

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

Number 1340

Konkoly Observatory  
Budapest  
1977 September 19

THE BELATED DISCOVERY OF NOVA Sgr 1968 AND NOVA Oph 1969

Recent reexamination and intercomparison of several objective-prism plates taken with the Curtis Schmidt telescope at Cerro Tololo, Chile has revealed two previously undetected novae. The plates are Kodak IIa-F behind an RG 1 filter and cover the spectral region  $\lambda\lambda 6000-6800$  at a dispersion of  $420 \text{ \AA/mm}$  at  $H\alpha$ ; they are widened to  $1/3 \text{ mm}$  during the 30-minute exposure and have a limiting red magnitude of about 12.0 for the continuum of a blue star.

Nova Sgr 1968 - position:  $17^{\text{h}}59^{\text{m}}18^{\text{s}}.87$ ,  $-28^{\circ}45'23''.8$  (1950). The two prism plates of this object were taken on 1968 May 17 and July 3, and both show broad emission at  $H\alpha$ . The total width of  $H\alpha$  gives a velocity spread of 2900 km/s on the first plate and 2300 km/s on the second. The May 17 plate also shows a faint, reddened continuum, estimated to be of red magnitude 11.0, on which are superposed weak emission bands tentatively assigned to  $\lambda 6300$  and  $\lambda 6364$  of [OI] and to  $\lambda 6474$  of [FeII]; this latter would indicate that it is probably a slow nova. The July 3 plate is somewhat deeper than the first but shows no continuum nor features other than  $H\alpha$ . From the limited spectral information available, it can only be said that the first plate was taken during the Orion or early nebular stage and the second plate was taken during the later nebular stage. There is also available a 5-minute, direct visual plate taken 1971 April 3 which shows no image at the nova position brighter than  $V = 16.3$ .

Nova Oph 1969 - position:  $17^{\text{h}}21^{\text{m}}12^{\text{s}}.14$ ,  $-24^{\circ}34'08''.0$  (1950). Two prism plates, taken 1969 June 21 and 1974 Aug. 8, are available at this position, but only the first shows evidence of the

nova. On this plate very broad H $\alpha$  emission with a symmetrically-placed core is seen superposed on a continuum of approximate red magnitude 10.8. The spectrum shows no forbidden lines nor absorption features but does have narrow, weak HeI emission at  $\lambda 6678$  indicating that it was in the principal emission stage at this time. The total width of H $\alpha$  corresponds to a velocity spread of 5000 km/s.

Dr. N. Sanduleak, Warner and Swasey Observatory, indicates in a private communication that there is an objective-prism plate on each of these fields at that observatory. The field of the Sagittarius object was taken 1967 July 5 with the Curtis telescope on 103a-F emulsion at a dispersion of about 1000  $\text{\AA}/\text{mm}$  at H $\alpha$ ; he finds no object in the nova position brighter than limiting red magnitude 13.5. The Ophiuchus field was covered on a IIa-O plate (dispersion about 1400  $\text{\AA}/\text{mm}$  at H $\gamma$ ) taken with the Burrell Schmidt telescope on 1969 July 14, three weeks after the discovery plate. Dr. Sanduleak reports no trace of Nova Oph 1969 down to limiting photographic magnitude 14.

The author expresses gratitude to N. Sanduleak for his communication and to J. Stock for his help in the position determinations.

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