

the circumpolar circle to the rim of the map. The ecliptic has an obliquity of about 24°. The Milky Way (The River of Heaven) is outlined. The purpose of the map is primarily astrological; the identification of many stars shown on it is a hopeless task.

This publication is a companion work to "A Korean star map," by W. Carl Rufus and Celia Chao (*Isis*, 1944, 35, 316-326).

ALEXANDER POGO

Carnegie Institution of Washington

The earth and the stars. C. G. Abbot. New York: D. Van Nostrand, 1946. Pp. xii + 288. (Illustrated.) \$3.75.

This book by Dr. Abbot is like a tour in the universe of space and time with a guide who is enthusiastic and optimistic and has an interest in people as well as in stars. The author impresses the reader not only with the vastness of the universe, but with its beauty, its unsolved problems, and the significance of intelligent life.

The material of the 1926 edition has been rearranged, some has been omitted, and much new has been added. The print is larger and the paper better. A few inadvertent slips have been noted which could be corrected by a sheet of errata inserted by the publisher in each copy of the book. Plates referred to in the text as XIII, XX, and XXII are missing; plates of different subjects bear those numbers.

The author begins with descriptions of appearances. Then he explains interpretations given them, from ancient myths to results obtained with modern equipment. Two chapters on the sun include a discussion of the sun's periodicities, their influence on weather, and the possibility of utilizing the power in solar radiation. So modest is the treatment of Dr. Abbot's own part in these researches that the reader would not realize how large it is. Topics related to astronomy, such as atoms, calendars, star places, and navigation, are explained. In the last chapter, "Some Famous Astronomers and Famous Instruments," are described feelingly the high lights of astronomical history from Hipparchus to the construction of the 200-inch telescope. Appendixes contain astronomical tables, a brief explanation of tides, a glossary, and an index.

LEAH B. ALLEN

Hood College, Frederick, Maryland

Making your own telescope. Allyn J. Thompson. Cambridge, Mass.: Sky, 1947. Pp. xi + 211. (Illustrated.) \$3.50.

This volume contains a reasonably consecutive set of directions for the construction of a reflecting telescope of 6-inch aperture and 48-inch focal length. After a brief account of the discovery and development of the telescope, the author gives a list of the materials and equipment needed to make the telescope mentioned above, and proceeds to tell how to grind the mirror, prepare a pitch lap, and polish and figure the mirror. He describes the making of a diagonal mirror, but limits himself to the description of three common types of eyepieces, Huyghenian, Ramsden, and Kellner, referring the reader to other books for complete details on their construction.

Plans are given for two equatorial mountings made from standard pipe fittings. In the chapter "Aluminizing and Cleaning," the author assumes that the telescope maker will send his

mirror away to be aluminized and says only that "instructions for silvering by the Brashear and other processes may be found in optics, telescope making and physics laboratory texts."

Mr. Thompson has served as an instructor in telescope-making classes at the Hayden Planetarium in New York City; his book indicates that he has met most of the problems encountered by amateurs. Many of the solutions proposed are the standard ones, tried and proven by several decades of American amateur telescope makers. Considering how often the mirror and tool stick together for an unskilled amateur, the author's suggestion, "If this occurs, use a carpenter's wooden clamps to separate them, or wedge the tool on a bench, hold a block of wood against the side of the mirror, and free it with a sharp blow of the hammer," seems like powerful medicine. A little more emphasis on prevention and one or two less drastic cures would make worthwhile additions to the book.

The author appears to be optimistic about polishing (2-6 hours, p. 67) and needlessly pessimistic about figuring (15-25 hours, p. 196). When the testing of three nearly-plane surfaces against each other is discussed (p. 102), no mention is made of 'saddle-shaped' surfaces, which are common in small sections of plate glass; no clue is given as to what may be done with them. Other small omissions are noted, but a second edition will doubtless take care of them in due time.

As it is, the book is an excellent one for the man who is making his first reflecting telescope.

CHARLES H. SMILEY

Ladd Observatory, Providence, Rhode Island

Scientific Book Register

FEDERER, CHARLES, and FEDERER, HELEN. *Splendors of the sky*. (2nd ed. rev.) Cambridge, Mass.: Sky, 1947. Pp. 36. (Illustrated.) \$3.35.

GAMOW, GEORGE. *Atomic energy in cosmic and human life: fifty years of radioactivity*. Cambridge, Engl.: at the Univ. Press; New York: Macmillan, 1947. Pp. x + 161. (Illustrated.) \$3.00.

JONES, HAROLD SPENCER. *John Couch Adams and the discovery of Neptune*. Cambridge, Engl.: at the Univ. Press; New York: Macmillan, 1947. Pp. 43. \$7.5.

LEY, WILLY. *Rockets and space travel: the future of flight beyond the stratosphere*. New York: Viking, 1947. Pp. viii + 374. (Illustrated.) \$3.75.

SPURR, J. E. *Features of the moon*. Pt. I: *Geology applied to selenology; the Imbrian Plain region of the moon*. Pt. II: *The features of the moon*. Lancaster, Pa.: Science Press, 1945. Pp. x + 112 (Pt. I); xiii + 318 (Pt. II). (Illustrated.) \$5.00.

STERNS, MABEL. (Compiler.) *Directory of astronomical observatories in the United States*. Ann Arbor, Mich.: J. W. Edwards, 1947. Pp. x + 162. (Illustrated.) \$2.85.

———. *Harvard College Observatory, the first century: a review of the past and a preview of the future*. Cambridge, Mass.: Harvard College Observatory, 1946. Pp. 94. (Illustrated.) \$1.00.