Note on Meridian Observations of Nova Persei.

By A. Graham, M.A.

(Communicated by the Secretaries.)

The position of *Nova Persei* as deduced from observations with the Cambridge Transit Circle was as follows :—

1901.	App. R.A.	Mean R.A. Jan. 1.	App. Decl.	Mean Decl. Jan. 1.
	h m s	h m s	° ' "	° ' "
Feb. 25	3 24 29.882	3 24 28.222	43 34 3.85	43 33 54.25
28	29.524	27.934	4.08	54.74
Mar. 1	29.784	28.217	3.40	54.15
2	29.529	27.985	2.93	53.77
3	29.619	28.098	3.06	54.01
5	29.527	28.051	3.70	54.85
7	29.605	28.172	2.53	53.89
12	29.344	28.019	2.88	54.81
21	29.269	28.120	0.78	53.88
Apr. 1	29.114	28.107	43 33 59.59	54.29
Mean 3 ^h 24 ^m 28 ^s .092 ± ^s .065.		43° 33' 54" 26 ± " 27.		

Notes.

February 25. Through clouds. Estimated 1st mag. February 28. Disturbed by knocking at Newall Dome. 2nd mag. March 1. Decidedly red. 2nd mag. March 2. Red. Unsteady. March 3. Through clouds. Faint. March 5. Red. March 7. Through clouds. Very faint. March 12. Considerably fainter. Somewhat less than 3rd mag. March 21. About 4th mag. March 25. Not visible on the meridian in a perfectly clear sky. April 1. Clouds. About 4.5 mag.

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Further Observations of the New Star in Perseus.

By A. Stanley Williams.

The following observations of the brightness of *Nova Persei* are in continuation of those already communicated to the Society and published in *Monthly Notices*, vol. lxi. p. 337. Down to March 18 they were made with the eye aided only by ordinary concave spectacles, but after that date an opera glass was employed. The provisional magnitudes in the last column are, as before, on the H.P. scale, and on the assumption that a step is equivalent to 0.1 mag. It appears to be actually rather smaller

than this, but the determination of the exact value is reserved until the completion of the observations.

Date. 1901.	G eenwich. M.T. h m	Observations.	Mag.
Mar. 5	6 55	<i>Nova</i> = β Persei + 5, δ Persei - 7	2.65
6	7 0	β Persei + 8, δ Persei - 4, γ Persei - 5	2.83
9	10 0	δ Persei + 2, γ Persei - 1. (ϵ Persei - 5)	3.3
12	10 30	δ Persei + 2, = γ Persei	3.25
18	9 50	δ Persei + 10, γ Persei - 9, ν Persei + 2, (ρ Persei - 2)	4.13
22	10 10	32 Persei + 5, 36 Persei - 3	5.22
25	9 15	32 Persei + 5, 36 Persei - 1	5.32
26	10 10	= κ Persei, ν Persei + 5	4.22
	11 45	κ Persei - 3, ν Persei + 4	4.02
27	10 20	κ Persei - 4, ν Persei + 5	4.02
28	11 0	κ Persei + 4	4.35
29	10 15	κ Persei - 2	3.75
31	10 0	κ Persei + 4 $\pm$	4.35 $\pm$
Apr. 1	10 0	= κ Persei, ν Persei + 6	4.27
4	10 5	κ Persei - 2, ν Persei + 5	4.12

Notes.

March 5. Very clear. March 6. Clear. March 9. Estimates perhaps not quite unaffected by cloud. March 12. Rather hazy; observations not satisfactory. March 18. Very clear. March 25. Very clear. March 26. Very clear. *Nova* distinctly brighter at 11^h 45^m than it was at 10^h 10^m. March 27. Slightly hazy, sky very bright. March 28. Clear, but sky bright. March 29. Never quite free from thin cloud, but the *Nova* seemed uniformly a little plainer than κ Persei. March 31. Sky never free from thin cloud, but the *Nova* always seemed inferior to κ Persei. April 1. Moon very bright, but clear night. April 4. Moon full and sky very bright.

The relative brightness of the comparison stars has seemed in some cases to differ appreciably from what the H.P. values would imply. This is particularly the case with respect to κ and ν Persei. The H.P. makes the two stars about equally bright (κ 3.95 and ν 4.00), but on several nights in March ν has seemed to the writer not less than half a magnitude brighter than κ .*

A periodical variation in brightness of *Nova Persei* has recently been announced by von Glasenapp, of St. Petersburg, and Dunér, of Upsala (*A.N.* 3700), minima occurring on March 19,

* This difference may have been due, in part at any rate, to κ being at a slightly lower altitude than ν , and consequently more affected than the latter by atmospheric absorption and the greater brightness of the sky nearer the horizon. But on April 14 at 8^h 30^m in a very clear sky and with no Moon, κ still seemed distinctly fainter than ν , the difference amounting to three steps.

22, and 25. The above observations show well the faintness of the star on March 22 and 25, whilst there are less marked indications of a decreased brightness on March 28 and 31. It would seem from the latter that either there has been a real diminution in the amplitude of the variation, or else that the period is not exactly three days or uniform in length.

The following notes of the colour of the *Nova* were made with a $2\frac{3}{4}$ -inch refractor. March 5, white, certainly no bluish or greenish tinge. March 12, white, with perhaps a slight reddish tinge. March 22, a distinct reddish tinge. March 26, white, with a slight reddish tinge. March 27, colour reddish, the reddish tinge more pronounced than it has been hitherto, though still not so deep and pronounced as the reddish colour of *Mars* or *Aldebaran* to the naked eye. March 28, colour reddish, not very deep. March 29, colour slightly reddish, not at all deep or pronounced. April 1, orange yellow, fairly deep. April 4, orange, not very deep.

It should be mentioned that the colour of this star has seemed to me particularly difficult to describe, there appearing to be distinct flashes of two or more different tints; also that the $2\frac{3}{4}$ -inch refractor employed is over-corrected. With the same instrument and power *Algol* appeared distinctly bluish. The *Nova* has always shown a perfectly defined star disc whenever the seeing was good.

Hove: 1901 March 8.

Observations of Nova Persei. By M. C. Sharp.

Herewith I forward a table, giving estimated magnitudes of *Nova Persei*, for the most part made with the help of a binocular, except on March 6, 11, and 16, when only a brief glimpse with the naked eye was possible. On these three and some other nights, when moonlight and haze made comparisons difficult, the estimations are marked (?). Indeed, on nights when there was a slight haze or cloud the light of the *Nova* was much more affected than that of neighbouring stars, and in a small telescope it did not seem to have quite the same focus.

The colour at first was a bright orange yellow, as seen with a small refractor of 1.54 in. aperture, but got deeper as the brightness declined. Thus on March 9 and 10 it was pale orange, and a deep orange on the 25th, when it was at its then lowest observed magnitude, while on the 27th it had increased in brightness, and was a light orange yellow. On the 28th it was orange red, and orange yellow again on April 1, when the colour