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are described. Scientific, engineering, and business applications are outlined.

This well-indexed reference will be very valuable to computer users, and especially to computer designers.

Beta Decay for Pedestrians. By Harry J. Lipkin. 117 pp. North-Holland Publishing Co., Amsterdam, 1962. Distr. in US by Interscience Publishers, Inc., New York. \$6.00. Reviewed by M. E. Rose, University of Virginia.

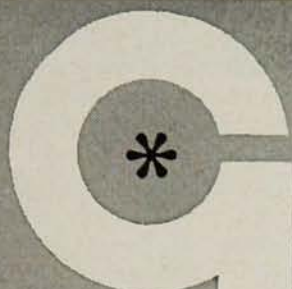
CONTRARY to what one might expect from the title, and an acquaintance with some other works from the pen of Harry Lipkin, this slim volume is not a parody. The book is not without touches of humor, but its purpose and the method of achieving it are quite serious. In slightly more than 100 pages, the author describes virtually the gamut of nuclear beta decay with machinery which is never more complicated than the vector model. The purpose is frankly pedagogic and if there is anything new for the cognoscenti it is the fact that all the effects of "parity nonconservation" in allowed transitions can be understood in a quantitative way with some elegant handwaving. This handwaving consists in large measure in the applications of the well-known conservation rules. As the author remarks, allowed transitions are simple enough so that the heavily formal techniques tend to obscure the comparatively simple reasons which underlie the results. While, in principle, even forbidden transitions could probably be discussed in the simple way adopted here, it would be a tour de force to do so. Racah algebra is extremely useful but not always essential. That is one lesson that may be drawn from these pages.

Of course, with no explicit formulation of a beta interaction something is lost, and the author makes no claims to the contrary. The student of this subject would do well to read this book, but it does not eliminate the necessity for the nonpedestrian works. In a book of this length with so little emphasis on formalism one would not expect many technical errors, and very few were found. Such as came to my notice were too trivial to detail. The format supplements the author's style and the book reads like a novel, or perhaps a novelette would be a more appropriate comparison. At any rate it is a very good novelette.

Optical Spectrometric Measurements of High Temperatures. Symp. Proc. (U. of Chicago, Mar. 1960). Philip J. Dickerman, ed. 268 pp. The U. of Chicago Press, Chicago, Ill., 1961. \$12.50. Reviewed by Eugene Guth, Oak Ridge National Laboratory.

MANY symposia these days have programs so overloaded that there is little time left for the primary purpose of any gathering—discussion. This symposium was a noteworthy exception.

There were four technical sessions, devoted essentially to the fields of astrophysics, thermonuclear



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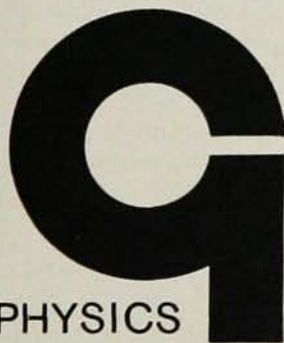
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research, arc research, and shock-tube work. A discussion of each of the invited papers (there were no contributed papers) was stimulated by discussion leaders; discussion followed from the floor. Many questions of a fundamental significance such as the appropriateness of an equilibrium assumption and an outline for future work in astrophysics, etc., were put forward.

The last session, led by the program chairman, E. U. Condon, consisted primarily of a panel discussion and was devoted to unifying the concepts discussed in the first four sessions. Several of the groups participating in the symposium described briefly their plans for future activities and the extension of their present research efforts. During the panel discussion Condon made an interesting historical remark—why is it that there is hardly any spectroscopy research going on in this country, and, what's worse, there are very few new spectroscopists being trained. "I am afraid we find ourselves in a rather difficult situation that results from this great tendency that I think has marked so much of American physics—that of following after the latest and most glamorous thing with a degree of concentration or exclusiveness that I think is rather extreme." Just recently the importance of spectroscopy became accentuated by the rapid development of plasma physics, and even more recently through the laser.

All in all, we would recommend that all who plan symposia examine these proceedings. If they conduct them in the manner described in these proceedings, we are sure most fruitful results will be obtained. The appearance of the book is very good, considering the speed with which it appeared.

Ionization Phenomena in Gases, Volumes 1 and 2. Conf. Proc. (Munich, Aug. 1961). H. Maecker, ed. 2337 pp. North-Holland Publishing Co., Amsterdam, 1962. \$43.00. Reviewed by Howard Chang, Stanford Research Institute.

DURING the past five years, it has been customary to hold an international conference on ionization phenomena in gases, usually in the fall and in a European city which has at least several good restaurants. These tomes contain the conference proceedings of the 1961 session, which was held in Munich from August 28 to September 1, 1961. As such it is not within the competence of this reviewer even to begin to comment on the contents of the approximately 250 papers included in the two volumes. However, he cannot refrain from marveling at how much mileage (literally) some authors are able to get from a single paper.

The division is not by subject matter, for the editor was guided by the general rule that papers dealing with relatively elementary processes were included in Volume 1, and he reserved Volume 2 for papers dealing with more complicated phenomena. From the logistical viewpoint, Volume 1 contains the

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