

NOTES FROM OBSERVATORIES

VISUAL MAGNITUDES OF NOVA PUPPIS 1942

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The magnitudes of Nova Puppis 1942 in Table I were determined with the wedge photometer by methods previously described.¹ The magnitude read from a mean light-curve increased from 8.99 on October 13, 1943 to 9.31 on January 8, 1944, changing at a rate of 0.38 magnitudes per hundred days. In the spring of 1943 the rate was nearly three times as great, 1.04 magnitudes per hundred days. At the maximum rate of change between November 13 and 17, 1942, the star decreased as much in brightness in 20 hours as it does now in 100 days.

The observations in Table I have a maximum deviation from a straight line of 0.30 mag. and a mean deviation of 0.00 mag.

TABLE I

VISUAL MAGNITUDES OF NOVA PUPPIS 1942

G.C.T. 1943	m_v	G.C.T. 1943	m_v	G.C.T. 1943-1944	m_v
Nov. 9.520	9.04	Nov. 28.477	9.04	Dec. 15.432	9.33
10.507	9.28	29.470	9.20	22.429	9.16
11.507	9.26	30.474	9.09	23.414	9.35
12.516	9.07	Dec. 2.486	9.09*	24.413	9.28
23.477	9.24	4.439	9.24	26.413	9.21
24.487	9.02	7.444	9.22	28.436	9.18
25.490	9.04	8.445	9.23	Jan. 1.382	9.26
26.493	9.11	9.445	9.14	7.384	9.41
27.491	9.08	14.416	9.39	8.375	9.50

* Mount Wilson 20-inch reflector; all other measures 6-inch refractor, Pasadena.

Figure 1 shows the field of the nova photographed with a blue-sensitive plate on January 6, 1943 by Seth B. Nicholson with the 100-inch reflector. The visual magnitudes, on the Har-

¹ *Pub. A.S.P.*, 55, 14, 1943.

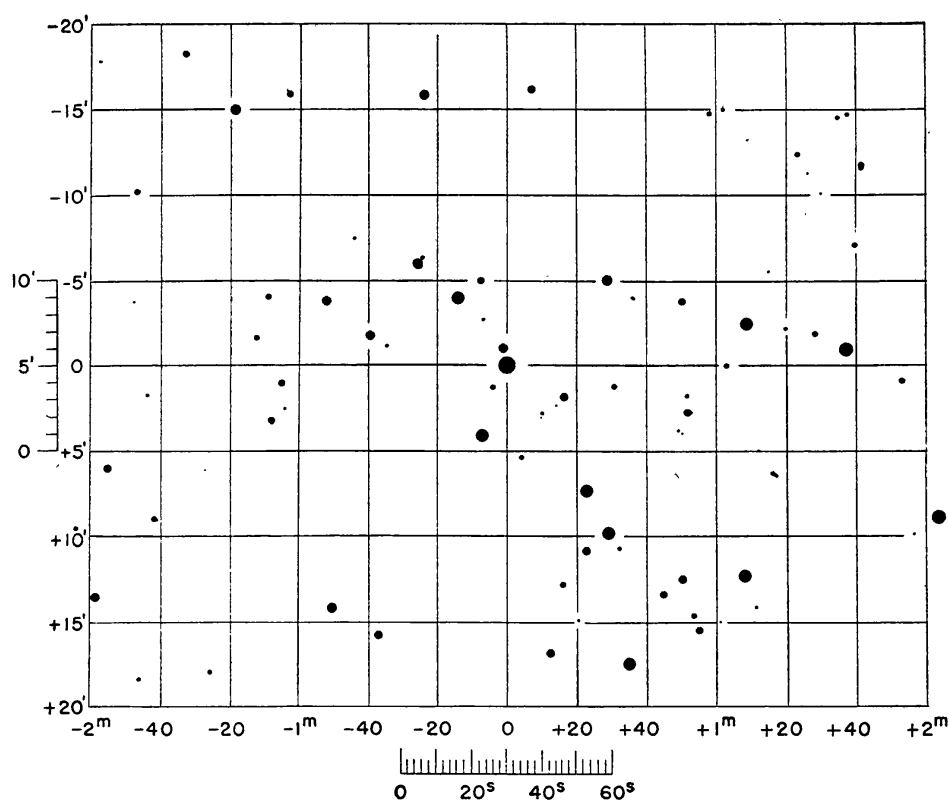


FIG. 1.—Field of Nova Puppis 1942 photographed on a blue-sensitive plate January 6, 1943 with the 100-inch telescope. Stars with elongated images in the following positions are double:

$\Delta\alpha$	$\Delta\delta$	$\Delta\alpha$	$\Delta\delta$
$-1^m 42^s$	$+ 9'$	$+0^m 52^s$	$+ 3'$
$-1 04$	-16	$+0 55$	$+16$
$+0 10$	$+ 3$	$+1 17$	$+ 6$
$+0 36$	$- 4$	$+1 41$	-12

The star at $-0^m 25^s$, $-6'$ was elongated by a mechanical defect.

vard scale, of the comparison stars listed in Table II have been measured with the wedge photometer by the author on at least 8 nights. Differences between the mean magnitude of the nova and its magnitude referred to each of these stars on 24 to 34 nights yield corrections, not exceeding 0.15 mag., to the magnitudes of the 8 comparison stars previously reported.² The corrected magnitudes for these stars are included in Table II (Nos. 1, 3, 4, 5, 7, 8, 12, 14).

The measures of star No. 2, the irregular variable Y Puppis,

² *Pub. A.S.P.*, 55, 285 (Table I), 1943.

TABLE II
VISUAL MAGNITUDES OF STARS IN THE FIELD OF NOVA PUPPIS

Star	$\Delta\alpha$	$\Delta\delta$	m_v	Star	$\Delta\alpha$	$\Delta\delta$	m_v
1	+2 ^m 04 ^s	+ 9'	6.97	10	-0 ^m 51 ^s	+14'	9.29
2	+0 50	+12	8.49*	11	+0 28	- 5	9.36
3	+1 08	- 2	8.50	12	+0 22	+ 7	9.56
4	+1 38	- 1	8.69	13	-0 52	- 4	9.74
5	-0 25	- 6	8.79	14	-0 07	+ 4	9.97
6	+1 08	+12	8.92	15	+0 12	+17	10.16
7	+0 29	+10	9.17	16	-0 37	+16	10.36
8	-0 14	- 4	9.19	17	-0 35	- 1	10.62†
9	+0 35	+17	9.26				

* Irregular variable Y Puppis.

† Red star, visually about the same magnitude as the star at -0^m 40^s, -2'.

show only one outstanding residual. No certain indication of variability in any other star in Table II is brought out by a comparison of the residuals.

CARNEGIE INSTITUTION OF WASHINGTON
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January 1944

SPECTROGRAPHIC OBSERVATIONS OF ER ORIONIS

OTTO STRUVE

The variability of ER Orionis (BD -8°1050 = 45.1929) was discovered in 1929 by C. Hoffmeister,¹ who gave the limits in magnitude as 9 and 9.5 and who assigned it to the Algol-type stars. The light-curve was determined by N. Florja,² who established its W Ursae Majoris character with slightly different minima. From observations in 1930 and 1931 Florja derived the following elements:

$$\text{Min.} = 2,426,336.438 + 0.423,388 E$$

During the month of November, 1943, I obtained 22 spectro-

¹ *A.N.*, 236, 235, 1929.

² *Veränderliche Sterne, Nishni-Novgorod = Gorki, U.S.S.R.*, 3, 86, 1941; 4, 7, 1932. See also Taylor and Alexander, *Pub. Univ. of Pennsylvania, Astr. Ser.*, 6, 13, 23, 1940.