

## Evolutionary Period Changes in $\omega$ Centauri!?

Johanna Jurcsik

*Konkoly Observatory, P.O. Box 67, H-1525 Budapest, Hungary*

**Abstract.** The periods of most of the RRab stars in  $\omega$  Centauri have increased during the past century at the same rate as evolutionary model calculations predict. This result raises the possibility that evolutionary changes in the periods are directly observed in this cluster.

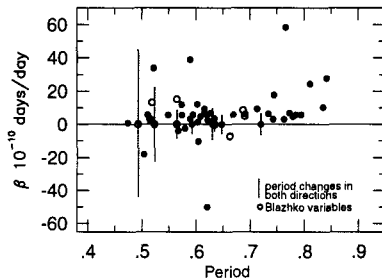


Figure 1. The period change rates ( $\beta$ ) of 54 RRab stars in  $\omega$  Centauri

The recent OGLE observations (Kaluzny et al. 1997) together with earlier photometric data made it possible to construct the  $O - C$  diagrams of the  $\omega$  Centauri variables on a century-long time base. In accordance with earlier results (Martin 1938; Belserene 1964), the periods of the bulk of the RRab stars are found to be increasing at  $10^{-9} - 10^{-10}$  d/d rate (see Fig. 1). The physical properties of these stars place them to the evolved (redward) phase of the horizontal branch evolution (Jurcsik 1998), where evolutionary period change rates calculated from Dorman's (1992) model sequences are of the same order, too.

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### References

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