

article is apparently written) would have difficulty in following, partly owing to the use of many technical terms, and partly to the sudden appearance of a mathematical formula. Nevertheless, the "Notice" forms a valuable addition to the very few elementary explanations of the tides which are at present available.

The present being an odd numbered year, the tables relative to physics and chemistry are omitted, in accordance with the general plan. Some additions have been made. The most interesting is a chapter devoted to meteorology. This mainly consists of a table giving mean maxima and minima temperature in various parts of the globe and two other tables relating to the temperature and barometric pressures at Paris. As usual, several of the other chapters, in particular those on geography, have been much improved with additional matter and more recent information.

ERNEST W. BROWN.

Diagrammes et Surfaces Thermodynamiques. Par J. W. GIBBS. Traduction de M. G. ROY. Avec une Introduction de M. B. BRUNHES. C. Naud (Scientia), Paris, 1904. 8vo. 100 pp. Price 2 Francs.

THIS little brochure forming Volume 22 of this series of scientific publications is a translation into French of the two original memoirs by J. Willard Gibbs, published in the *Transactions of the Connecticut Academy of Sciences*, Volume 2 (1873), pages 309-342 and 382-404, and accompanied by an introduction serving to interpret for the modern reader the special significance of these epoch-making memoirs, and in particular the trend of the lines of modern development at the hands of later workers in the same field.

It would be superfluous to speak here by way of review of such classic and well-known memoirs as those here translated for the benefit of the French reader. The introduction however may well merit a word, giving as it does an excellent presentation of certain collateral and introductory points, the discussion of which will be found of aid to any one reading these memoirs for the first time. A brief résumé is also given of the leading work of Duhem, Van der Waals and others who have found in these memoirs special inspiration, and have built so largely on this foundation. The introduction together with

the memoirs themselves should serve admirably to give to the reader a comprehensive idea of these classic methods in mathematical physics, and of the leading lines of development to which they have given rise. To all interested in these subjects this translation will come as a welcome publication in separate form of a pair of memoirs, somewhat inaccessible to the general reader, and yet without which the work table of the student of mathematical physics or of physical chemistry can scarcely seem well furnished.

W. F. DURAND.

NOTES.

THE twelfth summer meeting of the AMERICAN MATHEMATICAL SOCIETY will be held at Williams College, Williamstown, Mass., on Thursday and Friday, September 7-8. Titles and abstracts of papers intended for presentation at this meeting should be in the hands of the Secretary as early as August 20.

THE April number (volume 6, number 2) of the *Transactions* of the AMERICAN MATHEMATICAL SOCIETY contains the following papers: "General projective theory of space curves," by E. J. WILCZYNSKI; "Sur les opérations linéaires (deuxième note)," by MAURICE FRÉCHET; "Surfaces whose geodesics may be represented in the plane by parabolas," by EDWARD KASNER; "The doubly periodic solutions of Poisson's equation in two independent variables," by MAX MASON; "Definition in terms of order alone in the linear continuum and in well ordered sets," by OSWALD VEULEN; "On the structure of hypercomplex number systems," by SAUL EPSTEIN and J. H. MACLAGAN-WEDDERBURN; "On a definition of abstract groups," by E. H. MOORE; "Note on the definitions of abstract groups and fields by sets of independent postulates," by E. V. HUNTINGTON; "Definitions of a group and a field by independent postulates," by L. E. DICKSON; "On semigroups and the general isomorphism between finite groups," by L. E. DICKSON; "A set of postulates for ordinary complex algebra," by E. V. HUNTINGTON; "On imprimitive linear homogeneous groups," by H. F. BLICHFELDT.