

the Department of Defense. The transfer affects approximately 1600 members of the Bureau's staff. The four divisions, whose work has accounted for more than half of the Bureau's \$50 million annual budget, are ordnance development (division 13), missile development (division 15), electrochemical development (division 16), and electronic ordnance (division 17).

Announcement of the transfer was made on July 24th in a statement released jointly by Secretary of Commerce Sinclair Weeks and Secretary of Defense Charles E. Wilson. "This transfer," they said, "is in accordance with recommendations made by Mervin J. Kelly, chairman of the special committee established by the Secretary of Commerce to evaluate the present functions of the National Bureau of Standards in relation to the present national needs." It was indicated that reasons existed for announcing the transfer prior to release of the Kelly committee's report, which is expected to appear sometime this month, but no further justification was offered for the action or for its timing. Neither was there any specific suggestion that the transfer had been recommended by the full committee or by any of its members other than Dr. Kelly.

Mr. Wilson and Mr. Weeks indicated that the transferred functions of the Bureau would be carried out under the direction of the chief of ordnance for the Army, but that for the present no attempt would be made to move the scene of these ordnance activities from the laboratory buildings of the Bureau of Standards. It was also indicated that the Department of Defense will continue to call upon the Bureau for assistance in defense research and development programs in fields other than ordnance.

Scientific Translations

First Group Made Available

The first set of translations of Russian scientific papers has been completed and copies may be obtained for 10 cents each from the Office of Technical Services, Department of Commerce, Washington 25, D. C., it has been announced by the National Science Foundation, sponsors of the program. The first twenty of these translations, all from *Doklady Akademii Nauk SSSR*, are listed below:

Gaponov, A. V., "A Dynamical Model of the General Theory of Electric Machines", **89**, 45 (1953) (NSF-tr-1, June 1953)

Ivanenko, D. and Larin, S., "Theory of the Periodic System of the Elements", **88**, 45 (1953) (NSF-tr-1, June 1953)

Arkharov, V. I., Ignatyeva, S. I., and Kozmanov, Yu. D., "Thermal Fatigue of Single Crystals of Aluminum", **88**, 439 (1953) (NSF-tr-3, June 1953)

Ivanenko, D., Kurdgelaidze, D., and Larin, S., "Observations on Nonlinear Meson Dynamics", **88**, 245 (1953) (NEF-tr-4, June 1953)

Goldman, I. I., "On Spectroscopic Determination of the Quadrupole Moments of Nuclei", **88**, 241 (1953) (NSF-tr-5, May 1953)

Vaisman, I. A., "Effect of Nucleon Orbits on Slow Neutron Capture Cross Sections and on Spin of Odd-Odd Nuclei", **88**, 431 (1953) (NSF-tr-6, May 1953)

Borovsky, I. B. and Golovner, T. N., "Multiplicity in X-Ray Emission Spectra", **88**, 233 (1953) (NSF-tr-7, June 1953)

Kharanen, V. Ya., "Sound Propagation in a Medium with Random Fluctuations of the Refractive Index", **88**, 253 (1953) (NSF-tr-8, June 1953)

Buinov, N. N. and Savinykh, V. P., "Effect of Plastic Deformation on Subsequent Decomposition in Aluminum Alloys Al-Si and Al-Mg-Si", **88**, 257 (1953) (NSF-tr-9, June 1953)

Motylev, Yu. L., "On the Creep of Soil", **88**, 441 (1953) (NSF-tr-10, June 1953)

Katsenelenbaum, B. Z., "Wave Guides with Nonideal Walls", **88**, 37 (1953) (NSF-tr-11, June 1953)

Sverdlov, L. M., "Relations Between Moments of Inertia and Rotation Frequencies of Isotopic Molecules", **88**, 249 (1953) (NSF-tr-12, June 1953)

Vysokovsky, D. M., "Experimental Investigation and Design of 'Wave-Canal' Antennas", **89**, 41 (1953) (NSF-tr-13, June 1953)

Zeldovich, Ya. B., "Nucleon Isobars as Intermediate States in Beta-Decay", **89**, 33 (1953) (NSF-tr-14, June 1953)

Khrushchov, M. M. and Babichev, M. A., "Resistance to Abrasive Wear and the Hardness of Metals", **88**, 445 (1953) (NSF-tr-15, June 1953)

Vaisman, I. A., "Certain Regularities in Nuclear Spin and a Nuclear Shell Model", **88**, 237 (1953) (NSF-tr-16, May 1953)

Tyabin, N. V., "Motion of a Sphere in a Viscoplastic Liquid Dispersion System", **88**, 57 (1953) (NSF-tr-17, June 1953)

Zarembo, K. S., "An Estimate of Displacements and Deformations of Underground Gas Conduits Due to Temperature", **89**, 53 (1953) (NSF-tr-18, June 1953)

Osipov, K. A., Fedotov, S. G., and Lozinsky, M. G., "On a 'New' Mechanism of Plasticity of Metallic Solid Solutions", **89**, 57 (1953) (NSF-tr-19, June 1953)

Fok, M. V., "Wide-Angle Interference from a Quadrupole Source of Light", **89**, 439 (1953) (NSF-tr-20, June 1953)

In addition to contracting with Columbia University for translations from the Russian, the National Science Foundation's Office of Scientific Information has established a Scientific Translations Center in the Library of Congress to aid in the dissemination of foreign technical literature. The major emphasis of the Center will be on Russian journals initially, although it is hoped that other languages will be covered extensively in the future. Monthly lists of translations acquired by the Center will be issued, and photostat and microfilm copies will be made available. Inquiries may be addressed to the Scientific Translations Center, Science Division, Library of Congress, Washington 25, D. C.

Phys. Rev., 1921-50

30-Year Cumulative Index Available

A two-volume name and subject cumulative index of all papers appearing in *The Physical Review* from 1921

to 1950, inclusive, has been published by the American Institute of Physics for the American Physical Society. Prepared at the University of Minnesota under the direction of J. W. Buchta, the index represents a complete reworking of the individual volume indices of the journal during the thirty-year period in the light of present-day reference requirements. The massive task of compilation was carried out with the support of the Office of Naval Research. Professor Buchta, who is the present editor of *Reviews of Modern Physics*, served from 1930 to 1950 as assistant editor of *The Physical Review*.

It was once intended that the Physical Society would publish a cumulative index of *The Physical Review* every tenth year, but that high objective has never been realized. Only one index of the journal has been published, and it covered the period from the first issue in 1893 through the year 1920. Publication of an index for 1921-30 was prevented by the depression, and the next target date of 1940 was interfered with by the Second World War.

One volume of the index (543 pp.) is a listing of authors; the second volume (498 pp.) is a comprehensive subject index. Copies are available from the American Institute of Physics, 57 East 55th Street, New York 22, N. Y., in both stiff paper binding and cloth binding. The prices, respectively, are \$10 and \$12 per two-volume set for members of the American Physical Society (limit: one set), and \$14 and \$16 for non-members.

Patent Claim Settled

Discovery in Rome Finally Pays Off

Settlement of a patent claim of long standing against the Atomic Energy Commission has been completed, according to the AEC, which announced on July 31st that payment of \$300,000 as compensation for partial revocation of a patent granted to seven atomic scientists in 1940, and for infringing use by the AEC and the Manhattan District, had been approved by the Commission and its patent compensation board. The patent, entitled "Process for the Production of Radioactive Substances", was granted in 1940 on the basis of work by the scientists in Rome prior to 1934; it involved the discovery that radioactive isotopes of a number of elements can be produced by exposing the elements to neutrons slowed down by passage through a moderating material.

Scientists holding an interest in the patent are Edoardo Amaldi of the Istituto fisico della Università in Rome, Oscar d'Agnostino of the Istituto di Sanita Pubblica in Rome, Enrico Fermi of the University of Chicago, Bruno Pontecorvo (?), Franco Rasetti of Johns Hopkins, Emilio Segre of the University of California at Berkeley, and Giulio Trabacchi, also of the Istituto di Sanita Pubblica. Each of them, with the exception of Pontecorvo, held an eighth interest, as did G. M. Giannini and Co., Inc., of Pasadena, assignee and legal owner of the patent. Pontecorvo, who disap-

peared in September 1950 after flying to Finland from England, originally held an eighth interest in the patent, but he assigned half of his interest to Eugene Ghiron-Fubini, Glen Head, Long Island, New York, in October 1942. Pontecorvo gave his power of attorney to the attorney for the applicants before his disappearance. The one-sixteenth share still assigned to Pontecorvo will be deposited in the U. S. Treasury pursuant to Treasury Departmental Circular No. 655, which governs the payment of funds to individuals in "certain" countries.

Miscellany

The vacancy on the Atomic Energy Commission caused by the resignation some months ago of former commissioner Thomas Keith Glennan has been filled by the appointment of Joseph Campbell, treasurer of Columbia University and its vice-president in charge of business affairs.

Donald A. Quarles, president of the American Institute of Electrical Engineers during the past year and an official of Western Electric and the Sandia Corporation, has been named Assistant Secretary for Research and Development in the Department of Defense. His nomination was confirmed by the Senate on July 30th. The new post was established in accordance with President Eisenhower's proposal of April 30th for reorganizing the Defense Department and for abolishing the Research and Development Board.

A new periodic chart of the elements has been issued by the Central Scientific Company. Three styles are available, giving the symbol, atomic number, atomic weight, electronic configuration, naturally occurring isotopes, principal oxidation states, valence electrons, melting point, boiling point and density for each element in the wall chart format. An $8\frac{1}{2} \times 11$ inch version is also made, suitable for student use. Full details may be obtained from the Central Scientific Company, 1700 Irving Park Road, Chicago 13, Illinois.

Standard letter symbols for meteorology have recently been approved by the American Standards Association and published by the American Society of Mechanical Engineers. The rapid growth of the science during World War II caused confusion in symbol usage, and the new standard has been established in the interests of uniformity. The list of symbols was prepared by a group of specialists from the armed services, government agencies, universities, airlines, and meteorological publications, under the administrative leadership of the ASME. Copies of the eleven-page *American Standard Letter Symbols for Meteorology* (Y10.10-1953) are available from the American Standards Association, 70 East 45th Street, New York, N. Y., or from the American Society of Mechanical Engineers, 39 West 39th Street, New York, N. Y., at \$1.00 per copy.

The American Association for the Advancement of Science, in cooperation with the Westinghouse Edu-