+ after a number when the remainder lies between a quarter and three quarters of the last unit set down. This compels anyone who wishes to use the table to insert the sign or to provide for a possible error of three quarters of a unit in his last place. The ordinary method with no sign inserted leads to a maximum error of half a unit. It seems to the reviewer to be preferable to use two signs, a plus, for example, when the remainder is between a quarter and a half, and a minus with the last figure raised one unit when the remainder is between a half and three quarters. These signs can then be dropped without adjustment and with the usual error of half a unit.

This is, however, a very small matter. The author is to be greatly congratulated on the successful completion of his task, and on producing a volume which will undoubtedly be the standard for all future tables of the logarithms of trigonometric functions. The excellent typography—an important point—should not be forgotten. The publication has been made with aid of a subvention from the Fondation Commercy by the University of Paris.

ERNEST W. BROWN.

Annuaire du Bureau des Longitudes pour l'An 1912. Paris, Gauthier-Villars.

THE present issue has its usual share of improvements and additions by the alteration to more modern data of some of the astronomical and physical constants and the inclusion of new matter. For a handy volume of reference in such matters, it is probably unsurpassed by any other of the same size and cost. But the reviewer has had cause to wonder whether some portions of the matter are really of much value. This arose from his attempt to use the table of elements of the asteroids. On account of the convenient form in which they are given, he incautiously adopted the elements for about twenty asteroids, not for statistical purposes but for individual examinations. Two of them seemed rather remarkable and the Berlin Astronomische Jahrbuch was searched for previous values. It then appeared that the periods given were erroneous; No. 318 was set down with a period of 2204 days instead of 2104 days, and No. 624 with 4229 instead of 4429 days. These are of course slips in proof-reading, but none the less disconcerting. In tables of continuous functions such errors are easily seen and corrected; one cannot do this with isolated physical constants.

The appendices contain an account by M. G. Bigourdan of the mean temperature in different parts of France. The subject is illuminated by numerous diagrams showing the mean temperatures, daily, monthly, annually, winter, etc. M. P. Hatt gives an elementary account of the method of least squares illustrated by numerical examples. One of the best features is the full index, which enables the reader to find anything desired without trouble. For the first time the phenomena are given in legal time, that is, Greenwich time, which is nine minutes, twenty-one seconds behind Paris mean time. The change is due to a law passed on March 9, 1911, a convenience for which the astronomer as well as the traveller is grateful.

<div style="text-align:right">ERNEST W. BROWN.</div>

NOTES.

THE nineteenth summer meeting of the AMERICAN MATHE-MATICAL SOCIETY will be held at the University of Pennsylvania on Tuesday and Wednesday, September 10–11, 1912.

THE March number (volume 13, number 3) of the *Annals of Mathematics* contains the following papers: A third generalization of the groups of the regular polyhedrons," by G. A. MILLER; "A type of homogeneous linear differential equation," by L. A. HOWLAND; "On the complete logarithmic solution of the cubic equation," by R. E. GLEASON; "The circular numbers for a plane curve," by H. T. BURGESS; "On the sum of a certain triple series," by E. W. BROWN; "A theorem in difference equations on the alternations of nodes of linearly independent solutions," by E. J. MOULTON; "Periodic quadratic transformations in the plane," by VIRGIL SNYDER; "On the reduction of a system of linear differential forms of any order," by A. DRESDEN; "On the functional equation for the sine. Additional note," by E. B. VAN VLECK.

AT the meeting of the London mathematical society held on February 8 the following papers were read: By A. C. Dixon, "Exceptions to extensions of a theorem of Jacobi's"; by W. Burnside, "Some properties of groups whose orders are powers of primes"; by G. H. Hardy and J. E. Littlewood, "Some results concerning diophantine approximations."