Finally the theory is applied to the special case of the earth and, also, to the three other minor planets, and for the earth numerical tables are given. The question of glacial periods is handled in a moderate spirit, critically and without controversial prejudice. Since glaciation is not caused by cold winters (cf. Siberia) but by long and cold summers (that is, by cool periods of precipitation) the effect on temperate climates of a variation in the obliquity of the ecliptic combined with a high eccentricity of orbit may be quite large.

Stockwell's formula for the variations of e and ϵ are used to calculate the amount of heat received each season and the length of each season for the 500 millennia before 1850. This formula is of so complicated and empirical a form that one can have little confidence in the extreme degree of extrapolation which such a use implies. It would seem to be enough, however, to warrant the conclusion that glacial epochs could be explained if the variations have been in the past slightly greater than those given by the exact formula.

The author is to be warmly congratulated on such a thorough and critical attack on the problem of "mathematical climate." The book can be recommended, not only to meteorologists, but also to those who enjoy the clearing up of new fields in physics by the use of straightforward mathematics with numerical determinations. It would exert a broadening influence on a student of mathematical physics in whose hands it might be placed, since it combines problems from several distinct fields.

<div style="text-align: right">P. J. DANIELL</div>

Géométrie Descriptive. By Gaspard Monge. Augmentée d'une *Théorie des Ombres et de la Perspective,* extraite des papiers de l'auteur par Barnabé Brisson. Parts I and II. Paris, Gauthier-Villars, 1922. xvi + 144 + 138 pp.

These reprints, appearing in the series LES MAITRES DE LA PENSÉE SCIENTIFIQUE ably edited by Maurice Solovine, are of special interest to Americans for the reason that the descriptive geometry created by Monge was among the earliest mathematical creations of the French which reached the United States; it was taught at West Point in the first quarter of the nineteenth century. Monge's descriptive geometry was first published in the year VII (1799), but the present reprint is from the fourth (1820) posthumous edition which included also material on shadows and perspective, selected by Brisson from Monge's then unpublished papers. Of interest is Monge's estimate of the value of descriptive geometry: "If in all the larger towns there were established secondary schools, in which young men of the age of twelve years who look forward to practicing some one of the trades should be trained during two years in graphic constructions and become acquainted with the principal phenomena of nature, a knowledge of which is indispensable to them, this training, in developing their intelligence and giving them the habit and the sentiment of precision, would contribute in the surest manner to the progress of national industry."

<div style="text-align: right">FLORIAN CAJORI</div>