

been used as follows: — Merid. Circle Zone, No. 53, + 3^s.6, + 1^{''}.8; Mural Circle Zone, No. 186, + 2^{''}.7; Transit Zone, No. 179, — 0^s.30; No. 192, + 2^{''}.1. In the case of stars 8 and 9, they were corrected so as to make the differences of the apparent places on November 16 conform to the differences measured with the filar micrometer on that night.

The observation of October 16 is not regarded by the observer as particularly strong, and this may well be, owing to the large hour-angle at which the comet was observed, and the foggy condition of the atmosphere.

There was a moderately thick fog on November 16, during the

observations, followed by clouds. The sky suddenly clouded after the single comparison of November 18; but, possible errors of counting seconds or micrometer-revolutions excepted, the observation is a good one. The comet was bright, with strong nuclear condensation.

The comet was bright on November 19, until a bank of clouds suddenly rising hid it from view. Light of central condensation estimated as equal to that of a star of the magnitude 9.5. The coma appeared to be 2' or 3' in diameter.

The Catalogue of ARGELANDER'S Southern Zones from 19^h to 24^h, and GOULD'S Zone-observations at Cordoba, are not included in the library of this observatory.

A NEW SHORT-PERIOD VARIABLE IN *AQUILA*.

19^h 22^m 38^s; — 7° 17'.9 (1875.0)

BY EDWIN F. SAWYER.

I beg to announce that I have discovered the star 50 (U. A.) *Aquilae*, to be a variable of short period. The magnitude of the star in the *Uranometria Argentina* is 7.0. My observations of 1882 September 15, and 1886 September 21, give the magnitude of the star as 6.7 and 6.8 respectively, being fairly accordant. On the evening of 1886 October 22, however, while examining the stars in its vicinity, I was struck with its unusual faintness, and it was marked for future examination. On the two following evenings the star still remained faint, but on the third evening (October 25) it was

found very bright, and its variability established beyond doubt.

A preliminary reduction of my observations so far obtained indicates that the period is about one week. The range of fluctuation is between the magnitudes 6.4 and 7.3. The star appears colorless. The comparison-stars used and the preliminary light-scale adopted are given below; the positions being for the mean equinox of 1875.0.

The star is 6.7 mag. in Heis.

	α	δ	U.A. Sawyer Light-Scale		
	^h ^m ^s	^o [']	^M	^M	
$a = 100$ (U.A.) <i>Aquilae</i>	19 52 59	—10 17.0	6.1	6.1	18.0
$b = 92$ “ “	19 47 21	— 8 53.8	6.2	6.25	16.6
$c = 80$ “ “	19 42 9	—11 10.7	6.4	6.4	15.0
$d = 60$ “ “	19 28 45	— 7 43.9	6.7	6.65	11.0
$e = 43$ “ “	19 16 20	— 7 38.2	6.7	6.7	9.7
$f =$ W.B. 280	19 13 19.6	— 6 51.5		7.1	6.0
$g =$ W.B. 568	19 24 12.3	— 6 46.2		7.5	1.3

From the above light-scale the following light-values for the variable have been determined:—

	^d ^h ^m	Light		^d ^h ^m	Light
1882, Sept.	15 10 15	8.7		1886, Nov.	2 6 0 10.0:
1886, “	21 8 50	9.8		4 6 10 7.5	
Oct.	19 7 0	11.0		5 6 0 5.3*	
	22 7 0	7.0		7 6 0 9.3*	
	23 6 45	5.0		8 6 0 13.6*	
	24 6 30	9.1		9 5 45 12.0*	
	25 7 0	13.9		14 5 45 8.2	
Nov.	1 6 10	14.8 ::		15 5 45 14.0:	

*Moonlight.

Cambridgeport, 1886 Nov. 15.