profit and pleasure in its perusal. It will furnish excellent collateral reading in connection with a course on the mathematical theory of probability.

<div align="right">R. D. CARMICHAEL.</div>

An Introduction to the Mathematical Theory of Heat Conduction with Engineering and Geological Applications. By L. R. INGERSOLL and O. J. ZOBEL. Boston, Ginn and Company, 1913. vi + 171 pp.

THIS is a text on Fourier's series and heat conduction. The aim of the volume is to make the study of the subject more interesting and profitable by presenting along with the theory a large number of practical applications. These are chosen so as to make the book of direct service to geologists and engineers. Several of the practical problems which thus come in are here treated for the first time. The pulse of the concrete world throbs in every chapter and it has a healthy beat which gives one pleasure.

This book is intended for the student who has neither time nor mathematical preparation to pursue the study at great length. Consequently very little attention is given to such mathematical aspects of the theory as uniqueness, existence and convergence theorems. Hence the book will not be of special value to one interested primarily in mathematics. But its clear treatment of numerous practical applications will render it of distinct service to those for whom it was prepared, namely, students of physics and engineering who desire an elementary and brief treatment of the conduction of heat.

The arrangement of material, from a pedagogic point of view, is most excellent and deserves to be signalized with emphasis. The exposition is clear and interesting.

<div align="right">R. D. CARMICHAEL.</div>

Le Système du Monde. Histoire des Doctrines cosmologiques de Platon à Copernic. Tome premier. Par PIERRE DUHEM. Paris, Hermann, 1913. 512 pp.

THE whole of the present volume is given to an account of the Hellenic cosmology beginning essentially with that of Plato. In order that the reader may understand better the doctrines of Plato and his successors a brief exposition is first given (pages 5–27) of the earlier astronomical teachings of

Pythagoras and the school founded by him. Following this is an illuminating account of the cosmology of Plato (pages 28–101) and certain developments of it among his followers (pages 102–129).

The most interesting part of the book is that (pages 130–241) in which the "physics" of Aristotle is treated.

The remaining four (of the eight) chapters deal in order with the following topics: the theories of time, space, and the void after Aristotle (pages 242–350); the dynamics of the Greeks after Aristotle (pages 351–398); the heliocentric astronomies (pages 399–426); the astronomy of excentrics and epicycles (pages 427–496).

Throughout the book the work of the author seems to have been done with care. The exposition is good. The matter brought together is of the highest interest to every student of the history of science. There is, however, but little of it which makes a special appeal to the mathematician as such; and that little consists of such beginnings of mathematical sciences as Aristotle's argument (see pages 213–214) to prove the sphericity of the surface of still water, this being the first instance (according to our author) in which mathematical reasoning has been used to establish a law of equilibrium for heavy liquids.

<div align="right">R. D. Carmichael.</div>

Cours de Mécanique. Vol. I. By Léon Lecornu. Paris, Gauthier-Villars, 1914. vii+536 pp.

In preparing the course in mechanics given at l'Ecole Polytechnique Professor Lecornu has apparently met difficulties similar to those encountered by the teachers in the technical schools of America. In the first place the time alloted to the subject is only 37 lessons for each of two years. This has made it necessary to put a portion of the kinematics of a point into the entrance requirements, and to transfer kinematics of machines to the course in geometry and the theory of the potential to the course in analysis. All of these topics are, however, discussed at length in the present volume.

In the second place the author has had to resist a demand for the teaching of practical applications with the necessary omission of much of the pure theory. He is firm in his belief that the course in l'Ecole Polytechnique should be purely theoretical. His position is stated in the preface and, among