

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

Number 3082

Konkoly Observatory
Budapest
4 September 1987
HU ISSN 0374-0676

ON THE POSSIBLE NOVA OF SOLOVYOV

In 1949, Solovyov (1949a,b) reported on a possible nova in the constellation of Aquila. The evidence for the existence of the nova consists of only one photographic plate taken on 2 May 1949 at $21^{\text{h}} 42.0^{\text{m}}$ UT. On this plate, the limiting magnitude was 13.5, the nova appeared at between 10.8 and 11.0 magnitude, and the nova's position was $19^{\text{h}} 22^{\text{m}} 58.3^{\text{s}}$, $+2^{\circ} 41' 28''$ (1949.0 epoch). The nova was not detected on plates taken two days earlier, one day earlier, or 23 days later. From this evidence, it is quite possible that Solovyov's object (CSV101836 = NSV12006) could be a faint galactic nova that brightened on 2 May 1949 and then quickly faded. It is also possible that Solovyov's object could be a flare star of large amplitude, or a gamma ray burster, or a photographic defect.

To help choose between these possibilities, I have examined the plates at the Harvard College Observatory. Specifically, I was looking for plates exposed around 2 May 1949 which showed the position of the possible nova. I did find the plates B74713 (a 45^{m} exposure started at 3 May 1949 $16^{\text{h}} 9^{\text{m}}$ UT with a limiting magnitude of roughly 14.0) and RB16275 (a 120^{m} exposure started at 5 May 1949 $16^{\text{h}} 42^{\text{m}}$ UT with a limiting magnitude of roughly 15.5). Both plates showed no sign of anything unusual near the error box.

These observations rule out the possibility of Solovyov's object being a nova, since the object would have to have faded by over 3.0 magnitudes in 19 hours. I would like to request that other astronomers with access to archival plate collections should try to see if they have photographs from the same night. I would also like to request that anyone who may have access to the original plate of Solovyov should examine the image for plate defects. Such an examination should include a comparison of the image under high magnification with those of nearby stars, as well as a blink comparison with a comparable plate.

BRADLEY E. SCHAEFER
NASA/GSFC, Code 661, Greenbelt, MD, 20771, USA

References:

- Solovyov, A.V., 1949a, Russian Astronomical Circulars, no. 87.
Solovyov, A.V., 1949b, Russian Astronomical Circulars, no. 88.