

**PERIOD DETERMINATIONS FOR THE RRc
VARIABLE CI COMAE BERENICES**

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The variability of CI Comae Berenices = S 9780 = GSC 872.326 ($\alpha_{J2000} : 12^{\text{h}}14^{\text{m}}11^{\text{s}}.3$; $\delta_{J2000} : +14^{\circ}01'50''$) was discovered by Hoffmeister (1967). He found a possible RR Lyrae nature and gave two approximate moments of maximum light based on photographic plates. Splittgerber (1979), from another study employing the photographic plates secured at Sonneberg Observatory, Germany, could not determine a period of variation, but he mentioned a possible EW classification. No further source of information was found through a bibliographical search with the SIMBAD data base.

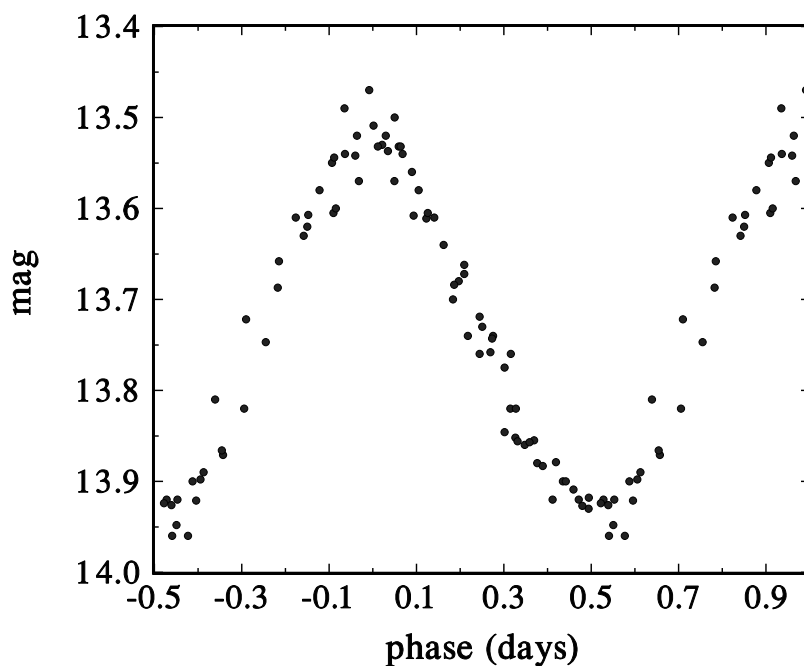


Figure 1. CCD light curve of CI Comae Berenices using the elements (1)

We have observed CI Com with a SBIG ST-6 CCD camera attached to the 0.35 m S-C-telescope of the R. Szafraniec Observatory at Metzerlen, Switzerland. GSC 872.598 (GSC magnitude: 11.29) served as comparison star, while GSC 872.499 was used as check star. Both these stars turned out to be constant at the 0^m02 level. A total of 84 CCD measurements (without using a filter) during 17 nights from JD 2450895 to JD 2450988 have been obtained. Due to the proximity of the comparison stars to the variable, no correction for differential extinction was applied to the data.

These measurements were subjected to a period search algorithm. For this purpose, we employed the program “Period98” written by Sperl (1998). With the highest peak corresponding to a frequency of $P^{-1} = 2.77799$ our measurements can be represented to within the accuracy of the photometry (0^m03). The following elements of variation are found:

$$JD(max, hel) = 2450925.467(10) + 0.359972(3) \times E \quad (1)$$

In Figure 1, we show all our CCD data folded with the elements (1).

The slight asymmetry of the light curve as well as the range of variation ($13^m51 - 13^m95$) and the value for the period leads us to classify CI Com as an RRc type pulsating variable. Since no information on the colour variation is available, this conclusion is in need of confirmation.

This research has made use of the SIMBAD data base operated by the CDS, Strasbourg, France. The CCD photometry at the R. Szafraniec Observatory is supported by the “Emilia Guggenheim-Schnurr Foundation”.

References:

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 Sperl, M., 1998, *Masters thesis*, Institut für Astronomie, Universität Wien
 Splittgerber, E., 1979, *MVS*, **8**, 100