

a few seconds). In so short space may ample descriptive matter and illustrated examples be put that only about half the book, small as it is, is used for the purpose; the other half consists of the requisite astronomical, physical, and mathematical tables. The surveyor who is no astronomer need have no fear. The author requires of him no knowledge of theoretical or practical astronomy or of uranography—except that the totally ignorant might have difficulty in picking out Markab (α Pegasi) from the chart on which there are two α 's in the great square of Pegasus.

E. B. WILSON.

EISENHART'S DIFFERENTIAL GEOMETRY.

IN reviewing Professor L. P. Eisenhart's book on Differential Geometry in the June number of the BULLETIN, I criticized four equations which occur at the bottom of page 313 without noticing that the arc is supposed to be the parameter along the locus of the centers of the spheres, as is stated in the last paragraph of page 310. The equations are correct as they stand with the exception of a plus sign between the parentheses in the third, which should be minus.

Professor Eisenhart has sent me the following list of errata, the publication of which may be of convenience to readers of the book:

P. 51, Ex. 24 is incorrect.

P. 87, omit the last line.

P. 117, to the expression for $\frac{d^2x}{ds^2}$ add $\frac{\partial x}{\partial u} \frac{d^2u}{ds^2} + \frac{\partial x}{\partial v} \frac{d^2v}{ds^2}$.

P. 123, last paragraph is incorrect. The position of the surface relative to the tangent plane depends upon the character of the terms of third and higher orders.

P. 179, in (86) the signs + should be -, and in the next equation the signs - should be +.

P. 180, line 27, change S to S_2 .

P. 221, line 24, the upper limit of the second integral should be u_2 instead of u .

P. 241, in (52) change y_1 to y_0' .

P. 259, line 3, in place of "congruent" read "superposable by a translation."

P. 268, Ex. 7, change the last clause to "determine the two lines of striction."

P. 278, line 8, insert after "equations" the phrase "and §§ 77, 82."

P. 280, line 10, after "values" insert "(cf. §§ 77, 82)."

P. 313, in the expression for ζ change + before $(u^2 - \frac{1}{2})$ to -.

P. 400, line 9, change ω_1, ω_2 to $\omega_1 + \frac{\pi}{2}, \omega_2 + \frac{\pi}{2}$.

P. 412, Ex. 6, change + before ds_1 to -.

P. 418, line 19, remove the sign Σ after m^2 .

P. 423, Ex. 9, in the equation change λ to λ^2 .

P. 441, line 27, after "zero" insert "in fact L vanishes identically."

P. 444, Ex. 15, in last term of the equation change + to - and p to p_1 .

G. A. BLISS.

NOTE ON COLLINEATION GROUPS.

SINCE the publication of my paper on collineation groups in the *Transactions* (volume 12, No. 2, April, 1911) my attention has been called to a similarity which exists between my determination of the collineation groups in the ordinary plane and that given by Valentiner ("De endelige transformations-grupper theori," *Videnskabselskabets Skrifter*, 6 Raekka, Copenhagen, 1889).

The general outlines of the first parts of the two papers are the same, as in both the groups which contain homologies of higher period than 2 are first discussed. A determination of those groups leaving a line invariant which must contain an homology of period 2 having that line for axis is given in both papers. The proofs that no group can contain homologies of higher period than 5 or homologies of period 5 are essentially the same. The proofs that no group can contain homologies of period 4 are somewhat different. Valentiner's discussion of groups containing homologies of period 3 is inaccurate and as a consequence he overlooks the existence of the G_{216} , although he considers the possibility of a group of this order.