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OPTICAL BEHAVIOUR OF THE X-RAY SOURCE EXO 020528+1454.8 IN THE SEASON 1986/87

This object consisting of a pair of dMe stars (dM4.5e+dM4.5e) is identical with Lowell's proper motion star G035-027. First results about the optical behaviour were given by Hudec et al. (1986).

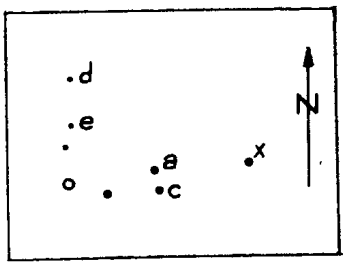

Figure 1

In linking to the sequence of comparison stars given in Figure 1 and Table I the object was measured on 84 blue-sensitive plates (ORWO-ZU21+GG13+BG12) from 26 nights obtained with the 50/70/172 cm Schmidt camera of Sonneberg Observatory covering the time interval between August 2, 1986 and February 23, 1987. The magnitudes in B of the comparison stars listed in Table I are linked to the sequence of comparison stars of TT Arietis given by Götz (1985). The star "h" there is identical with the star "x" in the present sequence.

The magnitude distribution in B of all individual observations is shown in Figure 2. Most of them are in the range between $m_B = 15^m.65$ and $m_B = 16^m.05$. There is no doubt that the object is variable. But its variability, caused by the two components, is of low amplitude and belongs probably to the low and quiet state of the stars.

In series of 5 and more plates per night the individual observations are scattering within $\Delta m_B \approx 0^m.3$. Only in the night of J.D. 244 6763 the amplitude amounts to $\Delta m_B = 0^m.5$.

Table I

comparison star	m_B
x	$14^m.86$
a	15.64
c	15.89
d	16.30
e	16.84

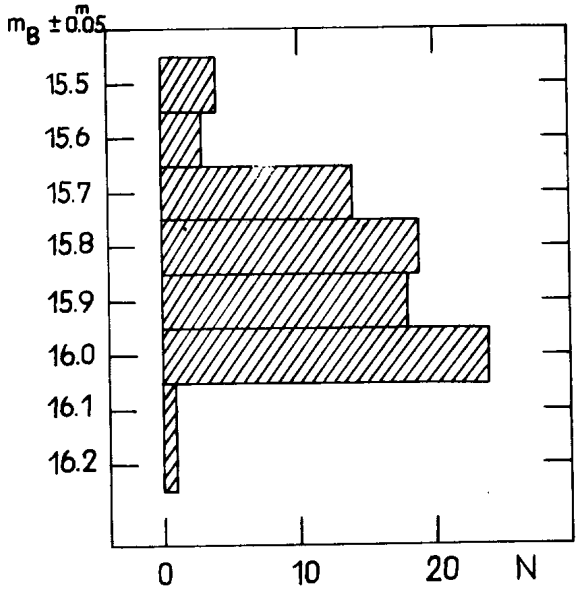

Figure 2

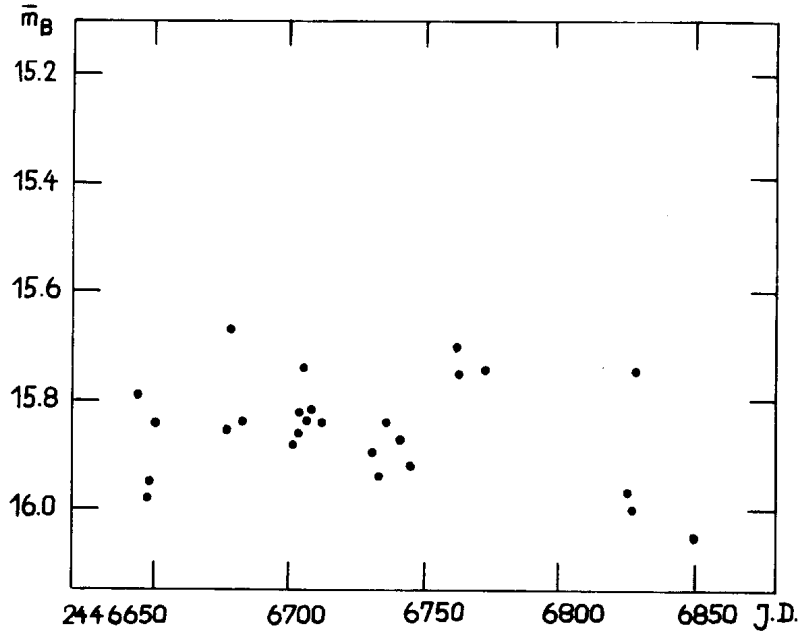

Figure 3

No flare was observed, as can be seen from Figure 3, where the mean values of brightness from each night are given to show the long-scale behaviour of the object.

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