fundamental ideas of photometry and spectroscopy, and three chapters are devoted to the determination of the brightnesses of the stars, to spectroscopic methods, and to special observations of the sun, such as the photography of prominences and the use of the spectrohelioscope.

O. STRUVE

Conférences d'actualités scientifiques et industrielles. Paris: Hermann & Co., 1929. Pp. viii+271. Fr. 35, unbound.

This volume combines several lectures which were given in 1929 at the Conservatoire National des Arts et Métiers, and which were intended to popularize the more recent advances in physics. The authors have reduced to the minimum the use of mathematical formulae and have devoted their attention especially to the discussion of fundamental principles. From the point of view of the astronomer, the following lectures are especially interesting: L. de Broglie ("The Recent Crisis of Wave Optics"), E. Bloch ("Atoms of Light and Quanta"), L. Dunoyer ("The Photo-electric Cell and Its Applications"), G. Ribaud ("The Radiation of Incandescent Bodies"), and L. Bloch ("The Structure of Spectra and the Structure of Atoms"). The administration of the Conservatoire National des Arts et Métiers is to be congratulated for having published this important volume.

P. SWINGS

Introduction à l'étude de la mécanique ondulatoire. By L. DE BROGLIE. Paris: Hermann & Co., 1930. 8vo. Pp. xvi+288. Pl. 1. Fr. 85, unbound; Fr. 95, bound.

The author begins this book with an account of those problems of classical mechanics which are useful in the study of wave mechanics (equations of Lagrange, Hamilton, and Jacobi). He then develops the fundamental ideas of wave mechanics and the equations for the propagation of waves in different cases (absence of field, constant field, and variable field). One chapter is devoted to the diffraction of electrons in crystals. Other chapters deal with probability as considered in the new mechanics of photons, with the uncertainty relations and with the objection of Einstein. The author also discusses the wave associated with the motion of a system of corpuscles and with the interpretation of the stability of motions in the old quantum theory and in the wave mechanics.

In this book the author has explained the transition from the old to the