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NSV 6708

This star was rediscovered by Dawes on 1986 July 6, on patrol photos taken on 1986 July 5 (McNaught, 1986). The star was then at mag 7.5. The NSV catalogue gives only a maximum of mag 9.7 and a range of 0.8 mag. It lies 33 arcsecs due north of a mag 11 star. According to the NSV catalogue the star (originally BV 520) is identical to CoD -39,9021, but examination of the nearby CoD stars suggests that CoD -39,9021 may be the mag 11 star as it is of similar brightness to the faintest CoD stars. However, the measured position of NSV 6708 more closely agrees with the coordinates of the CoD star than with the mag 11 star.

Dawes comparison photo used in the blink was taken in early 1985 and shows no image at the position of the variable, it then being fainter than mag 12. Subsequent examination of Schmidt survey plates by McNaught show that it has a range of from mag 7.5 to 15.5. The small range reported in the NSV is presumably due to merging of the variable with the mag 11 star. Details of the individual plates are as follows

Union	1928 May 28	not recorded	(14.5: B
Canterbury	66 Jul 9		15: B
Stellarum	70 Mar 6		14: B
Papadopoulos	74 May 11	not recorded	(14.5: V
ESO B	75 Jul 6		9: B
ESO B	75 Jul 9		9: B
SERC J	76 May 6		12.9 J
SERC J	77 Mar 18		7.6 J
SERC J	77 Jun 6		8.5 J
SERC R	78 May 2		16: R
SERC R	79 Mar 26		16: R
SERC J	79 May 1		15.4 J

On two fields of the Whiteoak extension of the PSS, the variable is mag 7.5.

The J magnitudes are based on uncalibrated measures of the image diameters, the other survey measures being guesstimates aided by Ann Savage of the UKSTU. It was fortunate that the variable appeared on the overlap of four fields.

A photographic finder chart showing the star when faint is given in Fig. 1 .

NSV 6708

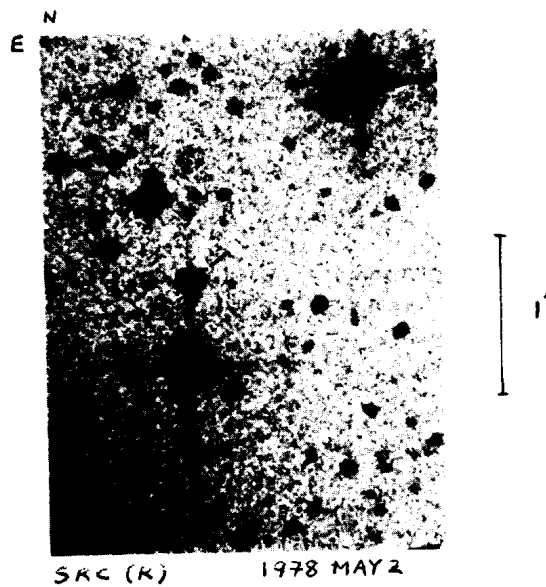


Figure 1 From an R survey plate of the U.K. Schmidt Telescope.
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Patrol photographs by McNaught are detailed below

1985 Jun 16	11: appears marginally resolved from star?
85 Dec 12	8 (on limit)
86 Jan 18	7.5:

From mid Feb onwards, the variable has been recorded at mag 7.5 on numerous patrol photographs. Subsequent to the rediscovery, the star has been closely monitored visually by Australian and New Zealand amateurs. The observations suggest possible slight variability around mv 7.5 .

No colour information is available from the schmidt survey plates, but colour photographs by McNaught and Steven Burns on 1986 Apr 11 show the variable to be white. On that date, the tail of P/Halley crossed the variable.

Astrometry was carried out by McNaught on an SERC J film copy using the Bolton machine at UKSTU, Siding Spring and the measures are based on 10 Perth 70 stars within 1.5 degrees of the variable.

R.A. (1950.0)	Dec. (1950.0)
h m s	o ' "
14 31 41.54	-39 20 13.2

The RMS error 0.4 arcsec in R.A. and 0.5 arcsec in Dec.
The epoch of the plate is 1977.43

The use of the UKSTU and AAT facilities at Siding Spring is gratefully acknowledged by McNaught.

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Reference :
McNaught, R.H. 1986, IAUC 4233