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PHOTOELECTRIC OBSERVATIONS OF THE FLARE STAR BY Dra IN 1985

Photoelectric monitoring of the flare star BY Dra has been carried out at the Stephanion Observatory during the year 1985 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 U colour of the international UBV system. The telescope and photometer used have been described elsewhere (Mavridis et. al, 1982). The transformation of our instrumental ubv system to the international UBV system is given by the following equations:

a) For the period June 20- July 10, 1985

$$\begin{aligned}V &= v_0 + 0.086 (b-v)_0 + 2.160, \\B-V &= 0.376 + 1.035 (b-v)_0, \\U-B &= -2.010 + 1.116 (u-b)_0.\end{aligned}$$

b) For the period August 7 -14, 1985

$$\begin{aligned}V &= v_0 + 0.037 (b-v)_0 + 2.020, \\B-V &= 0.393 + 1.050 (b-v)_0, \\U-B &= -1.710 + 0.963 (u-b)_0.\end{aligned}$$

c) For the period September 2-8, 1985

$$\begin{aligned}V &= v_0 - 0.020 (b-v)_0 + 1.953, \\B-V &= 0.451 + 1.007 (b-v)_0, \\U-B &= -1.520 + 0.931 (u-b)_0.\end{aligned}$$

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

Table I

Monitoring Intervals

Date	Monitoring intervals (U.T.)	Total Monitoring Time
1985		
June		
20	20 ^h 00 ^m -20 ^h 29 ^m , 20 ^h 33 ^m -21 ^h 03 ^m , 21 ^h 21 ^m -21 ^h 54 ^m , 21 56 -22 21 .	1 ^h 57 ^m
21	19 58 -20 24 , 20 26 -20 58 , 21 12 -21 44 , 21 46 -22 15 , 22 53 -23 20 .	2 26
22-23	19 47 -20 19 , 20 27 -20 55 , 21 08 -21 43 , 21 45 -22 16 , 22 53 -23 25 , 23 27 -24 00 , 00 12 -00 35 , 00 37 -01 02 .	3 59
23	19 48 -20 17 , 20 19 -20 49 , 21 02 -21 32 , 21 42 -22 05 .	1 52
24	20 09 -20 38 , 20 40 -21 15 , 21 28 -22 00 , 22 02 -22 32 .	2 06
26	19 51 -20 21 , 20 25 -20 55 , 21 08 -21 42 , 21 44 -22 14 .	2 04
27	19 45 -20 17 , 20 19 -20 57 , 21 11 -21 49 , 21 51 -22 22 , 22 41 -23 03 .	2 41
28	19 45 -20 15 , 20 17 -20 54 , 21 08 -21 40 , 23 13 -23 42 .	2 08
July		
5	20 32 -20 58 , 21 01 -21 35 , 21 50 -22 24 , 22 27 -22 34 .	1 41
8	19 47 -20 16 , 20 19 -20 46 , 20 59 -21 37 , 21 40 -22 22 .	2 16
9	20 56 -21 22 , 21 25 -21 50 .	51
August		
7	20 30 -21 02 , 21 04 -21 28	56
8	20 31 -20 43 , 20 45 -21 00 , 21 02 -21 31	56
9	19 50 -20 22 , 20 27 -20 57 .	1 02
10	20 02 -20 20 , 20 23 -20 38 , 20 41 -21 00	52
September		
3	20 12 -20 52 , 20 56 -21 36	1 20
TOTAL		29 ^h 7 ^m

Any interruption of more than one minute has been noted. During the 29.12 hours of monitoring time no flare was observed.

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- Mavridis, L.N., Asteriadis, G.A., and Mahmoud, F.M.:1982, in Compendium in Astronomy (ed. by E.G. Mariolopoulos, P.S. Theocaris, and L.N. Mavridis)
D. Reidel Publishing Company, Dordrecht, Holland, p. 253.