

ON A NEW VARIABLE OF SHORT PERIOD,

18 (Fl.) *Aquilae*: (1855) 19<sup>h</sup> 0<sup>m</sup> 9<sup>s</sup>, +10° 51'.0,

By S. C. CHANDLER.

Observations extending from 1894 Aug. 9 to Oct. 7 have established the variability of the above star, between the approximate limits 5<sup>m</sup>.3 and 5<sup>m</sup>.7, in a period of a trifle less than five days. The elements derived from these observations and from those of the Potsdam Photometric Catalogue are

1894 Aug. 6.7 (Greenwich M.T.) +4<sup>d</sup>.986 E.

The star was used as a standard by Dr. GOULD for the *Uranometria Argentina*, and is there marked with an asterisk, which indicates that he found reason to suspect variation while it was under observation at Cordoba. It was also used as a fundamental star by MÜLLER and KEMPF; who, however, state that their numerous measurements do

not confirm this suspicion (p. 482). In view of my observations, which clearly showed the above variation and its unmistakable periodicity, I was led to examine the Potsdam observations thoroughly, not only those which were taken of it as a fundamental star, but those in the zones where it was employed as such. We thus have 57 determinations of its brightness at Potsdam, on 32 nights. These were assembled to form a mean light-curve, using the above period. The result was an apparently certain confirmation of the fluctuation, within somewhat narrower limits of magnitude. This is extremely interesting as evidence of a surprising precision in the Potsdam measurements, unexampled in instrumental photometry.

OBSERVATIONS OF THE FIFTH SATELLITE OF *JUPITER*,

MADE WITH THE 36-INCH EQUATORIAL OF THE LICK OBSERVATORY,

By E. E. BARNARD.

The satellite is very faint at present, and observations of it have been obtained only on one morning. It was also seen on the morning of October 16, but a heavy south wind shaking the telescope made it impossible to set the threads on the satellite. The measures have been reduced with an apparent semidiameter (equatorial) of 20".69, from my previous measures of the planet (see *A.J.* 325). To this was applied a phase-correction of -0".38.

The satellite was very difficult, but I think the measures will be reasonably good.

*Mt. Hamilton*, 1894 Oct. 17.

1894 October 8.

Standard Pac. Time	Circle	Distance	
		from pr. limb	from center
14 <sup>h</sup> 5 <sup>m</sup> 9 <sup>s</sup>	53.049	29.40	49.71
14 8 37	52.951	28.53	48.84
14 12 14	52.921	28.13	48.44
14 14 17	53.003	28.94	49.25
14 18 12	53.269	31.58	51.89
14 23 7	53.215	31.04	51.35
14 25 37	53.209	30.98	51.29
14 27 52	53.200	30.39	50.70

Coincidence of threads = 50".080.

ON THE VARIABILITY OF 6442 *Z HERCULIS*,

By EDWIN F. SAWYER.

On my return the last of August from a short vacation, I found a communication from Dr. CHANDLER, calling my attention to his discovery of the above star as a variable of the *Algol*-type, and requesting observations of the same for the purpose of confirmation. Although the conditions for observing during August and September were anything but favorable, owing to recent forest fires, several observations

were secured when the star was found at its normal brightness. On two occasions, however, August 29 and September 6, the star was found quite faint. On both these evenings the minimum had undoubtedly been passed, as only a few steps rise in the light was observed. These observations, however, served to prove its variability and its interesting type.

*Brighton*, 1894 Oct. 20.

POSITIONS OF COMPARISON-STAR FOR THE COMET *a* 1894,

By DR. L. DEBALL.

The comparison-star cited in no. 322 of the *Astronomical Journal*, namely S.D.M. -6°259, has been twice observed here. The observations, referred to the mean equinox of 1900.0, are

1892 Mar. 21 = 1892.22	8.7	8 <sup>h</sup> 21 <sup>m</sup> 27.37 <sup>s</sup>	-6° 8' 43.8"	Circle W.
1893 Mar. 16 = 1893.20	8.6	27.46	44.6	" E.

*v. Kuffner Observatory, Vienna XVI*, 1894 July 22.