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

Number 3007

Konkoly Observatory
Budapest
6 April 1987
HU ISSN 0374-0676

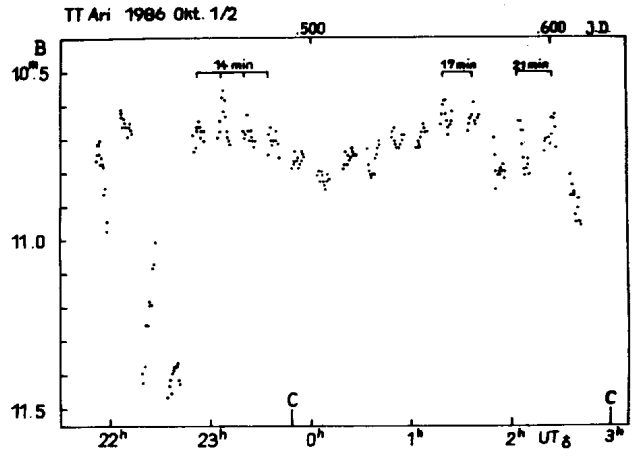
PHOTOELECTRIC OBSERVATIONS OF TT ARIETIS ON 1/2 OCTOBER 1986

Coordinated observations of this accreting white dwarf in a low-mass binary, simultaneously in the X-ray and the optical region, were carried out by numerous authors during summer and autumn 1985 (Wenzel et al. 1986, 1987). One year later, during the night of 1986 Oct. 1/2, we checked the behaviour of the object by photoelectrical observations with the Piszkéstető 50 cm telescope in Hungary. Star c (after Wenzel et al. 1986) served as comparison star. The measurements were made in the blue sensitivity region b. For the transformation into international B magnitudes the empirical formula

$$B = b + \frac{\sec z - 0.7297}{13.3061}$$

was used.

The resulting light curve (Fig. 1) shows the following.



1. During that night the star was in its "active" state (high brightness).
2. The photometric period of about 3.2 hours can clearly be recognized from the space of time between the two observed maxima, but these maxima are not in phase with the maxima "C" computed from the photometric elements given by Wenzel et al. (1986).
3. There are quasi-periodic fluctuations of the kind described in Wenzel et al.(1986, 1987)and Semeniuk et al. (1986). The cycle length seems to be not constant, but varying between 14 and 21 minutes.
4. During the observation time there occured an unusually deep dip in brightness down to $11^{m}.5$.

The numerical data of these observations will be published in "Mitt. Veränderl. Sterne", Sonneberg.

S. RÖSSIGER
Zentralinstitut für Astrophysik
Sternwarte Sonneberg
Sonneberg
DDR-6400

References:

Semeniuk, I., Schwarzenberg-Czerny, A., Duerbeck, H., Hoffmann, M., 1986, Inf. Bull. Var. Stars No. 2899

Wenzel, W., Hudec, R., et al., 1986, Preprint

Wenzel, W., Hudec, R., et al., 1987, in preparation