

## Introducing Two Outstanding New McGraw-Hill Books

### **PHYSICS FOR SCIENCE AND ENGINEERING**

By **ROBERT L. WEBER, MARSH W. WHITE, and KENNETH V. MANNING,**  
The Pennsylvania State University. In press

This new book gives a precise presentation of the important physical principles essential to further work in science and technology. It is the "calculus version" of the authors' highly successful text *College Physics*, giving students of science and engineering insight into complex physical phenomena. Emphasis is on the understanding of fundamental ideas and methodology, rather than on mere memorization of facts and laws. Recent developments in modern atomic and nuclear physics and concepts in quantum theory and solid state are included, along with a striking 8-page insert depicting an actual nuclear power reactor.

### **MODERN INTRODUCTORY PHYSICS**

By **IRAM. FREEMAN,** Rutgers University.  
New second edition. 510 pages, \$6.00

An important revision of a popular introductory physics text, stressing the more modern aspects of physics over the classical, with the emphasis also on the historical and philosophical aspects of the subject. It has been written primarily for an introductory course in which a previous knowledge of physics is unnecessary. Only topics contributing to the understanding of the scope, methods, aims, and conclusions of classical and modern physics are included. The treatment of nuclear physics has been brought up to date, and more material has been added on Heat and Thermodynamics.

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the individual intuition of men of genius, able to leap beyond the confines of empirically well-founded ideas to frame original concepts of the greatest power. Science has its moments of revelation too. Galileo seems to have been very little concerned with the experimental verification of his ideas of motion. It is a sobering thought that "we cannot exclude from science, which is rational, the influence of factors which are irrational."

**Analytical Experimental Physics** (2nd Revised Edition). By Michael Ference, Jr., Harvey B. Lemon, and Reginald J. Stephenson. 623 pp. U. of Chicago Press, Chicago, 1956. \$8.00. Reviewed by Arthur Beiser, New York University.

The new edition of *Analytical Experimental Physics*, like its well-known predecessor, has a refreshingly straightforward, no-nonsense approach to the teaching of physics. The authors neither skip nor slur unappetizing topics, and, in spite of this, have managed to produce what seems to be an unusually clear text. The two-column format of the book seems to help matters, except that the illustrations are consequently tiny and not always intelligible. (I might add that the book has been shrunk to only  $10\frac{1}{4}'' \times 7\frac{1}{2}''$ , and will now fit in many bookcases.) The conventional material in mechanics, heat, electricity and magnetism, and optics receives detailed treatment. Differential and integral calculus are introduced gradually and mks units are employed. Modern physics is emphasized: the radiation laws, elementary spectral theory, x-rays, the solid state, various aspects of nuclear physics and instrumentation, reactors, and cosmic rays are all discussed. Unfortunately, considering their efforts to be modern and complete, the authors' coverage of special relativity is both scanty and feeble. Still, they have done a first-class book, one that has few rivals as a pre-engineering text.

**The Language of Modern Physics: An Introduction to the Philosophy of Science.** By Ernest H. Hutten. 278 pp. (Allen & Unwin, England) The Macmillan Co., New York, 1956. \$3.75. Reviewed by Erich M. Harth, Duke University.

Van Melsen, the philosopher and historian of science, once remarked that "man has endeavored to escape philosophic problems in many ways and with a considerable display of intelligence". Hutten's new book offers physicists and others interested in science a chance to mend their ways.

The book bears the subtitle *An Introduction to the Philosophy of Science*. In this field, which is beset by controversy and fairly invites going out on some limb at every turn, the writer has shown remarkable restraint. "Nothing that I have said, or tried to say," he concludes in a final paragraph, "implies that I have a doctrine to spread, or a new -ism to found."

Following a short introduction, Hutten deals with the requirements of logic and the linguistic formulation of