SHORTER NOTICES

A Manual of Field Astronomy. By Andrew H. Holt. New York, Wiley, 1917. 10 + 128 pp.

This book is designed to meet the demand for something "less extensive than most texts on the subject and yet more complete than the usual chapters on the subject in books on surveying." It is "planned especially for engineers, rather than astronomers, the methods described being those for use with field instruments under ordinary field conditions."

After an introductory chapter, the various systems of coordinates and the astronomical triangle are explained. Then follow chapters on Measurement of Time, The American Ephemeris and the Nautical Almanac, Problems in Conversion of Time, Corrections to Observations, Observations for Latitude, Azimuth, Time and Longitude. The appendix contains the derivations of the necessary formulas in spherical trigonometry, a description of the solar attachment for transits, a set of tables, and a number of typical problems completely solved.

The treatment is eminently practical throughout. Under each topic there is given: first, the relations and theory on which the method depends, then the procedure is outlined, step by step, under the general headings: *Computation preceding field work, Field work,* and *Computation following field work.* This outline is supplemented by reference to the solution of a typical problem. Thus the student learns exactly what things he is to do, and exactly how, when, and in what order, he is to do them.

The diagrams are excellent, the book is attractive in make-up, and on the whole this is the best brief treatment of the subject that the writer has seen.

C. H. Currier

The Elements of Theoretical and Descriptive Astronomy. By the late Charles J. White. 8th edition, revised by Paul P. Blackburn. New York, Wiley, 1920. 11 + 309 pp.

Originally published in 1869 to meet the requirements of the U. S. Naval Academy, successive editions "have simply brought the treatment of the subject up to date without making material changes in its form." The book is largely a discussion of theoretical astronomy, descriptive astronomy being treated very briefly. Thus in the chapter on the planets, Mars is dismissed with a page, while two pages are devoted to a discussion of how to find the heliocentric longitude of the node of a planet. No exercises to be solved or questions to be answered by the student are inserted.

Some important topics are either left out altogether or treated briefly. Thus there is no mention whatever of standard time in the chapter on