

# Orbital Solution and Physical Parameters of the Binary Cepheid AW Per

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AW Per is a well-known binary Cepheid. Recently Welch & Evans (1989) determined a spectroscopic orbit. Evans (1989) pointed out that the spectral type of the companion is incompatible with the mass function of the system. We re-determined the orbit of AW Per using both photometric and spectroscopic data. The result of the simultaneous least-squares fit can be seen on Fig.1. The orbital elements are very close to the results of Welch & Evans. After correcting for the companion, the Cepheid's light and velocity curves were analyzed with the surface-brightness method. The details of the analysis will be published in MNRAS (Vinko, 1992). The mass of AW Per was found to be 6 solar masses, which confirms the mass-problem of the secondary. Observations are planned to continue at Konkoly Observatory.

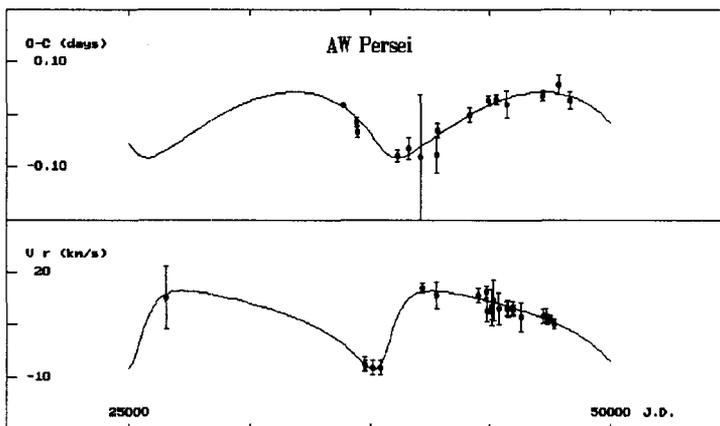


Figure 1. O-C and  $\gamma$ -velocity diagram of AW Per, assuming the results of the orbital solution.

## References:

- Evans, N.R., 1989, *Astron.J.* **97**, 1737.
- Vinko, J., 1992, *Mon.Not.Royal Astron.Soc.* (in press)
- Welch, D.L. & Evans, N.R., 1989, *Astron.J.* **97**, 1153.