ABROAD *Continued from page 35*

tutes, with funds set up by the Italian government (theoretically 200,000,000 lire, but actually 100,000,000 lire for 1947). Although this sum is small and cannot compare with those supplied to American institutions, it is enough to keep research from stopping entirely. In addition, the Rome physics institute and some others have been aided by business firms and private enterprises.

It follows from all this that for the next several years most of the Italian research will be addressed, necessarily, to those fields which do not require a large outlay of money, such as cosmic-ray studies. In any event it is hard to say whether normal physical progress can persist in this situation. The greatest and most unavoidable danger is the continuing departure of physicists to other countries, especially to the United States, where they may have better research equipment and living conditions.

E. AMALDI

BOOKS *Continued from page 25*

emplifies its own quotation from a characteristically exquisite piece by Maxwell, ending: "scientific truth should be presented in different forms, and should be regarded as equally scientific, whether it appears in the robust form and the vivid colouring of a scientific illustration, or in the tenuity and paleness of a symbolical expression."

E. O. Salant
Brookhaven National Laboratory

TECHNIQUES OF OBSERVING THE WEATHER. By B. C. Haynes. 272 pp. John Wiley & Sons, Inc., New York, 1947. $4.00.

Excellently illustrated. In simple language it describes cloud forms, meteorological instruments, and a homemade observing station. Tables are included.

Gordon A. Atwater
American Museum of Natural History

ENERGY UNLIMITED. By Harry M. Davis. 273 pp. Murray Hill Books, New York, 1947. $4.00.

Physics in the best style of the news magazines, clearly written and beautifully illustrated. It shares with that medium an over-excited view of headlines and gadgets. It makes no demand on the reader and is just a little shallow.

Philip Morrison
Cornell University

PHYSICAL SCIENCE AND HUMAN VALUES. 181 pp. Princeton University Press, Princeton, New Jersey, 1947. $3.00.

The papers and discussions of the Nuclear Science Session of the Princeton Bicentennial Conference are here presented with a foreword by E. P. Wigner. This material, dealing with society's influence on science and science's influence on society, was edited and coordinated by K. K. Darrow. The sections of the Conference devoted to scientific problems of a technical nature are not recorded in this book.

Books Received

THE NAMING OF THE TELESCOPE. By Edward Rosen. 110 pp. Henry Schuman, Inc., New York, 1947. $2.50.

TECHNIQUES GENERALES DU LABORATOIRE DE PHYSIQUE. Vol. I. Edited by J. Surugue. 433 pp. Centre de Documentation du Centre National de la Recherche Scientifique, Paris, 1947.

STUDIES AND ESSAYS: Presented to R. Courant on his 60th Birthday January 8, 1948. 470 pp. Interscience Publishers, Inc., New York, 1948. $5.50.

YALE SCIENCE: The First Hundred Years 1701–1801. By Louis W. McKeehan. 82 pp. Henry Schuman, Inc., New York, 1947. $2.50.

THE EARLY WORK OF WILLARD GIBBS IN APPLIED MECHANICS. Assembled by L. P. Wheeler, E. O. Waters and S. W. Dudley. 78 pp. Henry Schuman, Inc., New York, 1947. $3.00.

KERNPHYSIK UND MEDIZIN. By Gerhard Schubert. 344 pp. Muster-Schmidt, Goettingen, 1947.

ELECTRONIC TRANSFORMERS AND CIRCUITS. By Reuben Lee. 282 pp. John Wiley & Sons, Inc., New York, 1947. $4.50.

DISSOCIATION ENERGIES AND SPECTRA OF DIATOMIC MOLECULES. By A. G. Gaydon. 239 pp. John Wiley & Sons, Inc., New York, 1947. $5.00.

RADIOACTIVE TRACERS IN BIOLOGY. By Martin D. Kamen. Second printing. 281 pp. Academic Press Inc., New York, 1948. $5.00.

SURFACE CHEMISTRY FOR INDUSTRIAL RESEARCH. By J. J. Bikerman. 464 pp. Academic Press Inc., New York, 1948. $8.00.

JOURNAL *Continued from page 14*

Counters

During and since the war great improvements have been made in the theory and application of particle and quantum counters. For the benefit of those interested in counting techniques but who have not had firsthand experience with all the various counters and who wish to acquaint themselves with the factors which make different counters adaptable to different problems, a review has been written of the operating mechanisms and special properties of the commonly-used counters. Details of calibration and measurement techniques have not been treated, nor has auxiliary electronic equipment, such as scalers or discriminators, been discussed.

The following subjects are covered: Ionization counters —the theory of pulse shape, the effect of the counting gases, characteristics of amplifiers, slow and fast counting, signal-to-noise ratios, and counter geometry. Proportional counters—gas multiplication, pulse shape, counting gases, time resolution, and details of construction. Geiger counters—the gas discharge mechanism, counting gases, pulse shape, dead times, recovery times, random time lags, efficiency, life time, and counter construction.

Similar discussions are given about electron multipliers, photo-multiplier-phosphor counters, and crystal counters.

R. R. W.

Particle and Quantum Counters
D. R. CORSON, R. R. WILSON
Review of Scientific Instruments, 19: 207, April 1948