(a table of conversion from mks to cgs units is available in an appendix), and the author provides detailed solutions of some simple problems. The section is then concluded with numerous problems, both in metric and English units, with the answer to every other problem given (why not to all of them? The habit of giving answers for only odd-numbered problems seems less justified here than anywhere else).

The whole field of general introductory physics is covered in this book: mechanics, heat, electricity and magnetism, sound, light, and some atomic physics. The general level is that of a first course, but a few non-elementary topics are included (e.g., reverberation of sound in a room). Four-place logarithms and trigonometric tables make the book self-contained.

Such a book should be the proper place to accustom students to the use of standard symbols for the units, but nt is used for newton, KW for kilowatt, and the like, and even LB and FT are used for lb and ft in the drawings.

Plasma Physics. By J. G. Linhart. 278 pp. (North-Holland, Amsterdam) Interscience Publishers, Inc., New York, 1960. $7.00. *Reviewed by D. J. Rose, Massachusetts Institute of Technology.*

LINHART'S book is not wholly good, and not wholly bad. If you are planning a one-semester course in plasma theory, you should keep it in mind. It is more satisfactory for that purpose than any of the smaller monographs on the subject and gives a somewhat broader coverage. However, watch carefully for typographical errors not included in the errata and for ambiguous figures. The treatise is strictly theoretical; the last two parts (Chaps. 7 and 8), y-clept Applications, is a brief summary of principles (of controlled fusion, electromagnetic energy generation, MHD conversion, propulsion, and energy storage). Little is said about the recent developments of the 6*N*-dimensional Liouville formulation, giving purported solutions for the plasma particle correlations. Lack of such intensive study might seem like fishing in a prepared bucket because it's simpler, rather than out in the ocean where the fish really come from. Such an appearance, while partly correct, omits the fact that assembly of the appropriate theoretical tackle for such an expedition would occupy a whole book this size. Thus Linhart chooses his material well enough for a short treatise, bringing the reader up to about the level of the Fokker-Planck equation. Complete plasma theory may share with its alchemical offspring—controlled fusion devices—the property that neither will come in small sizes. Particularly good are Linhart's analyses of individual particle motions. The fluid description starts off with the Liouville equation, conveniently explained, with the relativistic and non-relativistic Boltzmann equations, and velocity averages derived as consequences. Strangely enough, the Fokker-Planck equation is not built directly on this foundation, but is developed much later under the title of Collision and Relaxation Processes. One fifth of the book is given over to waves and instabilities. Under this topic, Linhart packs in considerable information, particularly about the oscillations of a plasma cylinder. A very useful bibilography of some 200 pertinent papers and 15 books is listed at the end.

Physique et Technique des Tubes électroniques. Volume 1, Eléments de Technique due Vide, 214 pp., 1958, 29 NF; Volume 2, Théorie et Fabrication des Tubes, 427 pp., 1960, 58 NF. By R. Champeix. Dunod, Paris. *Reviewed by L. Marton, National Bureau of Standards.*

IT would be misleading to the readers of this journal if I were to classify the two volumes of *Physique et Technique des Tubes électroniques* as books on physics. They are books on a technology used by physicists, and while they may be quite useful for them, they have not been written for the physicist but, as reflected by the organization of the book, for the technician. Both, the author and Professor Boutry, who wrote the preface, emphasize that the books have been written for the instruction of students at the Ecole Nationale de Radiotechnique and at the Ecole Française de Radio-Electricité. The present volumes indicate clearly that the instruction at these institutions is not at the university level. Wherever physics background is needed for the understanding of the phenomena some of the mathematical background is given without elaborate proof. Most of the treatment is at the technician's level.

Both volumes contain sets of problems (without solutions) for the student, which are probably the best feature of the book.

I believe that a person who is familiar with the subject may find some interesting information in these two volumes, but for a beginner I would not recommend the use of either of these volumes unless it is supplemented by ample other reading material.

Finite Difference Equations. By H. Levy and F. Lessman. 278 pp. Pitman Publishing Corp., New York, 1959. $9.25. *Reviewed by Herman Feshbach, Massachusetts Institute of Technology.*

THIS book forms an excellent introduction into a subject which is unfortunately often completely missing from the mathematical background of most physicists. Difference equations can be treated in a manner quite analogous to the procedures employed to solve differential equations; and once the fundamental background is developed (Chapters 1–3), linear difference equations with constant coefficients, with variable coefficients, eigenvalue problems as well as partial difference equations can be discussed (Chapters 4 and 8). The solution of nonlinear first-order equations is considered in Chapter 5. Chapter 7 deals with applications which are unfortunately quite uninteresting. There seems to be no treatment of the use of continued fractions. Many problems are given, together with some of the answers.