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PHOTOELECTRIC OBSERVATIONS OF UV Cas

The variability of UV Cas (26.1913) was first detected by D'Esterre (1913) who gave photographic magnitudes of  $12^m3$  at maximum and  $16^m5$  at minimum light of the star. According to these observations Lunderdorf (1919) included UV Cas in a list of R CrB stars. Gitz (1935) using plates taken from 1896 to 1907 and from 1933 to the beginning of 1935 obtained a  $13^m4$  (mpg) minimum and a nearly constant  $11^m8$  maximum. Payne-Gaposchkin and Gaposchkin (1938) questioned Lunderdorf's classification and placed the star in the doubtful R CrB stars list. Floria (1946) quoted the maximum from Gitz and the minimum from D'Esterre. Petit's (1960) visual observations (32 points during 706 days) show a constant brightness of  $10^m8$ . Weber (1966) observed UV Cas from 1945 to 1959 and from 1964 to 1965; his results show a steady light curve at about 11.7 mpg with a maximum of  $11^m4$  (in 1964, one night) and a minimum of  $12^m0$  (in 1956 one night; in 1958 two successive nights). Isles (1973) communicated three visual estimates of 10.9, 11.2, 11.5 mv.

The plot in Figure 1 shows all observations mentioned above.

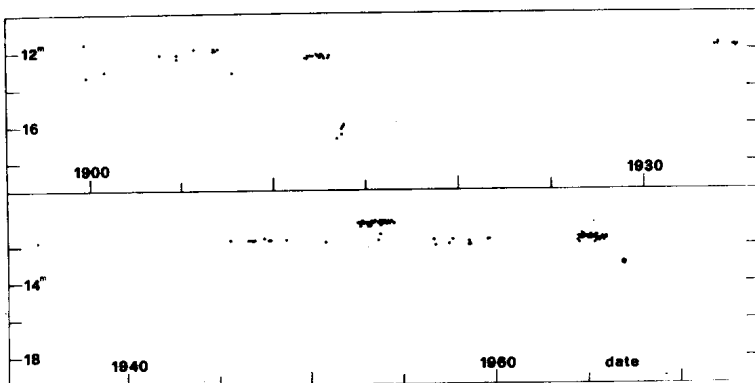


Fig. 1

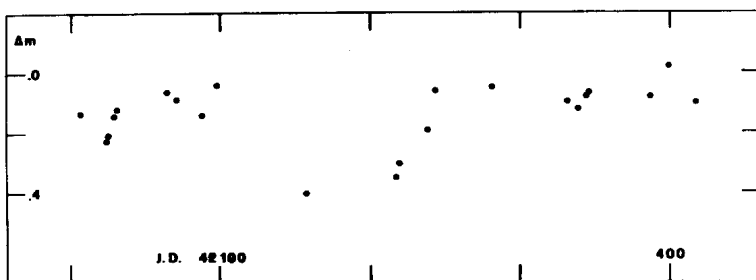


Fig. 2

J.D.	Δm	J.D.	Δm	J.D.	Δm
2442000+		2442000+		2442000+	
006	.13	087	.14	281	.05
022	.22	097	.04	331	.10
023	.21	157	.40	338	.12
028	.14	217	.35	344	.08
030	.12	219	.30	345	.09
064	.06	238	.19	386	.08
070	.09	243	.06	399	-.02
				417	.10

Photoelectric observations in V light, from November 1973 to January 1975, carried out using the 40 cm refractor of the Teramo Observatory are given in Figure 2 and in the Table; a 0.4 magn. deep minimum occurred in April 19, 1974.

Finding chart (from Weber) with comparison (a) and check (b) stars is given in Figure 3.

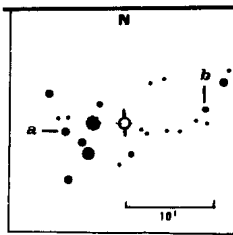


Fig. 3.

Some doubts about the classification of UV Cas as R CrB star arise analyzing the data; during 69 years of observations only one deep minimum (based on 4 nights in 1913) is known. Spectroscopic observations are necessary to classify this star properly.

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References:

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 Petit M., 1960, *Journal des Observateurs*, **43**, 79  
 Weber R., 1966, *Bull. Stat. Astr. Maisterne*, **9**