Fast-Neutron Spectroscopy. Suppl. No. 6 of *Atomnaia Energiia,* 1958. By B. V. Rybakov and V. A. Sidorov. Edited by N. A. Vlasov. 121 pp. Consultants Bureau, Inc., New York, 1960. Paperbound $12.00. *Reviewed by Evans Hayward, National Bureau of Standards.*

A REVIEW of all the methods in current use for the measurement of neutron energies in the range 0.3 to 30 Mev is presented in *Fast-Neutron Spectroscopy* by the Soviet physicists Rybakov and Sidorov. Spectrometers that depend on the (n, p) cross section or on specific nuclear reactions are discussed. There is, and certainly should be, heavy emphasis on the time-of-flight technique with which the authors obviously have a wealth of experience. A detailed description of their own spectrometer, one of the best in the world, is included.

This is a very useful handbook for the specialist. It contains plots of the characteristics of the cross sections used for detecting fast neutrons, corrections that must be applied to different counters, a table for converting neutron energy to time-of-flight, and a host of other data. Diagrams of the various spectrometers and of the physical layouts for specific experiments are also included along with typical spectra obtained with each.

In spite of its many virtues, this book is not worth its exorbitant price to the usual experimentalist.

Transistors. Principles, Design, and Applications. By Wolfgang W. Gärtner. 675 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1960. $12.50. *Reviewed by D. Keefe, Lawrence Radiation Laboratory.*

THIS is one of the most comprehensive and complete books published to date on transistors. The author devotes roughly half the volume to semiconductor physics and the design and properties of transistors; the remainder is devoted to practical applications of transistors. He has succeeded in his effort to present the complete picture at a pace which places no great demands on the average engineer or physicist who wishes to learn the properties of transistors and how to use them. In particular a great deal of emphasis has been placed on the characteristics of the various types of transistors as circuit elements, and the analysis of many of the practical circuits described is carried through in considerable detail. Among these are high- and low-power amplifiers for low frequencies, narrow- and wide-band amplifiers for high frequencies, and various forms of oscillators. Perhaps some physicists would like to see the short chapter on pulse circuits expanded in a later edition.

There is a liberal use of figures and diagrams, the average being one to every other page; a good fraction of these are graphs containing information on transistor parameters and characteristics and are a helpful summary for the designer. At the end of each chapter, references are given to the original literature where more details or elaboration of points in the text may be found, thus adding to its value as a source book.