vision of physical sciences, said in describing the tour. "If we can stimulate the interest of students by exposing them to the methods and tools of research, and pass on some of the excitement and satisfactions of scientific investigation, we will be making a real contribution to America's future."

■ A $2 million aeronautical research laboratory is nearing completion at the University of Michigan. Wilbur C. Nelson, chairman of the university's aeronautical engineering department, reports that the laboratory will be one of the most flexible and versatile educational and research facilities in the nation for the study of aerodynamics and aerothermodynamics.

The four units of the new establishment are the aerodynamics laboratory, aircraft propulsion laboratory, air pumping station, and the power shed. The sections of wind tunnels for subsonic, supersonic, and hypersonic research will be housed in the aerodynamics laboratory.

■ The Woodrow Wilson School of Public and International Affairs at Princeton University is offering an undergraduate seminar this year on the relationship of government to science. John Turkevich, Eugene Higgins professor of chemistry and a Government consultant, is directing the seminar. It includes a discussion of the principles of atomic and nuclear phenomena, international atomic energy control, the history of the Atomic Energy Commission, and the relationship of the Congress to the commission and of the commission to industry.

The seminar meets once a week and a student reports on a phase of the subject assigned to him. A notable feature is the presence of a visiting authority, either from Government or industry, who is engaged in the activity under discussion.

Grants, Fellowships, and Awards

■ For the tenth consecutive year Case Institute of Technology will offer 50 all-expense General Electric science fellowships to enable preparatory-school and high-school physics teachers from the north central states to participate in a special 6-week study program that will run from 17 June through 27 July 1956. Applicants for the fellowships, which are sponsored by the General Electric Company, must be college graduates who possess experience in preparatory or high-school teaching; they must be certified to teach in their respective states.

The program is open to qualified teachers from Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Minnesota, Ohio, Western Pennsylvania, Tennessee, West Virginia, and Wisconsin. Traveling expenses to and from Cleveland, Ohio, as well as the cost of living on the Case campus, books, tuition, and fees are included in each fellowship grant.

Purpose of the program is two-fold: to provide preparatory and high-school science teachers with a comprehensive review of the physical sciences, and to present an introduction to the most recent developments in nuclear physics. Two afternoons each week are spent visiting research centers in the Cleveland area such as General Electric's Nela Park Laboratories and the NACA Lewis Flight Propulsion Laboratory. Applications for the fellowships may be obtained from Dean Elmer Hutchisson, Case Institute of Technology, 10900 Euclid Ave., Cleveland 6, Ohio.

In addition to the study program at Case, the General Electric Company will also offer summer courses for high-school mathematics teachers at Rensselaer Polytechnic Institute; a summer program for high-school mathematics teachers at Purdue University; and summer courses for secondary-school chemistry and physics teachers from northeastern states at Union College.

■ In recognition of the contributions to science of Selman A. Waksman, a postdoctoral fellowship in the natural sciences related to the fields of medicine and health has been established at Rutgers University by the Chemical Division, Merck and Company, Inc., Rahway, N.J.

The Waksman-Merck postdoctoral fellowship is open to citizens of the United States or Canada who have received, or are about to receive, the Ph.D. or equivalent degree and who are interested in further training and research experience in biochemistry, chemistry, entomology, microbiology, nutrition, physics, physiology, or zoology as related to medicine and health.

The award is $4000 for one calendar year, beginning 1 July 1956. The closing date for receipt of applications is *10 Jan. 1956*. Application forms may be obtained from Dean of the Graduate School, Rutgers University, State University of New Jersey, New Brunswick, N.J.

■ The Bermuda Biological Station is continuing its program of grants-in-aid to assist scientists who wish to conduct research in Bermuda. These grants are supported by the National Science Foundation. Funds will be awarded primarily to pay for research space, living expenses, or for special collecting facilities required by a person who is working at the station. Applications for aid in purchasing equipment or for necessary travel expenses may also be considered.

A booklet describing the particular advantages and facilities of the Bermuda Biological Station will be sent on request. Formal application for research support should be made as far in advance as possible. For information write to the director, Dr. William H. Sutcliffe, Jr., Bermuda Biological Station, St. George's West, Bermuda.

■ The Commonwealth Fund, New York, convinced of the compelling need for medical schools to clarify their educational objectives in the postwar world and to help them to institute or to maintain creative programs in medical education, has announced the award of $7,150,000 drawn from its capital funds. This amount was appropriated as unrestricted grants to ten university medical schools. The urgency of the present need led the fund to make these special grants from capital in addition to the $2 million already given to medical education from its income in the fiscal year 1954–55.

It is expected that the special awards will enable the ten medical schools to make faster progress than would otherwise be feasible in this period when medical educators are reexamining their educational structure. It is hoped that the fund's action will stimulate similar unrestricted giving from other sources.

Medical schools receiving the grants were Chicago, $500,000; Columbia, $750,000; Cornell, $750,000; Emory, $600,000; Harvard, $1 million; New York University, $750,000; Southern California, $300,000; Tulane, $750,000; Western Reserve, $1 million; Yale, $750,000.

The Commonwealth Fund was established in 1918 by Mrs. Stephen V. Harkness with the motto, "To do something for the welfare of mankind." In recent years the fund's primary interests have been in the health field, particularly in medical education, medical research, and community health.

■ The Atomic Energy Commission has made available a number of special fellowships for the academic year 1956–57 in two relatively new fields of scientific endeavor that are closely related to the atomic energy program—radiological physics and industrial hygiene. The Oak Ridge Institute of Nuclear Studies will administer the fellowships for the AEC.

The radiological physics program provides for an academic year of formal courses at one of three universities to which fellows may be assigned; this is to be followed by transfer to a corresponding cooperating AEC installation where fellows will train for approximately 3

months in applied health physics. The three centers of the program are at the University of Rochester, in cooperation with Brookhaven National Laboratory; the University of Washington, in cooperation with the Hanford Works; and Vanderbilt University, in cooperation with Oak Ridge National Laboratory.

The programs at all three centers will include training in modern physics, radiation biology, radiation instrumentation, industrial hygiene and toxicology, biology, and research. As many as 25 fellows may be appointed in each of the three programs.

Industrial hygiene fellows will attend either Harvard University or the University of Pittsburgh. Course work will vary with the university selected and with the interests and undergraduate preparation of the individual. All fellows will be required to take course work in public health and biostatistics; electives may include engineering, health physics, toxicology, industrial medicine, and related subjects.

Basic stipend for AEC fellows is $1600, with an additional $350 allowed for spouse and $350 for each dependent child. Fellowship awards include payment of normal tuition and fees required by the university, and a travel allowance of 6 cents per mile for the fellow (not dependents) from the place of application to his assigned university. Radiological physics fellows receive an allowance for travel between the university and the cooperating laboratory. Industrial hygiene fellows are assisted financially to attend the annual meeting of the American Industrial Hygiene Association. One or more years of graduate work or industrial experience may qualify an industrial hygiene fellow for an additional $200 in the basic stipend.

A fellowship applicant may designate his choice of institution; when possible, assignments will be made accordingly, but ORINS cannot guarantee compliance with the choice. Requirements for AEC fellows include a bachelor's degree in physics, chemistry, or engineering, acceptability for graduate work at the university to which the fellow is assigned, and United States citizenship; applicants must be under 35 years of age. Radiological physics fellows should have minors in mathematics, biophysics, or similar fields; (however, applicants with other qualifications may be considered in special circumstances).

Additional information and application blanks may be obtained from the Fellowship Office, University Relations Division, Oak Ridge Institute of Nuclear Studies, Box 117, Oak Ridge, Tennessee. Completed applications, supporting letters of reference, and transcripts must reach the institute *not later than 1 Mar. 1956.*

In the Laboratories

■ Cornell Aeronautical Laboratory celebrated its tenth anniversary 30 Nov.–2 Dec. Highlight of the 3-day event was the dedication of two recently completed research facilities—a two-story addition and a three-story new building. Cornell Aeronautical Laboratory, Inc., is a self-supporting affiliate of Cornell University dedicated to research in the aeronautical sciences. The laboratory is a nonprofit organization; earned fees are used for further research or for educational benefits.

At its initiation in 1946 the laboratory had 600 employees and a few government contracts that totaled about $1 million. Today there are nearly 1200 employees and a $13-million backlog of research contracts. From five departments in 1946, the technical organization has expanded its interests to include ten technical departments.

More than 400 engineers and scientists are engaged in research at the laboratory. About 95 percent of laboratory work is for the Government, most of it classified. The research program is extremely broad and includes not only fields directly applicable to aeronautics but related ones.

■ The Chemical Division of the Borden Company will double its West Coast output of formaldehyde by building a new plant in the Seattle, Wash., area. The new plant, to be geared to produce more than 36 million pounds of formaldehyde a year, is scheduled for completion late in 1956. It will be under the direction of Ray T. Hanson, the Chemical Division's West Coast general manager.

■ The Garrett Corporation, Los Angeles, Calif., has announced the establishment of its new Rex Division to conduct a long-range research and development program in aeronautics. The Rex Division is headed by E. M. Ellingson, manager, and R. S. Rae, chief engineer.

Miscellaneous

■ Publication of a new journal, *Nuclear Science and Engineering: The Journal of The American Nuclear Society,* has recently been announced. J. G. Beckerley of the Schlumberger Well Surveying Corporation, Houston, Tex., has accepted editorial responsibility. He will be aided by Francis T. Miles of Brookhaven National Laboratory, associate editor, as well as by a publications committee consisting of Harold Etherington, Winston Manning, and Alvin M. Weinberg.

The following scientists have agreed to serve on the editorial advisory board: *Physics,* Harvey Brooks, G. Goertzel, D. G. Hurst, Henry Hurwitz, Jr., O. C. Simpson, R. Taschek; *Chemistry,* L. Cook, Karl Cohen, Stephen Lawroski, E. E. Motta, I. Perlman, J. A. Swartout; *Engineering,* W. K. Davis, O. E. Dwyer, L. J. Koch, Miles C. Leverett, W. T. Moore, John W. Simpson, W. Kelley Woods, Gale Young; *Metallurgy,* J. P. Howe, A. R. Kaufmann; and *Health Physics,* H. M. Parker.

The new journal will be devoted to the presentation of theoretical and experimental papers related to such subjects as nuclear reactor design, construction, and operation; interaction of nuclear radiations and matter; basic phenomena in performance of nuclear fuels; production, uses, and disposal of radioactive materials; chemical processing of nuclear fuels; basic and applied neutron physics; heat-transfer problems peculiar to nuclear reactors; technology of reactor materials; radiological safety, health physics, and nuclear radiation shielding; nuclear instrument research and development; reactor and fission physics; systems for remote handling of radioactive materials; nuclear reactor stability and control; controlled release of energy from nuclear fusion.

One volume a year is planned, and Vol. 1, No. 1 is scheduled for release in February 1956. Subscriptions for Vol. 1, priced at $10, should be sent to the publishers, Academic Press, Inc., 125 E. 23 St., New York 10.

■ A new 40-minute film on x-ray diffraction has been produced by the Research and Control Instruments Division of the North American Philips Company, Inc., 750 South Fulton Ave., Mount Vernon, N.Y. It may be borrowed, or it may be purchased at cost for school and industrial plant libraries.

Titled *The Ultimate Structure,* this black and white sound movie outlines how elements and compounds are identified and measured through studies of the atomic structure. Wave motion and crystal theories are demonstrated and typical examples are shown and described in order to illustrate research and production control applications in industry.

The film describes three analytic x-ray techniques: diffraction, diffractometry, and spectroscopy. The basic differences in the construction and use of the three instruments involved is emphasized.

Erratum: The news item on the American Nuclear Society and its new journal, *Nuclear Science and Engineering* (Academic Press, Inc., New York) that appeared on page 1015 of the 25 Nov. issue should have ended with the second paragraph. The remainder of the item deals with another new journal, *Nuclear Physics* (North Holland Publishing Company, Amsterdam; distributed in U.S.A. by Interscience Publishers, Inc., New York). *Science* regrets the error.