

**PUBLICATIONS OF THE
WASHBURN OBSERVATORY
OF THE UNIVERSITY OF
WISCONSIN. VOL. III**

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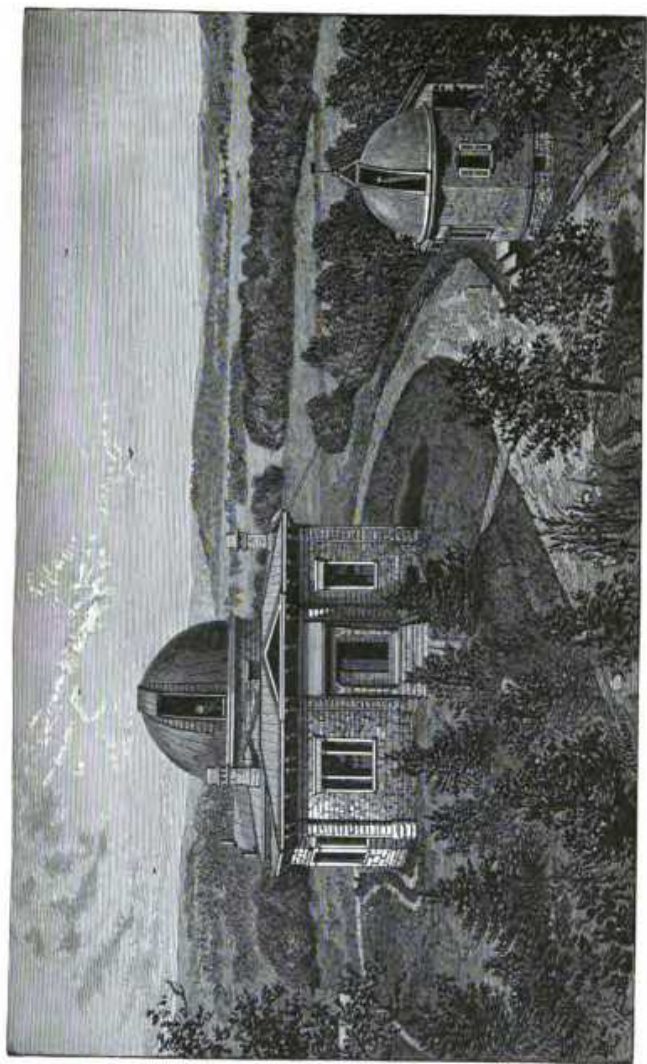
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VOL. III.

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WASHBURN OBSERVATORY.

FOUNDED BY

CADWALLADER C. WASHBURN,

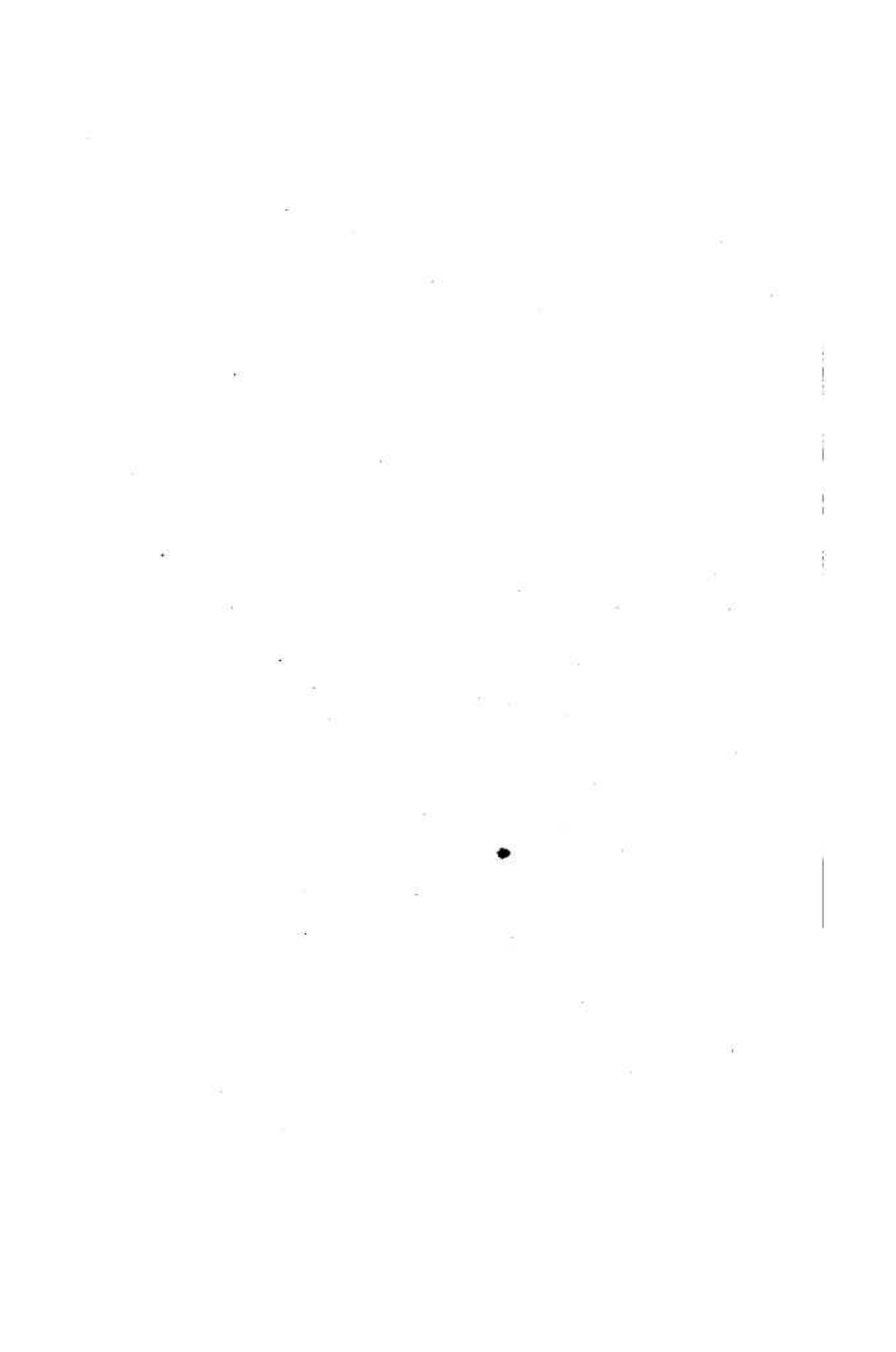
BORN 1818; DIED 1882.

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MILTON UPDEGRAFF,	ASSISTANT ASTRONOMER.*
GEORGE W. BROWN (Student)	METEOROLOGICAL OBSERVER.
JOHN DOESCHER	JANITOR.

Since August 15, 1884.

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WASHBURN OBSERVATORY

I. INTRODUCTION.

In March, 1884, I offered on the part of the Washburn Observatory to observe the 303 fundamental stars for the southern zones of the *Astronomische Gesellschaft*.

As the force at the Observatory is small, it was not possible to engage to make more than four observations *per* star. This offer was accepted by Professor AUWERS who, at the same time, expressed a desire for six observations *per* star. It is probable that we shall be able to respond to Professor AUWERS' wish, and to obtain the six observations desired, in most cases. Work was begun May 2, 1884, and up to January 1, 1885, the following observations have been made:

Stars of the 303 list.....	1270
Other stars from the B. J.....	231
Stars of the Refraction list (Leyden and C. G. H.).....	298
Total observations	1799

Up to June 1 the pointings at the telescope were made by myself while the microscopes were read by Mr. TATLOCK. By the liberality of a friend of the Observatory,—O. H. INGRAM, Esq., of Eau Claire,—we were enabled to employ Mr. G. C. COMSTOCK, formerly assistant here, during the months June—September; and since September his services have been secured by an appropriation from the BACHE Fund of the National Academy of Sciences, which was put at our disposition by the Trustees of this Fund—Professors J. D. DANA, WOLCOTT GIBBS and J. E. HILGARD.

The observing list consists not only of the 303 stars above mentioned, but of the Refraction Stars which are being observed jointly by the observatories of Leyden and the Cape of Good Hope, and of some circumpolars selected here to complete the refraction list.

The present volume contains nothing relating to this work, which is not yet finished, except the tables of Nadir Points and of the constants a , b , c . The values of a given in the tables are preliminary only, being such as were deduced from a few of the stars of each night for the purpose of time determinations. They will serve to exhibit the degree of steadiness of the instrument in connection with the values given in Volume II, pages 61, 62, 63, 64.

DETERMINATION OF THE LATITUDE.

In 1873 the U. S. Coast and Geodetic Survey determined the latitude of a station on the University grounds, which has been connected with the Washburn Observatory, by three independent surveys in 1881 and 1884 (two observers.) The coast survey station is:

3°.62 South and 25°.95 East of the Meridian-Circle of the Observatory.

The Observatory has several independent determinations either in progress or finished as mentioned below, and as this station will thus be very well determined, the Superintendent of the Coast Survey has signified his intention of repeating his determination of the latitude of the former station and of adding a direct determination of the latitude of the Student's Observatory.

If the programme is carried out, the latitudes determined and the methods will stand as in the following table: