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OBSERVATIONS OF CG CYGNI

BVR photoelectric observations of the eclipsing binary CG Cyg (B.D. $+34^{\circ}$ 4217) were taken during the first two weeks of July 1978 at the Kottamia station of Helwan Observatory (Egypt). The equipment and photometric arrangements are essentially the same as referred to by Sadik (1978). Two stars in the neighbourhood of the variable were selected as comparison and check stars. They are designated (a) and (b) respectively in the field map given by Yü (1923). The phases were computed using the light elements $E = 2439425.1221$ and $P = 0^{d}.6311410$.

CG Cyg has been listed by Hall (1976) in the table of short period group of his paper on the RS CVn binaries. The spectral type of this star is G9V–IV (composite spectrum) and H and K emission lines have been observed in the spectrum. The variability of the star was discovered by A. Stanley Williams in 1905, whose visual light curve (Williams, 1922) suggests irregularities outside of eclipses. Photographic observations were published by Milstein and Nicolajev (1940) and Tsesevich (1954). The photographic light curve of CG Cyg published by Yü (1923) shows the system to be generally brighter near the secondary eclipse than the primary (i.e., a normal "reflection effect") and also the system is brighter following the primary minimum than after the secondary. UBV photoelectric data by Milone (1969a,b)

reports asymmetries in the light curve maxima which undergo some kind of long term variation.

Preliminary B and (B–V) curves of our observations are shown in the diagrams below. It is remarkable that the system appears to be brighter near the primary eclipse than near the secondary. This effect is more pronounced in B than the V and R light curves. The observed effect seems to contradict the normal reflection effect in close binaries; though it is possible that it could be explained in terms of the "wave migration" discussion of Hall. A possibly similar star is BH Vir which has also been recently observed at Kottamia and is being examined at the present time.

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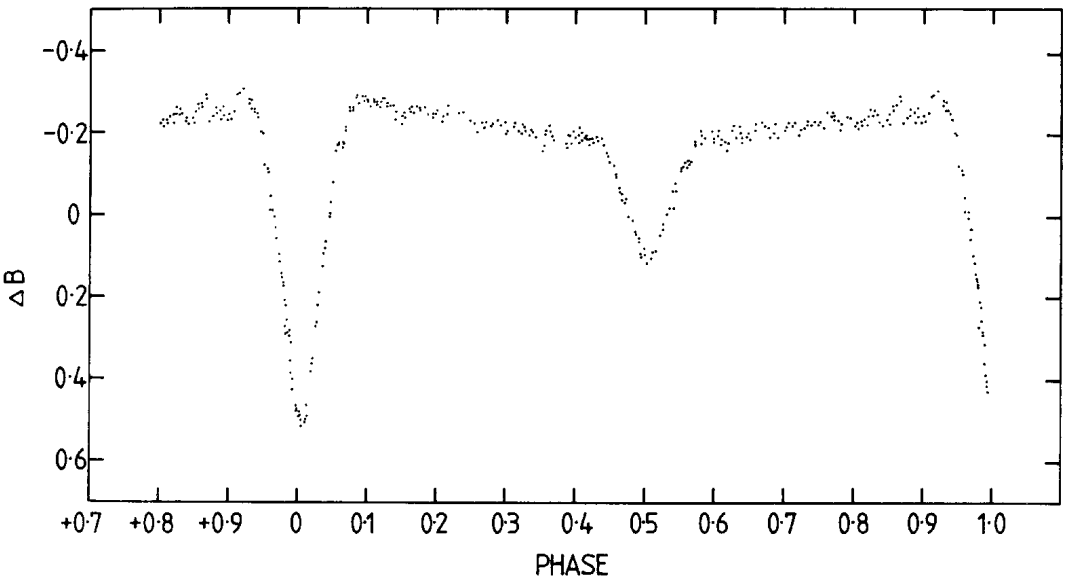
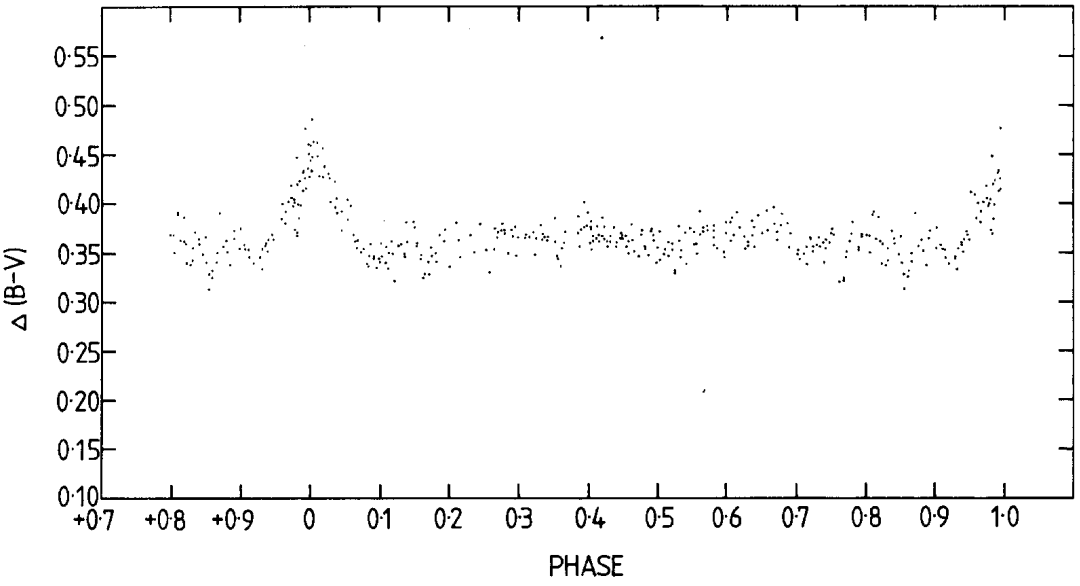


B Light Curve Of CG CYG.



B-V Light Curve Of CG CYG.