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**NOVA Aql 2001: ANOTHER V723 Cas-TYPE SLOW NOVA?**

KATO, TAICHI<sup>1</sup>; TAKAMIZAWA, KESAO<sup>2</sup>

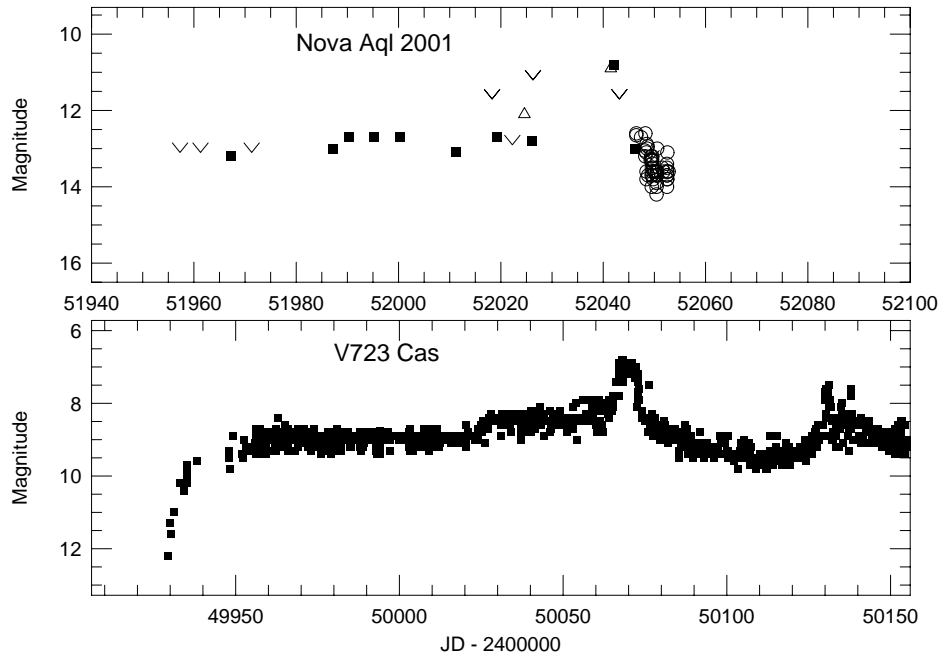
<sup>1</sup> Dept. of Astronomy, Kyoto University, Kyoto 606-8502, Japan, e-mail: tkato@kusastro.kyoto-u.ac.jp

<sup>2</sup> Variable Star Observers League in Japan (VSOLJ), 65-1 Oohinata, Saku-machi, Nagano 384-0502, Japan, e-mail: k-takamizawa@nifty.ne.jp

Nova Aql 2001 = V1548 Aql was originally discovered by M. Collins as a variable star TAV J1907+117 (Hurst 2001a). The object was reported to be at photographic magnitude 10.9 on 2001 May 11.99 UT. The object was suspected at magnitude 12.1 on Apr. 25, but the measurement may have been affected by crowding of the field (Hurst 2001a,b). The possibility as some sort of an eruptive variable was suggested based on the lack of bright infrared counterpart on IRAS surveys (Kato 2001). The object was announced as a possible nova (Hurst 2001b). Spectroscopic confirmation as a nova was made by several groups (Benn et al. 2001; Shemmer 2001). The nova was observed already very faint ( $\sim 12.5$ – $13.0$ ) on May 16–17, suggesting a rapid fade. However, predisccovery photographs by Takamizawa (2001) revealed that the nova was already bright in late February. This suggests that the nova had a long premaximum halt before its final rise to maximum.

Such behavior was also observed in previous novae, most notably in V723 Cas = Nova Cas 1995. Figure 1 shows the comparison between light curves of Nova Aql 2001 and V723 Cas. The horizontal scales were slightly different between these objects, but the overall features resemble each other within a factor of  $\sim 40\%$  difference in time scales. This striking similarity makes Nova Aql 2001 as a “twin” nova to V723 Cas, the best-observed slowest nova in the modern times. This similarity is consistent with the low expansion velocity (mean FWHM of  $1100 \text{ km s}^{-1}$ , Shemmer 2001), which is comparable to the small FWHM of  $600 \text{ km s}^{-1}$ , observed in  $H\alpha$  emission line of V723 Cas (Della Valle et al. 1995). The small difference in the FWHM between these two objects may suggest that the evolution of Nova Aql 2001 may be more rapid, which looks consistent with the time scales in the light curves, but the direct comparison of values may be still premature because the spectra were taken at different stages of nova explosions. The likely progenitor of Nova Aql 2001 was identified as a star having USNO A2.0 magnitudes of  $r = 18.7$  and  $b = 19.6$  (Uemura et al. 2001). This makes the outburst amplitude of  $\sim 8$  mag, which is roughly comparable to that of V723 Cas ( $\sim 10$  mag).

Long premaximum halts were also observed in historical novae, HR Del and possibly in DO Aql. The almost identical appearance of premaximum halts and sharp maxima suggest that a common mechanism is responsible for producing such, still poorly understood, features in slow novae. Both V723 Cas and HR Del showed oscillations after the main peak (as is also seen in the lower panel of Figure 1). If similar phenomenon occurs in Nova Aql 2001, the expected time of the second maximum is around JD 2452080–2452090



**Figure 1.** Comparison of light curves between Nova Aql 2001 and V723 Cas. The symbols in the upper panels: discovery and prediscovery photographic observations by Collins (open triangles), photographic observations by Takamizawa (filled squares), visual and V-band CCD observations reported to VSNET (open circles, including some observations reported to IAU Circulars) and photographic upper limits ('v'-marks). The light curve of V723 Cas (lower panel) are drawn from reports to VSNET

(late June, 2001), but the expected dates should be treated as approximate since the early stage of Nova Aql 2001 was not very well sampled. The cause of such nova oscillations still being poorly understood, intensive observations around this period would be encouraged.

The authors are grateful to VSNET (<http://www.kusastro.kyoto-u.ac.jp/vsnet/>) members for providing vital observations of both novae.

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