

physics for the initiate, and as a useful reference (and in part text) for the novice.

Astrophysical Quantities. By C. W. Allen. 263 pp. (The Athlone Press, England) John de Graff, Inc., New York, 1955. \$10.00. *Reviewed by Arthur Beiser, New York University.*

In most fields of science there is a good deal of quantitative information that an active worker must have handy in order to operate efficiently. The usual procedure is to write some numbers down on a scrap of paper or perhaps in the back of a notebook; the source and vintage (and, sometimes, the meaning) of most of the numbers are omitted. Now C. W. Allen has come to the rescue of the astrophysicist with an impressive compilation of relevant data, from the interior of the earth to the most remote nebulae. Even the Greek alphabet is provided. In fact, the very bulk of information included in the book makes this reviewer a bit uneasy—a nonspecialist in a particular subject might attribute a greater significance to a given number, presented without qualification, than it may deserve. An example is a list of the characteristics of the ring current around the earth presumed to account for certain geophysical phenomena, figures by no means universally believed. This caveat excepted, however, Professor Allen has rendered a valuable service, and his book will be appreciated by the student as well as by the professional astronomer.

Microwave Spectroscopy. By C. H. Townes and A. L. Schawlow. 698 pp. McGraw-Hill Book Co., Inc., New York, 1955. \$12.50. *Reviewed by M. L. Stitch, Varian Associates.*

This is the third book published with the title "Microwave Spectroscopy". But in so far as the microwave spectra of gases is concerned, it is the first definitive work to appear.

The work (and the term is used advisedly as this is no rambling collection of descriptive material interspersed with ill digested formulae plucked from the blue) is a cohesive reference-text-book which, as the authors assert, treats fully "those phases of the theory of molecular spectra which older types of spectroscopy have not been able to test adequately. . . . In addition, some attention is directed toward obtaining information about nuclear and molecular properties from the interpretation of molecular spectra".

The 18 chapters are divided into 14 which are mainly theoretical and 4 which are concerned with practical aspects, techniques, and apparatus of microwave spectroscopy. In addition, there is an unusually complete bibliography up to January, 1955 and 149 pages of useful and in many cases rare tables.

The theory is handled in a pleasing way. Almost every chapter begins with simple physical principles and models and, using many examples, proceeds to

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This text was designed to up-grade the worth of the physics laboratory in the present day curriculum.

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