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TO GET YOUR CATALOG, JUST DROP US A LINE. problem is not finished with obtaining the required formulae. It is necessary to analyse the results and this is by no means a 'mechanical' part of the solution. In particular, it is very desirable to study limiting cases." The authors are notably successful in achieving their objective. Many of the analyses cover several pages; nearly 100 clear, carefully prepared, detailed line drawings illustrate and clarify the text. Cross references to previous solutions are frequent.

The work is, in fact, a text-book on mathematical techniques for the study of particle dynamics. Its value for reference is enhanced by a list of reference works and a unique index in which relevant problem numbers are cited under topic headings, for example, 32 problems under "Magnetic fields, motion in;" is under "Perturbation theory," and so on. Frequent references to Landau and Lifshitz render concurrent availability of the Mechanics highly desirable.

The authors announce that "This collection is meant for physics students." It will interest both students and teachers and prove indispensable to serious students who have acquired only a modest mathematical sophistication.

S. L. Quimby Columbia University

Introduction to Modern Physics

J. D. McGervey 688 pp. Academic, New York, 1971. \$14.00

There are two kinds of undergraduate courses that have titles synonymous with "modern physics." The first type is the usual fourth course of a four-semester sequence in general physics for students of science and engineering, and the second type of course is normally taken during the senior year for the purpose of acquiring an in-depth integrated view of atomic and nuclear physics. The two kinds of courses are distinguished by the extent to which quantum mechanics is used as the fundamental mode of discussion.

Introduction to Modern Physics by John D. McGervey is a class-tested textbook designed for the latter type of course. It competes for attention among others with Principles of Modern Physics (McGraw-Hill, 1959) by Robert B. Leighton, Fundamentals of Modern Physics (Wiley, 1961) by Robert M. Eisberg, Introduction to Modern Physics (McGraw-Hill, 1969) by F. K. Richtmyer, E. H. Kennard and John N. Cooper, and Modern Physics and Quantum Mechanics (Saunders, 1971) by Elmer E. Anderson. McGervey's book compares very favorably with all

of these. Being a recent addition to the field, it has the advantage over older books of treating recently developed areas such as the laser, applications of the Mössbauer effect, properties of K mesons, and applications of positron annihilation (the latter being a special field of competence of the author). The text is soundly grounded in experimental physics and employs the "historical" approach without minimizing the difficulties encountered by the original experimenters. The mathematical level is appropriate for senior undergraduate students of physics, and quantum mechanics is treated in sufficient detail to provide a good introduction to the subject.

The primary aim of the book is "to give the student a feeling for the principles of modern physics . . ." The author achieves his objective by discussing a wide variety of topics in atomic, nuclear, and solid-state physics, all of which can be elucidated by applying the fundamentals of quantum theory. The author uses quantum mechanics as a tool and does not consider it an end in itself. In keeping with the level of the book, many topics in quantum mechanics, such as addition of angular momenta, are necessarily treated descriptively.

The book is clearly written and contains a number of helpful illustrative examples. The problems for the student are interesting and challenging. In general, Introduction to Modern Physics is a worthy addition to the existing texts on modern physics and should be considered for adoption by all teachers who wish to emphasize the conceptual and experimental basis of modern physics without delving extensively into the rigors of quantum mechanics.

REUBEN BENUMOF City College of The City University of New York (mate)

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Physics, An Introduction

E. C. Pollard, D. C. Huston 404 pp. Oxford U. P., New York, 1969. \$8.50

The attempt to teach physics to liberalarts students has become in the last few years a substantial effort on the part of many physics departments. It has acquired a name, "physics for poets," and, inevitably, generated an increasing number of textbooks, the latest of which is *Physics*, an *Introduction* by Ernest C. Pollard and Douglas C. Huston.

What makes teaching these presumptive "poets" such a challenge (and sometimes even fun) is the utter terror evoked by the very name of our beloved discipline, as well as the veritable communication chasm that yawns between teacher and typical student. It is therefore no mean task to instruct in such a course; writing a good text is certainly

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