aim of devising a modern course in physics for secondary schools and of preparing teaching materials to go with it. As originally conceived, the Science Study Series was to provide supplementary reading material in the PSSC physics course. The primary aim of the books, however, is "to bridge the ever-widening gap" between scientist and layman. Some of the books will portray physics and physicists at work, others will be biographical studies, and still others will be intended to enable the reader to make his own investigations and experiments. The Series will consist of original titles, with an occasional reprint of an outstanding work, brought up to date when necessary, and the publishing program will be guided by the PSSC board of editors consisting of Paul F. Brandwein (Harcourt, Brace and Co.), John H. Durston (Educational Services Inc.), Francis L. Friedman (Massachusetts Institute of Technology), Samuel A. Goudsmit (Brookhaven National Laboratory), Bruce F. Kingsbury (Educational Services), Philippe LeCorbeiller (Harvard University), Gerard Piel (*Scientific American*), and Herbert S. Zim (Simon and Schuster, Inc.).

The paperbound books will be somewhere between 120 and 160 pages in length and are expected to be priced at less than $1.00. It is planned that they will appear at a rate of about fifteen a year. The first five books, all scheduled to be published in September, are *The Neutron Story* by Donald J. Hughes, *Magnets: The Education of a Physicist* by Francis Bitter, *Soap Bubbles and the Forces Which Mould Them* by C. V. Boys, *Echoes of Bats and Men* by Donald R. Griffin, and *How Old is the Earth?* by Patrick M. Hurley. Wesleyan University Press (Columbus 16, Ohio) will make the Series available, at special education rates, to students and teachers in secondary schools, while Doubleday Anchor Books will handle their popular distribution.

The Office of Science Information Service of the National Science Foundation (1951 Constitution Ave., N. W., Washington 25, D. C.) has available upon request a revised and expanded edition of a detailed survey entitled, *Providing US Scientists with Soviet Scientific Literature*. In addition to listing 76 Soviet journals currently available in English, the survey reports on the sources of Soviet scientific literature, the availability of such literature in the US, and the current translation programs of professional and academic groups and government agencies. Current methods of providing comprehensive coverage of untranslated Russian material are also analyzed. The survey also considers some of the problems besetting the Soviet's own information system, the All-Union Institute of Scientific and Technical Information, which issues information abstracts of the majority of papers in some 1800 Soviet and 12 000 non-Soviet serials. The survey indicates that only a few subject indexes to the thirteen series of abstracts have been issued, and that punched card and computer techniques are being explored to facilitate the task.

As a part of Project Sherwood, R. L. Kelly of Stanford Research Institute has prepared for the University of California Lawrence Radiation Laboratory a 470-page tabulation of emission lines in the vacuum ultraviolet region of the spectrum. The list is being assembled from published data and includes all measured lines of the known states of ionization of the elements between 6 A and 2000 A. It will be printed as a finding list for each element as well as a finding list for all elements with the less intense lines removed. The numbers of lines are approximately 30 000 and 20 000 for the two sections. A list of strong lines for each ion will be included. The document, *Vacuum Ultraviolet Emission Lines,* will be obtainable from the Office of Technical Services, Department of Commerce, Washington, D. C.

Education

A 43-page report comparing the training of Soviet and US undergraduates in physics and mathematics has been prepared by Edward M. Corson, professor of mathematical physics at the University of Delaware, for the US Department of Health, Education, and Welfare. The document, entitled "An Analysis of the 5-Year Physics Program at Moscow State University", has been distributed by the Office of Education as a part of its "Information on Education Around the World" series.

The Moscow State physics curriculum is contrasted with the curriculum offered at Columbia University and the "tentative findings", according to the report, are that great differences in the two curricula are apparent. "The Moscow university student apparently has intensive and advanced precollege training in mathematics and physics. General physics, considered in the broad sense, is also developed and special and advanced areas of physics are undertaken from this broad base and continued in depth to parallel the student's courses in higher mathematics. In contrast, the American student generally enters his university with less preparation in mathematics and physics and his university courses are less advanced and proceed more slowly. Advanced areas of study do not, therefore, reach as high a conceptual level as in the Russian system.

"A pattern seems to emerge," Dr. Corson writes, "in which the Soviet curriculum appears to maintain a 2-year acceleration lead, in comparative levels of subject-matter achievement, over the corresponding American curriculum." This pattern, he observes, is reflected in such courses as atomic physics, electrodynamics, electronics-radiotechnology, nuclear physics, thermodynamics-statistical physics, and quantum mechanics.

The Atomic Energy Commission has announced a new program of special fellowships for advanced training in health physics offering five fellowships per year (beginning with the 1959–60 academic year) for work leading to the doctoral degree in related disci-

plines such as radiation physics, chemistry, biology, or engineering. Subject to approval, fellows may attend the graduate school of their choice to work upon problems of their own choosing. Applicants should have basic training in health physics, preferably at the graduate level, and must have shown by not less than two years of productive experience that they possess the potential to become top-level health physicists. They should preferably be not over 32 years of age and are expected to devote full time to their studies. Appointments will carry a stipend of $4000 per year, plus $400 for each dependent. In addition, funds up to $2500 per year are available to the graduate school of choice, to cover tuition and costs. Additional information may be obtained from the Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn., which will administer the program for the Commission.

The Oak Ridge Institute of Nuclear Studies has announced that it will present two three-month training sessions during the 1959–60 school year, designed for science specialists and teachers who provide special services to secondary-school science programs and conducted under a grant from the National Science Foundation. The first of the sessions will be held in Oak Ridge from September 28 to December 18, 1959, and the second is scheduled for January 4–March 25, 1960. Up to twenty participants will be accepted in each session. The training offered in these sessions is equivalent to that developed for the Oak Ridge Traveling Science Demonstration Lecture Program. The primary purpose of the program is to provide participants with subject-matter background in the major fields of science and to develop traveling-science-teacher-type materials and activities. The three-month sessions will include lectures and demonstrations in biology, chemistry, mathematics, and physics, discussions of improved teaching techniques, and methods of stimulating high-school interest in science and scientific careers. An important phase of the program will be the actual design and construction by the participants of low-cost, homemade demonstration apparatus that can be used to enhance secondary-school science teaching. The basic stipend is $75 per week for each participant plus certain additional allowances for dependents, housing, and travel. Further information and application materials are available from the Traveling Science Teacher Office, Oak Ridge Institute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tenn.

A Department of Virology has been established on the Berkeley campus of the University of California with the object of providing persons well grounded in biology, physics, or chemistry with intensive specialized instruction in the biophysical, biochemical, and biological aspects of virology. One of the few departments in any major university to be dedicated to the study of viruses, it will be closely associated with the University's Virus Laboratory, which was established ten years ago as a center of postdoctoral training and general research on all kinds of viruses. The Depart-

ment is headed by biochemist Wendell M. Stanley, Nobel Laureate and director of the Laboratory. Starting in September, lecture courses will be offered to graduate and advanced undergraduate students, to be followed later by a comprehensive laboratory course. Additional instruction will be offered, mostly at the graduate level, in the form of special study courses, seminars, and research projects. The program will lead to the MS degree with a major in virology, or to the PhD. The Department is now accepting applications from qualified students (including upper division and graduate students in other departments who wish to receive instruction in virology). A limited number of teaching and research assistantships are available.

Facilities

A Center for Nuclear Technology will be established this fall at Cornell University in Ithaca, N. Y., at a cost of more than $1.5 million. A National Science Foundation grant of $475 000 assured construction of the Center, which will include a nuclear reactor unit that can be used both for research and for training. For research purposes it will have a zero-power core obtained under the NSF grant, while the training program will employ a TRIGA (Training Research Isotope General Atomics) core, towards which the Atomic Energy Commission has granted $150 000. The training core will also be used for radioactive isotopes studies. The Center will be under the direction of Trevor R. Cuykendall and David D. Clark of Cornell's Department of Engineering Physics, and is expected to be complete by next summer.

Atlantic Research Corporation of Alexandria, Va., formally dedicated its new headquarters offices and laboratories on July 18. The ten-year-old research and development firm's major activity is solid propellant rocketry, but it has also carried out a variety of chemical, electronic, and engineering projects for governmental and industrial sponsors.

A contract for the construction of a Metals Development Building at the Ames (Iowa) Laboratory of the US Atomic Energy Commission was signed on June 22. The cost of the entire project, including equipment and utilities, will be $1.9 million. Construction of the building is expected to be completed sometime in 1960.

The Leach Corporation has opened a new solid-state research laboratory at its Relay Division in Los Angeles to augment the firm's development and test work on semiconductor devices.

On July 27, Raytheon Company dedicated its new Spencer Laboratory in Burlington, Mass. To be used for the research and development of all types of microwave tubes including, at present, magnetrons, amplitrons, traveling-wave tubes, backward-wave oscillators, and klystrons, the new facility is named for Raytheon's senior vice president, Percy L. Spencer, a pioneer in microwave tube development. During the dedication ceremonies, the firm revealed that the Spencer Laboratory, in addition to containing space for laboratories, offices, and a technical library, will house a 100-foot-long modulator for testing high-power microwave tubes, which will be constructed as part of a special $4 million program to be initiated by Raytheon in the near future. The modulator will be placed in a special wing of the new laboratory.

Georg Joos, professor of experimental physics at the Technische Hochschule in Munich, Germany, died on May 20. Born in 1894, Prof. Joos was educated at the Institute of Technology in Stuttgart and at the University of Tübingen. He was professor of theoretical physics at the University of Jena from 1924 to 1935, and in the latter year he was named professor of experimental physics at the University of Göttingen. During the period 1941–45 he was the scientific director of the Zeiss Works. After the war he left Zeiss to accept the experimental physics professorship at Munich, which he held until his death. Prof. Joos was a member of the Bavarian Akademie der Wissenschaften and the Akademie der Wissenschaften of Göttingen.

Karl W. Meissner, professor of physics at Purdue University, died suddenly on April 13 as the result of a coronary thrombosis. He was 67 years of age and at the time of his death was at sea, enroute to Europe. He was to have presented a paper on his recent work with the atomic beam source at the International Symposium on Interferometry held in June at Teddington, Middlesex, England, and was scheduled to spend the summer term at the University of Kiel, Germany, as a visiting lecturer in spectroscopy. He was born in Reutlingen, Germany, and received his doctoral degree from the University of Tübingen in 1915, where he studied under Paschen, Roentgen, and Sommerfeld. In 1925 he was called to the University of Frankfurt-am-Main, where in 1930 he became the director of the Physics Department. His refusal to compromise the basic principles of democracy and human freedom led to his dismissal in 1937 by the Nazi regime, and in the following year he came to the United States as assistant professor of physics at the Worcester Polytechnic Institute in Massachusetts. He joined the physics faculty of Purdue University in 1941 and remained there in charge of the spectroscopy section.

Prof. Meissner was the first to prove experimentally the existence of oxygen and sulfur in the sun. In 1935, independently of Minkowski and Bruck, he developed the atomic beam method for the study of hyperfine structure. From 1942 on he was interested in the development of an atomic beam light source for the primary standard of length. In his experiments with this source at Purdue he succeeded in reducing the half width of the calcium line λ4226 A to less than one third that of any other line proposed as a primary standard. Just one month prior to his death he suc-