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FIRST IN CONTROLS

Personnel, National Academy of Sciences—National Research Council, 2101 Constitution Avenue, N.W., Washington 25, D. C.

The American Academy of Arts and Sciences is again offering three \$1000 prizes to be awarded to the authors of unpublished monographs, one each in the humanities, the social sciences, and the physical and biological sciences. For the purpose of these awards the Academy defines a monograph as a "scholarly contribution to knowledge, too long for an article in a learned journal and too specialized for a general book". Manuscripts will be evaluated by a nine-man committee of fellows of the Academy, with three members representing each of the fields in which the prizes are to be given. The deadline for receipt of manuscripts is October 1. Full details may be obtained on request by sending a stamped self-addressed envelope to the Committee on Monograph Prizes, American Academy of Arts and Sciences, 280 Newton Street, Brookline Station, Boston 46, Mass.

Facilities

Two universities, Cornell and California, have recently established their own specialized centers for research on space problems. In each case the project is staffed by faculty members from several scientific and engineering departments of the university.

The Cornell University Center for Radiophysics and Space Research, organized late last year under the direction of Thomas Gold, professor of astronomy, physics, and electrical engineering, will eventually have access to what is expected to be the world's most powerful and largest radar antenna. The instrument, with an aluminum mesh saucer 1000 feet in diameter and capable of sending 420 Mc signals at a peak power of 2.5 million watts, is to be constructed in Puerto Rico within the next two years under the sponsorship of the Defense Department's Advanced Research Projects Agency. Scientists at the Center will also have at their disposal two other new installations, a radio astronomy receiver to be located south of Ithaca and a transmitting station to be constructed on the outskirts of the Cornell campus. In addition to Prof. Gold, the staff includes Henry G. Booker, who is the Center's associate director, and James P. Cox, Trevor R. Cuykendall, Kenneth I. Greisen, Philip Morrison, Edwin E. Salpeter, Henri S. Sack, Edwin L. Resler, Jr., and Paul F. Weaver. The design of the Puerto Rico radar unit was carried out by several faculty members in Cornell's School of Electrical Engineering under the direction of William E. Gordon.

On the Berkeley campus of the University of California, according to an announcement made in February, an interdisciplinary Space Sciences Laboratory has been established in temporary quarters in buildings recently vacated by the University's Department of Astronomy. In recognition of the growing need for coordinated research in the various areas of science re-

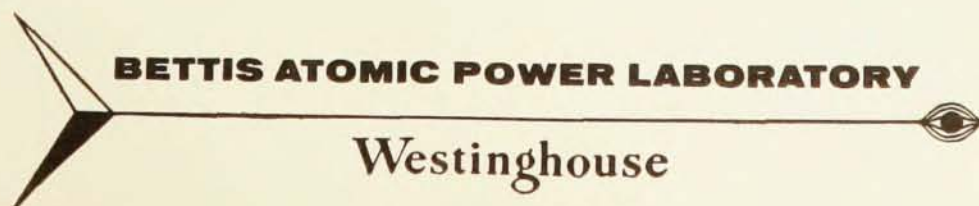
At the heart of the nuclear design problem, lies the determination of power distributions in a core for all possible conditions of depletion...

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For A Non-Uniformly Depleted Core**

Knowledge of these distributions are basic to the reactor thermal analysis and play a vital role in predicting temperature coefficients, shutdown, core life and structural heating.

*If you are a theoretical or experimental physicist and are interested in pursuing a career in reactor physics and you are a U. S. Citizen, write to: Mr. H. D. Altmire,
Bettis Atomic Power Laboratory, Box 1526,
Dept. B-63, Pittsburgh, 30, Pa.*

$$P(\vec{r}, t) = \sum_i \epsilon_i \sum_i^F \phi_i(x, y, t) Z_i(z, t)$$



PHYSICISTS

Schlumberger Well Surveying Corporation maintains a program of long-range industrial research projects at its Research Laboratory in Ridgefield, Connecticut.

The program includes such scientific fields as nuclear magnetic resonance, electromagnetic theory, nuclear physics, electronic systems, physical chemistry, wave propagation, data processing, sonics, and physical electronics.

In order to implement our diversified program we have openings for two professional staff members on a permanent staff of more than 100.

MATHEMATICAL PHYSICIST

The position requires a scientist with a Ph.D. in physics, applied mathematics or electrical engineering, with a strong interest in theoretical work. The applicant should have at least two years of experience in the use of mathematical techniques for the formulation and solution of physical problems.

Knowledge of transport theory, wave propagation or information theory are particularly useful. Specific projects cover a wide spectrum from rather short feasibility studies to long term research programs in the fields mentioned.

PHYSICIST FOR ACOUSTICS

This scientist should have an advanced degree in acoustics or geophysics with at least three years practical experience in ultrasonics, sonar or seismology.

The research program underway covers experimental and theoretical work in the measurement of acoustical properties of materials, particularly geological formations.

Our Laboratory is located in a small Connecticut town about 60 miles northeast of New York City. The facilities at the Laboratory are extensive and modern. Working conditions and fringe benefits are consistent with the highest industrial standards. Please send brief resume to:

MR. J. J. McNAMARA

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lating to the study of space problems, Chancellor Glenn T. Seaborg appointed a faculty committee in 1958 to work toward the creation of the new laboratory. The first chairman of the committee was Otto Struve, professor of astronomy. He was succeeded last fall by Edward Teller, professor of physics. The Berkeley Space Sciences Laboratory is under the direction of Samuel Silver, professor of engineering science, who for the past three years has been director of the University's Electronics Research Laboratory. Although the Regents of the University have provided a modest basic budget for the new laboratory, primary support is expected to come on a contractual basis from various government agencies. Eventually the laboratory plans to conduct a broad program of research ranging from solar physics and specialized cosmic-ray studies to investigations into the microbiological nature of the earth's upper atmosphere and of outer space.

Division 4 of the National Bureau of Standards—Atomic and Radiation Physics—was subdivided early in March and renamed the Radiation Physics Division. Lauriston S. Taylor continues as its chief. At the same time the Bureau established a new Division of Atomic Physics (Division 13) under the leadership of Lewis M. Branscomb, formerly chief of the Atomic Physics Section in the old Division 4. Research in the new Division will continue to be conducted in the NBS Atomic Physics Laboratory. It has the following Sections: (13.01) Spectroscopy, (13.02) Radiometry, (13.03) Mass Spectrometry, (13.04) Solid-State Physics, (13.05) Electron Physics, and (13.06) Atomic Physics. Major areas of research in Division 13 include precise determination of atomic constants and other physical properties associated with free electrons, atoms, ions, and molecules; it is also concerned with semiconductors and other aspects of solid-state research as well as with quantitative studies of the microscopic, mutual interactions of molecules, ions, atoms, and their constituent particles. The reconstituted Division 4 consists of the Sections in the present Radiation Physics Laboratory. After July 1 they will be renumbered in the following manner: (4.01) X Ray, (4.02) Radioactivity, (4.03) Radiation Theory, (4.04) High-Energy Radiation, (4.05) Radiological Equipment, (4.06) Nucleonic Instrumentation, and (4.07) Neutron Physics.

Excavation has begun on Case Institute of Technology's new \$2.3 million metallurgy building which upon completion (scheduled for September 1961) will double the space available for metallurgical research at Case and will provide room for approximately twice the present metallurgical faculty and student body. The new building will include research laboratory and teaching areas for the investigation of the effect of ultrahigh temperatures on materials and for the study of ultrahigh-strength materials.

A Space Vacuum Laboratory for the testing and evaluation of materials, components, and devices intended for use in space and satellite vehicles has been

established by the National Research Corporation in Cambridge, Mass. The new laboratory is under the direction of John C. Simons, head of the firm's Applied Physics Department. Equipment available includes ultrahigh vacuum test chambers in which pressures in the range of 10^{-10} mm Hg can be reached.

Publications

Contemporary Physics, a journal devoted to review articles on "various aspects of physics of a standard suitable for teachers in schools and in technical colleges, scientists in industry, and others striving to keep in touch with modern developments", has recently been launched by Taylor & Francis Ltd. The journal, under the editorship of G. R. Noakes, will appear six times a year and will include descriptive surveys of advances in physics, relatively elementary interpretations of theoretical matters, and papers on the historical, philosophical, and educational aspects of modern physics. It will also carry book reviews and interpretive essays dealing with other publications, both books and original papers. The editorial board of *Contemporary Physics* includes Sir Lawrence Bragg and Sir George Thomson as consultant editors and L. F. Bates, K. A. G. Mendelssohn, and F. A. Vick as advisory editors. The journal can be ordered (at a subscription price of \$4 per volume) from Taylor & Francis Ltd., Red Lion Court, Fleet Street, London E. C. 4, England.

In order to reduce to a minimum the number of frequencies at which acoustical measurements need to be tabulated, the American Standards Association has issued a new standard, *Preferred Frequencies for Acoustical Measurements* (S1.6-1959). Developed under the Association's sectional committee procedures, the new standard was sponsored by the Acoustical Society of America. It applies to the fields of physical acoustics, including architectural acoustics, electroacoustics, sonics and ultrasonics, and underwater sound, but excludes those aspects which pertain to safety, tolerance, and comfort. Copies are available at 35 cents each from the American Standards Association, Dept. PR 140, 10 East 40th Street, New York 16, N. Y.

ASTIA, the Armed Services Technical Information Agency at Arlington Hall, Va., is currently undergoing a "massive transition to automation" which eventually will result in the storing on magnetic tape of complete information on all of the nearly one million documents in the ASTIA collection—a collection which is growing at the rate of 30 000 titles per year. Until an automatic data processing system went into operation in February, ASTIA relied on the use of some seven million catalog cards. Approximately 1200 copies of reports had to be "hand-tailored" every day, and the number of requests for specific documents is reported to run as high as 3500 per day. A preliminary account of the program has been issued by the Department of Defense under the title, *Automation of ASTIA* (PB

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