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PHOTOELECTRIC MINIMA OF RZ CASSIOPEIAE

During the past season three times of minimum light of RZ Cas were obtained by us. The first two were observed at the Kutztown State College Observatory using the 46-cm telescope equipped with an EMI 6256 SA photomultiplier while the third was observed at Kitt Peak National Observatory using the 0.4 meter telescope no. 4 equipped with an RCA 1P21 photomultiplier. All observations were made in B and V light.

The times of minimum light are as follows:

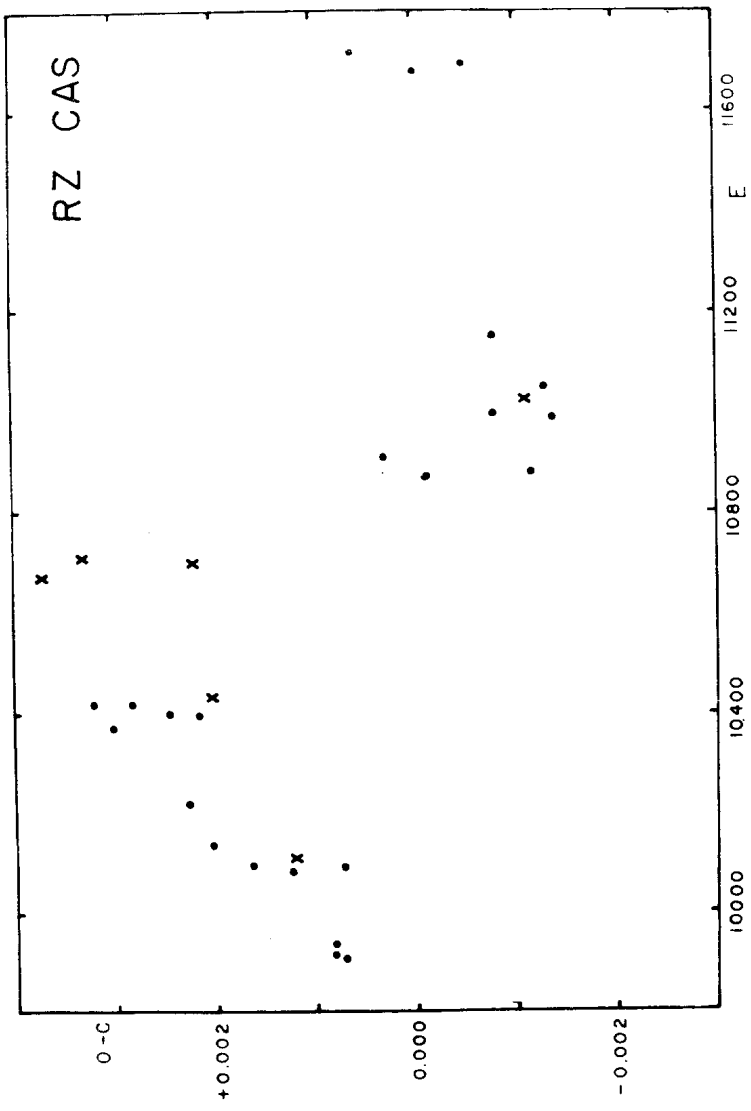
Hel. JD	E	O - C
2443832.5929	11677	0. ^d 0000
844.5449	11687	-0.0005
875.6224	11713	+0.0006

The epoch and O-C values have been calculated from the ephemeris given by Herczeg and Friboes-Conde (1974):

$$\text{JD Hel. Min. I} = 2429875.6902 + 1.^d1952473 \text{ E.}$$

As noted by Barlow and Scarfe (1978) the ephemeris given by Chambliss (1976) no longer predicts accurate times of minimum light for RZ Cas. Thus it appears that its period has recently undergone a change.

The Figure shows a plot of all photoelectric times of minimum light of RZ Cas obtained since the investigation by Chambliss and published in the IBVS. The times of minimum light given in that investigation are also included. The various observations appear to be internally consistent except for those of Margrave et al. (1975, 1978), which appear to be about 0.^d0045 too early.



These have been shifted by this amount and are indicated by crosses rather than circles on the figure.

The residuals and epoch number values have been calculated using the ephemeris of Herczeg and Friboes-Conde. It appears that an abrupt change of period occurred at about $E = 10800$, i. e., at the beginning of 1976. The period of RZ Cas is now about 0.5^s shorter than it was prior to this time.

We wish to thank Dr. Colin Scarfe for the information which he provided us on this system.

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References:

- Barlow, D. J., and Scarfe, C. D., 1978, IBVS no. 1379
Chambliss, C. R. 1976, Pub. Astron. Soc. Pacific 88, 22
Herczeg, T., and Friboes-Conde, H. 1974, Astron. and Astrophys. 30, 259
Margrave, T. E. et al. 1975, IBVS no. 1019
_____ 1978, IBVS no. 1478