

how futile it is trying to change opinions in either direction, and will hardly expect Professor Rocard to fare any better.

Be that as it may, Rocard has given a definite and detailed prescription for a test (pp. 67-76, 2nd ed.), the first objective one ever proposed for dowsing. Whosoever feels called upon to deny the effect may repeat the test, and let us have his results. In the meantime the message from *Le Signal du Sourcier* is clear. In Anglo-Saxon monosyllables it is: put up or shut up.

Kleines Lehrbuch der Physik. (5th Ed.) Ohne Anwendung höherer Mathematik. By William H. Westphal. 265 pp. Springer-Verlag, Berlin, 1963. DM 18. Reviewed by Walter G. Mayer, Michigan State University.

There is one problem which confronts the teaching communities of many

countries: how to present physics to the student who "does not master the basic elements of higher mathematics and is terrified by a simple derivative". Professor Westphal set out to attempt a solution and, as far as the German-speaking student is concerned, he appears to have been rather successful since his little textbook has seen five editions in the last fifteen years.

The "little textbook" deals primarily with classical physics. The first two chapters discuss mechanics, the next section is on heat, followed by two chapters on electricity and magnetism. One section deals with optics and general radiation phenomena, and the last chapter is simply entitled "Atoms".

It would be incorrect to say that the author has tried to give the reader a sense of security by avoiding topics which may be difficult to understand. He only avoids calculus—but

makes extensive use of formulas, frequently in such a manner that it is the formula which proves the point and not a lengthy description. There are no numerical examples, nor are there any exercises. The book lists facts and laws.

Since this book is frequently used by students of medicine and biology, it is encouraging that the new edition includes an improved section on x rays. This particular group of readers may also have profited from a somewhat enlarged discussion of nuclear and radiation physics. Although many aspects of modern physics are described, it appears as if these topics received a little less attention than the thorough treatment of classical physics. Nevertheless, the reader should find this book to be a good, noncalculus, well-illustrated introduction which contains a great deal of basic physics.

BOOKS RECEIVED

ACOUSTICS

A Course of Lectures on The Theory of Sound. By S. N. Rschevkin, Transl. from Russian by O. M. Blunn. Translation edited by P. E. Doak. 464 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$12.50.

ASTRONOMY & ASTROPHYSICS

The Universe of Time and Space. A Course of Selected Lectures in Astronomy, Cosmology and Physics. S. T. Butler and H. Messel, eds. 291 pp. (Pergamon, Oxford) Macmillan, New York, 1964. Paper \$2.95.

Observations during The Eclipse of February 1961. (Sixth AGARD Ionospheric Research Committee Meeting, Naples, May 15-20, 1961). Luciano de Socio, ed. 53 pp. (Pergamon, Oxford) Macmillan, New York, 1964. Paper \$3.75.

Habitable Planets for Man. By Stephen H. Dole. 158 pp. Blaisdell, New York, 1964. \$5.75.

ATOMIC & MOLECULAR PHYSICS

Soviet Maser Research. D. V. Skobel'tsyn, ed. Transl. from Russian. 186 pp. Consultants Bureau, New York, 1964. Paper \$27.50.

The Structure of Atoms. By Verne H. Booth. 204 pp. Macmillan, New York, 1964. Paper \$2.95.

Masers and Lasers. How They Work, What They Do. By M. Brotherton. 207 pp. McGraw-Hill, New York, 1964. \$8.50.

BIOPHYSICS & MEDICAL PHYSICS

Progress in Biophysics and Molecular Biology, Volume 13. J. A. V. Butler, H. E. Huxley, and R. E. Zirkle, eds. 328 pp. (Pergamon, Oxford) Macmillan, New York, 1963. \$12.75.

Personnel Dosimetry Techniques for External Radiation. Their Application in Nuclear Installations. Symp. Proc. (Madrid, April 1963) 510 pp. European Nuclear Energy Agency, Paris, 1963. Paper \$8.00.

The Toxicology of Radioactive Substances. Vol. 2, Radioactive Cobalt, Sodium, Phosphorus, and Gold. A. A. Letavet and E. B. Kurlyandskaya, eds. Transl. from Russian by R. E. Travers. (Pergamon, Oxford) Macmillan, New York, 1963. \$12.50.

Radiation Hazards and Protection. By D. E. Barnes and D. Taylor. 221 pp. Pitman Publishing Co., New York, 1963. \$8.50.

Advances in Biological and Medical Physics, Volume 9. John H. Lawrence, John W. Gofman, and Thomas L. Hayes, eds. 496 pp. Academic, New York, 1963. \$16.00.

CHEMISTRY & CHEMICAL PHYSICS

Physical Chemistry. By A. J. Mee and J. C. Speakman. 719 pp. Aldine, Chicago, 1964. \$5.95.

Advances in Chemical Engineering, Volume 4. Thomas B. Drew, John W. Hoopes, Jr., and Theodore Vermeulen, eds. 374 pp. Academic, New York, 1964. \$14.00.

Classical Thermodynamics of Non-Electrolyte Solutions. By H. C. Van Ness. 166 pp. (Pergamon, Oxford) Macmillan, New York, 1964. \$6.00.

Electronic Charges of Bonds in Organic Compounds. By G. V. Bykov. Transl. from Russian by J. T. Greaves. 191 pp. (Pergamon, Oxford) Macmillan, New York, 1964. \$9.00.

The Stabilization of Polyvinyl Chloride. By Fernand Chevassus and Roger de Broutelles. Transl. from French by C. John R. Eichhorn and Esteban E. Sarmiento. 385 pp. St. Martin's Press, New York, 1964. \$16.00.