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GL TAURI

The star GL Tauri has been classified in the G.C.V.S. (B.V. Karkain et al. 1970) as an irregular variable connected with an emission nebula, showing rapid light variations (Ins?). The range of the photographic magnitudes, as determined by W. Götz (MVS 361, 1958), is from 15.7 to 17.5.

Fourteen plates obtained in B (103a-0 + GG 13) and five in infrared (IN + RG 5) during the period between JD 2439763 and 2439860 with the 65/90/210 cm Schmidt telescope of the Asiago Astrophysical Observatory were examined for a study of the interconnection between the star and the nebula.

At minimum in blue GL Tauri appears as a star-like object fainter than determined by Götz. During the period covered by the present observations its brightness fluctuated between 18.6 and <19.0. The small nebula (17" diameter) in which the star is embedded showed also variations of blue brightness in some points of its surface, particularly in the northern part. Its appearance was therefore changing, but apparently without connection with the variations of the star-like object.

The star is invisible in infrared, except for one plate where it is barely visible, near the plate limit. The nebulosity does not appear in infrared.

Photographs of the same region obtained in blue light with the short focus 40/50/100 cm Schmidt telescope of Asiago show that the integrated blue magnitude of the nebula is about 17.6. For this reason we think that the minimum observed by Götz was mostly due to the brightness of the nebula rather than to the star.

The small emission nebulosity surrounding the star-like nucleus suggests that the variable object GL Tauri may be in an intermediate stage between Herbig-Haro objects and T Tauri variables.

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