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PHOTOELECTRIC OBSERVATIONS OF NOVA CEPHEI 1971

Nova Cephei 1971 was discovered by Kuwano on July 10 at $\alpha = 22^{\text{h}}02^{\text{m}}46^{\text{s}}.85 \pm 0^{\text{s}}.01$, $\delta = +53^{\circ}15'48''.2 \pm 0''.1$ (1950.0) with $m_v = 8.0$.

The present photoelectric observations were carried out with the 40 cm refractor of the Teramo Astronomical Observatory, equipped with an EMI 9502 photomultiplier.

Our photometric data, unpublished up to now, help to fill some gaps in the light curve in that we have observed Nova Cephei for a total of 47 nights from July 13 up to December 17, 1971.

The photoelectric observations of the nova and the comparison stars were made between 1.020 and 1.337 air masses. The comparison stars are listed in Table I, and their magnitudes were determined by comparison with several Johnson's standard stars performed on many different nights of good quality.

		Table I	V	B-V
c_1	BD+ 52 ^o 3095		8.73± .01	0.42± .02
c_2	BD+ 53 ^o 2778		8.61± .01	1.51± .02
c_3	$\alpha=22^{\text{h}}02^{\text{m}}05^{\text{s}}.3$, $\delta=53^{\circ}17'17''.2$ (1950.0)		10.69± .01	0.28± .01
c_4	$\alpha=22^{\text{h}}02^{\text{m}}30^{\text{s}}.0$ $\delta=53^{\circ}16'03''.6$ (1950.0)		11.54± .01	0.37± .02

The magnitudes of Nova Cephei are listed in Table II. These results are in good agreement with the data obtained by McConnell and Thomas (1972), Kohoutek and Klawitter (1973) and confirm that the nova can be classified as fast because the fall of 2 magnitudes occurs in less than 25 days from July 22 to August 14.

This consideration is confirmed by spectrophotometric studies about the large radial velocities both of absorption and emission systems, observed by Fehrenbach and Andriolat (1971), Bahng (1972) and Aikman et al. (1973).

During the transition stage starting after July 22 some oscillations are noticeable with decreasing amplitudes up to August 23.

Table II

U.T. Date	V	U.T. Date	V	U.T. Date	V
1971		1971		1971	
Jul. 13.88	8.20 \pm .01	Aug. 3.94	9.44 \pm .01	Aug. 29.05	10.91
14.92	8.35	5.88	9.47	30.93	10.87
15.89	8.44	6.89	9.85	Sep. 11.84	11.11
16.84	8.64	10.89	10.13	18.79	11.22
17.99	8.63	12.89	10.54	23.78	11.47
19.86	8.71	13.95	10.55	24.77	11.48
21.90	8.68	14.92	10.69	Oct. 8.78	12.02
22.99	8.59	15.87	10.71	18.81	12.21
25.97	9.31	16.88	10.78	20.79	12.13
26.94	9.29	17.86	10.69	22.80	11.94
27.99	9.55	18.86	10.70	25.81	12.21
29.91	9.83	19.91	10.80	Nov. 12.72	12.30
30.93	9.94	20.86	10.76	16.79	12.45
31.98	9.99	23.90	10.73	Dec. 16.72	12.70
Aug. 2.00	9.68	25.86	10.80	17.77	12.66
3.00	9.50	27.96	10.84		

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References:

- Aikman, G.C.L., Hilditch, R.W., Younger, F., 1973, Publ. Astron. Soc. Pacific, 85, 756.
 Bahng, F.D.R., 1972, Mon. Not. R. Astron. Soc., 158, 151.
 Fehrenbach, C., and Andriolat, Y., 1971, L'Astronomie, Dec. 1971.
 Kohoutek, L., and Klawitter, P., 1973, Astron. Astrophys. Suppl. Ser, 11, 347.
 Kuwano, Y., 1971, IAU Circ., No.2340.
 McConnell, D.J., and Thomas, J.C., 1972, IBVS, No.706.