will x be very great, for the fact remains that gravitation is so minute, so infinitesimal in comparison with the ordinary forces with which the physicist deals, that it may well be regarded as zero in comparison with them. Given two masses of matter, one composed entirely of positive, and the other of negative electrons, we can calculate the electrostatic attraction between these masses, itself not an unduly powerful force, but one with which the physicist has frequently to deal. Calculating now in like manner the gravitational attraction between the same two masses, how much smaller is the gravitational than the electrostatic attraction? It is smaller in the ratio of unity to 10^{41}! In words, gravitation is one hundred thousand billion billion billion billion times the smaller.

In its unification of all matter and all forces in a single simple and homogeneous system the theory of relativity is certainly an attractive one, to say the least. Though it, too, may eventually pass into the limbo of discarded physical theories, its future development and possible applications will be followed with great interest.

H. D. CURTIS.

(Publications of the Astronomical Society of the Pacific, February, 1917.)

An Introduction to Astronomy, by Forest Ray Moulton, Ph. D., Professor of Astronomy in the University of Chicago, Research Associate of the Carnegie Institution of Washington. New and revised edition. xxii + 577 pages. The Macmillan Company, 66 Fifth Avenue, New York. Price $2.25.

Those teachers who have been using Moulton's earlier book with the same title will welcome this new edition. It is not merely a revision of the first edition, bringing the various paragraphs up to date, but the entire book has been rewritten and some important modifications have been made. The subject of the Reference Points and Lines has been deferred until Chapter IV and the consideration of the Earth and its motions taken up in Chapters II aud III. The study of the Constellations unfortunately is left until Chapter V, which will not be reached by the ordinary college class until the weather is too cold for out-door study. This study ought to be begun in the first weeks of the college year. The instructor, however, can easily take this up out of the text-book order.

Most of the chapters have been enlarged, especially the last, on the Sidereal Universe, the numerous discoveries made during the last ten years, rendering this imperative.

Nearly all of the illustrations are new, a large number of them coming from the splendid photographic and spectrographic work which has been done at the Yerkes and Mt. Wilson Solar Observatories within recent years.

"It is easy to see that you have begun that diagram at this end," said Sherlock Holmes, "for you have clearly tired as you went on, and I don't wonder. It was a long job!"

"On the contrary," replied the artist, "I began at the other end, and learnt how to do it properly as I went along."

Moral?—When you have the stars arranged in an evolutionary series, it may not be *quite* clear which is the youthful end?? ("From an Oxford Notebook" in *The Observatory*, January, 1917.)