

States or similar institutions abroad. Stipends will vary with the academic status of the individual. First-year fellows (students entering graduate school for the first time or those who have had less than one year of graduate study) will receive \$1400; fellows who need one final academic year of training for the doctor's degree will receive \$1800; fellows between these groups will receive stipends of \$1600. The basic stipend for postdoctoral fellows will be \$3400 per year. Tuition and laboratory fees and limited travel allowances will be provided, as will dependency allowances for those fellows who are married.

Application forms for both predoctoral and postdoctoral graduate fellowships may be obtained by writing to the National Science Foundation, 2144 California Street, N.W., Washington 25, D. C. Completed applications must be returned to the Fellowship Office, National Research Council, by January 5, 1953. The special examination for predoctoral candidates will be given at various places throughout the United States on January 31.

New Research Journal

Mechanics and Physics of Solids

Publication this month of the first number of an international quarterly, the *Journal of the Mechanics and Physics of Solids*, has been announced. Edited by W. M. Baldwin, Jr., professor of metallurgical engineering at the Case Institute of Technology in Cleveland, and by Rodney Hill, of the department of theoretical mechanics at the University of Bristol in England, the journal will contain original research papers, both experimental and theoretical. The following subjects have been mentioned as giving an indication of the journal's scope: creep, fatigue, elastic and plastic properties of engineering metals, stress analyses of structures and continua, significance of material tests, rationale of technological forming processes.

The editors will be assisted by an advisory board comprising four British representatives and two each from the United States, Switzerland, and Western Germany. They are: J. F. Baker (Cambridge, England), E. Brandenberger (Zürich), G. Busch (Zürich), A. H. Cottrell (Birmingham), F. A. Kochendörfer (Düsseldorf), N. F. Mott (Bristol), A. Nadai (Pittsburgh), G. Sachs (Syracuse, N. Y.), E. Siebel (Stuttgart), and H. W. Swift (Sheffield). The journal is published by the Pergamon Press Ltd., London, which is represented in this country by Lange, Maxwell, & Springer, Inc., 122 East 55th Street, New York 22, N. Y.

Infrared Spectra

Punch Card Compilation of Data

The Committee on Infrared Absorption Spectra, formed last year under the sponsorship of the National Research Council (see *Physics Today*, November 1951, p. 26), was assigned the task of developing methods for collecting and distributing spectral absorption data on

organic and inorganic compounds. Working in close collaboration with the National Bureau of Standards, much of the Committee's efforts were directed towards designing a punch card system and preparing a bibliography in order to provide workers in the field with a means for obtaining quick access to published results from the large and rapidly expanding infrared spectra literature.

According to a recent announcement from the Bureau, the task of compiling a punch card catalog is now well under way, and cards covering forty-five separate compounds and containing spectra and other useful data, as well as bibliographic references, are now being made available on a subscription basis to industrial and research laboratories. The catalog, which is being compiled under the direction of E. C. Creitz and the NBS staff, provides a series of spectral curves with which the spectra of unknown compounds can be compared and makes data needed for theoretical computation readily accessible without the use of expensive sorting equipment. Machine-size key-sort cards, punched and notched so that they may be sorted by means of a knitting needle or an inexpensive sorting machine, are to be supplied to users at cost. In addition, the Bureau proposes to print the spectra and bibliographic data on $8\frac{1}{2} \times 11$ -inch paper. IBM cards will also be made available. The Bureau plans eventually to supplement the regular series of spectra with a special series to be obtained at high resolution on specially purified compounds. Each card for this series will contain all the physical and chemical data obtainable on the particular compound, including melting and boiling points, refractive indices, visible and ultraviolet spectra, and x-ray diffraction data.

Detailed instructions for ordering the infrared cards can be obtained from E. Carroll Creitz, National Bureau of Standards, Washington 25, D. C.

Miscellany

The National Geographic Society has announced the organization of a scientific expedition to study high altitude cosmic-ray effects over twenty-three degrees of latitude in the mountains of India. Martin A. Pomerantz, research physicist at the Franklin Institute's Bartol Research Foundation, will head the party. Dr. Pomerantz is expected to arrive in Bombay this month after having spent several weeks consulting with colleagues in London, Paris, and Amsterdam. He will be joined in Aligarh by a group of Indian scientists, including P. S. Gill, director of the department of physics at Muslim University, who will participate in the study.

Unesco has issued a list of scientific and technical journals published in South East Asia, together with a supplement dealing with Chinese journals, according to the U. S. National Commission for Unesco. It is further reported that a comprehensive listing of scientists and scientific institutions in South East Asia is now in progress.

A European research office of the U. S. Air Research and Development Command is to be established in Brussels, according to a recent announcement. The new office will be concerned with unclassified research of interest in connection with air developments of the future.

A gift of more than one hundred scientific and technical books from the National Bureau of Standards in Washington was presented earlier this year to the National Physical Laboratory of India by U. S. Ambassador Chester Bowles at a formal ceremony in New Delhi. The volumes were accepted on behalf of the laboratory by its director, K. S. Krishnan. The National Physical Laboratory provides services in India which are similar to those provided in this country by the NBS and in England by the research establishment at Teddington.

The international relations activities of the National Academy of Sciences-National Research Council are henceforth to be carried out by an "Office" rather than a "Division", in view of a decision reached by the NAS-NRC governing board at its meeting on June 15th. The change from division to office status was recommended by Roger Adams, Foreign Secretary of the Academy, who pointed out that activities in the field of international relations were not limited to any one division or branch of science and that expanded efforts in international scientific relations called for an organizational structure that would facilitate efficient administration of the program. The Office of International Relations functions under a policy committee headed by Dr. Adams. Wallace W. Atwood, Jr., formerly executive secretary of the Division, will serve as director of the new Office.

Government

A new series of atomic tests at Eniwetok Atoll in the Western Pacific is scheduled to take place during the next few months, according to a joint announcement made in Washington on September 9th by the Atomic Energy Commission and the Department of Defense. The refusal by spokesmen for both agencies either to confirm or deny that the experiments might involve the hydrogen bomb gave rise to widespread speculation in the nation's press that a thermonuclear weapon was in fact about to be tested. The official statement said that the experiments at the Marshall Island testing grounds would be conducted under the full provisions of the Atomic Energy Act and would be witnessed only by U. S. government officials and members of the task force.

The AEC's experimental cancer research and therapy program is expected to be enlarged by the end of this year, according to the Commission, when the Argonne Cancer Hospital should be in full operation. Other cancer research and therapy facilities are located at Oak Ridge, Brookhaven, and at the University of California Medical Center in San Francisco.

A stock motion picture film footage program has been established by the Atomic Energy Commission for the benefit of educational motion picture, newsreel, and television producers and of government agencies. One hundred thousand feet of unedited 35 mm black and white stock film footage without sound track has been assembled and is currently being distributed at standard government cost rates through a depository in Long Island City, N. Y. The film, which was made last year with the guidance of educational motion picture producers and educators both in and out of the government, covers unclassified AEC and contractor activities at thirteen installations in the fields of physical, biological, medical, and agricultural research.

Widespread criticism of the State Department's procedures in issuing passports has led to the creation of a special board of appeals to advise the Secretary of State on cases in which U. S. citizens have been denied passports. The appeals board, according to an announcement made on September 2nd, will consist of at least three State Department officials not connected with the passport division and will be empowered to call for clarification of testimony on which previous decisions of the passport division have been based. The Department has ruled that the passport division must inform persons whose applications are turned down that they have the right to appeal to the board. The individual must also be notified of the division's reasons, consistent with security regulations, for having rejected an application.

After four silent years, the House Committee on Un-American Activities called a special hearing in Chicago last September 5th to hear testimony from E. U. Condon in answer to charges made by the Committee in another election year that he was "one of the weakest links in our atomic security" and that he associated "knowingly or unknowingly" with alleged Soviet espionage agents. Press reports of the Chicago hearing suggested no further pursuit of these charges by the Committee, which now seems more interested in Dr. Condon's reasons for not having accepted an offer to work on the Manhattan District's bomb project at Los Alamos in 1943. He answered that he had decided instead to stay at the Westinghouse laboratories to work on radar.

Education

Tufts College, founded in 1852 at Medford, Massachusetts, is holding its Centennial Celebration on October 11th. Guest speakers will be: James B. Conant, president of Harvard University; Vannevar Bush, president of the Carnegie Institution; and Sir Godfrey Hilton Thomson, professor of education at the University of Edinburgh.

A new acoustics laboratory is being constructed in the Sheffield Building of Columbia University which will provide facilities for an enlargement of the present academic program in acoustics. The expansion of activity in acoustics will make available several graduate