The Foundation also announced an award of $29 400 to the American Academy of Arts and Sciences, Boston, for a two-year policy study entitled "History of Activities of the Federal Government in Science", to be carried out under A. H. Dupree. Three additional awards were granted under the category "Dissemination of Scientific Information". Two of these are for projects at the Library of Congress: "Study of Publications Stemming from Defense-Related Technical Reports" (D. E. Gray), and "Establishing and Operating a Center for Recording, Reporting, Duplicating, and Distributing Translations of Scientific Literature" (R. L. Zwemer). The third went to the U. S. Department of Agriculture Graduate School (R. R. Shaw) for an "Investigation of the Effectiveness of Information Sources Available to American Scientists".

Zernike Awarded Nobel Prize

For Discovery of Phase Contrast

Fritz Zernike, professor of theoretical physics at Groningen University, in Holland, has been named to receive the 1953 Nobel Prize in physics for his invention of the phase contrast microscope, a contribution not only to physics but also to biology and medicine because of its usefulness in the study of living cells. Dr. Zernike's discovery of the principle of phase contrast dates from the early thirties when he attempted, without success, to interest a famous German optical firm in the idea. "They said," Dr. Zernike is reported to have recalled, "if it was practical they already would have developed it". Phase contrast is used in observing thin, almost transparent, objects, such as living tissue, which differ optically from their surroundings only in refractive index. Phase changes in wavefronts of light passing through such an object are converted into changes in light intensity by use of an optical system employing an annular substage diaphragm and an annular quarter-wave plate, which has the effect of making the object seem either more or less bright than its surroundings. Dr. Zernike was also honored just one year ago by the British Royal Society, which presented to him its Rumford Medal.

Translations Pool

Established at Crerar Library

The Special Library Association, in cooperation with the Crerar Library, Chicago, has announced a new translation program aimed at increasing the availability of translations in a number of technological fields, including physics. A nucleus of some 1300 translations has already been deposited in the Library, and listings are expected to be available shortly. Because the usefulness of the pool will depend upon the number of translations collected, the Association says it will welcome contributions of complete translations or the opportunity to microfilm such documents, with permission to lend or reproduce in photocopy being a condition of deposit. In view of the emphasis currently placed upon Russian scientific translations by the National Science Foundation's translating program, the Association plans to concentrate on translations from languages other than Russian. Contributions and requests for a price list or information on the availability of translations should be addressed to the S. L. A. Translations Pool, John Crerar Library, 86 East Randolph Street, Chicago 1, Illinois.

AEC Unclassified Contracts

37 Awarded for Physical Research

A total of 37 unclassified physical research contracts with universities and private research institutions has recently been announced by the Atomic Energy Commission. Among the ones concerned with physics are:

Carnegie Institute of Technology (R. Smoluchowski), "Properties of Grain Boundaries and Lattice Imperfections" and "Radiation Effects"; Columbia University (W. W. Havens, Jr.), "Neutron Spectroscopy and Nuclear Physics"; Columbia University (J. L. Kulp), "U-Pb Method of Age Determination"; Duke University (H. W. Newson), "Fast Neutron Cross-Sections and Shell Structure"; University of Florida (D. C. Swanson), "Electrostatic Generator Program"; University of Illinois (F. Seitz), "Experimental and Theoretical Investigation of Radiation Damage in Solid Materials"; Kansas State College (C. M. Fowler), "Precision Beta-Ray Spectroscopy"; University of Michigan (H. R. Crane), "42-Inch Cyclotron Program"; University of Minnesota (J. H. Williams), "50 Mev Linear Proton Accelerator"; University of Nebraska (T. Jorgensen, Jr.), "Mechanism of Energy Transfer of Slow Ions"; North Carolina State College (K. O. Beatty, Jr.), "Measuring the Thermal Conductivity of Poor Conductors"; Pennsylvania State College (T. F. Bates), "An Investigation of the Mineralogy and Petrography of Uraniferous Shales and Lignites"; Stanford University (E. L. Ginzton), "Limitations of Electron Linear Accelerators"; Vanderbilt University (S. K. Haynes), "Precision Beta-Ray Spectroscopy"; and University of Wisconsin (R. G. Sachs), "Theory of Light Nuclei".

Radiation Research

New Journal to Appear Shortly

A new journal entitled *Radiation Research*, to be the official organ of the Radiation Research Society, will be published bimonthly by Academic Press. *Radiation Research* will publish original articles on all aspects of the effects of radiation (ionizing, visible, ultraviolet, and infrared) on matter, and is meant to be of interest to physicists, chemists, biologists, and medical researchers. The managing editor of the journal is Titus C. Evans of the College of Medicine, State University of Iowa. The first issue is to appear in February 1954, and information about subscriptions may be obtained from Academic Press Inc., 125 East 23 Street, New York 10, N. Y.