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Cessation of optical flickering from the symbiotic star CH Cygni

ATel #2707; ***J. L. Sokoloski (Columbia), R. Zamanov, K. Stoyanov (IOA, Bulgaria), S. Bryson, M. Still (NASA Ames)***
on ***30 Jun 2010; 14:52 UT***
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Subjects: Optical, Request for Observations, Binary, Cataclysmic Variable, Variables

Referred to by ATel #: 4316

Observations of CH Cyg with the Kepler satellite and the 60 cm telescope of the National Astronomical Observatory Rozhen (Bulgaria) reveal that the minute-time-scale optical flickering that CH Cyg typically produces has disappeared. Kepler observations beginning 17 December, 2009, show flickering with approximate peak-to-peak amplitude of several mmag (on a time scale of less than an hour, in the Kepler bandpass) between 17 and 27 December, 2009. During this time, the overall optical brightness gradually increased. During roughly the following 20 days, the overall optical flux decreased and the fractional amplitude of the rapid optical flickering declined. Between mid-January and mid-March, 2010, rapid optical flickering was undetectable with Kepler. CCD observations from the 60 cm telescope in Rozhen during three nights in May did not show any flickering above 0.04 mag in U, B, and V filters. In the past, the disappearance of rapid optical flickering has been attributed to either an eclipse of the accreting white dwarf (e.g., Sokoloski & Kenyon 2003, ApJ, 584, 1027), a change in the structure of the accretion disk (Sokoloski & Kenyon 2003, ApJ, 584, 1021), or the activity of a magnetic propeller (Mikolajewski et al. 1990, AcA, 40, 129).

The Table lists the date of each observation at Rozhen, the filter, the UT-start and UT-end of each run, the number of data points, the exposure time in seconds, the minimum and maximum magnitude in the run, and the standard deviation in magnitudes. Typical observational errors are less than 0.01 mag.

Date - filter	UT start - end hh:mm - hh:mm	Npts	exptime [sec]	min- max [mag]-[mag]	stdev [mag]
6/7.05.2010ÃÂ ÃÂ ÃÂ ÃÂ ÃÂ B	00:26-02:03	270	20	10.955 - 10.995	0.007
7/8.05.2010ÃÂ ÃÂ ÃÂ ÃÂ ÃÂ U	00:22-01:27	29	90	11.423ÃÂ - 11.460	0.009
9/10.05.2010ÃÂ ÃÂ ÃÂ V	00:07-01:41	132	10	9.359ÃÂ -ÃÂ 9.389	0.004
9/10.05.2010ÃÂ ÃÂ ÃÂ B	00:07-01:42	133	20	11.008ÃÂ - 11.040	0.006

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