

BOOK REVIEWA Complete Manual of Amateur Astronomy

P. Clay Sherrod, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1981, 319 pages, \$24.95, cloth; \$10.95, paper.

Mr. Sherrod's book, A Complete Manual of Amateur Astronomy, will offer direction and purpose for new as well as experienced amateur astronomers. The book does a superb job of introducing the amateur to the major areas of astronomy where valuable contributions can be made.

The first chapter covers the selection of a telescope and provides a wealth of information that will aid in the purchase of a telescope. However, the value of a fully and easily rotating reflector tube is not mentioned. For variable star observers this is a critical matter that should be emphasized. A review of available star atlases is also provided.

Chapter 2 covers instrument set-up and maintenance. It is one of the best I have read on these topics.

Chapter 3 provides detailed information on how to observe meteors, and Chapter 4 deals with the observation, photography, and discovery of comets. Like Chapter 3, it gives very clear and detailed information on equipment, star charts, magnitude estimations, plotting of path, use of a filar micrometer, position determination, and photography. Information describing a comet search program and instructions on reporting suspected new comets are also provided.

Chapter 5, "Amateur Studies of the Sun", covers equipment, sunspots, and the Zurich/Wolf number. The reader is advised to send monthly reports of all data to the Solar Division of the AAVSO.

Chapter 6 provides extensive coverage on observing different types of lunar features, and offers some very interesting discussions of these features. Estimation of the age of lunar features is briefly covered. Two charts of prominent features with accompanying photographs to the same scale are provided. The determination of feature heights by shadow-length measurement is also covered.

Lunar occultations are covered in Chapter 7. Again, a very detailed description of equipment and procedures is presented. The various types of occultations are also discussed.

Chapters 8, 9, and 10 deal with the observational studies of Mars, Jupiter, and Saturn, respectively. Excellent coverage is provided on equipment and how to observe and record data of the various features. Numerous sketches are reproduced, and the author discusses observations of the various features of Mars, the belts of Jupiter and Saturn, and the ring system of Saturn.

Chapter 11 provides a very interesting discussion on visual photometry of minor planets. Examples of how to plot the paths and changes in brightness are well done, and the discussion on why some asteroids change in brightness includes some excellent diagrams.

Chapter 12 deals with a subject very dear to my heart, "Studies of Variable Stars". The capabilities of instruments of various sizes is well covered. The section on observing procedure is a little too brief for my taste, but does give a good introduction to the subject. A description of various types of variable stars and their characteristic light curves is given, and the chapter concludes with a

section on how to conduct a search for novae and supernovae.

The author strongly emphasizes the value of setting circles as a quick way to locate variables, although he does not point out that one of the most famous variable star observers, the late Leslie C. Peltier, rarely used setting circles.

Chapter 13 deals with an introduction to photoelectric photometry and the last chapter, 14, discusses astrophotography. Types of equipment and their uses are covered. Exposure graphs of film speeds, shutter speeds, and focal ratios are provided for lunar work, for full, quarter, and crescent phases. Similar graphs are also provided for planet work, lunar eclipses, solar work, and solar eclipses.

This review cannot begin to describe all the material contained in A Complete Manual of Amateur Astronomy; a great deal of it is original and has never before been in print. I feel most amateur astronomers would benefit from reading this book.

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