by the Cramér and Raikov results, and much (though not all) of it is concerned with just one problem; the characterisation of the class of characteristic functions admitting only infinitely divisible factors.

The book is not easy to read, but this seems unavoidable in view of the nature of the subject matter and the classical analytic methods of attack which appear to be necessary; one proof, for example, occupies all 39 pages of Chapter 8. This having been said, however, I found the book interesting and well written.

It is, of course, a translation of one published in Russian in 1960. It is possible, as always, to detect traces of its non-English origin, but in this case they are extremely rare; the translator and the editor (who has also added various clarificatory footnotes) deserve considerable praise. The typography and physical format in general are also of a high standard. R. M. LOYNES

IKENBERRY, E., *Quantum Mechanics for Mathematicians and Physicists* (Oxford University Press, 1962), xii+269 pp., 64s.

This book is one of many textbooks on quantum mechanics which have appeared during the last few years. It sets out to provide the basis for a one-year introductory course, suitable both for mathematicians and physicists. In the American context in which the book was written such a course would be given to first-year graduate students; here it would form part of an honours degree syllabus.

Dr Ikenberry's course is fairly conventional both in scope and presentation. It begins with three chapters on the origins of quantum theory in the problems of atomic physics and electromagnetic radiation, and follows a well-trodden path up to a final chapter on the Dirac theory of the electron. It is quite a short book for one which covers so much ground, and it must be pointed out that this coverage is achieved by leaving the reader to fill in much of the detail by reading other more expanded texts and original papers as well as by working through about 350 illustrative exercises. Thus, unlike some of its more substantial contemporaries, it is not a text which is complete in itself.

For the most part Dr Ikenberry's presentation of the subject seems to this reviewer to be both clear and unexceptionable. However, the last chapter does not quite maintain the general standard. Here the author discusses the interpretation of the Dirac wave function and, in particular, the so-called " Zitterbewegung " in much the same way as Dirac himself did. He seems unaware that, as long ago as 1949, such puzzling features of relativistic quantum mechanics were clarified by Newton and Wigner in a paper which surely merits at least a reference in any up-to-date textbook.

These exceptions apart, the book is a useful and reliable addition to the available texts on the subject. P. W. HIGGS

EDELEN, D. G. B. *The Structure of Field Space* (University of California Press; Great Britain: Cambridge University Press, 1962), xiii+239 pp., 84s.

The subtitle of this book " An Axiomatic Formulation of Field Physics " is misleading, for its contact with physics is minimal. Part One, " The Axiomatic Structure of Fields ", discusses systems of field equations derived from a general Lagrangian function of a set of fields, including a symmetric affine connection, defined over a four-dimensional connected Hausdorff space. Part Two, " The Variant Field Theory Analysis of the Classical Fields ", particularises the Lagrangian in order to obtain equations for the gravitational and electromagnetic fields, either alone or coupled to a classical fluid.

The author's outlook is dominated by Einstein's view of physics as geometry, which led him to spend his later years in a fruitless search for a " unified field theory ".

https://doi.org/10.1017/S0013091500009081 Published online by Cambridge University Press