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ELECTRODYNAMICS. Lectures on Theoretical Physics. Volume III. By Arnold Sommerfeld. 371 pp. Academic Press Inc., New York, 1952. $6.80.

News and views

Scientific Manpower

A Federal Policy is Born

One of the summer's more important but almost unnoticed events occurred on September 6th, when Manpower Policy No. 8 was issued by Acting Secretary John R. Steelman of the Office of Defense Mobilization to define the government's position regarding the training and use of scientific and engineering manpower. This over-all policy, recommended by the interagency Manpower Policy Committee, its Committee on Specialized Personnel, and the national Labor-Management Manpower Policy Committee of the Office of Defense Mobilization, assigned to government agencies the responsibility for making specific contributions to the program for the utilization and training of scientists and engineers. While the policy recognized that many of its recommended activities were already under way in individual industrial firms, educational institutions, professional organizations, and in government, it is also clear that much remains to be done before solutions can be found for the underlying problems which have made such a policy statement necessary.

Much of the pessimism concerning the threatening shortage of scientific manpower has been based on evidence that the numbers of scientists are not increasing nearly as fast as is the need for their services. At the same time there is a growing recognition that the immediate situation might seem less gloomy if more attention could be given to the efficient employment of scientists and to improving the avenues of scientific communication and liaison so that unnecessary duplication of research effort might be reduced to as low a level as possible. Several federal agencies have taken steps in these directions. The Atomic Energy Commission, the Department of Defense, and the National Advisory Committee for Aeronautics, for example, have for some time collaborated in a review of the research and development programs of the three agencies, which together account for the great bulk of all research and development work performed by or sponsored by the government, with a view toward reducing the demands on scientific manpower to the minimum level consistent with the national security.

Present minimum requirements of the long-term national defense program call for the production and improvement of military equipment for an armed force of 3.7 million, provision of a reserve supply of key equipment sufficient to meet the first year's need of any full

mobilization, assistance for other nations in building up their military strength, and the maintenance of a vigorous civilian economy for an increasing population. The importance of scientists in all phases of the program is constantly increasing, and if the need should arise for additional projects requiring further major expenditures of scientific effort, as might almost certainly be expected, the existing shortage seems guaranteed to become critical.

It might be remembered that an originally compelling reason for the establishment of the National Science Foundation was to provide a single coordinating agency concerned with all aspects of science and with its conservation as a precious national resource. In establishing the agency, the National Science Foundation Act of 1950 called upon NSF to develop a national policy for the promotion of basic research and education in the sciences and to carry on various programs of scientific support, evaluation, and cooperation. Unhappily, the Foundation has had to function during its first two years of existence with only a fraction of the relatively modest budget allowed under the Act. This has led to serious curtailment of some parts of the NSF program at a time when all signs indicate that the most strenuous effort will be needed to avert a nation-wide shortage of scientists that could prove crippling to the plans of government and industry alike. It is possible that with the election out of the way the next Congress will be able to approach science, as an important element in the national welfare, with such enlightened bipartisanship that the National Science Foundation may receive financial encouragement to carry out its programs on the scale originally planned.

Industrial Physics

Columbia Reports Team Research Study

As part of the Columbia University School of Engineering studies of research administration, a project has been under way for the past year and one-half to examine the use of scientific research teams in industrial research operations. One portion of the survey, which has to do with data on personnel employed and needed by industrial research laboratories, has recently been released. A questionnaire distributed to the approximately 3300 industrial research laboratories listed by the National Research Council resulted in 1436 codable answers covering a total of 44,639 professional research workers in physics, chemistry, biology, engineering, and other categories. Of these, 1988 are listed as physicists.

One of the more striking aspects of the survey is that at the time the questionnaires were returned (early this year) an increase of about twenty-five percent in the total number of physicists thus employed was indicated by the responding laboratories as required in industrial research by January 1953. It is pointed out in the survey, however, that the reported estimates of personnel requirements by 1953 do not necessarily represent statistical estimates for all industrial laboratories.

AIP Placement Service

At Cambridge APS Meeting Next Month

For the past several years the American Institute of Physics has conducted a placement register for the benefit of physicists seeking employment and for that of employers seeking physicists to fill jobs. Although the placement service register operates continuously at the Institute offices, its most prominent role has been played at the large Winter Meetings of the American Physical Society and, on several occasions, at the APS Spring Meetings in Washington, D. C. This service is considered an essential part of the Institute's efforts on behalf of the physics profession, and it is an encouraging fact that since its establishment large numbers of physicists have been aided in contacting the personnel representatives of university, industrial, institutional, and government laboratories, and that many mutually satisfying placements have resulted.

This winter's "New York" meeting of the Physical Society, which is *not* going to be held in New York but rather at Harvard University in Cambridge, Massachusetts on January 22–24, 1953, will also include a placement service register. Organizations wishing to post notices of available positions may send descriptions of the openings on 8½ x 11-inch paper in multiple copies (fifteen are required) to the Institute office, or post them upon arrival at the meeting. Pre-registration for applicants seeking new positions is essential, and application forms and further information can be obtained by writing to the Institute.

In order to insure their inclusion at the Cambridge placement register, registrants' completed qualification forms and employers' descriptions of open positions must be received by the Institute office no later than *January 12, 1953.* Registrants and employers should report to the placement desk upon arrival at the meeting to receive code numbers and further instructions. Personal contact, through the arrangement of interviews, is the primary objective of the placement register, and it is therefore to the advantage of both employers and registrants to be present. The qualifications of those seeking positions will, however, be available for inspection whether or not registrants are present, and employers who are unable to attend the meeting may send descriptions of vacancies for posting.

All correspondence relating to the foregoing should be addressed to Mrs. Marjorie Robinson, Placement Service Register, The American Institute of Physics, 57 East 55th Street, New York 22, N. Y.

Radio Astronomy

Harvard Observatory Program Announced

A research program aimed at attempting to determine the structure of our galaxy through a study of the great clouds of hydrogen which float in the Milky Way is soon to be initiated by the Harvard Observatory under the direction of Bart J. Bok and Harold I. Ewen. Plans have been announced for construction of a radio