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PHOTOELECTRIC TIMES OF MINIMA OF RZ CAS

Photoelectric observations of RZ Cassiopeiae were made in 1973 and 1974 with the 16-inch Boller and Chivens f/18 Cassegrain telescope operated by the University of Montana's Department of Physics and Astronomy on the 6500-foot peak of Blue Mountain near Missoula, Montana. The telescope is equipped with a Johnson-type single-channel photometer containing an EMI 6256B photomultiplier behind a Corning 3384 V-band filter. The photomultiplier signal is fed through a DC amplifier to a voltage-to-frequency converter, whose output is integrated by an electronic counter for ten seconds.

The stars SAO 12386 and HR 791 were used as the comparison and check stars, respectively. Each observation consisted of three ten-second integrations. Observations were made at the rate of about one per minute in the vicinity of minimum light. The heliocentric times of the observed minima determined by the chord bisection method are given in the table, along with the epoch numbers E, the O-C values computed from the GCVS(1969) ephemeris, and the duration of constant light (to $\pm 0^m.003$) during minimum light.

Hel. JD of Minimum	E	O-C	Duration of constant light
2,441,954.8561	4025	$-0^d.0025$	7 minutes
2,442,339.7265	4347	$-0^d.0017$	8 minutes

Further observations of this system are planned in conjunction with a dynamical analysis of the O-C curve. A preliminary analysis supports the hypothesis that RZ Cas has two dark companions with orbital revolution periods of about 23 years and 105 years (1975).

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