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PHOTOELECTRIC OBSERVATIONS OF CI CYGNI DURING THE
OUTBURSTS OF 1971 AND 1973

As a contribution to the knowledge of the photometric behaviour of the symbiotic star CI Cygni, I report here the results of photoelectric observations performed in V light with the 40 cm refractor of the Teramo Observatory from 1971 to 1974.

The star usually varies between the visual magnitudes about 11.2 and 11.9 (Greenstein, 1937; Himpel, 1940; Miller, 1967; Hoffleit, 1971) but in 1911 and in 1937 outbursts were observed during which the star brightened up respectively to 10.0 and 10.9. The observations listed in the accompanying table began soon after the announcing by the Central Bureau for Astronomical Telegrams that a major outburst was in progress (Lowder, 1971). As comparison star was used BD +35°3834 with the photometric values

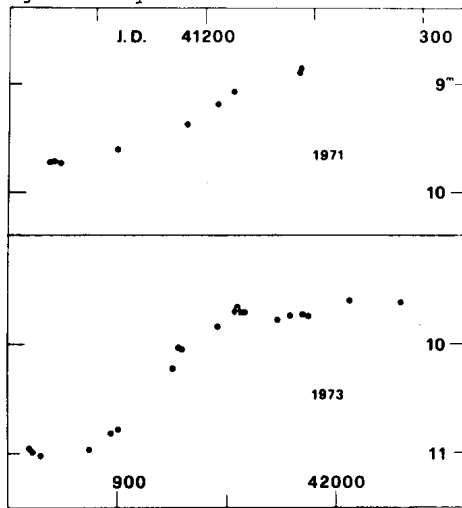
$$V = 9.45, \quad B-V = +1.03$$

determined by means of many Johnson's standard stars; its constancy was checked every night by comparison with an anonymous 9th magnitude nearby star.

In 1971 CI Cygni rose at least to the magnitude $V = 8.9$; in 1972 no photoelectric observations were accomplished but according to the AAVSO observers during that year it faded steadily from 9.3 to 11.0. The star was found at this last magnitude by Belyakina (1974) at mid June 1973 and by the writer when his photoelectric monitoring was resumed on June 26, but at the beginning of August began to flare up again reaching two months later the magnitude $V = 9.7$; at the end of its seasonal appearance in the sky CI Cygni was still as bright as 9.6. The few colour determinations listed in the Table show, as already noted in the preceding outbursts and in full agreement with the results of Belyakina, that the increase in brightness is accompanied by a decrease of the colour index, the star becoming much bluer at maximum.

The occurrence of two outbursts within such a short lapse of time and the raising to a brightness higher than never before ob-

served indicate that the star has undergone in 1971-73 a phase of unprecedented strong activity.



V light-curve of CI Cygni in 1971 and 1973

Photoelectric observations of CI Cygni from 1971 to 1974

J.D.	V	B-V	J.D.	V	B-V	J.D.	V	B-V
41			41			41		
129.49	9.72		865.43	11.02		958.32	9.71	
131.38	9.71	+0.80	887.44	10.97		973.31	9.77	
134.43	9.73	+0.85	897.51	10.82		979.36	9.73	
160.57	9.60		900.51	10.78		985.30	9.72	
193.58	9.37		925.49	10.22		987.27	9.74	
206.38	9.18		928.51	10.03		42		
213.38	9.07		929.40	10.04	+0.096	006.27	9.60	
243.34	8.89		946.40	9.84		030.24	9.62	
244.31	8.86	+0.45	954.34	9.70	+0.84	277.39	10.50	
860.49	10.95		955.33	9.67	+0.83	281.43	10.53	
861.56	10.99		956.42	9.71		306.34	10.53	

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Italy

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