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UBV PHOTOMETRY OF THE SYMBIOTIC STAR V1329 Cyg IN 1988-1990

The symbiotic star V1329 Cyg (HBV 475) was discovered by Kohoutek (1969). Since that time many astronomers have observed and made models for this star (Chochol and Vittone, 1986 and references listed by them).

The star was observed photoelectrically from 26 Sep. 1988 to 29 Aug. 1990 with the 1.2 m Kryonerion telescope and a single channel photon counting photometer described by Dapergolas and Korakitis (1987). The photometer employs a high gain 9789QB phototube and conventional UBV filters. Its output is fed directly to a microcomputer enabling rapid data access. For the calibration of the photometer the UBV photoelectric equatorial sequences were used (Landolt, 1973).

The period of observations covers  $\approx 75\%$  of the phase of V1329 Cyg. The derived mean values are listed in Table I where  $n$  indicates the number of observations used for deriving the listed mean value. The phases were calculated using the linear ephemeris  $2424869.9^d + 950.07^d$  given by Grygar et al. (1979).

The instrumental errors for U,B,V data are  $\pm 0.1$  mag,  $\pm 0.03$  mag and  $\pm 0.04$  mag respectively for 1988 and 1990 and  $\pm 0.2$  mag,  $\pm 0.05$  mag and  $\pm 0.05$  mag respectively for 1989. The calibration error is  $\approx 0.04$  mag.

The derived U magnitudes in Table I show an excess that permits us to suggest the presence of an early type star. This is also confirmed from the B-V colour index that corresponds to a star certainly earlier than M type.

A characteristic feature of the photometric behavior of V1329 Cyg is the presence of fluctuations on the light curve ( $\Delta V \approx 1$  mag). These fluctuations were also observed during the pre-flare and after the flare period (Taranova and Yudin, 1986) and confirm that V1329 Cyg is an eclipsing binary.

Table I

Date (JD)	V	B	U	n	Phase
2447431.32	13.16	13.67		5	.747
2447433.27	13.12	13.75	13.3	3	.749
2447435.32	13.14	13.75	13.3	12	.751
2447446.26	13.16	13.76	13.0	2	.763
2447447.25	13.09	13.75	13.1	1	.764
2447448.32	13.13	13.74	13.2	6	.765
2447451.29	13.14	13.78	13.1	3	.768
2447453.28	13.13	13.74	13.2	3	.771
2447454.25	13.15	13.74	13.1	3	.772
2447742.43	14.16	14.78	14.2	5	.074
2447743.49	14.11	14.73	14.1	4	.075
2447745.48	14.10	14.63	14.1	4	.077
2448097.56	13.05	13.64	13.4	5	.448
2448099.52	13.05	13.58	13.3	4	.450
2448124.53	13.12	13.64	13.3	2	.476
2448131.34	13.13	13.66	13.4	4	.484
2448133.32	13.07	13.6	13.3	5	.486

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#### References:

- Chochol, D., Vittone, A.: 1986, *Astrophys. Space Sci.*, 75, 237.  
 Dapergolas, A., Korakitis, R.: 1987, *Publ. Nat. Obs. of Athens, Ser. II*,  
 No.28.  
 Grygar, J., Hric, L., Chochol, D. and Mammano, A.: 1979, *Bull. Astron. Inst.*  
*Czechosl.* 30, 308.  
 Kohoutek, L.: 1969, *I.B.V.S.*, No.384.  
 Landolt, A.U.: 1973, *Astron. J.*, 78, 959.  
 Taranova, O.G., Yudin, B.F.: 1986, *Soviet Astronomy*, 30, 93.