

that a stationary Gaussian process be ergodic are easily replaced by the more elegant condition

$$T^{-1} \int_{-T}^T |C_x(\tau)| d\tau \rightarrow 0 \text{ as } T \rightarrow \infty.$$

The book is intended for the practical engineer rather than the theoretician. The list of references is very short and includes almost no theoretical work.

Emanuel Parzen is Professor of Statistics at Stanford University and the author of two books and numerous research papers. He was a Visiting Professor at Imperial College, London, in 1961-62 and at MIT in 1964. He is Associate Editor of the S.I.A.M. Journal of Control, and Chairman of the Institute of Mathematical Statistics. His PhD (1953) is in mathematics, from the University of California, Berkeley.

FOR THE MAN WHO HAS EVERYTHING

Title Internal Conversion Processes

Editor Joseph H. Hamilton

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Pages xxv + 669

Price \$22.50

Reviewer Morris L. Perlman

The analysis of measurements of radiations emitted when nuclei de-excite by internally converted transitions has yielded a great deal of spectroscopic information about the transitions themselves and about the nuclear states between which they occur. Internal conversion methods are fairly well known and they have been employed at least to some extent by most nuclear spectroscopists. This is not to say that they are so

well-worn as to be dull. Development and refinement of both experiment and theory are still proceeding; and from time to time new types of information are shown to be obtainable by use of internal conversion methods, often in combination with other types of measurements.

In 1963 at Warsaw and again in 1965 at Vanderbilt University, Nashville, Tenn., conferences were held at which internal conversion was discussed in detail. The Proceedings of the 1965 conference constitute the major part of the book *Internal Conversion Processes*, which was edited by the conference organizer, J. H. Hamilton. There were approximately 60 invited and contributed papers presented at the conference, and most of these were followed by some discussion. In addition to this material, the volume includes several survey articles covering theoretical and experimental aspects of the subject matter. Also included are several tables useful to practitioners. Most of these tabulated data—on *L*-shell particle parameters and on conversion matrix elements and phases—have not been available elsewhere.

The papers of the Proceedings are, not surprisingly, a mixed bag; they range in quality from that of excellent journal articles to that of mediocre contributions at a large meeting. Indeed, some of the better material has been appearing in journal articles. The several survey papers, making up about one-eighth of the volume, are authoritative; however, they do not differ greatly from what may be found in some of the standard works, as, for example, *Alpha-, Beta-, and Gamma-Ray Spectroscopy*, edited by K. Siegbahn.

If one wishes to have, gathered in a handy tome, general information about internal conversion theory and methods and a large amount of specific information about many of the various applications actually being made, then this work should be useful. Because it includes a plethora of references, it is useful also as an entry to the voluminous literature. This is a book which should be readily available to the nuclear spectroscopist and to the individual

interested in getting a view of the somewhat special field. It is regrettable that works of this kind are not published in some inexpensive format, perhaps such as some laboratories use for annual reports. This reviewer doubts that many individual researchers will wish to buy personal copies of this rather costly volume; but for the man who has everything

Morris Perlman is a senior chemist at Brookhaven National Laboratory, where most of his research has been concerned with nuclear spectroscopy and with problems involving atomic electrons and nuclear transitions. Prior to coming to BNL in 1949, he worked at the Radiation Laboratory in Berkeley, at Los Alamos, and for about two years with General Electric. His undergraduate work was done at Louisiana State University; his PhD (1940) is in physical chemistry from the University of California, Berkeley.

BOOK ANNOUNCEMENTS

Although the following books will not be reviewed, they may be of interest to some of our readers:

Experience and Theory, Stephan Körner, Humanities Press, 1966, 250 pp, \$7.50.

Principles of Radiation Protection Engineering, Lawrence Dresner, McGraw-Hill, 1965, 451 pp. \$15.00.

A Fortran IV Primer, Elliott I. Organick, Addison-Wesley, 1966, 263 pp, \$4.95.

Zone Melting, Hermann Schildknecht, Academic, 1966, 222 pp, \$9.00.

Fortran II and IV for Engineers and Scientists, Hellmut Golde, Mac-Millan, 1966, 224 pp, \$4.50.

High-Temperature Chemistry of Silicates and Other Oxide Systems, Nikita Aleksandrovich Toropov and Valentin Pavlovich Barzakovskii, Consultants Bureau, 1966, 216 pp, \$25.00.