

High Energy Nuclear Reactions

By A. B. CLEGG, *Jesus College, Oxford*. This is an account of interactions of nucleons, with energies of 100 MeV and more, with nuclei. Particular attention is given to certain reactions, elastic scattering and knockout reactions, whose mechanisms can be understood relatively simply. The reasons for this simplicity are described, along with the resulting features seen in experimental measurements. 7 figures. \$2.90

The Flight of Thunderbolts

Second Edition

By SIR BASIL SCHONLAND. Starting with an account of the thunder magic of primitive peoples and its place in the ancient world, the author goes on to give the history of lightning damage to buildings and ships before Franklin's invention of the lightning rod, and then describes Franklin's experiments and their sequel. The book was first published in 1950 and for this second edition extensive revisions have been made in the light of recent scientific knowledge. The later chapters contain fresh information on fireballs, the mechanism of lightning generation, protection of buildings, whistler atmospherics, and artificial rainmaking.

40 illustrations. \$4.80

The Special Theory of Relativity

Second Edition

By J. AHARONI, *Imperial College of Science and Technology, London*. Several new sections dealing with relativistic electrodynamics have been added to this second edition, along with description of recent developments concerning electromagnetic mass. Dirac's relativistic equation of motion of a charged particle is treated in detail, as well as the Wheeler-Feynmann absorber theory. The book is suitable for advanced undergraduate or graduate students and does not require extensive knowledge of Tensor Calculus or Group Theory. Knowledge of the physics of classical dynamics, Maxwell's theory and elementary quantum theory is assumed. 30 figures. \$11.20

Oxford University Press
New York

PUBLISHING NEWS

Reliability Physics Notebook

One approach to determining the operating life expectancy of electronic devices has been outlined in the *Reliability Physics Notebook*, prepared by reliability and solid-state scientists at Battelle Memorial Institute's Columbus Laboratories for the Rome Air Development Center at Griffiths Air Force Base in New York.

The notebook contains 254 pages, including 60 figures, which outline techniques, procedures, and data in six areas: mathematical models in reliability physics, aging and failure mechanisms; physical properties of materials and processes pertinent to reliability physics, accelerated testing, reliability screening procedures, and the use of statistical methods in reliability physics experiments.

The volume, edited by H. Clay Gorton of Battelle, is available from the Clearing House for Federal Scientific and Technical Services, US Department of Commerce, Washington, D. C. 20230.

Apparatus

Three volumes concerning the improvement of physics apparatus for laboratories and lectures have been prepared by the American Institute of Physics and American Association of Physics Teachers Center for Educational Apparatus in Physics.

The first, *Physics Apparatus, Experiments, and Demonstrations*, is a bibliographic guide listing the educational literature in physics on experiments, demonstrations, laboratory instrumentation and techniques, and sources of apparatus, equipment, and materials. The titles, most of which are intended for the undergraduate, do not include texts and standard reference works.

The second publication, *Physics Experiments and Demonstrations*, is an annotated subject index of papers dealing with experiments or demonstrations, selected from the *American Journal of Physics* in the years 1933 to 1964. *Apparatus Notes*, the third

volume, is a reprinting, with a keyword index, of the two-page apparatus note section of AJP which has appeared in the Journal since 1960.

All three publications are available from the AIP, 335 East 45th Street, New York, N. Y. 10017.

Measurements and calibrations

A survey of the degree of accuracy in measurement now existing in the United States is the subject of *Accuracy in Measurements and Calibrations, 1965*, edited by W. A. Wildhack, R. C. Powell, and R. L. Mason and published by the National Bureau of Standards.

The book has 145 pages of charts which plot the limits of uncertainty of a given quantity ranging from pico units to giga units and discussions covering the six basic quantities of the International System and derived quantities in the fields of electricity, metrology, mechanics, thermal, radiation and radio. It is available as NBS Technical Note 262, at a cost of \$1.00 from the Superintendent of Documents, US Government Printing Office, Washington, D. C. 20402. One section of the book which covers calibration services from d-c into the microwave region available at the NBS Boulder Laboratories is also being published as a 93-page separate volume, *Accuracy in Electrical and Radio Measurements and Calibrations, 1965*. It is Technical Note 262A and costs fifty cents.

Conference proceedings

Several conference proceedings have recently been published by CERN. All are available from CERN, 1211, Geneva 23, Switzerland. W. O. Lock is editor of Volume I and F. Dahl-Jensen is editor of Volume II of the proceedings of the Vth International Conference on Nuclear Photography, which was held in September 1964. This is CERN publication 65-4. The proceedings of the conference on program-