

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 1036

Konkoly Observatory
Budapest
1975 August 14

PHOTOGRAPHIC OBSERVATIONS OF UV CASSIOPEIAE

Soon after the announcement by the Telegram Bureau of the I.A.U. that the R CrB star UV Cassiopeiae was fading (Isles, 1973) I took with the 20 cm astrograph of the Teramo Observatory some plates of the field which had been patrolled from end 1965 to 1971 with the same instrument. On the 89 available plates the magnitude of the star has been determined with a Zeiss G2 Schnellphotometer, using the following comparison stars:

^mpg
a 11.1
b 11.7
b' 11.8
c 12.4

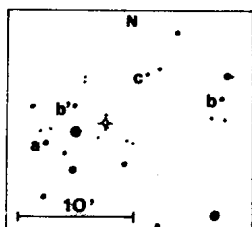


Fig.1. The comparison stars; the brightest star is BD+58°2533

The stars a, b and c are the same used by Weber (1966) and I have retained the magnitudes assumed by this author, except a correction of -0^m1 to the star a which appeared necessary to adjust the magnitude sequence of the four stars.

The result is given in the Table and in Fig.2. From the end of 1965 to the end of 1971 (J.D. 39126 to 41301) UV Cas has been always observed near its maximum brightness at about 11.6 magn., with some possible fadings to 11.8. The minimum announced by the I.A.U. Circular is clearly apparent: from November 17 to November 24, 1973 (J.D. 42004 to 42011) the star underwent a fast decline, reaching the magnitude 12.6 at the last date. When the field was photographed again on February 1974 the star recovered the magnitude 12.1. So the amplitude of the light variation was at least 1^m; according the quoted I.A.U. information, the decline began between J.D. 41977 and 41986: the deep minimum lasted therefore about 100 days.

P. TEMPESTI
Osservatorio astronomico di Teramo
Italy

References:

- Isles, J.E. 1973. I.A.U. Circular 2591
Weber, R. 1966, Bull.Stat.Astroph.Mainterne N.9

J.D.	m _{pg}	J.D.	m _{pg}	J.D.	m _{pg}	J.D.	m _{pg}
2439		2439		2439		2439	
126.3	11.75	323.4	11.45	417.4	11.85	827.3	11.85
140.3	11.75	324.4	11.65	417.6	11.70	830.3	11.75
140.3	11.70	343.4	11.70	435.3	11.85	2440	
267.5	11.60	346.4	11.70	474.3	11.70	088.5	11.70
267.5	11.40	348.3	11.80	476.3	11.80	089.5	11.65
268.5	11.55	350.4	11.60	478.5	11.60	090.4	11.75
268.5	11.70	351.5	11.60	492.3	11.60	125.6	11.65
269.6	11.40	353.4	11.55	501.3	11.75	126.5	11.85
270.5	11.60	355.4	11.55	504.4	11.65	2441	
270.5	11.60	375.3	11.70	505.3	11.80	183.4	11.60
271.5	11.45	376.3	11.40	641.5	11.60	192.4	11.75
272.5	11.60	377.3	11.60	673.5	11.65	221.4	11.65
294.5	11.60	378.3	11.60	675.5	11.55	244.3	11.45
295.5	11.65	379.3	11.55	684.4	11.60	248.3	11.55
298.5	11.70	379.5	11.70	707.5	11.60	249.3	11.70
299.4	11.60	382.4	11.65	708.4	11.55	273.3	11.65
300.4	11.75	384.6	11.85	727.3	11.70	301.4	11.50
301.5	11.70	385.4	11.75	734.5	11.70	2442	
317.4	11.65	391.5	11.80	740.4	11.55	004.5	12.50
318.5	11.60	393.6	11.95	760.3	11.65	006.3	12.30
319.5	11.70	412.5	11.80	761.4	11.60	007.3	12.35
320.4	11.55	413.5	11.85	767.4	11.65	011.3	12.55
321.4	11.70	414.5	11.80	771.4	11.85	089.3	12.15

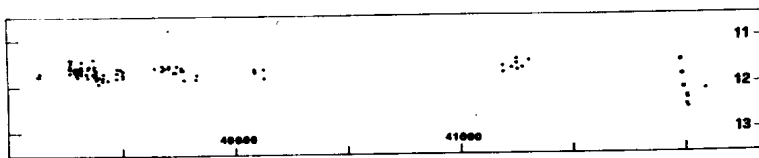


Fig.2 The photographic observations of UV Cas performed at Teramo from the end of 1965 to the beginning of 1974. The three circles show the visual observations reported in the I.A.U. Circular 2591 reduced to photographic magnitudes assuming a colour index of +0.6 as a typical one for an R CrB star near maximum.