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V1032 OPH IS A DWARF NOVA

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V1032 Oph was discovered by Kinman et al. (1965, their star number 40) as a possible RR Lyrae type variable. It had however an unusually large photographic amplitude of about two magnitudes and Kinman et al. could not find a suitable period. GALEX (Martin et al., 2005) visited the object three times, with near UV magnitudes $nuv = 18.9$ and 17.8 on two occasions in 2005 (and no far UV magnitude fuw determined), and with $fuw = 20.4 \pm 0.4$ and $nuv = 20.2 \pm 0.2$ in 2007. The Catalina Real-time Transient Survey (CRTS; Drake et al., 2009) rediscovered V1032 Oph recently (as CSS080426:162610-035325). The CRTS light curve was not characteristic for RR Lyrae type stars.

V1032 Oph was therefore selected for follow-up observations using the robotic mode of the C14 telescope at the Sonoita Research Observatory (SRO). Photometry was performed using a SBIG STL-1001E CCD camera equipped with B and V filters. The stars USNO-B1.0 0861-0298934 ($V = 14.98 \pm 0.02$, $B - V = 0.97 \pm 0.05$, star "a" of Kinman et al.) and USNO-B1.0 0860-0285298 ($V = 15.88 \pm 0.13$, $B - V = 0.81 \pm 0.05$) were used as comparison stars for the SRO observations. Their B and V magnitudes were determined from absolute photometry at SRO. In general two B and two V images with exposures of 300 seconds were made each available night. These observations, taken in the first half of 2009, are available from the IBVS website.

The light curve of V1032 Oph presented in Fig. 1 is similar to that of SU UMa, with frequent short outbursts and a generally fairly small amplitude for a dwarf nova (V varies between 15.1 and 19.0, but maxima are generally around mag. 16 and minima around mag. 18.5). Also the data of Kinman et al. (1965) and early CRTS observations are compatible with this interpretation. The outburst that started at the end of March 2009 and lasted into April, was brighter and lasted longer than any of the other outbursts. This could therefore have been a superoutburst. The CRTS light curve shows a period of about four months in the first half of 2007 when the object was always near minimum without any outbursts (unfiltered mag. 17-17.5; note that the unfiltered CRTS observations have the object in general about one magnitude brighter than in V). Also SU UMa has experienced such extended spells in quiescence in the past. During maximum V1032 Oph has $B - V = 0.26 \pm 0.10$ on average, within the range of cataclysmic variables. This value may need to be corrected for interstellar extinction ($E(B - V) = 0.282$ in the direction of V1032 Oph, according to Schlegel et al., 1998).

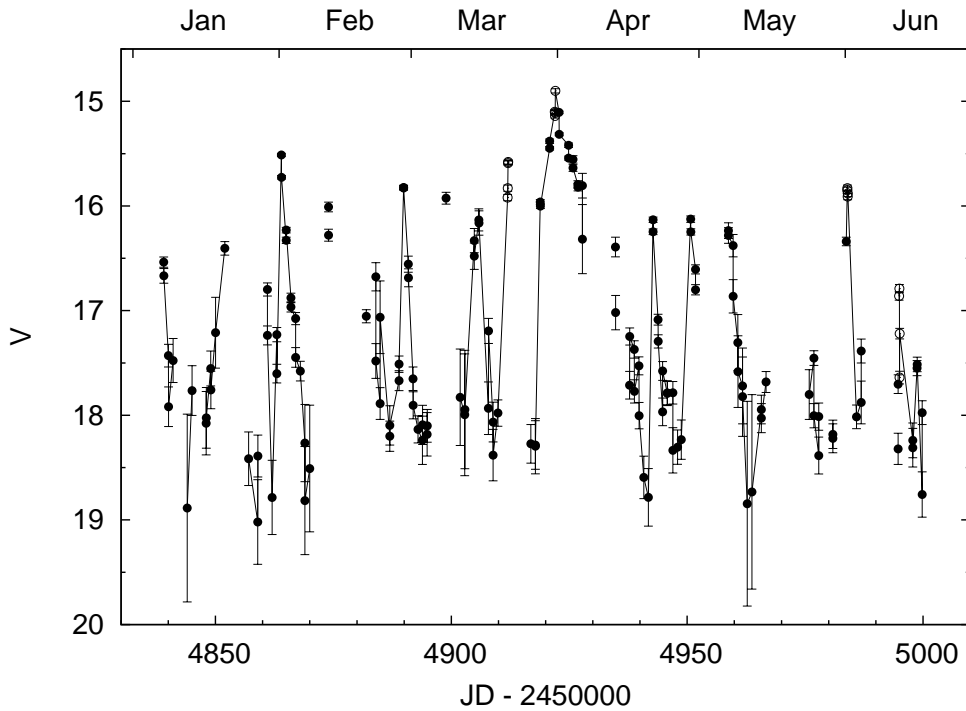


Figure 1. Light curve of V1032 Oph in the first half of 2009 from CRTS (open circles; unfiltered) and SRO data (filled circles) using nightly averages. To guide the eye, some points have been connected by lines.

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