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THE SYSTEM CC CASSIOPEIAE

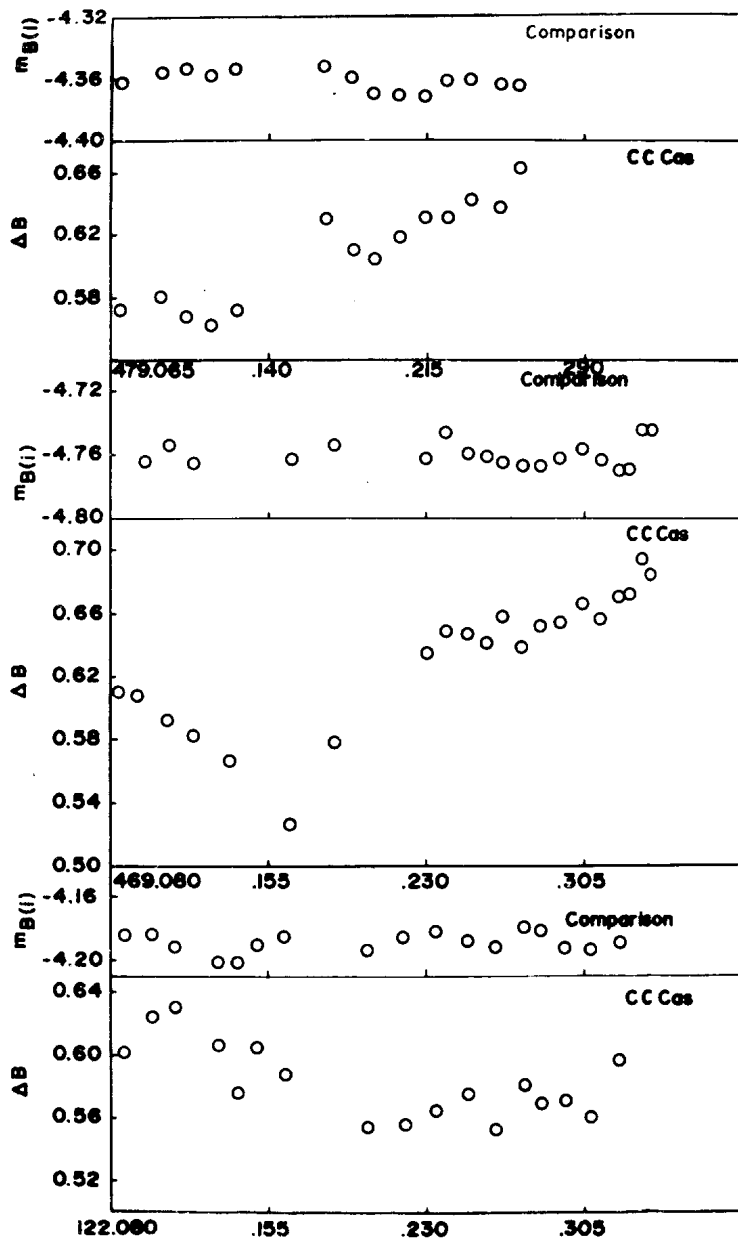
The star CC Cas was discovered to be a spectroscopic binary by Pearce (1927) who has given its period and the spectroscopic elements. A photographic light curve and the elements of the system have been given by Gaposchkin (1940). Gibson and Hjellming (1974) have detected occasional variable radio emissions at frequencies 2695 and 8085 MHz. Szafraniec (1975) has pointed out that no light minimum of the system has been observed since 1930.

A total of twenty seven nights of observations were secured during the period 1965 to 1969 and on one night in 1974, on the 38-cm reflector of the Uttar Pradesh State Observatory through standard U,B and V filters, using an unrefrigerated 1P21 photomultiplier and employing d.c. techniques. Initially the stars BD+59^o601 and BD+58^o567 were used as comparison stars but the star BD+58^o567 has been used for final computations as it was found to be far more suitable one in respect of magnitude, constancy of light and its colour.

We were able to observe three primary minima during the course of our observations. On other nights the star showed no variation. The variations are about 0.^m16 in B and V filters and 0.^m14 in U filter. The observed primary minima in B and V filters are given in Figures 1 and 2.

The times of primary minima have been determined mainly on observations around the minimum light phase, since the ascending and descending branches in any one minimum could not be fully covered. The observed times of primary minima and the corresponding values of (O-C), based on the ephemeris (Guthnick and Prager, 1930).

Primary Minimum = JD(Hel) 2426000.3 + 3.^d36897·E
are given in Table 1. One finds that the (O-C) are all negative



J.D. (Hel.) 2439000 +
Figure 1

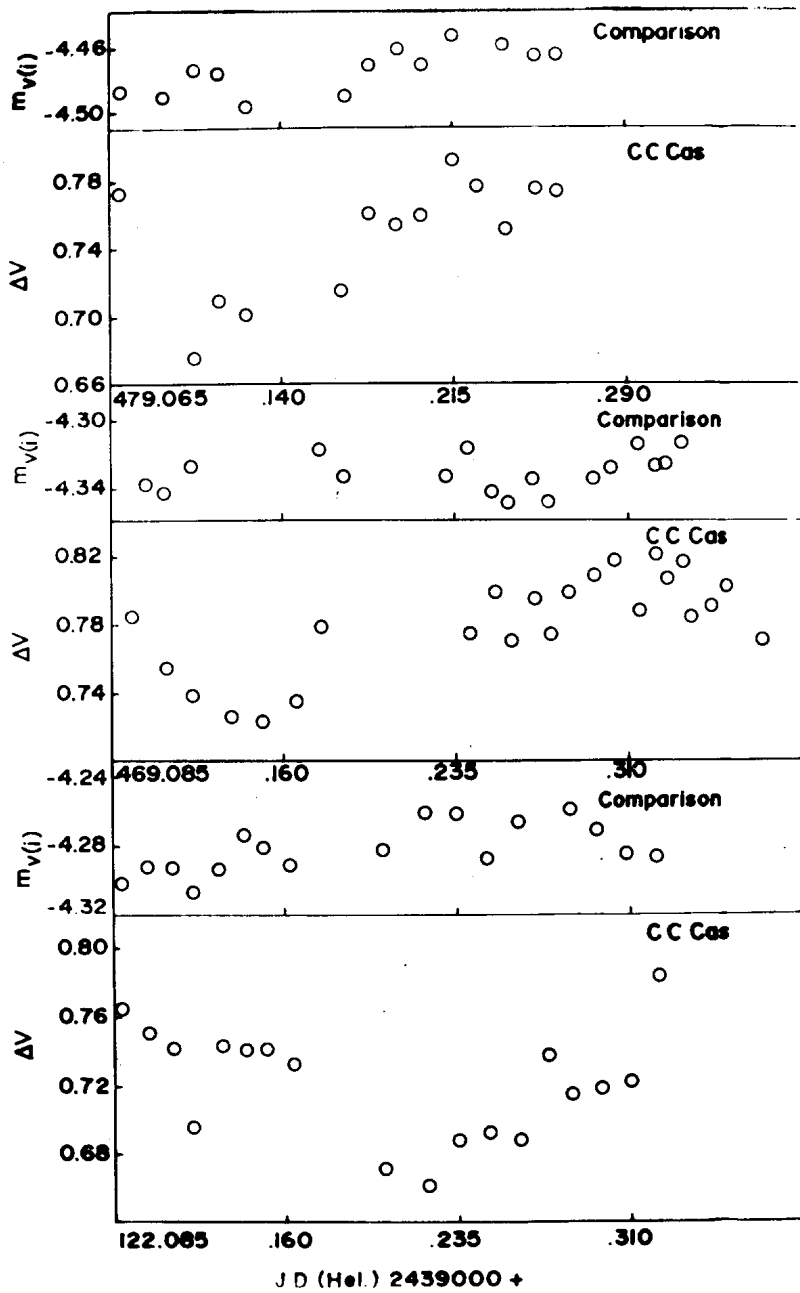


Figure 2

Table 1

Observed times of primary minima of CC Cas	
Observed Primary Minimum	(O-C)
JD(Hel) 2439122.219	-0 ^d .219
469.157	-0.285
479.129	-0.420

and are large. Further, on the basis of our first observed minimum as epoch no variation of light was detected within -4.3, +1.9 hours of predicted time of minimum on the night of December 9, 1968.

The observed colours and magnitudes of CC Cas along with those of comparison stars have been listed in Table 2. These are in good agreement with those of Roman (1956), viz. $B-V=0^m.50$, $U-B=-0^m.48$ and $V=7^m.1$.

Table 2

Colour and visual magnitude for comparison and variable stars

Star	B-V	U-B	V	Remarks
CC Cas	0 ^m .48	-0 ^m .48	7 ^m .18	Outside the eclipse
BD+59 ^o 601	0.34	-0.24	9.24	-
BD+58 ^o 567	0.32	-0.39	8.06	-

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