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PHOTOELECTRIC OBSERVATIONS OF THE FLARE
STAR BD + 13^o2618 IN 1973, 1974

Continuous photoelectric monitoring of the flare star BD +13^o2618 has been carried out at the Stephanion Observatory ($\lambda = -22^{\circ}49'44''$, $\phi = +37^{\circ}45'15''$) during the years 1973, 1974 using the 30 inch Cassegrain reflector of the Department of Geodetic Astronomy, University of Thessaloniki. Observations have been made with a Johnson dual channel photoelectric photometer in the B colour of the international UBV system. The telescope and photometer will be described elsewhere. Here we mention only that the transformation of our ubv system to the international UBV system is given by the following equations:

for the time interval from 9-4-1973 to 25-4-1973

$$V = v_o + 0.039(b-v)_o + 1.560$$

$$B-V = 0.737 + 1.033(b-v)_o$$

$$U-B = -1.365 + 1.007(u-b)_o$$

for the time interval from 5-5-1973 to 6-5-1973

$$V = v_o + 0.070(b-v)_o + 1.865$$

$$B-V = 0.753 + 1.030(b-v)_o$$

$$U-B = -1.379 + 1.021(u-b)_o$$

and for the time interval from 20-4-1974 to 23-4-1974

$$V = v_o - 0.011(b-v)_o + 2.445$$

$$B-V = 0.848 + 0.992(b-v)_o$$

$$U-B = -1.632 + 0.999(u-b)_o$$

The monitoring intervals in UT as well as the total monitoring time for each night are given in the Tables Ia, Ib. Any interruption of more than one minute has been noted. In the fourth column of Tables Ia, Ib the standard deviation of random noise fluctuation $\sigma(\text{mag}) = 2.5 \log(I_o + \sigma)/I_o$ for different times (UT) of the

corresponding monitoring interval is given.

During the 10.23 hours of monitoring time no flare was observed.

Table Ia
Monitoring Intervals in 1973

Date	Monitoring Intervals (U.T.)	Total Monitoring Time	σ (U.T.)
1973			
April	20 ^h 53 ^m -21 ^h 23 ^m , 21 ^h 27 ^m -21 ^h 58 ^m		0.015(21 ^h 01 ^m), 0.012
9-10	22 03 -22 27, 00 19 -00 31, 00 33 -00 35, 00 59 -01 16.	01 ^h 56 ^m	(21 ^h 55 ^m), 0.015(22 13), 0.014(00 25).
20	19 48 -20 11	23	0.020(20 09).
22	20 53 -20 56, 21 00 -21 25	28	0.015(21 12)
24-25	20 36 -21 08, 21 12 -21 34, 23 12 -23 17, 23 22 -23 32, 23 36 -23 48, 23 50 -00 04, 00 09 -00 22, 00 24 -00 38, 00 46 -01 04, 01 07 -01 18, 01 22 -01 36.	02 45	0.015(20 57), 0.014 (21 24), 0.020(23 54), 0.024(00 27), 0.034 (01 14), 0.037(01 31).
25	20 18 -20 39	21	0.013(20 25)
May			
5-6	22 53 -23 01, 23 05 -23 24, 23 29 -23 50, 23 53 -00 01, 00 10 -00 20, 00 22 -00 28	01 12	0.012(22 55), 0.014 (23 15), 0.011(23 35), 0.015(00 16)
	Total	07 ^h 05 ^m	

Table Ib
Monitoring Intervals in 1974

Date	Monitoring Intervals (U.T)	Total Monitoring Time	σ (U.T.)
1974			
April			
20	00 ^h 41 ^m -01 ^h 23 ^m , 01 ^h 48 ^m -01 ^h 56 ^m	01 ^h 18 ^m	0.017(01 ^h 06 ^m), 0.018 (02 04)
22-23	23 59 -00 30, 00 33 -00 59, 01 02 -01 32, 01 48 -02 12	01 51	0.012(00 12), 0.015 (00 38), 0.013(01 05), 0.022(01 53).
	Total	03 ^h 09 ^m	

G. KAREKLIDIS, F. MAHMOUD, L.N. MAVRIDIS, D. STAVRIDIS

H.ZERVAKI - ZOEROU
Department of Geodetic Astronomy
University of Thessaloniki

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