

THE PERIOD OF AA COMAE BERENICES

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Abstract

A period of 0.487821 days is computed for AA Comae Berenices from magnitude estimates on plates in the collection of the Maria Mitchell Observatory.

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AA Comae Berenices is an ab type RR Lyrae variable star (Kukarkin et al. 1971). The heliocentric elements, from Meinunger and Wenzel (1968) are:

$$JD(\max) = 2437759.390 + 0^d.48781 E.$$

Magnitude estimates were taken from 239 plates dating between 1965 and 1980. Composite light curves were plotted for six subsets of this interval, based on the published elements. Phases of the rising branch suggested a longer period. New light curves were constructed with heliocentric phases calculated from:

$$JD(\max) = 2440352.637 + 0^d.487821 E.$$

Maxima from Meinunger and Wenzel (1968) as well as maxima of the Nantucket mean light curves are satisfied by these elements to within 0.03 days. Slightly better agreement is obtained if the original elements are retained for dates before 2438150.

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REFERENCES

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