
Physics in the Soviet Union. *A. S. Kompanayets.* Philosophical Library, Inc., New York. 1962. 592 p. (translation of the second Russian edition). \$7.50.

The title of this book is misleading and irrelevant. It is actually an elementary theoretical physics text.

The book, according to the author, was prepared for engineers and those working in fields associated with physics and in fact it is not suitable for physics students. The physical and mathematical level required for the reading of the book is about that of the advanced undergraduate physics major in this country.

The book is divided into four parts. Part I, Mechanics, 80 pages, is inadequate from the standpoint of a physicist; the emphasis is on the Lagrangian formulation which is fine for the parts on modern physics. Part II, Electrodynamics, 136 pages, is a good introduction although it contains very little optics; special relativity and its dynamics are discussed here. Part III, Quantum Mechanics, 183 pages, is an excellent discussion of the topic up to and including the Dirac electron. Part IV, Statistical Physics, 172 pages, discusses the three types of statistics and the statistical approach to macroscopic thermodynamics; this section is well constructed. Thus, most of the book is concerned with "modern" physics, and this approach for the non-physicist is worthwhile.

The book has a typical European format and European notation conventions are used. Illustrations are few and far between. Exercises which usually extend the text material appear throughout. The bibliography is brief but adequate, with about half of the citations being originally in English or available in English. The index is only fair. The typography is neat and clean.

For the non-physicist who wishes an introduction to modern theoretical physics, this is a good book. A physicist who for one reason or another is out of touch will enjoy reading it.

PHILLIPS B. BURNSIDE

Breakthroughs in Mathematics. *Peter Wolff.* Signet Science Library (paperback), New York. 1963. 285 p. \$7.50.

This very interesting little book attempts to supplement mathematical studies by presenting excerpts in English from the works of nine famous and significant mathematicians of the last 2200 years and, what is more important, furnishes modern commentaries on each. The intended reader is not expected to be more than a beginning student of mathematics, but anyone can read parts or all of the sections to advantage, and each section is independent of the rest so that separate reading is possible.

The author has been able to show more originality in the commentary, Part II, of each chapter. Here he has been completely successful in interpreting the classical writings with the new mathematics in view. He has also added historical notes and personal color. It is a source book which can be read again with renewed interest and value.

There is something refreshing about original works in any science and, as has been advised the best way in learning is to study the masters. There is an introduction and an excellent bibliography for further reading, as well as an index.

S. E. GANIS