

accords "au calcul sa part inévitable." That the author thus expedites matters is quite certain, but to say that the analytical attack and the implied principle of continuity are unavoidable is to forget the brilliant and fruitful labors of von Staudt and his successors.

The author has made a very judicious choice in the vast material available and has produced a book which duplicates no other single book in the existing literature. The book is written in the good traditional style of French clarity and is free of excessive condensation. The reader is further helped by the figures which appear when and where they are most needed. Bibliographical references are few in number, there is no index, and the table of contents is brief and summary.

We have quite a few books which may be used as a basis for a first course in synthetic projective geometry, particularly in English. The situation changes radically when it comes to a second course in this subject. M. Michel's book may be used to great advantage for such a purpose in our American schools, and the set of nearly one hundred exercises at the end of the book may be quite helpful in this connection.

NATHAN ALTSHILLER-COURT

*Linienpektren und periodisches System der Elemente.* By Friedrich Hund. Volume IV of the series *Struktur der Materie*, edited by M. Born and J. Franck. Berlin, Springer, 1927. vi+221 pp.

In this book a very successful attempt is made to give a recapitulation and a uniform, systematic presentation of the results obtained in the unravelling and classification of line spectra from the pioneer work of Bohr through the investigations by Catalán, Russell, Saunders, Pauli, Heisenberg, Schrödinger, and others. In order to present only one kind of problem to the reader at a time the author has intentionally made very little explicit use of the new quantum mechanics. Nevertheless, he makes a special point of calling attention to the difficulties and limitations inherent in the correspondence principle. Hence, from different points of view the book contains material which should appeal to the astronomer and the chemist as well as to the theoretical physicist and the spectroscopist.

Not only is the presentation relatively non-mathematical, in the sense that advanced analysis has been replaced by a vectorial algorithm devised by the author, but it is also unusually clear and logical. By commencing with the rough and then proceeding to the finer properties of spectra, the atomic model so-called is refined step by step until it becomes possible to give at least a qualitative account of all the details of the most complex spectra. By no means the least valuable feature of the book consists in the numerous, excellent tables which constitute the best and most extensive classification of spectral terms and relationships extant. It is thus evident that the text is an unusually valuable contribution to the field of line spectra.

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