the theoretical basis of the experimental methods involved in the measurement of parameters used in band-theory calculations.

An elementary knowledge of free-electron theory and band theory is assumed for the reading of this book. For anyone working with energy-band calculations either theoretical or experimental, this work would certainly prove to be of great value.

Linear Algebra and Matrix Theory. By Evar D. Nering. 289 pp. Wiley, New York, 1963. $6.95.
Reviewed by Dagmar Renate Henney, University of Maryland.

The author presents ideas in linear algebra very effectively with the help of matrices. Theory and computational procedures are combined and given equal emphasis. The introductions preceding each chapter (there are six of them) are excellent and help clarify the material substantially. The discussions in the introduction as well as in the body of each chapter are also very illuminating in details. From the very beginning the author explains precisely what he sets out to do. For instance, on page 16 he mentions the differing character of existence of bases in finite and infinite dimensions. On page 71, concerning the uniqueness of the normal form of a matrix, he clearly discusses the kinds of trivial nonuniqueness which we normally tolerate. On page 69, he brings out the double use of the word "equivalence" and on page 83, the double use of "adjoint". The many trivial ambiguities which we normally tolerate in our subject, but which are perplexing to the student, are always brought into consciousness for the student so that he can quickly learn to tolerate them too.

Another good feature of the book is the quick treatment of spectral decomposition in Chapter 3. This compares especially favorably to Halmos who takes (in this reviewer's opinion) too long before leading up to this.

Nering's treatment of determinants on the other hand seems somewhat unfortunate. He departs in it from his avowed program of introducing an abstract vector space concept and then discussing the concept's expression in matrix form. This means that until he has covered the first third of his book (i.e., up to page 93), Nering cannot assign a determinant to an operator. Determinants appear as a formidable complex computational tool which fortuitously can be applied to operators, which in turn can be calculated when necessary. The reason for this lapse from Nering's avowed program of vector concepts is clear. Trilinear forms, which precede determinants, must be preceded by linear forms. The author does not want to discuss linear forms until much later, in connection with bilinear forms and inner products. The reviewer believes though that any instructor can use Nering and add the extra material on linear forms and trilinear forms before determinants, without destroying the author's organization of the subject. This book is highly recommended as a textbook.

Selected Topics in Nuclear Spectroscopy. Summer School Proc. (Nijenrode Castle, Netherlands, July-August, 1963). Compiled by B. J. Verhaar. 348 pp. (North-Holland, Amsterdam) Interscience, New York, 1964. $12.50.
Reviewed by M. E. Rose, University of Virginia.

A review of the proceedings of summer school lectures and seminars, such as this one, is useful only if the prospective audience is given information concerning the actual contents thereof. This volume contains sixteen lectures given by twelve contributors. By and large, the subject matter is concerned with three topics although, obviously, there is some overlap among them. They are: (1) nuclear structure as revealed by energy level data and as interpreted in terms of nuclear models (shell, collective), (2) nuclear structure as revealed by reaction data and interpreted by the current models (e.g., optical), and (3) weak interactions. In the last category the emphasis is on the conserved vector current theory, its predictions and the attempts to establish its validity. In addition, the induced pseudoscalar interaction is the primary object of the discussions centered on muon capture.

In detail, lectures which are to be classified under category (1) are: Collective models by K. T. Hecht, En-