

**CCD OBSERVATION OF THE 1997 NOVEMBER OUTBURST OF V364 Peg:
AN SU UMa-TYPE DWARF NOVA WITH A LONG ORBITAL PERIOD?**

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V364 Peg is a dwarf nova discovered during the supernova survey at the Beijing Astronomical Observatory (Qiu et al. 1997a). Qiu et al. (1997b) reported another bright outburst at $R = 15.0$ on 1997 November 14.44 UT. The reported amplitude exceeding 5 mag and the rapid decline (1.3 mag d^{-1}) rate at the time of make the object a good candidate for an SU UMa-type dwarf nova (Kato 1997). During this bright outburst, we observed the variable in order to detect possible superhumps.

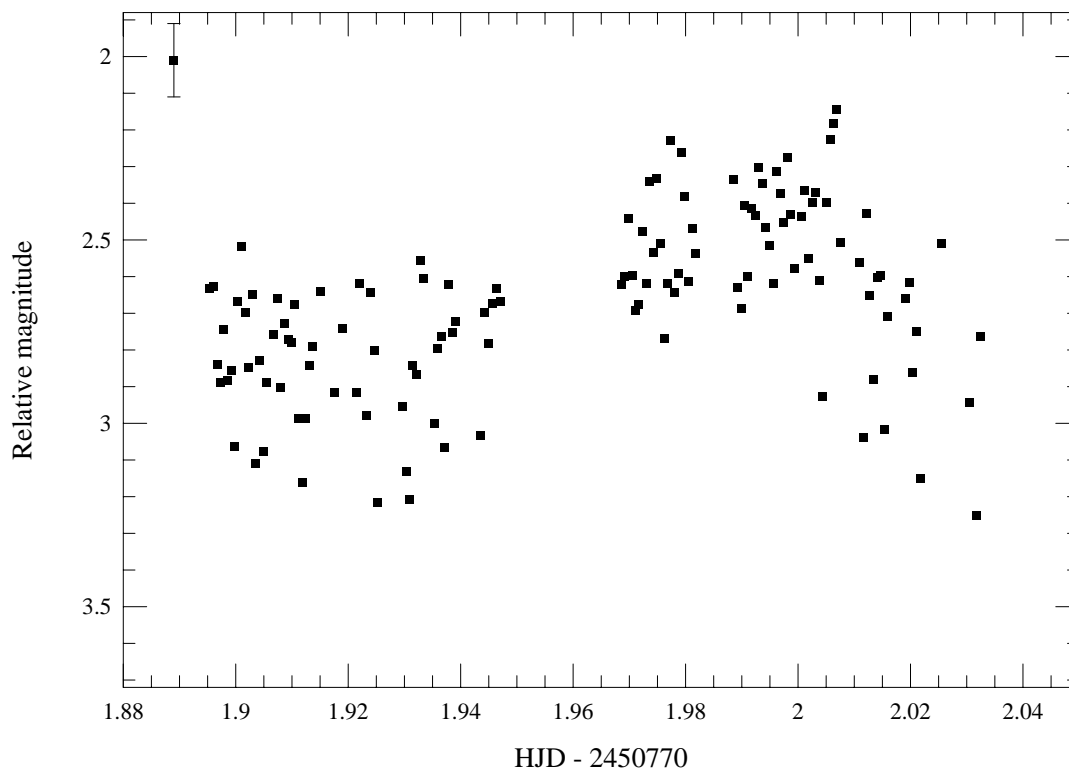


Figure 1. Light curve of V364 Peg

The observations were done on 1997 November 19 using an unfiltered ST-7 camera attached to the Meade 25-cm Schmidt-Cassegrain telescope. The exposure time was 40–45 s. The images were dark-subtracted, flat-fielded, and analyzed using a microcomputer-based aperture photometry package developed by one of the authors (TK). The flux of the variable was measured relative to GSC 1113.1775 (USNO *r*-magnitude 12.9), whose constancy was confirmed by comparison with GSC 1113.499 (USNO *r*-magnitude 13.2). The magnitudes given below are expressed relative to GSC 1113.1775.

Figure 1 illustrates the light curve of the present observation. Although the run was not long enough to confirm the periodicity, there was a hump-like feature with an amplitude of 0.3 mag around HJD 2450771.996. We consider this is a superhump, by taking into account the considerable duration of the outburst (the object was still in outburst on 1997 Dec. 1, at mag 16.6, by L. T. Jensen), the brightness of the outburst, and the usual lack of modulations of this amplitude in SS Cyg-type dwarf novae. The superhump period seems to be longer than 2.5 hours, as the length of the observation was ~ 3 hours. Although this periodicity should be confirmed by future observations, the potential period makes V364 Peg as a candidate of the longest orbital-period SU UMa-type dwarf novae (cf. Nogami et al. 1997), or even may be the second dwarf nova in the period gap (Nogami et al. 1998). Future monitoring of outbursts and intensive time-resolved photometry are needed.

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