THE PERIOD OF AA COMAE BERENICES

THOMAS P. GREENE Maria Mitchell Observatory Nantucket, MA 02554

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.

* * * * *

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

JD(max) = 2437759.390 + 0.48781 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 + 0.487821 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.

This work was done under the supervision of Dr. Emilia P. Belserene and was funded by NSF AST 8005162. I would like to thank Dr. Belserene for her assistance and guidance, and the National Science Foundation for support.

REFERENCES

Kukarkin, B. V. et al. 1971, First Supplement to the General Catalog of Variable Stars, Moscow.

Meinunger, L. and Wenzel, W. 1968, <u>Veröffentlichungen</u> <u>Sternwarte Sonneberg</u>, 7, 389.