PHOTOGRAPH OF THE NEBULA *N. G. C.* 1499 NEAR THE STAR ξ PERSEI.

By E. E. BARNARD.

IN *A. N.* 3082, Dr. Archenhold gives an account of a large nebula which he had photographed near the star ξ Persei. He also gives an outline map of the nebula, showing its position with reference to the stars in and near it.

From his chart, the nebula is shown to extend from R. A. $3^h\ 47^m$ to R. A. $3^h\ 56\frac{1}{2}^m$, and from Dec. $+\ 35°.4$ to $+\ 36°.6$.

This nebula was discovered by me some six years previous to Dr. Archenhold's photograph, *viz.*, 1885, November 3, with the 6-inch Cooke Equatorial of Vanderbilt University Observatory, at Nashville, Tenn. It is No. 1499 of Dreyer's *N. G. C.*, where it is described as "very faint, very large, diffused." It was a very difficult object with the 6-inch.

I have made several photographs of this nebula with the Willard lens of the Lick Observatory. The last one of these was made 1895, September 21, and was given 6 hours' exposure. An enlargement from this is here reproduced (Plate XI). The scale of this picture is $0°.9 = 1$ inch.

It will be seen from the photograph that this is a very remarkable nebula. There are a number of angular condensations in it—especially in the north preceding and north following edges. Indeed the outlines everywhere seem to be brighter and unequally condensed. In its northern part is a very small, very dark spot, about 6′ in diameter—doubtless a hole in the nebula.

It will be noticed that this object lies on the edge of a region comparatively devoid of small stars. This is a very suggestive fact noticeable in the case of most of these large diffused nebulæ, as shown in photographs of the large nebulous regions of Cygnus, Monoceros, Cepheus, Scorpio and the present one of Perseus, where the nebulosity either lies in or on the edges of a vacancy among the stars.

KENWOOD OBSERVATORY, CHICAGO,
November 20, 1895.

PLATE XI

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PHOTOGRAPH OF THE NEBULA *N. G. C.* 1499

By E. E. BARNARD, Lick Observatory

Exposure 6h Sept. 21, 1895 Six-inch Portrait Lens