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Pulsation period of CY Cnc¹

Breger (1970) in a study of Praesepe cluster (NGC 2632) observed CY Cnc (KW 114, HD 73345, $m_v=8.14$, F0V) during 2.2 hours and remarks "small variability possible". Later Jackish (1972) classified it as probable δ Scuti type variable, he estimated a period around 2-3 hours.

The observing run was carried out during one night in December, 1989, with the 1.5m spanish telescope in the Calar Alto Observatory (Almería, Spain). The variable and both comparison stars ($C_1=HD 73294$ and $C_2=HD 73430$) were measured in uvby filters. The light curve in filter b is shown in figure 1 as magnitude differences (CY Cnc- C_1) in instrumental system, the solid line was calculated from the obtained frequency.

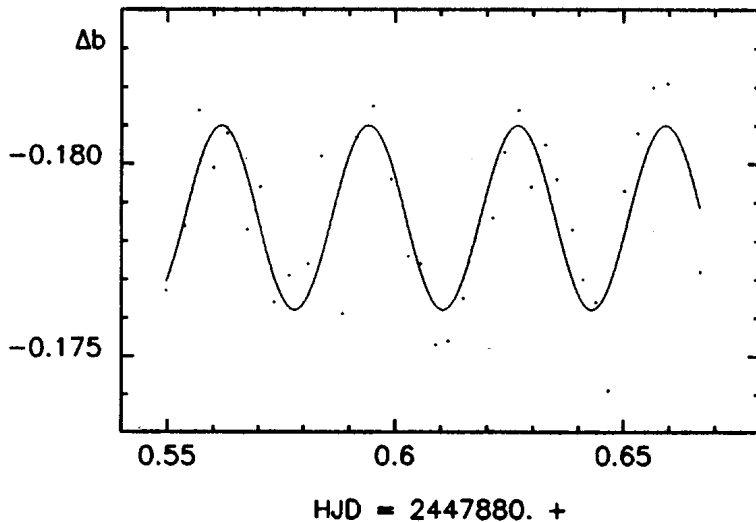


Figure 1

¹Based on observations collected by using the 1.5 m telescope from the Observatorio Astronómico Nacional at Calar Alto Observatory, Almería, Spain

The Fourier analysis carried out for our data (López de Coca et al., 1984), showed a dominant frequency at 30.8 c/d and an amplitude of 0.^m005.

For the photometric calibration (López de Coca et al., 1990), we have used the indices given by Hauck and Mermilliod (1985) and we obtained the following physical parameters for this star: $M_{bol}=2.06$; $\log T_e=3.902$ and $\log g=4.074$. With these values, we can calculate the pulsational constant Q with the classical Petersen and Jørgensen (1972) formula, thus, $Q=0.016$ that should correspond to the third overtone.

Therefore, we can conclude that CY Cnc can be considered as a normal δ Scuti variable, although more observations are needed.

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