between the coördinates $\bar{x}$, $\bar{y}$ in the plane of projection, and the minimal parameters $\bar{u}$, $\bar{v}$ on the sphere. These relations yield, as the equation of the curves into which the loxodromes project,

$$\cos^{-1}\frac{\bar{x}}{\sqrt{\bar{x}^2+\bar{y}^2}} = A \log \sqrt{\bar{x}^2+\bar{y}^2} + B$$

or, in polar coördinates,

$$\rho = \alpha e^{\beta\theta} \qquad (\alpha, \beta = \text{const.}).$$

The case of the oblate spheroid is interesting, in that the loxodromes on it project stereographically into the same spirals as do the loxodromes on the sphere which is tangent to the spheroid along the equator.

BERKELEY, *October*, 1905.

STOLZ AND GMEINER'S FUNCTION THEORY.

Einleitung in die Funktionentheorie. Abteilung I. By OTTO STOLZ and J. ANTON GMEINER. Leipzig, B. G. Teubner. 1904. vi + 242 pp.

THE Funktionentheorie of Stolz and Gmeiner is a working over of certain parts of Stolz's Allgemeine Arithmetik which do not appear in the new Stolz and Gmeiner's Theoretische Arithmetik. The two new books are evidently to be thought of together as a single course in the elements of analysis. The contents of the Theoretische Arithmetik correspond in a general way to sections 1 to 7, part of 10, and most of 11 of volume I, and of sections 1, 2, 6, and part of 5 of volume II of the Allgemeine Arithmetik. The Theoretische Arithmetik begins with the theory of whole numbers; then, after discussing the system of rational numbers, positive and negative, develops for the real and ordinary complex numbers the theory of addition, subtraction, multiplication, division, exponents and logarithms. In the course of this development appears a short discussion of complex numbers of n units, including quaternions, some geometric applications, and the fundamental theorems on infinite series.

The Funktionentheorie, on the other hand, corresponds to sections 9, 11, and part of 10 of volume I, and to sections 3, 4,