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STRÖMGREN PHOTOMETRY OF A POSSIBLE VARIABLE STAR NEAR NGC 663

A possible unknown variable star has been found in the vicinity of the highly reddened open cluster NGC 663.* After the final reduction of the photometric data the star turned out to be a 10th magnitude foreground star. The star numbered as No. 12 in our observing list, has been identified as No. 8 in the table of the photographic data for NGC 663 in the atlas of Hoag (1961) with plate coordinates x = -6.50 and y = 7.78. Hoag gives a photographic V magnitude of m_v = 10.06.

From an inspection of the BD chart we identified the star as BD $+60^{\circ}330$ which is equivalent to SAO 11965 with coordinates

$$(1950.0) = 1^{h}\ 42^{m}\ 30^{s}.148$$
$$(1950.0) = 61^{\circ}\ 01\ \ 52''.41.$$

The r.m.s. scatter of the reduced mean photoelectric y magnitudes of the star is more than three times larger than for the other stars in our list. BD $+60^{\circ}330$ was observed 10 times between October 25, 1989, and February 22, 1990. Table I contains the y magnitude, the uvby colour indices, and Julian date (JD). Our results seem to indicate a period in the order of one day and an amplitude of variability in the y magnitude of 0.4 mag. From the mean uvby colour indices we derived a spectral type of F5. More observational data are needed to confirm the variability found, and to make a classification of this suspected variable star possible.

* Based on observations collected at Gothard Astrophysical Observatory of Eötvös University, Hungary

Table I

Julian date	y	b-y	m1	c1
2447825.4957	10.126	0.310	0.151	0.456
825.5568	9.941	0.411	0.031	0.343
826.4597	9.891	0.369	0.140	0.435
826.5050	10.078	0.508	0.122	0.584
827.4030	10.216	0.305	0.156	0.373
828.4392	10.034	0.435	0.069	0.437
901.4152	9.855	0.512	0.034	0.466
911.4136	10.252	0.361	0.104	0.459
915.3487	10.127	0.360	0.117	0.525
2447945.3948	10.225	0.320	0.152	0.472

The last observation was obtained with the 90 cm telescope of Jena University at Großschwabhausen observing station GDR.

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Reference:

Hoag, A.A., Johnson, H.L., Iriarte, B., Mitchell, R.L., Hallam, K.L. and Sharpless, S.: 1961, Publ. US Naval Obs. 2nd Ser.Vol.XVII, Part VII