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### UBV observations of the flickering of T CrB

ATel #2586; **R. Zamanov, S. Boeva, S. Tsvetkova, K. Stoyanov (Institute of Astronomy, Sofia, Bulgaria)**  
on 27 Apr 2010; 13:32 UT

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Subjects: Optical, Binary, Cataclysmic Variable, Star

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We observed the recurrent nova T Coronae Borealis simultaneously in three filters (UBV) using the telescopes of the National Astronomical Observatory Rozhen (Bulgaria). The 2m RCC telescope observed in U and V bands, and the 50/70 cm Schmidt telescope in B band. During the first run (JD 2454851.6) the total amplitude detected in U was about 0.4 mag and during the second (JD 2454889.5) - about 0.3 mag. In the table are given as follows: the band, UT-start and UT-end of the run, number of CCD images obtained, minimum, maximum and average magnitudes in each band, standard deviation of the mean, typical observational error.

<b>date</b>	<b>UTst- end</b>	<b>Npts</b>	<b>min</b>	<b>max</b>	<b>average</b>	<b>stddev / err</b>
band	h:mm- h:mm		[mag]	[mag]	[mag]	[mag] / [mag]
20.01.2009Å Å Å Å U	2:17-4:05	28	11.517	11.921	11.747	0.118 / 0.027
Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å B	2:28-4:07	240	11.108	11.269	11.199	0.035 / 0.010
Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å V	2:19-4:09	559	9.878	9.952	9.916	0.015 / 0.016
27.02.2009Å Å Å Å U	0:11-1:37	24	12.162	12.465	12.330	0.089 / 0.028
Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å B	0:15-1:43	24	11.438	11.521	11.482	0.021 / 0.005
Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å Å V	0:10-1:40	490	10.138	10.191	10.168	0.009 / 0.012

We adopt extinction  $E(B-V)=0.15$  (Selvelli, Cassatella & Gilmozzi, 1992, ApJ 393, 289). Following Bruch (1992, A&A 266, 237), we calculate the colours of the flickering source:

January 20 **U-B = -0.50, B-V= +0.42**

February 27  $U-B = -0.56$ ,  $B-V = +0.69$ ; the error is  $\hat{A} \pm 0.10$  in  $U-B$ , and  $\hat{A} \pm 0.15$  in  $B-V$ .

The result confirm our resent findings (Zamanov et al. 2010, MNRAS 404, 381) that the colours of the flickering source of the symbiotic stars differ from those of the cataclysmic variables. The data are available upon request from the authors ([www.astro.bas.bg/~rz/TCRB/](http://www.astro.bas.bg/~rz/TCRB/)).

Flickering of T CrB in UB

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