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 8½ x 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.