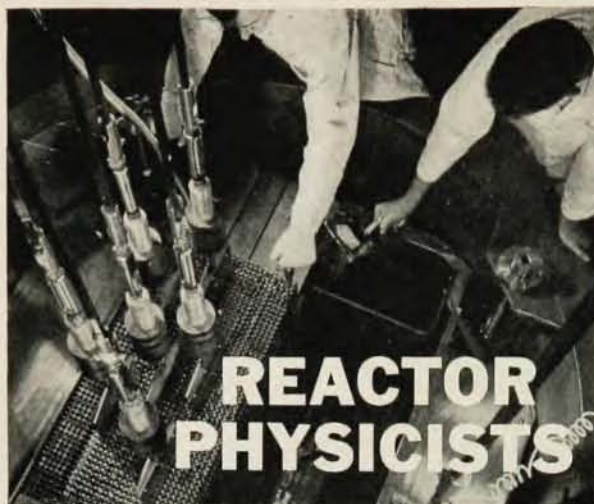




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volume. Indeed, the authors state that they do not presuppose a graduate course in partial differential equations for the general understanding of this work, but only assume familiarity with advanced calculus and matrix theory. The book is concerned with basic principles underlying the use of difference methods, and although specific reference is sometimes made to certain computers in use in the United States, no previous familiarity of the reader with these machines is assumed.

Quantum Chemistry Integrals and Tables. By James Miller, John M. Gerhauser, F. A. Matsen. 1323 pp. U. of Texas Press, Austin, Tex., 1959. \$15.00. Reviewed by Joseph G. Hoffman, University of Buffalo.

EARLIER tabulations of quantum chemistry integrals by Kotani (1955) and Preuss (1956) are herewith supplemented for the calculation, for example, of energy integrals or dipole moment integrals for one- or two-electron systems. The necessarily extensive table of functions in integral form for the determination of atomic and molecular properties is printed by photo-offset. The tables for computations are based on the standard Slater orbitals $1S$, $2S$, $2P$, etc. The orbital functions were starting points for calculations on an IBM 650, whose print-out was taken directly by photo-offset into the book. There is a nice continuity with the tables of Kotani in that the notation for the functions has been carried over without modification. It has to be noted that there is no bibliography: the only two references given in the entire book are the two mentioned above. After one page of introduction there are eight sections describing formulae and illustrating notation by means of examples. The formula sections extend to the 41st page, and the remainder of the book contains numerical tables. These are much needed tables for specialists in chemical physics, and the fundamental nature of the quantum-theoretical integrals makes the text a standard working tool. It is likely, however, that the other two tabulations by Kotani and by Preuss will be required for reference purposes because they have extensive bibliographies. The authors have succeeded in providing an excellent and complete supplement to the existing numerical tables without further documentation of the literature.

Stress Wave Propagation in Materials. Internat'l Symposium (Penn. State U., June-July 1959). Edited by Norman Davids. 337 pp. Interscience Publishers, Inc., New York, 1960. \$10.00. Reviewed by R. Bruce Lindsay, Brown University.

AN interesting development in scientific publishing and one that is steadily growing more popular is the publication in book form of invited papers presented at sponsored symposia. The volume under review resulted from an international symposium conducted at Pennsylvania State University in the summer of 1959 by the Department of Engineering Mechanics,