PUBLISHING NEWS

Phys Rev Fission

The Physical Review will be published weekly instead of semimonthly beginning next January, according to an announcement by S. A. Goudsmit, managing editor of the American Physical Society. The fifty-two issues will be grouped in four volumes of thirteen issues each. Each volume will be divided into two sections which will appear in alternate weeks for twelve weeks, and the thirteenth issue of each volume will be a combined quarterly index. Section A will deal primarily with physics of atoms, molecules, and condensed matter, and Section B with physics of the nucleus and elementary particles.

The subscription rate for members will be increased from $10 to $15 per year. The nonmember subscription rate ($40 per year) will remain the same. Subscriptions to only one of the sections will not be available since billing and handling costs for one section would be essentially the same as for both sections.

The transition to weekly issues was necessitated by the great increase in size of the journal. In the past ten years, the membership of the American Physical Society doubled, and the number of articles and the number of pages in *The Physical Review* kept pace with this growth. In 1962 there were almost 9800 pages. The equipment currently used cannot handle more than about 500 pages per issue, and this places an upper limit of 12 000 pages per year under the present system. Hence, very little capacity remained available if the journal continued as a semimonthly.

Physical Review Letters will also be converted into a weekly journal in January. The fifty-two issues will be divided into two volumes. There will be no subject matter division and, for the time being, no change in the subscription price.

Cumulative Index for JETP

The AIP is issuing a translation of the cumulative index for the Soviet journal—*Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki*, covering the period 1946–60 (Vols. 16–39), which appeared in July 1963 as Vol. 45, No. 1. The translation will appear in the January 1964 issue of *Soviet Physics—JETP*, Vol. 18, No. 1. The English version of the index will contain references to both the original journal and to the date that the article appeared in the AIP translation journal *Soviet Physics—JETP*. An effort will be made to indicate whether translations are available for those articles covered by the index but appearing before *Soviet Physics—JETP* commenced publication. This would include Vols. 16–27 (1946–54) of the Russian journal; *Soviet Physics—JETP* started with Vol. 28 (1955). For this purpose, the files of the Special Libraries Association Translation Center will be used.

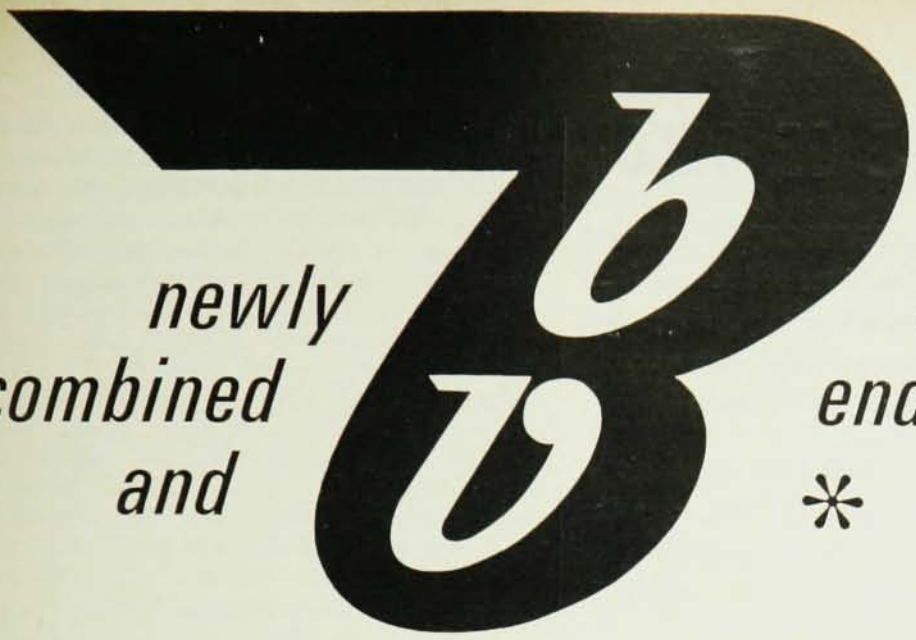
The Special Libraries Association Translations Center, instituted in 1946, is a depository and information center for unpublished translations of scientific data. Translations made by various nongovernmental institutions are donated to the Center, which offers inexpensive copies. As of June 1963, a total of 77 500 translations were available from the Center. About 60 percent are translations from Russian and 40 percent from other languages. By an agreement in 1959 between the Center and the Office of Technical Services, the SLA collects translations from foreign and domestic nongovernmental sources; translations from foreign and domestic governmental agencies are collected by the Office of Technical Services of the Department of Commerce. Copies of all translations are available at both centers. *Technical Translations*, a semimonthly issued by the OTS, indexes all newly deposited translations and lists translations available from all known sources: commercial translators, works in progress, and journals translated cover-to-cover. (Subscriptions are $12 a year; foreign subscriptions $16.)

Band Spectroscopy

A collection of tables entitled *The Red System* ($A^2\Pi - X^2\Sigma$) *of the CN Molecule*, photographed, measured, and analyzed under the direction of Sumner P. Davis and John G. Phillips, has been published by the University of California Press as Volume 1 of the Berkeley project for the analyses of molecular spectra. The 214-page book (priced at $9.50) represents the first results of a continuing program to provide complete tabulations of the analyzed spectra of certain molecules of astrophysical interest.

The project, according to investigators Phillips and Davis, had its origin in a 1956 letter from Charlotte Moore Sitterly to William F. Meggers, president of the Joint Commission for Spectroscopy, in which Dr. Sitterly made an urgent request for the systematic study of molecular spectra which are known only incompletely or imprecisely. A subcommittee consisting of G. Herzberg of the National Research Council of Canada, R. S. Mulliken, professor of physics at the University of Chicago, and F. A. Jenkins, professor of physics at the University of California at Berkeley, was formed to outline a program, assign work to laboratories, and select a form of publication.

Meanwhile, John G. Phillips of the Berkeley Astronomy Department was investigating the possibilities of employing computers in the analysis of band spectra. In 1959, after he had shown that the use of computers could effect great savings in both time and effort, the project was begun under the direction of Drs. Jenkins and Phillips. After Dr. Jenkins died in



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1960, Sumner P. Davis, who had joined the project during the previous year, took over his responsibilities. A three-year grant from the National Science Foundation provided funds for equipment and salaries.

The red CN system, which appears prominently in the spectra of carbon stars and sunspots, was selected as the first to be studied because of its wide spectral range (from about 4370 Å to the region beyond the photographically accessible infrared). The tabulations cover the 39 bands which are sufficiently intense to be recognized in photographic plates, using a relatively high-temperature laboratory source, such as an arc. In addition to CN, the molecules selected for study during the program include C_2, TiO, AlH, NH, BH, MgH, SiH, HgH, SiF, BO, and ZrO.

Review of Materials Science

The National Academy of Sciences—National Research Council and the Office of Naval Research have collaborated in a 771-page survey of materials science entitled *Perspectives in Materials Research*. The study came about as the result of the need felt by the National Academy and the ONR Metallurgy Branch for a comprehensive statement on the state of knowledge and the important problems in the science of materials. Funds for the study were provided through an ONR contract, and the Division of Engineering and Industrial Research, NAS–NRC, was given the responsibility of administering it. An Advisory Committee on Perspectives in Materials Research, headed by Academy president Frederick Seitz, was set up, which organized panels of scientists to prepare the series of individual-area perspectives included in the volume. The book's 12 chapters are devoted to the science of materials; cohesive properties of solids; magnetism and magnetic materials; electrical, optical, and thermal properties of solids; diffusion and mass transport in solids; phase transformations in the solid state; growth, structure, and morphology of crystals; mechanical behavior of crystalline solids; surface phenomena; structure and properties of liquids; effects of radiation on materials; and techniques and instrumentation. The volume has been published by ONR as number 10 in the series, *Surveys of Naval Science*, and is available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for $4 a copy.

Bibliography on Magnetism

The 1962 AIP–AIEE Conference on Magnetism and Magnetic Materials has undertaken the distribution of Volume 2, and Part 1 of Volume 3, of the *Index to the Literature of Magnetism*. The *Index* is published on a semiannual basis by Bell Telephone Laboratories and originally was intended for the use of the Laboratories' staff. It includes references from the literature on ferro-, ferri-, and antiferromagnetism and superconductivity. Volumes 1 and 2 contain 1000 and 1400 references, respectively, from the 1961–1962 literature; the