

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

Number 1721

Konkoly Observatory  
Budapest  
1979 December 21

UBV PHOTOELECTRIC OBSERVATIONS OF V 1016 Cyg DURING 1979

V 1016 Cyg (MH $\alpha$  328-116) is considered as the prototype of a small group of unusual variable stars.

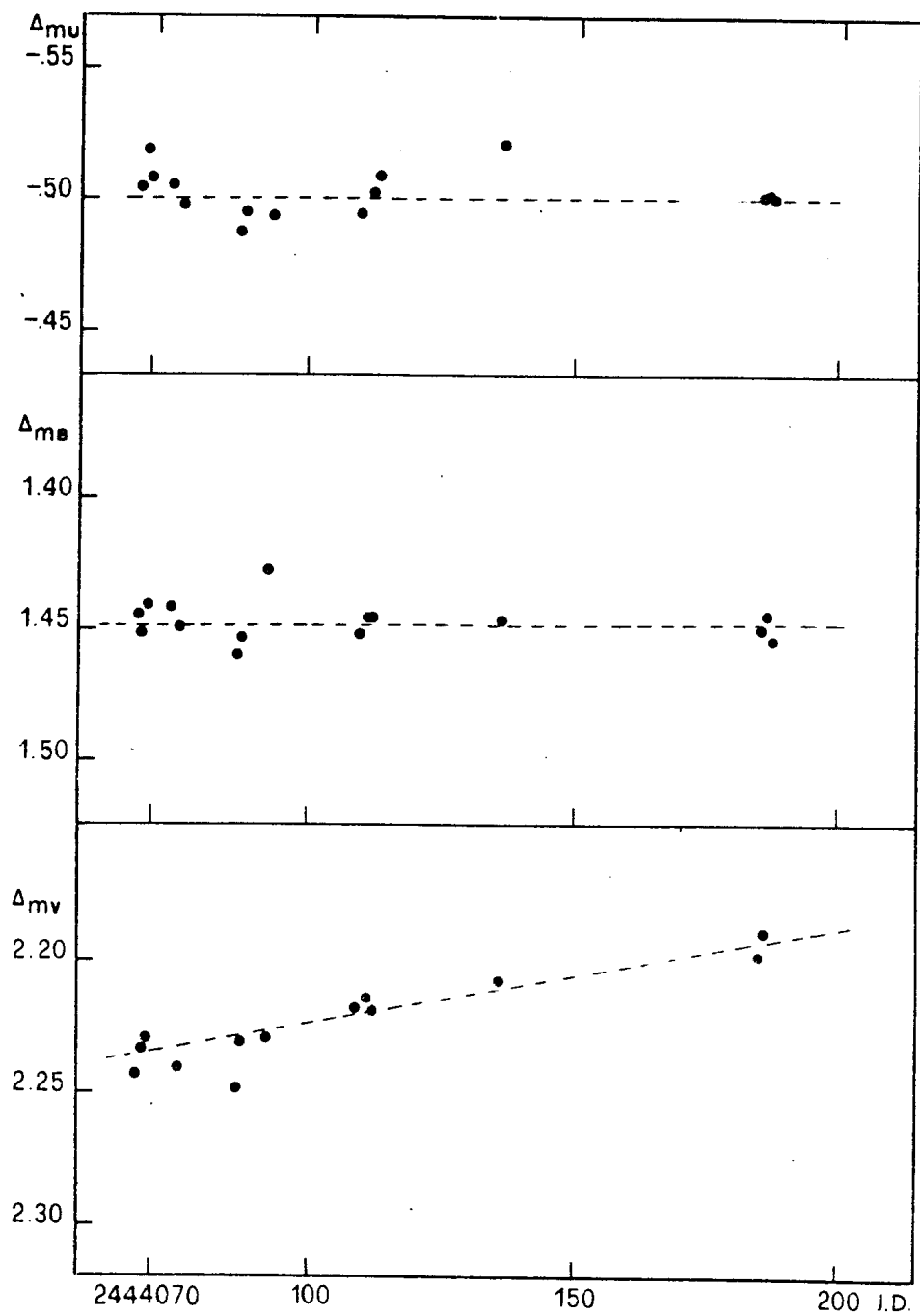
The properties of its remarkable emission-line spectrum and details on its evolution have been given in the literature (see e.g. Mammano and Ciatti (1975), Ciatti et al. (1978), Ciatti et al. (1979)). No accurate photoelectric photometry of this interesting object has been secured up today. Prior to 1963 (when unusual nova-like brightening took place) photographic observations showed the star was probably fainter than 15.5 pg. (Fitzgerald et al. 1966). In 1965 the variable reached 11.8 pg rising slowly to 10.8-10.7 at the beginning of 1968 (Ciatti et al. 1971). Since then the star has maintained a nearly constant brightness (Ciatti et al. 1978).

During 1979 UBV photoelectric observations of V 1016 Cyg have been carried out at the 91 cm Cassegrain telescope of the stellar station of the Catania Astrophysical Observatory using BD +39<sup>o</sup>3965 as comparison star and checking our measurements with a set of standard stars. The comparison star has not shown any noticeable variation. Our observations range from the 7th July 1979 (J.D. 2444067) to the 9th November 1979 (J.D.2444187).

The reduction of observations to the standard UBV system is in progress but the mean magnitudes of variable we found are V=10.46, B=10.05 and U=9.99.

In the Figure we report the magnitude differences (V 1016 Cyg - BD + 39<sup>o</sup>3965) versus Julian Day for each night of observation.

From the Figure we can see that V 1016 Cyg is increased almost constantly in its V luminosity of about 0.05 mag., from



$\Delta m_V \approx 2.24$  to  $\Delta m_V \approx 2.19$ , while its B and V magnitudes seem to be constant.

It is difficult to say if this V light curve is an increasing part of a long period variable or if the star is increasing indefinitely its V luminosity. There are, however, some indications for the latter hypothesis: the last photographic (1977) observations by Ciatti et al. (1978) give values of 10.8 and 10.7 for B and V magnitude, respectively. Our photoelectric observations, as we say above, give mean values of 10.85 and 10.45 for B and V magnitudes. This fact is consistent with the hypothesis that the star is increasing its V luminosity almost constantly (from 1977?) up today.

E. MARILLI, G. STRAZZULLA

Osservatorio Astrofisico di Catania  
Città Universitaria  
95125 Catania - Italia

References:

- Ciatti, F., Mammano, A., Rosino, L.: 1971, IAU Colloquium No.15, Bamberg, 64
- Ciatti, F., Mammano, A., Vittone, A.: 1978, Astron. Astrophys. 68, 251
- Ciatti, F., Mammano, A., Vittone, A.: 1979, Astron. Astrophys. (Research Note, preprint)
- Fitzgerald, M.P., Houk, N., McCuskey, S.W.: 1966, Astrophys. J. 144, 1135
- Mammano, A., Ciatti, F.: 1975, Astron. Astrophys. 39, 405