

have been established during the past year in the southern states. H. McKinley Conway, Jr., director of the Association, reported that there were no major consulting research institutions in the South ten years ago, but that the region now has some forty consulting laboratories, about twenty-five commercial testing laboratories, and more than two hundred individual scientific consultants. Thousands of professional scientists are employed in the region and southern membership in technical societies, he reported, is now at an all-time high.

The University of Texas is setting up a radiocarbon dating program which will provide the Southwest with its first facilities for making use of the technique in determining the age of artifacts and other specimens of archeological interest. Leon O. Morgan will be in charge of instrumentation for the program.

The universe may be larger than it has looked, according to Harlow Shapley of the Harvard College Observatory. Ever since certain star clusters in the Magellanic clouds were found to resemble globular clusters in our own galaxy, he told members of the American Astronomical Society on December 30th, their apparent discrepancy in luminosity has been puzzling. Proposing tentatively that the globular clusters in the Milky Way and those in the Magellanic clouds be considered to be equally bright and therefore more distant from one another, Shapley suggested that the magnitudes of the Cepheid variable stars may actually be on the average nearly four times greater than has been assumed, with the result that the galaxies may be larger and farther away and that present estimates of their masses may be in serious need of revision.

Education

A survey by F. S. Endicott, director of placement at Northwestern University, has indicated that college graduates with technical training will have little difficulty in finding employment this year, but that employers are concerned over the continuing shortage of graduates in science and engineering. Last year industry was able to hire less than seventy percent of the graduates wanted, and prospects for 1953 are apparently not expected to be much better.

Radiological physics fellowships are being offered by the AEC for graduate study during 1953-54 at Vanderbilt University in cooperation with the Oak Ridge National Laboratory, at the University of Rochester in cooperation with Brookhaven National Laboratory, and at the University of Washington in cooperation with the AEC Hanford Works. In each case, nine months of course work at the university is followed by three months of additional study and field training at the cooperating AEC installation. Application forms for fellowships in radiological physics, which deals with health problems associated with the handling of radioactive materials and which encompasses radiation monitoring, radioisotope measurements, hospital physics, and related activities, may be obtained from the Fellowship Office, University Relations Division, Oak Ridge Insti-

tute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tennessee.

Industrial research fellowships in physics, chemistry, electrical and chemical engineering, metallurgy, ceramics and minerals, and engineering mechanics are again being offered this year by the Armour Research Foundation, Illinois Institute of Technology. Research fellows will attend the Institute half-time and work in the Foundation half-time in a graduate program leading to advanced academic degrees; they will be employed full time by the Foundation during the summer. Awards are made to U. S. citizens under 28 years of age holding a bachelor's degree from an accredited engineering or scientific school or a liberal arts college with a major in the sciences. Application forms can be obtained from the Office of Admissions, Graduate School of Illinois Institute of Technology, 35 West 33rd Street, Chicago 16, Illinois.

Applications for admission to the 1953-54 sessions of the Oak Ridge School of Reactor Technology (which begins next September) must be submitted to the school not later than March 1, according to information from Union Carbide and Carbon Corporation, operator of the AEC's Oak Ridge National Laboratory where the twelve-month course will be given. F. C. Von der Lage, the school's director, points out that the curriculum has been expanded and improved over previous sessions, and the faculty has been increased for the 1952-53 class. The following subjects, in all of which reactor science is emphasized, are currently scheduled to be taught: analysis and mathematics, engineering, chemistry and technology, materials, nuclear physics, experimental physics, and technology. Students are selected by a committee on admissions from two categories: nonsponsored recent graduates, and sponsored students from industries and government agencies. Brochures describing the 1953-54 session and application forms for admission are available upon request from the Oak Ridge School of Reactor Technology, P. O. Box P, Oak Ridge, Tennessee.

Mount Holyoke College has announced the establishment of an agency of the college to be known as Industrial Associates for Women in Science, a collaboration of science, industry, and the liberal arts which will include industrialists, scientists, and members of the college. The agency will seek to develop projects in education, teaching, and research to which industry may contribute both as a public service and in its own interest, and which will advance the educational aims of the college.

Industry

Continued investment in industrial instrumentation in 1952 showed a ten percent rise over 1951, according to a year-end statement by Henry F. Dever, president of the Brown Instruments Division, Minneapolis-Honeywell Regulator Company. All indications, he added, are that the trend will continue toward wider use of instruments and automatic control equipment by

industry to help meet expanded production goals in the face of a tight labor supply.

A memory unit employing both electronic and magnetic techniques, which stores and releases numbers at the rate of 50,000 per second, has been designed and constructed by the research division of Burroughs Adding Machine Company for use with ENIAC, the U. S. Army Ordnance Corps' electronic digital computer at the Ballistics Research Laboratory, Aberdeen Proving Grounds, according to a company announcement.

Consolidated Engineering Corporation of Pasadena, California, has announced the formation of a new company, to operate under the name of Consolidated Vacuum Corporation, which will manufacture DPI high vacuum equipment, high vacuum systems, valves, gages, etc., in the area of Rochester, New York, following formal acquisition of the vacuum equipment department of Eastman Kodak's Distillation Products Industries.

John C. Kurtz, a director of Bausch & Lomb Co., died after a brief illness on December 28th at the age of sixty-five. A native of Rochester, New York, Mr. Kurtz was a graduate of the University of Michigan and the University of Rochester School of Optics. From 1912 to 1915 he worked with William Bausch on a series of experiments that resulted in the first successful melting of optical glass in the United States. He headed the glass manufacturing department of the company from 1918 to 1936. Mr. Kurtz was a member of the Optical Society of America.

Ralph A. Loring, professor of physics and head of the department at the University of Louisville in Kentucky, died on January 1st at his home in Louisville after suffering a heart attack. He was fifty-six years of age. A native of Hingham, Massachusetts, Professor Loring did his undergraduate work at Dartmouth, and studied for graduate degrees at Harvard and Ohio State, where he received the doctorate in physics in 1932. He joined the Louisville faculty in 1934, and became head of the physics department three years later. Professor Loring was a member of the American Physical Society and of the American Association of Physics Teachers.

Leland A. Wooten, director of the chemical physics department of the Bell Telephone Laboratories at Murray Hill, New Jersey, died at Williamsburg, Virginia, last December 29th while on his way back to New Jersey after visiting his parents in Statesville, North Carolina. He was fifty-two years old. Dr. Wooten, who received the PhD degree from Columbia University in 1935, had been a member of the staff at Bell Labs since 1928. He belonged to the American Physical Society, the American Chemical Society, and the Electrochemical Society.



William Azbell, formerly assistant professor of physics at Bradley University, Peoria, Illinois, has been named associate professor of physics and chairman of the physics department at Wartburg College, Waverly, Iowa.

The following physicists have joined the staff of the Los Alamos Scientific Laboratory in New Mexico: **Daniel E. Bannerman**, from UCLA; **David S. Carter**, from the Forrestal Research Center; **Robert D. Glauz**, from Brown University; **Marvin M. Hoffman**, from the Ames Laboratory; **Joseph W. Mather**, **Arthur D. Schelberg**, **J. Karl Theobald**, and **Theos J. Thompson**, from the University of California at Berkeley; **David F. Woods**, from Cornell University; and **John L. Yarnell**, from the University of Minnesota. The Los Alamos Laboratory is operated for the AEC by the University of California.

Ida Barney, research associate in astronomy at Yale University, was awarded the Annie J. Cannon Prize, for her "distinguished contribution to astronomy", at the winter meeting of the American Astronomical Society. The award, established in 1934, has in the past been given to **Julie V. Hansen** (Copenhagen), **Cecilia P. Gaposchkin** (Harvard), and **Charlotte M. Sitterly** (National Bureau of Standards).

Christopher E. Barthel, Jr., assistant director of the Armour Research Foundation, has been elected chairman of the board of directors of the National Electronics Conference.

John J. Bohrer has been promoted to assistant director of research at the International Resistance Company in Philadelphia.

S. Chandrasekhar has been appointed Morton D. Hull Distinguished Service Professor of Theoretical Astrophysics at the University of Chicago, and **Harold C. Urey** has been named by the University as Martin A. Ryerson Distinguished Service Professor of Chemistry.

Marshall R. Cleland, research physicist in the beta-tron section of the radiation physics laboratory at the National Bureau of Standards, has joined the staff of Nuclear Research and Development, Inc., of St. Louis, Missouri, where he will head several industrial research projects to be undertaken in the new laboratories just occupied by the company.

Taylor Fletcher, design engineer with Beckman Instruments, Inc., South Pasadena, California, has been appointed manager of the company's special products division.