell University Medical College since 1936, has been appointed to the new position of administrator of grants for the American Cancer Society. During the current fiscal year, which began on 1 Sept., the society will allocate $8 million for research.

MARSHALL N. ROSENBLUTH, a theoretical physicist at Los Alamos Scientific Laboratory, has joined the General Atomic Division of the General Dynamics Corporation, San Diego, Calif.

FERDINAND G. BRICKWEDDE, chief of the Heat and Power Division, National Bureau of Standards, has been named dean of the College of Chemistry and Physics at Pennsylvania State University. He succeeds George L. Haller, who resigned more than a year ago to become manager of the laboratories department of General Electric's Electronic Division.

During his more than 30 years with NBS, Brickwedde devoted himself to low-temperature physics and thermodynamics research and to the improvement of the standards of temperature measurements. For the past 11 years, he has been interested in the improvement of the standards of rheology and the octane rating of automotive gasolines.

R. E. HUNGATE, professor of bacteriology at the State College of Washington, has resigned to join the department of bacteriology at the University of California, Davis.

WILLIAM DAMESHEK, professor of medicine at Tufts University, School of Medicine, will deliver the first Samuel H. Golter lecture of the City of Hope Medical Center, Duarte, Calif., on 15 Nov. at the Ambassador Hotel, Los Angeles. He will discuss the current status of myeloproliferative disorders. The lecture is to be given annually by a medical research worker who deals with one of the diseases of special interest to the City of Hope Medical Center.

DONALD G. FINK, director of research for the Philco Corporation, Philadelphia, Pa., is to receive the 1956 Journal award of the Society of Motion Picture and Television Engineers on 9 Oct. during the society's 80th convention in Los Angeles, Calif. He is being honored for his paper on "Color television vs. color motion pictures," which appeared in the June 1955 issue of the society's journal.

THEODORE J. BAUER, for the past 3 years chief of the U.S. Public Health Service's Communicable Disease Center in Atlanta, Ga., has been named deputy chief of the Bureau of State Services. He replaces Leroy E. Burney, recently appointed Surgeon General of the service.

Recent Deaths

ROBERT F. ANDERSON, West Chester, Pa.; 91; professor emeritus of mathematics and former head of the department at West Chester State Teachers College; 31 Aug.

CHARLES E. BENNETT, Ridgewood, N.J.; 74; electrical engineer and inventor; 31 Aug.

ANTON J. CARLSON, Chicago, Ill.; 81; professor emeritus of physiology and former head of the department at the University of Chicago; vice president AAAS Section N in 1925; 97th president of AAAS in 1944; 2 Sept.

MOSES KESCHNER, New York, N.Y.; 80; former clinical professor of neurology at Columbia University; 31 Aug.

JOHN W. SCOTT, Laramie, Wyo.; 85; emeritus professor of zoology and former chairman of the department of zoology at the University of Wyoming; 15 Aug.

JOSEPH SHRYOCK, Wawa, Pa.; 76; civil engineer; 29 Aug.

MERRILL A. STAINBROOK, Brandon, Ia.; 59; retired professor of geology at Texas Technical College; 10 July.

GUSTAV SWOBODA, Geneva, Switzerland; 63; former chief of the Czechoslovak Weather Service; secretary general of the World Meteorological Organization from 1951 to 1955; 4 Sept.

FREDERICK D. WEIDMAN, Llanerch, Pa.; 74; emeritus professor of dermatology at the University of Pennsylvania; associate pathologist of the Zoological Society of Philadelphia; 30 Aug.

Education

■ The U.S. Atomic Energy Commission has established two new programs to assist colleges and universities to expand facilities for training in nuclear energy technology. The purpose of the plan is to increase the supply of the nuclear engineers, scientists, and technicians.

Under the first of the new programs the commission will make grants toward the cost of equipment to be used in course work dealing with nuclear energy technology. Grants made to any single institution may not total more than $350,000.

Under the second new program, source and special nuclear material will be lent without charge for use, burn-up, fabrication, preparation of fuel solutions, or reprocessing material after use. By-product materials will be furnished at a cost of 20 percent of list price. Certain other materials peculiarly related to nuclear energy technology will be furnished without charge. The value of materials lent to any single institution may not total more than $50,000. Details of the new programs, for which Congress has appropriated funds, may be obtained by writing to the Director, Division of Reactor Development, U.S. Atomic Energy Commission, Washington 25, D.C.

■ The American Medical Association reports that 28,639 students are enrolled in 76 approved 4-year medical schools and in six schools giving the first 2 years of medical training, a record high.