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A LATE TYPE VARIABLE IN NGC 6819

Barkhatova and Vasilevsky (1967) suspected that a red star, situated 4' from the centre of the old open cluster NGC 6819, might be a variable star (Fig.1, star no. 352).

Photoelectric measurements of this star have been made on the UB_v-system with the 60 cm-reflector of the Lund Observatory. These measurements clearly confirm that the star is variable. Photoelectric data and some other measurements as well are given in Table 1 and Fig.2.

As can be seen from Fig.2, the star is probably a variable of irregular type. From two objective prism plates it has been classified as an M4 giant.

The cluster diameter is 8' (of Fig.1), and the variable star is likely to be a physical member of the cluster. As the apparent distance modulus of the cluster is about 12^m6 (Lindoff (1972)), the absolute magnitude of the variable star is (-2^m6)-(-2^m2). As $E_{B-V} \approx 0^m3$ the intrinsic colours are $(B-V)_0 \approx 1^m2$ and $(U-B)_0 \approx 0^m9$.

References:

- Barkhatova, K.A., Vasilevsky, A.E., Var.Star.Bull. 16, 171, 1967. Burkhead, M.S., Astronomical Journal, 76, 257, 1971. Lindoff, U., Reports from the Observatory of Lund, No.4, in press. Purgathofer, A. Mitteilungen der Universitaets-Sternwarte, Wien, Band 13, 7 (1966).

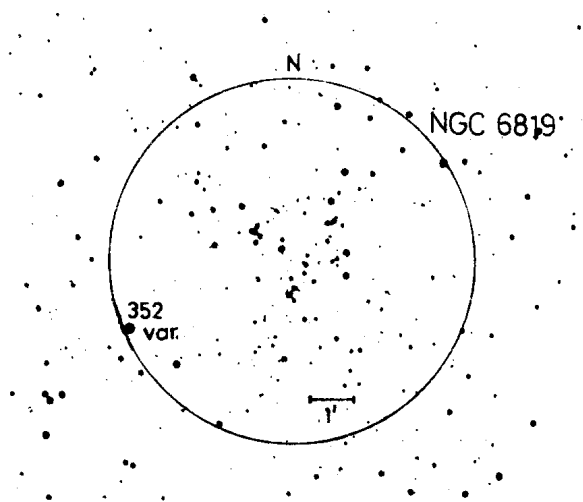


Fig.1. The open cluster NGC 6819 and the variable star no. 352.

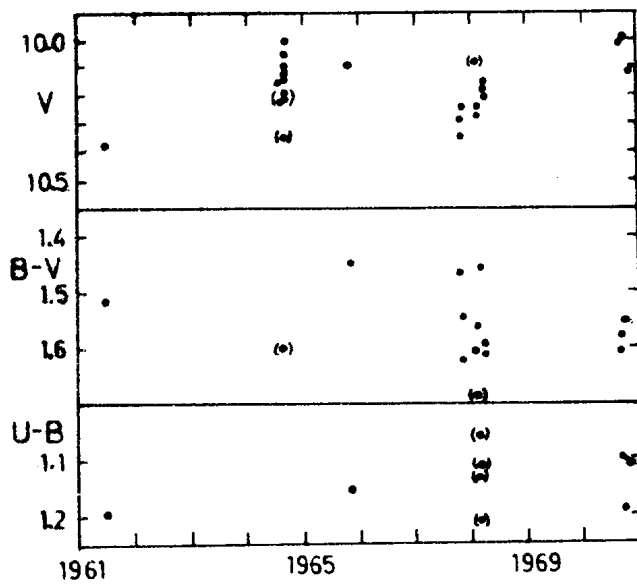


Fig. 2. Observed magnitudes and colours for star no.352

Table 1
 Magnitudes and colours of the variable star
 No.352 in NGC 6819

Date	V	B-V	U-B	Remarks
1961	10.38	1.52	1.20	Purgathofer (1966)
1964 Oct.	10.00 10.35	1.6	-	Barkhatova, Vasilevsky (1967)
1965 Nov. 23	10.08	1.45	1.16	Lindoff, photographic plates
1968 May 23	10.34	1.47	-	Lindoff, photoelectric
1968 May 24	10.29	1.55	-	" "
1968 May 29	10.26	1.64	-	" "
1968 July 23	10.09:	1.69:	-	" "
1968 July 26	10.24	1.57	1.22	" "
1968 July 28	10.27	1.61	1.13:	" "
1968 Aug. 20	10.20	1.62	1.12:	" "
1968 Aug. 22	10.18	1.59	-	" "
1968 Aug. 23	10.17	1.46	1.06:	" "
1970 Sept. 26	10.01	1.61	1.19	" "
1970 Sept. 28	10.01	1.58	1.10	" "
1970 Oct. 23	10.11	1.55	1.11	" "
?	10.00	1.59	1.14	Burkhead (1971)

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