thorough discussion of angular momentum for both photons and electrons is particularly noteworthy; this aspect of quantum electrodynamics is only lightly touched by other texts. The work of Akhiezer and Berestetskii is a valuable graduate-level reference for physicists concerned with electron physics, and the serious students of atomic physics. It could also serve as an introduction to quantum field theory, although recent general texts provide broader and more readable introductions. Yet the book under review (to be distinguished from the full Russian text from which it was translated) deserves criticism on several counts.

Twelve years ago, the first Russian edition of *Kvantovaya Elektrodinamika* was published. The US Atomic Energy Commission subsequently published a complete translation (by Consultants Bureau, Inc.) as *Quantum Electrodynamics*, AEC-tr-2876. That paperbound edition is still available from the Office of Technical Services, Department of Commerce, Washington, D.C., for $2.65. The Russian text was revised in 1959, and the book under review is a translation (by the Israel Program for Scientific Translation) of selected portions from this second edition. Recently, John Wiley & Sons—Interscience Publishers have announced their publication of the entire second edition.

The earlier English edition contains, among other topics, accounts of multipole radiation, the Breit formula, the Dirac equation for a Coulomb field, internal conversion of gamma rays, positronium, spectral line widths, bound states, and energy-level shifts. These practical applications comprise some 40 per cent of that edition. Regrettably, the present publisher chose to delete all such applications from the abridged edition under review, leaving simply the chapters on the free electron, the free photons, and the S matrix. Since many Western authors are unfamiliar with this exposition of these applications, the deletion was particularly unfortunate.

In contrast to the beautiful Pergamon Press editions of Landau and Lifshitz (at comparable prices), the text here is inexpensively typed, and the Russian typography of the formulae lacks the clarity of Western typography. Furthermore, the book provides no index. While such an edition might be acceptable (although not desirable) for prompt and inexpensive publications of topical lectures, it is a shabby treatment for the second edition of a distinguished treatise.

Akhiezer and Berestetskii have written a useful book, and the second edition offers some valuable revisions of the earlier work. Nonetheless, the publication under review is no bargain. I shall be pleased to see the John Wiley & Sons—Interscience edition of this text.

Die Relativitätstheorie Einsteins. By Max Born. 328 pp. Springer Verlag, Berlin, 1964. Paper, DM 10.80.
Reviewed by Jacques E. Romain, Centre de Recherches Routieres, Brussels, Belgium.

This is the latest edition of a book which was first published in 1920. The author's purpose was to steer a middle course between oversimplified popular expositions and technical texts that are accessible only to readers with a thorough mathematical background. Clearly, this program is a challenge, and not everyone would be up to such a requirement. Professor Born surely is. That there are not many good books meeting these specifications is illustrated by the fact that a new revised edition of a forty-year-old book was thought in order by both an American and a German publisher.

If Professor Born were to write a new book on relativity today, he would probably not write exactly this one. However, the updating is effective and appears to be quite sufficient in view of the scope of the book. While using no more elaborate mathematical tools than elementary algebra, an occasional mention of differential equations (for Maxwell's equations) and a little bit of analytic geometry for the four-dimensional representation, the author manages to give a fairly detailed and quantitative account of the essential points of special relativity. Of course, as tensors are excluded the treatment of general relativity can be only qualitative. The emphasis is on the purport and interpretation of the concepts, of the measurement procedures, and of the results. Simple easy-to-repeat experiments are described and comparisons are proposed in order to help the reader grasp particular points and to convince him of the merits of unexpected statements. The author takes pains to state the main criticisms that have been formulated against relativity (especially inconsistency claims, e.g., the "clock paradox") and to explain them away. A short chapter on cosmology affords an opportunity to disclose philosophical motivations in the backs of the minds of some supporters of several cosmological theories and provides a lesson in scientific objectivity.

This edition is fully equivalent to the 1962 American edition. Therefore, as it is not cheaper than the latter, it will probably appeal to few English-speaking readers. However, it is worth mentioning that the language is clear and simple throughout, and provides easy reading to everyone with a practical reading knowledge of German.

Albert Einstein and the Cosmic World Order. By Cornelius Lanczos. 139 pp. Interscience, New York, 1965. $3.95.
Reviewed by Herbert Malamud, Sperry Gyroscope Company, Division of Sperry Rand Corporation.

Lanczos' little book is probably best described by comparing it with another, for example, the recent revised edition of Max Born's *Einstein's Theory of Relativity* (Dover, 1962). Both are intended for the non-physical-scientist, both deal with special and general relativity, and both use only elementary mathematics, algebra, geometry, and arithmetic.

Born's book, however, presents far more of the physical consequences of relativity, describing the Doppler effect, interferometry, and so on, while Lanczos' book confines itself completely to the basic meanings of the theory in terms of our view of the universe, the Cosmic World Order, in his words. Lanczos describes elegantly and clearly the geometric basis of the relativity theories and its effect on Einstein's thought, the reason that it drove Einstein to such effort to