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FLARES OF HD 97766

TT Hydrae was observed in UBV colours using a photoelectric photometer attached to the 35-cm Cassegrain telescope at Yunnan Observatory during April 15 to May 24 (UT) in 1987. HD 97766 and HD 97637 were used as the comparison star and the check star, respectively. The UBV bands are close to the Johnson standard system, 20 sec integration time for each colour and 38" diaphragm were employed.

Flares of HD 97766 (=CD -26^o8440; $m_V = 8.5$; G5) had been found on May 7 and May 9 (UT).

HD 97766 was observed in BV colours on May 7 from 12^h59^m to 15^h58^m UT and in UBV colours on May 9 from 14^h26^m to 15^h53^m UT. The obtained differential magnitudes in the sense of HD 97637 - HD 97766 are listed in Table I and Table II, and plotted in Figure 1 and Figure 2, respectively.

Table I

BV photoelectric observations of HD 97766, 1987 May 7 (UT)

G.M.T.	ΔV mag	G.M.T.	ΔB mag
12 ^h 59 ^m .7	0.601	13 ^h 00 ^m .1	-0.058
13 07.9	0.620	13 08.5	-0.062
13 16.2	0.638	13 16.7	-0.035
13 31.1	0.634	13 31.6	-0.055
13 38.6	0.628	13 39.1	-0.021
13 45.9	0.643	13 46.4	-0.017
13 53.2	0.622	13 53.7	-0.039
14 01.5	0.633	14 02.2	-0.040
14 09.5	0.609	14 10.0	-0.063
14 16.7	0.602	14 17.2	-0.061
14 35.8	0.615	14 36.4	-0.062
14 46.8	0.630	14 47.5	-0.050
14 55.5	0.611	14 56.1	-0.066
15 06.2	0.601	15 06.6	-0.047
15 13.7	0.874	15 14.2	0.238
15 21.7	0.640	15 22.2	-0.052
15 29.9	0.624	15 30.5	-0.045
15 39.2	0.633	15 39.8	-0.041
15 48.2	0.617	15 48.7	-0.056
15 56.8	0.620	15 57.2	-0.061

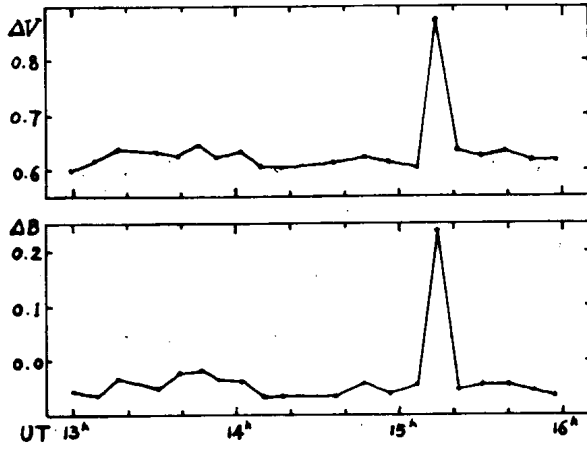


Figure 1

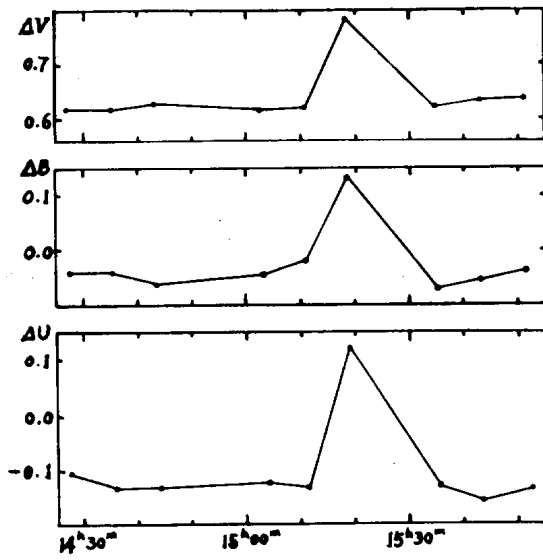


Figure 2

Table II

UBV photoelectric observations of HD 97766, 1987 May 9 (UT)

G.M.T.	ΔV mag	G.M.T.	ΔB mag	G.M.T.	ΔU mag
14 ^h 26 ^m .7	0.617	14 ^h 27 ^m .2	-0.041	14 ^h 27 ^m .8	-0.108
14 35.0	0.618	14 35.6	-0.042	14 36.1	-0.133
14 42.9	0.629	14 43.4	-0.062	14 43.9	-0.131
15 02.6	0.618	15 03.1	-0.046	15 03.9	-0.124
15 10.5	0.622	15 11.0	-0.018	15 11.6	-0.131
15 18.2	0.782	15 18.7	0.136	15 19.2	0.118
15 34.7	0.621	15.35.2	-0.071	15 35.8	-0.130
15 42.5	0.632	15 43.1	-0.055	15 43.8	-0.156
15 51.0	0.637	15 51.5	-0.037	15 52.8	-0.134

The recorded amplitudes of the flares in UBV bands, Δm_V , Δm_B , Δm_U and the errors of observation in a single intergration in UBV bands, σ_V , σ_B , σ_U are given in Table III.

Table III

The recorded amplitudes of the flares and the standard deviations of observation in a single integration

G.M.T.	Δm_V	σ_V	Δm_B	σ_B	Δm_U	σ_U
May 7, 15 ^h 14 ^m	0.252	± 0.013	0.287	± 0.014	---	---
May 9, 15 ^h 19 ^m	0.157	± 0.007	0.183	± 0.016	0.249	± 0.013

Our observations indicate that the amplitude of the flare in U band is larger than in V band.

More observations would be desirable.

ZHANG ZHOUSHENG, LI YULAN, WANG XUNHAO
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