guaranty and testimony for the fact that this book is not the work of a dilettante but of a competent and serious person who worked hard and well on both the scientific and the educational aspects of his undertaking.

In his preface, Hildesheimer claims that most of the semipopular books written by others deal either with quantum physics or with relativity but not with the whole of modern physics; moreover, those written by eminent scientists, such as Einstein, are not really comprehensible to the layman. I tend to disagree with these judgments. I distinctly recall that, as a young boy in secondary school, I read several books on relativity, among them those by Bertrand Russell and by Einstein, and that Einstein's presentation made the best sense to me. Both Gamow (in the "Mr. Tompkins" series) and Einstein (in the *Evolution of Physics,* with Infeld), have balanced their respective presentations. One thing may be said against Hildesheimer's work: like most scientists not themselves active in the field, he is overly impressed with the present accomplishments of physical theorizing. There is a great deal of discussion of controversial material of an epistemological character, although there is no mention of the Einstein-Rosen-Podolsky experiment and the ensuing discussion by Bohr and others. There is no discussion at all of quantum field theory and, more generally, of the relationship between relativistic field theory and quantum theory. But these topics should be of interest to the layman who is interested in the frontiers of science as well as its philosophic implications.

All in all, Hildesheimer's book will be of interest to those who read German fluently and who find it useful to read several semipopular books on modern physics by authors with different points of view. Such readers will find Hildesheimer's book well written and easy to understand.

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***Progress in Nuclear Physics.*** vol. 3. Otto R. Frisch, Ed. Academic Press, New York; Pergamon Press, London, 1953. 279 pp. Illus. + plates. $9.50.

This excellent volume contains a number of articles on topics in nuclear physics. The editor has apparently made the decision to keep the area covered by each author well circumscribed, permitting a rather detailed and complete review of each subject. This makes the volumes of this series complementary to its American analog, *Annual Review of Nuclear Science,* where on the whole fairly large areas are brought into perspective by a necessarily qualitative discussion.

The present volume contains a number of articles on instruments: "The diffusion cloud chamber" by M. Snowden; "Energy measurements with proportional counters" by D. West; "Solid conduction counters" by F. C. Champion; and "The production of intense ion beams" by P. C. Thonemann. Articles that have to do with nuclear physics proper are "Oriented nuclear systems" by B. J. Blin-Stoyle, M. A. Grace, and H. Halban; "Stripping reactions" by R. Huby; and "The collision of deuterons with nucleons" by H. S. W. Massey. Two topics on electrodynamics also included are "Cerenkov radiation" by J. V. Jelley and "Annihilation of positrons" by M. Deutsch. These are, of course, not properly nuclear physics; but the first has instrumental applications, while the second is of a most fundamental importance, providing sensitive tests of quantum electrodynamics as applied to the two-body problem.

It is a pleasure to record that these articles are well written, are authoritative, and for the most part are complete. The instrumental papers include sections detailing the theory of the instruments as well as giving experiments either already performed or twinkles in the eyes of the author, in which the instrument is used. We must exclude the discussion of solid conduction counters from this description, since it is hard to make them reliable. Here the author concentrates on the information of the structure of materials revealed by these investigations. The papers on nuclear physics proper present both the theory and the experiment and are careful to point out the possible experimental and theoretical avenues where further work is indicated.

The book contains a name index as well as a short subject index. Each article contains an extensive and, in itself, an extremely useful bibliography.

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***Progress in Cosmic Ray Physics.*** vol. II. J. G. Wilson, Ed. Interscience, New York; North-Holland, Amsterdam, 1954. xi + 322 pp. Illus. $8.50.

Like its predecessor, which was published in 1952, this volume consists of surveys or reports on several topics of current interest in cosmic-ray physics, written by experts in the fields covered. The usefulness of thoughtful reviews, expeditiously published, is quite obvious in such a turbulent subject; research workers will expect to find here many facts and references, collated with critical judgment, and in general they will not be disappointed. The book is satisfactory; if it misses the high level of some of the contributions in volume I, the differences are mainly that the subjects are less uniformly interesting, and the delay between writing and publication has stretched to well over a year.

The latter fact is most keenly apparent in the chapter on the heavy unstable particles. The editor has assigned himself this task and, in summarizing the experimental facts and their interpretation, has followed fairly closely the sense of the Copenhagen conference of 1952. The past year has seen some of that interpretation swept away, as new facts have clarified many difficult points (and of course raised others).

R. D. Sard and M. F. Crouch, writing on nuclear