Applications which has a comparable level and, to some extent, attitude. Feller is much more precise and detailed and delves deeper in the more limited field of discrete sample spaces. Gnedenko, on the other hand, ranges (in general) over a wider class of topics (including continuous distributions and purely mathematical aspects of distribution functions), and perhaps, because of the lesser detail, is smoother and easier to read. While there is some overlap, these two books are mainly complementary, and a student of either will find it helpful to read the other.

Computer Handbook. Harry D. Huskey and Granino A. Korn, eds. 1248 pp. McGraw-Hill Book Co., Inc., New York, 1962. $25.00. *Reviewed by Peter L. Balise, University of Washington.*

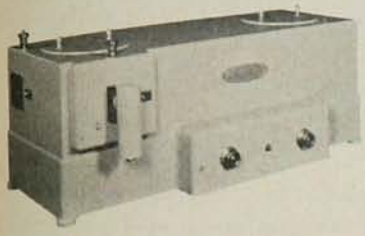
COMPUTERS have become so important that one might expect this book to have appeared sooner, except for the desirability of its publication awaiting some stabilization in the explosive growth of computer technology. Although continued development will rapidly make some parts obsolete, especially since it emphasizes equipment details, this volume contains much of long-range value. Appropriately for a handbook, it does not replace a basic text but contains a wealth of specific data.

Fully half is devoted to analog computers. The first sections give detailed circuits and response characteristics of many commercial amplifiers and other components. However, these sections also include some application data such as tables of RC networks and amplifier representations of transfer functions. Section 5, entitled "Significant Applications", is of most interest to the computer user. Besides a good introduction, it features many specific examples and more advanced applications such as random processes, partial differential equations, and linear programming. Scaling, often made unnecessarily complicated, is quite effectively and simply explained. Time scaling is presented in terms of integrator gain, and amplitude scaling by a voltage scale factor, although this reviewer prefers normalizing variables to use computer units of 100 volts. Time-delay methods and other important special techniques are presented in Section 6. Strangely, transistorized computers are isolated in Section 7. The last two sections discuss passive analogs such as networks for static and vibrating structures, conductive models, membrane analogies, and hydrodynamic analogies.

Equipment is even more strongly emphasized in the digital-computer half of the book, including for example particulars of symbol-display devices. Beginning with elements of vacuum tubes, several sections discuss in detail transistors, basic signal-modifying circuits, memory devices, logical and arithmetic circuits, error detection, program control, and input-output devices. Programming, illustrated by ALGOL, is introduced in a single section. The digital differential analyzer and other special-purpose machines are explained, and a few common magnetic-drum general-purpose computers

Vacuum Ultra-Violet Instrumentation

.5 METER SCANNING VACUUM U.V LABORATORY, SEYA-NAMIOKA TYPE TABLE OR CONSOLE—**MODEL 235**



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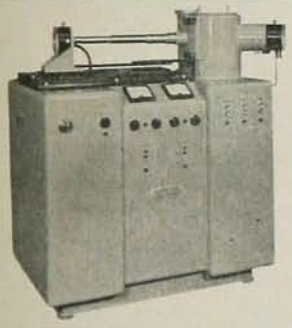
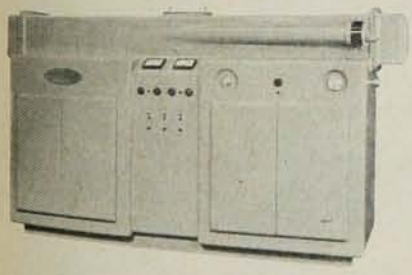


2 METER GRAZING INCIDENCE VACUUM U.V. SCANNING MONOCHROMATOR **MODEL 255**



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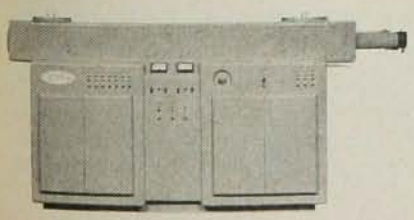

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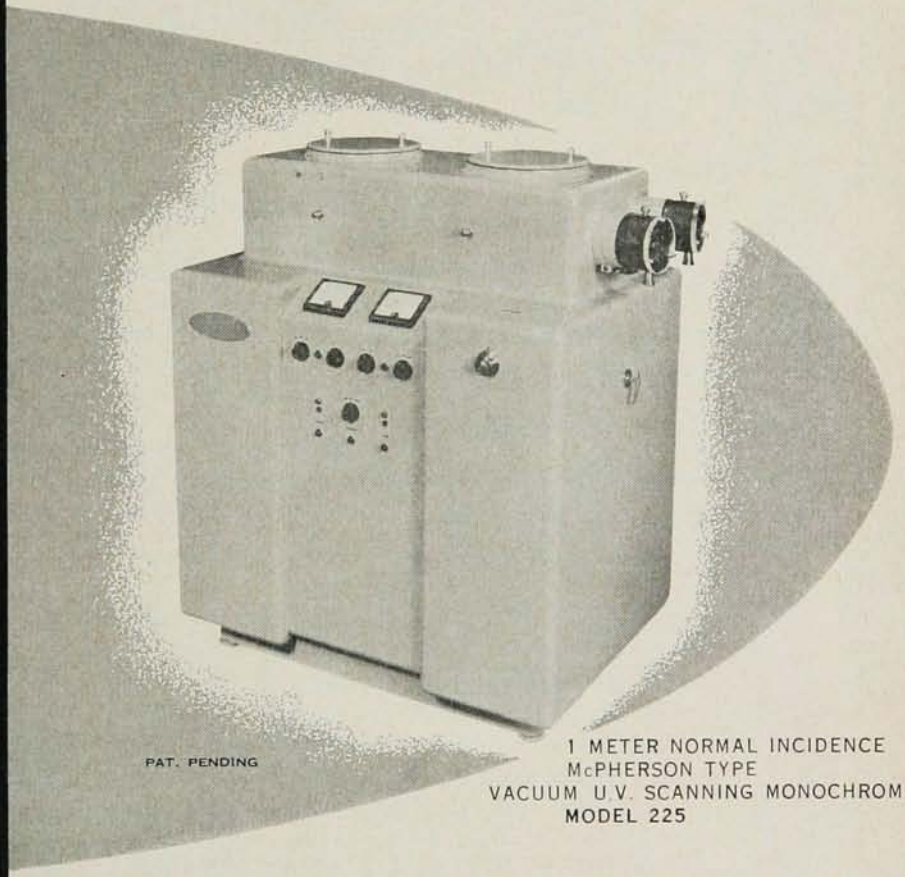

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are described. Scientific, engineering, and business applications are outlined.

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