

COMMISSION 27 OF THE I. A. U.  
INFORMATION BULLETIN ON VARIABLE STARS

Number 1706

Konkoly Observatory  
Budapest  
1979 November 19

THE 1978 NOVA IN Sgr

The object at  $\alpha=18^{\text{h}}14^{\text{m}}20^{\text{s}}.6$ ,  $\delta=-27^{\circ}59'51''$  (1900) was discovered by Stenholm and Lundstrom (1979) to have had the spectrum of a declining nova on an objective prism plate taken 1978 Mar. 8. The star is visible on Maria Mitchell plates taken between 1978 June 30 and 1978 Oct. 3 but not seen in 1977 or 1979 on plates with a limiting magnitude near  $m_{\text{pg}}=15$ . There are no plates of the field between 1977 Oct. 1 and 1978 June 30 or between 1978 Oct. 3 and 1979 May 2.

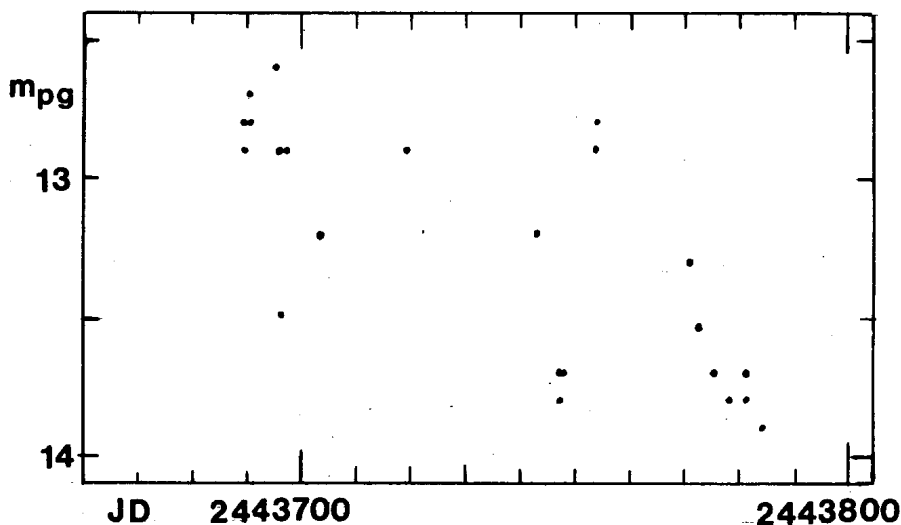


Fig. 1. A photographic light curve for the 1978 Nova in Sgr

The photographic light curve is shown in Fig. 1. Magnitudes are from eye estimates relative to the sequence stars identified on the finding chart, Fig. 2. Preliminary magnitudes of the sequence stars are listed in Table 1. They are based on photographic transfer from photoelectric B magnitudes (Bok and Bok

Table 1

a	12.2
b	12.7
c	13.0
d	13.6
e	14.2

1960) and photographic IPg magnitudes (Pickering et al. 1923) in Selected Area 158, transformed to  $m_{pg}$  according to:

$$m_{pg} = B - 0.2$$

and  $m_{pg} = 12.18 + 1.34(IPg - 12)$  .

The first relation is a simple zero-point adjustment. The second comes from a linear least squares fit involving five of the seven faintest stars which the two sequences have in common (leaving out two discordant red stars).

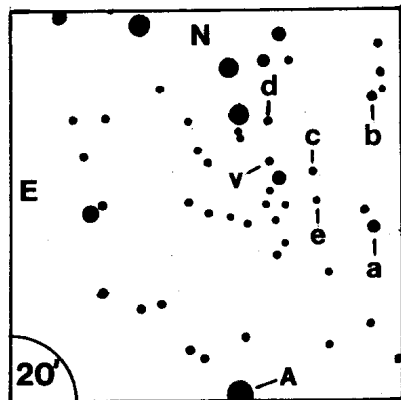


Fig. 2. Field of the 1978 Nova in Sgr. Preliminary magnitudes of the sequence stars are given in Table 1. The star marked "A" is CoD -28°14475.

I am grateful to Earthwatch, of Belmont, Massachusetts, for support of this work and to volunteers Clifford Spohn for estimates of the nova and Mary Fletcher for the photographic transfer.

EMILIA P. BELSERENE  
 Maria Mitchell Observatory  
 Nantucket, Mass. 02554 USA

References:

- Bok, B.J., Bok, P.F. 1960, Monthly Notices of the R.A.S. 121, 531  
 Pickering, E.C., Kapteyn, J.C., van Rhiijn, P.J. 1923, Harv. Ann. 102  
 Stenholm, B., Lundström, I. 1979, IAUC 3411