

*La Mécanique Nouvelle, démontrée par les Principes Classiques.* By Paul Dupont. Paris, J. Hermann, 1925. xiii+150 pp.

In this volume the author tries to reconcile Einstein's restricted theory of relativity and classical mechanics. If we could regain our former belief in a fixed ether, then we might accept the author's preferred system of reference. If M. Dupont had defined physically his system of *horloges rectifiés*, then he might have given us a new variety of restricted relativity, sacrificing the constancy of the observed velocity of light to secure a linear transformation of uniform accelerations in going from one moving system of coordinates to another. Under neither hypothesis does this book achieve its announced purpose.

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*Das Lebesguesche Integral. Eine Einführung in die neuere Theorie der reellen Funktionen.* By Dr. Erich Kamke. Leipzig and Berlin, B. G. Teubner, 1925. 151 pp.

The purpose of this book, according to the author's preface, is to make the theory of measure of point aggregates and the theory of integration more accessible to students than has hitherto been the case. The contents consist of four chapters: the first treats the general theory of point aggregates; the second treats content and measure of linear point aggregates; the third and longest is devoted to the measure of plane aggregates and to Lebesgue integrals of bounded functions of one variable; and the book ends with a short chapter on the integral of Perron, with special reference to unbounded functions of one variable.

The writing of a book of this kind is beset by two difficulties: if detailed explanations are given for the sake of simplicity, the book soon expands to the dimensions of a treatise; if the material is condensed for the sake of brevity, the very person for whom it is intended finds difficulty in understanding it. On the whole Dr. Kamke has succeeded in overcoming these difficulties and has contrived to include a surprising amount of material in this little book. Many of the proofs are models of brevity and clarity and in fact these qualities are conspicuous in most of the exposition. One exception to this statement is the treatment of measure, which seems to the reviewer confusing to a beginner on account of the lack of unity in the various definitions and the inclusion of the Jordan theory of content. Another is that the notation and the numbering of the various theorems makes the verification of references to previous pages troublesome. But these defects are far outweighed by the merits of the text.

In conclusion it may be said that the book will be of most value to two classes of students: those who desire to obtain a general knowledge of Lebesgue integrals without mastering a course in the theory of functions of real variables, and those who desire a framework to be used as a basis for further study in the subject. The latter class will appreciate the numerous references to other books and periodicals.

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