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PHOTOELECTRIC OBSERVATIONS OF THE FLARE STAR BD+16°2708 IN 1976

Continuous photoelectric monitoring of the flare star BD +16°2708 has been carried out at the Stephanion Observatory ( $\lambda = -22^{\circ}49'44''$ ,  $\phi = +37^{\circ}45'15''$ ) during the year 1976, 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 instrumental ubv system to the international UBV system is given by the following equations:

$$V = v_o - 0.008(b-v)_o + 2.292,$$

$$(B-V) = 0.737 + 1.043(b-v)_o,$$

$$(U-B) = -1.798 + 1.131(u-b)_o.$$

The monitoring intervals in UT as well as the total monitoring time for each night are given in the Table I.

Table I  
 Monitoring intervals in 1976

Date	Monitoring intervals (UT)	Total Monitoring time	$\sigma$ (U.T.)
1976			
May			
7-8	20 <sup>h</sup> 09 <sup>m</sup> -21 <sup>h</sup> 48 <sup>m</sup> , 21 <sup>h</sup> 50 <sup>m</sup> -22 <sup>h</sup> 16 <sup>m</sup> , 22 18 -22 48, 23 00 -23 12, 23 45 -00 08, 00 10 -00 43, 00 45 -01 20, 01 22 -01 51.	03 <sup>h</sup> 36 <sup>m</sup>	0.10 (21 <sup>h</sup> 25 <sup>m</sup> ), 0.10 (21 54), 0.11 (22 20), 0.09 (23 06), 0.07 (23 46), 0.06 (00 13), 0.06 (00 47), 0.07 (01 24).
21-22	19 55 -20 20, 20 22 -20 53, 20 55 -21 29, 21 38 -22 08, 22 11 -22 43, 22 45 -23 23, 23 31 -00 16, 00 18 -00 59, 01 01 -01 48.	05 23	0.06 (19 58), 0.06 (20 24), 0.05 (20 57), 0.05 (21 41), 0.05 (22 13), 0.06 (22 48), 0.06 (23 34), 0.07 (00 28), 0.09 (01 33).
26-27	20 56 -21 27, 21 29 -21 58, 22 00 -22 31, 22 42 -23 13, 23 16 -23 47, 23 49 -00 29,		0.06 (21 01), 0.06 (21 33), 0.06 (22 03), 0.06 (22 45), 0.07

Table I (cont.)

Date	Monitoring intervals (UT)	Total Monitoring time	$\sigma$ (U.T.)
1976			
May			
26-27	00 <sup>h</sup> 40 <sup>m</sup> -01 <sup>h</sup> 06 <sup>m</sup> , 01 <sup>h</sup> 08 <sup>m</sup> -01 <sup>h</sup> 27 <sup>m</sup>	03 <sup>h</sup> 58 <sup>m</sup>	(23 <sup>h</sup> 17 <sup>m</sup> ) 0.07(23 52), 0.08(00 44), 0.09 (01 12).
28-29	20 17 -20 48, 20 52 -21 21, 21 24 -21 54, 22 04 -22 31, 22 34 -23 02, 23 05 -23 42, 23 52 -00 23.	03 33	0.06(20 21), 0.06 (20 56), 0.06(21 27), 0.06(22 07), 0.06 (22 36), 0.06(23 07), 0.06(23 55).
May-June			
31-1	20 07 -20 46, 21 20 -21 58, 21 59 -22 30, 22 32 -22 59, 23 10 -23 44, 23 46 -00 11, 00 23 -01 16.	04 07	0.06(20 11), 0.06 (21 24), 0.07(22 01), 0.06(22 36), 0.06 (23 14), 0.06(23 49), 0.08(00 26).
June			
2-3	21 39 -22 06, 22 09 -22 41, 22 44 -23 28, 23 37 -00 10, 00 14 -00 51, 01 09 -01 20.	03 07	0.05(21 43), 0.07 (22 16), 0.06(22 51), 0.07(23 42), 0.07 (00 26), 0.07(01 12).

Total 23<sup>h</sup>44<sup>m</sup>=23<sup>h</sup>73

Any interruption of more than one minute has been noted. In the fourth column of Table I the standard deviation of random noise fluctuation  $\sigma(\text{mag})=2.5 \log(I_0+\sigma)/I_0$  for different times (UT) of the corresponding monitoring intervals is given.

During the 23.73 hours of the monitoring time no flare was observed.

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