

COMMISSION 27 OF THE I. A. U.  
INFORMATION BULLETIN ON VARIABLE STARS  
Number 1903

Konkoly Observatory  
Budapest  
1981 January 5  
HU ISSN 0374-0676

GY CYGNI

This star was estimated on Sonneberg Sky patrol plates made during the years 1966-1980. The light curve shows apparent non periodic waves with clear maxima and minima. The middle cycle

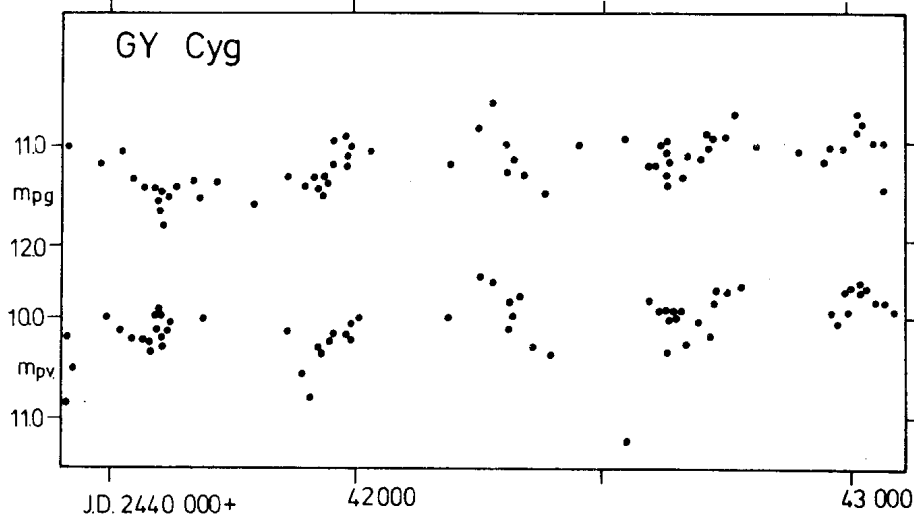


Fig.1. Middle lightcurve from parallel photographic observation series in mpg and mpv.

duration is about  $300^d \pm 50^d$ . Probable there exists a secondary light variation with a period of  $4000^d$  and an amplitude of 0.5 mag. (mpv).

The observed amplitude of the total light variation is 10.6-11.8 (mpg) and 9.5-10.7 (mpv). The colour index is about  $(mpg-mpv)=+1^m.1$ .

It is possible that the star is a semiregular type variable of type SR b.

Its spectral type M 7p determined by Jaschek et al.(1) contradicts the observed colour. From the estimated luminosity of the star we can find a distance  $r=(1.0\pm 0.8)$ kpc. The interstellar extinction with  $A_V=0.2-0.7$ , which is effective in this distance, increases the discrepancy between the colour index and spectral type.

The peculiarities in the spectrum of this variable pointed out by Wachmann (2,3) call for a detailed spectrographic investigation.

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References:

- (1) Jaschek, C., Conde, H. and de Sierra, A.C., La Plata, Ser. Astr. 28.2, 1964
- (2) Wachmann, A.A., Astron. Nachr. 255, 369, 1935
- (3) Wachmann, A.A., Astron. Nachr. 236, 280, 1929