sign dreams for the alternating-gradient monsters now contemplated by men with their eyes on the horizon. It's a nice book because it emphasizes principles. You are told the requirements of orbital and phase stability, and you see how these requirements are individually satisfied in the various types of machines, and how acceleration is applied at the same time. It deals also in a descriptive way with the engineering of the accelerators, but here again it is the engineering *principles* that are discussed rather than the length of this or that member or the placing of nuts and bolts. For example, a chapter is devoted to the Brookhaven cosmotron, and in it the requirement of varying the frequency of the accelerating voltage over a wide range is made clear; this then leads to an engineering discussion of how the requirement of a broadly tuned, high-impedance cavity of the right resonant frequency was met through the use of ferrite. It may be a pity that the extensive discussion of the East-Coast cosmotron has practically crowded the West-Coast bevatron out of the book, but one feels in the writing the author's having lived through the creation of the cosmotron and one senses his intimacy with the very sophisticated electrical engineering applied by the Brookhaven group to their machine. The book is very readable; simple differential equations are used as required, and explanations are helped by analogy in such spots as the discussion of phase stability (loaded pendulum analogy) and in the description of alternating-gradient focusing (optical analogy). Sometimes two or three ways of looking at a point are presented. The more classical accelerators such as direct-current machines, betatrons, microtrons, and ordinary cyclotrons are not discussed, but within its defined limitation of subject material, the book presents an enjoyable exposition.

The Compleat Strategyst. By J. D. Williams. 234 pp. McGraw-Hill Book Company, Inc., New York, 1954. $4.75. *Reviewed by Ernest A. Lynton, Rutgers University.*

In the preface to this delightful book the author states that ". . . it was felt to be worth while to try to bridge the gap between the priestly mathematical activity of the professional scientist and the necessarily blind reaction of the intelligent layman who happens not to have acquired a mathematical vocabulary". In this he has succeeded admirably, producing a thoroughly enjoyable and highly instructive primer on the theory of games of strategy.

After an introductory discussion of the aims, methods, and limitations of game theory, the reader is taken gently but firmly through a successive treatment of two-, three-, and four-strategy, zero-sum games. Each of these sections consists of a series of amusing and delightfully illustrated examples, followed by a general discussion of the pertinent methods, and concluded with a group of problems left to the reader, with solutions given at the back of the book.

This sounds rather like a textbook, and the book is in a way just that. It requires from its reader (supposedly an intelligent layman) much concentration and a good deal of work, and is most definitely not one of those insultingly sophomoric popularizations which purport to "teach effortlessly". But this book is written (and illustrated) with so much wit and charm that it quite lacks the soporific effect of so many otherwise truly instructive treatises.

An equally remarkable characteristic of the book is that from the beginning to the very end it never lets the reader forget that it is no more than a primer. There is no pretension to completeness, none of the "you too can be an expert" attitude. Instead the approach is rather: "You can have fun reading this and doing some work, and then you'll at least know what game theoreticians are talking about."

Indeed a laudable aim, which makes this book a wonderful acquisition or gift for any outsider to the field. And if any scientist buys this book for a friend, let him be sure to read it himself before rewrapping it carefully.

Textbook of Physics. Edited by R. Kronig. 855 pp. Interscience Publishers, Inc., New York, 1954. $10.50. *Reviewed by M. L. Stitch, Varian Associates.*

This textbook by a distinguished group of Dutch scientists under the editorship of R. Kronig represents in many ways a new departure in undergraduate texts available in this country.

It is novel to have a textbook, and especially an undergraduate textbook written in the "Handbuch" manner, with different authors for different chapters. It is unusual to find a chapter on medical physics and a section of biographical notes. The last has some puzzling qualifications for its choices. (Thus one, Dominique François Jean Arago, is mentioned. And while Lawrence and Millikan are included, Gibbs and Oppenheimer are ignored.) The really extraordinary thing is that despite such esoteric topics as good derivations of Debeye's theory of specific heat of solids or of Van der Waals' law, and a fairly extensive treatment of modern physics, this is essentially a text of physics at the phenomenological level which is unusually detailed and diverse, and which is suitable for sophomores and juniors with a grounding in differential and integral calculus.

Useful pedagogical devices are employed such as specially marked sections for topics of specialized interest, fine print sections for topics requiring more sophisticated mathematics, and distinguishing print for verbal formulations of important principles. There are many illustrations, and the printing and format are better than average.

Although there are no problems, the number and choice of practical examples are unusual. Thus one finds several examples of practical kinematical constraints, an automatic urinal flush ilustrated as an example of a nonharmonic relaxation oscillator, three-phase currents and rotating fields, and a discussion of spectacles.