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BD +28°637

On the basis of the photometric material obtained in 1960-64 at the Schmidt camera in three colours of the UBV system (80 photos in each colour) we found that the star BD +28°637 is an irregular variable.

The extreme values of its brightness are as follows: 11.69-13.40, 11.30-12.41, 10.55-11.53 mg in U, B and V, respectively. The colour indices vary in wide range: (U-B) from +0.35 to +1.32, (B-V) from +0.51 to +1.65.

On the (U, U-B) diagram a short-wave emission excess appears with the increase of the brightness of the star.

On the Hertzsprung-Russel diagram the star is located within the T-band. The star BD +28°637 is probably a variable of the RW Aur type.

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L.N.MOSIDZE  
Abastumani Astrophysical Observatory  
Georgian SSR, USSR

THE LIGHT-SURFACE OF TU Cas

TU Cas is a cepheid type variable with regular light curve variation. The periods were determined by Oosterhoff (1):  $P = 2^d,1393$  and  $P_B = 5^d,2306$ .

The variable was observed at the Konkoly Observatory in three colours from 1960 until 1963. Using a procedure proposed by J. Balázs and L. Detre (2) we constructed the so

called light-surface of the variable. It proved to be similar to that of the RR Lyrae stars showing Blashko effect (e.g. AR Her) (3): on the light-surface of TU Cas a bulb appears and develops on the descending branch, whilst the brightness of the maximum decreases resulting in a double maximum at a definite phase of the  $P_B$ -period; later the old maximum is shrinking to a bulb on the ascending branch, finally disappearing, meanwhile the new one, increasing continuously, is shifted to the left and takes the place of the old maximum.

The phenomenon repeats itself in all the three colours and could be checked independently from the observations of Vasilanovskaja (4) as well.

E. ILLÉS

Konkoly Observatory  
Budapest

Literature:

- 1 Oosterhoff, P.Th.: BAN XIII. No 479. (1967).
- 2 Balázs, J. - Detre, L.: Budapest Mitt. 8 (1939).
- 3 Almár, I.: Budapest Mitt. 51 (1961).
- 4 Vasilanovskaja, O.P.: Bjull. Stalinabad No 43-44 (1966).