

calculated from theoretical assumptions by Vineyard et al, Erginsoy, and others, with a computer.

Thus, the book is of importance for those who wish to have explanations of observed radiation-damage phenomena.

Some possibilities for exploration of damaged material are mentioned in the last chapter. Changes in lattice parameter, in which the reviewer is interested, and in density are not mentioned.

A short subject index concludes the well written and printed book.

M. E. Straumanis is professor at the Graduate Center for Materials Research, University of Missouri at Rolla.

Concise two-year text

DISCOVERING PHYSICS. By Philip E. Heafford. 262 pp. Philosophical Library, New York, 1965. \$6.00

by Robert L. Weber

P. E. Heafford (Department of Education, University of Oxford) has written this concise text for a two-year course to meet the requirements of the various regional C.S.E. examination boards. It is also intended for use by pupils who will take the "O" level with another text book at about age 16. The emphasis and the sequence is in line with recommendations of the Association for Science Education (formerly the Science Masters' Association).

The book is characterized by brevity, simplicity, appeal to everyday experiences and interests, clear drawings, graphical and diagrammatic analysis, minimal mathematics, good use of charts to summarize phenomena and properties, and suggestions for student experiments. Most chapters end with a set of discussion questions and numerical problems. Answers are given for the problems.

A commendable feature of this syllabus is that it begins with light and vision. Lens properties are treated entirely by ray diagrams. This section probably builds a student's confidence in his ability to make observations and to generalize from them. The chapter on dispersion and color

would have benefitted from color illustrations.

There follow six chapters on properties of matter, eight on mechanical and heat energy, four on vibrations and waves, and eight on electrical energy. This is essentially a balanced presentation of classical physics although such terms as neutron, radar, transistor and electron beam are mentioned. In a book of such brevity it is perhaps inevitable that some references are too cryptic (e.g., Roemer's measurements, page 6). Some terms seem to be introduced unnecessarily (for example, rare and dense mediums, page 19; pure spectrum, page 25). In other cases, an explicit definition of a term would seem more helpful than circumlocution (for example, virtual image, page 9). The illustrations are generally appealing and informative, though the heat-buckled rails of figure 16.3 are not very realistic.

Since *Discovering Physics* is so concise and yet is intended for a two-year program, its value would have been enhanced by a list of recommended supplementary reading. It is, however, a clear and stimulating text at the level intended.

Robert L. Weber is a professor of Physics at The Pennsylvania State University.

Solving particular problems

THE THEORY OF STOCHASTIC PROCESSES. By D. R. Cox and H. D. Miller. 398 pp. Wiley, New York, 1965. \$11.50

by George Weiss and Kurt Shuler

One of the more popular topics to appear lately in textbook and monograph form is stochastic processes. Since none of these books have been written specifically for the physical scientist, the reader cannot expect a complete discussion of stochastic problems of direct interest to the physicist. Nevertheless, one can judge the utility of a mathematics text on stochastic processes for the physical and chemical community on the basis of whether it presents the formal developments of the subject in such a way that the reader can apply it to problems of



NEW KERR CELL LASER Q SWITCH

- ☐ Controllable
- ☐ Giant pulses
- ☐ Long life
- ☐ Easy to use
- ☐ Brewster angle or standard
- ☐ For ruby or neodymium
- ☐ Also for photo shuttering

These new Kerr Cell Laser Q Switches are available in many configurations with a variety of accessories.

Beckman & Whitley also offers rotating-mirror, liquid, and thin-film Q switches. For information contact us at 441 Whisman Rd., Mountain View, Calif. 94040.

Beckman & Whitley
A SUBSIDIARY OF TECHNICAL OPERATIONS INC.

ATMOSPHERIC PHYSICS RESEARCH

Qualifications for this position include a PhD degree in Physics or Physical Chemistry or a related field and an interest in the physics and chemistry of the atmosphere. Research experience in elementary processes of atomic physics would be highly desirable.

This position entails a combined effort in laboratory investigation of chemical or photo-chemical processes occurring in the earth's atmosphere, and field investigation of the upper atmosphere utilizing sounding rockets and aircraft. The field work will receive extensive support from other Sandia organizations experienced in airborne instrument development and aircraft and rocket field operations. This position is in an established group of scientists engaged in experimental and theoretical investigations of atomic collisions.

All qualified applicants will receive consideration for employment without regard to race, creed, color, sex or national origin. Sandia Corporation, a prime contractor of the U.S. Atomic Energy Commission, is a Plans for Progress Company; an equal opportunity employer. U.S. citizenship is required.

Send resume to Professional Employment Section 559, Sandia Corporation, Albuquerque, N.M.

SANDIA CORPORATION



ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA