

ferrous metals (T. A. Read); University of Michigan, fundamental research on isotopic reactions (Richard B. Bernstein); Florida State University, analysis of nuclear forces (A. E. S. Green and M. A. Melvin); Kansas State College, labeled chemical species produced by neutron irradiation of phosphorous trichloride and related compounds (R. E. Hein); and University of California, nuclear moments (Carson D. Jeffries).

National Science Foundation

A second group of awards for the fiscal year 1955, totalling about \$1.6 million, has been announced by the National Science Foundation. Twelve of the 120 grants for the support of basic research and related matters were listed under the category of physics. These include Amherst College (T. Soller), metals and paramagnetic salts below one-tenth degree absolute; University of California at Berkeley (D. S. Saxon), theoretical nuclear and atomic physics; Indiana University (R. W. Thompson), construction of a double cloud chamber for research on fundamental particles; Midwestern Universities Research Association (D. W. Kerst), high-energy accelerator problems; University of Pennsylvania (K. R. Atkins), superfluidity of liquid helium, and (W. E. Stephens), photonuclear and transmutation processes; Principia College (S. L. Leonard), direct pair production by electrons of 200–500 Mev energy; University of Rochester (M. P. Givens), a study of solids with soft x-rays; Stanford University (W. K. H. Panofsky), design study for high-energy magnetic spectrometers; Vanderbilt University (I. Bloch), normal modes of vibration of nuclei; University of Washington (J. H. Manley), nuclear emulsion studies of pion-proton scattering; and Yale University (V. W. Hughes), atomic beam magnetic resonance investigations. The Foundation is also supplying funds to the Carnegie Institute of Washington for the preliminary studies of a committee on radio astronomy, to the University of Rochester for the fifth annual conference on high-energy nuclear physics, and to the American Institute of Physics for maintaining the National Register of Scientific and Technical Personnel in the field of physics.

NSF has agreed to accept responsibility through the fiscal year 1956 for the administration of the federal rubber research program. Alan T. Waterman, the Foundation's director, has indicated that the aid of expert scientific and technical advice will be enlisted in reviewing and evaluating the existing research program, which consists of (1) basic research conducted by contract with nine educational institutions and three research organizations and (2) a government laboratory operated under contract with the University of Akron. The program has been administered by the Office of Synthetic Rubber of the Federal Facilities Corporation.

The National Science Foundation this summer will provide thirty stipends of \$250 each and a limited number of fee exemption certificates amounting to \$66 each to high school teachers of chemistry, physics, and

general science. The stipends and certificates are for enrollment in the Institute for High School Science Teachers to be held at the Pennsylvania State University July 5th to August 13th. Detailed information about the program and application forms are available from the Director of Summer Sessions at the Pennsylvania State University, State College, Pennsylvania.

A summer institute designed "to improve the teaching of physics on all levels and devise ways of attracting gifted students into the study of physics" is to be held at the University of New Mexico June 16 to July 13 under NSF sponsorship. The program will include lectures on modern physics by H. A. Bethe, a course for high school teachers by W. L. Parker, and graduate seminars by C. F. Squire, W. D. Walker, and G. E. Pake. Membership is open to physics teachers and high school teachers with at least one year of college physics, and a few \$200 stipends will be available, for which applications must be received by April 1. Membership applications are due by May 1. For further information write John R. Green, Director, Summer Institute for Teachers of Physics, University of New Mexico, Albuquerque, New Mexico.

Education

March 14th is the deadline for application to enroll in the 1955–56 session of the Oak Ridge School of Reactor Technology, a fifty-week course of study scheduled to begin on September 12th. Industrial firms have been invited to sponsor personnel in their employ for enrollment in the school under an arrangement whereby sponsored students remain on the payroll of their home organizations. To defray the pro-rata operating costs of the school, including all supplies and the use of special facilities, a fee of \$2500 is charged for each student. For those who are on an AEC cost-type contract or government payroll there is no charge. The school is part of Oak Ridge National Laboratory, which is operated by Union Carbide and Carbon Corporation for the Atomic Energy Commission. It was established as a means for providing advanced training in reactor theory and technology for engineers and scientists who will engage directly in reactor research design and development. The school utilizes the ORNL staff and facilities for the instruction of students, and since much of the material presented in the curriculum is classified, enrollment is contingent upon satisfactory completion of a personnel security investigation. Further information and application forms may be obtained from the Director, Oak Ridge School of Reactor Technology, Oak Ridge National Laboratory, P. O. Box P, Oak Ridge, Tennessee.

The second annual Graduate Summer Session in Statistics, sponsored jointly by the University of Florida, North Carolina State College, Virginia Polytechnic Institute, and the Southern Regional Education Board, will be held from June 20 to July 29 at the University of Florida at Gainesville ("in the rolling hills of North Central Florida, midway between the cooling

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Fellowships and research assistantships in oceanography and meteorology are available at the Agricultural and Mechanical College of Texas. Qualified graduates in physics, chemistry, geology, meteorology, biology, and engineering may apply for the fellowships, which include the United Gas Fellowship in Engineering Oceanography (\$3000) and the Dow Fellowship in Chemical Oceanography (\$2000). Graduate assistantships providing as much as \$2400 each are also available. A \$500 scholarship and student assistantships are offered for undergraduates working toward the bachelor's degree in meteorology. Applications should be submitted by March 30th to Dale F. Leipper, Head, Department of Oceanography, College Station, Texas.

Stevens Institute of Technology has announced the establishment of the Robert Crooks Stanley Fellowships in engineering and science. Full-time graduate students working for their master's or doctor's degrees will be eligible for the awards. The fund is a gift of the family of the late Robert C. Stanley, an alumnus and chairman of the Institute's board of trustees from 1935 to 1948.

Ninety courses "designed especially for engineers in private industry" were inaugurated in January at the French Atomic Energy Commission establishment at Saclay, according to *The New York Times*. François Perrin, head of the French AEC, was quoted as saying that France has passed from the experimental phase of atomic energy to that of practical utilization and that many other study centers would be required shortly to meet the demands of the nation's atomic energy program.

General Electric's Educational and Charitable Fund will double its fellowship award program for 1955 with more than a quarter of a million dollars to be given in fellowships. Thirty of the seventy-four awards will be for graduate study in physics, chemistry, and metallurgy. Twenty will be for graduate study in engineering fields. Each fellowship will be accompanied by a grant of \$1200 to the institution in which the fellow is enrolled for study. Single fellows, or married fellows without children, will receive at least \$1750, while married fellows with one or more children will receive at least \$2500. The program of fellowships for graduate study is one element in G-E's over-all educational assistance program, which includes 170 scholarships for outstanding undergraduates, 200 fellowships for secondary school science and mathematics teachers, grants to colleges and universities matching similar gifts from em-

employees under the company's "corporate alumnus" program, and assistance in providing equipment for instructional purposes.

Publications

A comprehensive guide to the literature of five important years of transistor development has been compiled under the direction of Alan R. Krull, librarian of the Technological Institute Library at Northwestern. Reprinted from the Transactions of the Institute of Radio Engineer's Professional Group on Electron Devices in August 1954, *Transistors and Their Applications: A Bibliography, 1948-1953*, is available free of charge upon request to the Technological Institute Library, Northwestern University, Evanston, Illinois.

A directory of commercial and college testing laboratories, successor to the National Bureau of Standards' Miscellaneous Publication M 187 which appeared in 1947, has been published by the American Society for Testing Materials. The 48-page directory lists the locations of 278 industrial laboratories equipped and prepared to undertake testing on a commercial or fee basis. Laboratories of 86 colleges prepared to do testing are also listed. Copies may be purchased for \$1.00 each from the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania.

William W. Stifler, emeritus professor of physics at Amherst College in Massachusetts, died on December 2, 1954, at the age of seventy. Professor Stifler graduated from Shurtleff College, Alton, Illinois, in 1902 and received his doctor's degree in physics from the University of Illinois in 1911. During a full half-century of teaching, Professor Stifler taught at Ewing College, the University of Illinois, and at Columbia University before going to China in 1917 as head of the physics department and dean of the premedical school at Peking Union Medical College. He subsequently served as visiting professor of physics at Canton Christian College (1922-23), after which he returned to the United States for a year's research at Harvard followed by a year spent as acting professor of physics at Williams College. He went to Amherst College in 1925 as associate professor, became a full professor in 1931, and retired in 1952 after having served for 29 years as a member of the Amherst faculty. He was a fellow of the American Physical Society and a member of the American Association of Physics Teachers and of the Optical Society of America.

Henry E. Lawrence, emeritus professor of physics of the University of Rochester and head of the Rochester physics department from 1903 to 1934, died on December 19th at the age of ninety. An early specialist in high-frequency electrical phenomena, he was named associate professor at Rochester in 1895, became a full professor in 1901, and retired in 1934. Professor Lawrence was a fellow of the American Physical Society.

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