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SAO 23170, A NEW BETA Cep IN THE STELLAR CLUSTER H VI 33

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Name of the object:
SAO 23170 = BD +56°508 = AGK +57°0283 = PPM 27412 = GSC 3694_2053 = NGC 869_839 = YZ 57 2080 = Oo 839

Equatorial coordinates:	Equinox:
R.A. = 2 ^h 18 ^m 48 ^s DEC. = +57°17'08"	2000.0

Observatory and telescope:
Mollet Observatory, Newtonian 0.41-m telescope

IBVSTdetCCD

Filter(s):	V
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Comparison star(s):	HD 14210 = HIP 10873 = SAO 23200 = BD +56°543 = PPM 27455 = AGK +57°0289 = GSC 3694_1539
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Check star(s) (two names whenever possible):

Check star(s):	1: GSC 3694_1853 2: SAO 23173 = PPM 27413 = GSC 3694_1169 3: GSC 3694_1822
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Transformed to a standard system:	No
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Availability of the data:
Upon request

Type of variability:	Beta CMi (Beta Cep)
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Remarks:
In a photometric program searching for new variables, SAO 23170 was initially chosen as a comparison star for the suspected Tycho variable HD 14210 (= TYC 3694_1539). Photometry of SAO 23170 against check stars showed rapid light variations between 0.02 and 0.10 magnitudes in the V band. As a consequence, observational work was then focused on this new object. This star, with a V magnitude of 9.51 and B2 spectral type, was observed for 34 nights between 6 September and 23 December 1997. Data analysis using PERDET software (Breger, 1990) showed that this object is a multiperiodic Beta Cep variable. Two periods of 0.19493 and 0.24233 days (Figure 1) were identified. Observations suggest that more periodicities might be present, but photometric data did not allow to confirm it because the comparison or check stars for SAO 23170 might be slightly variable (Figure 2).

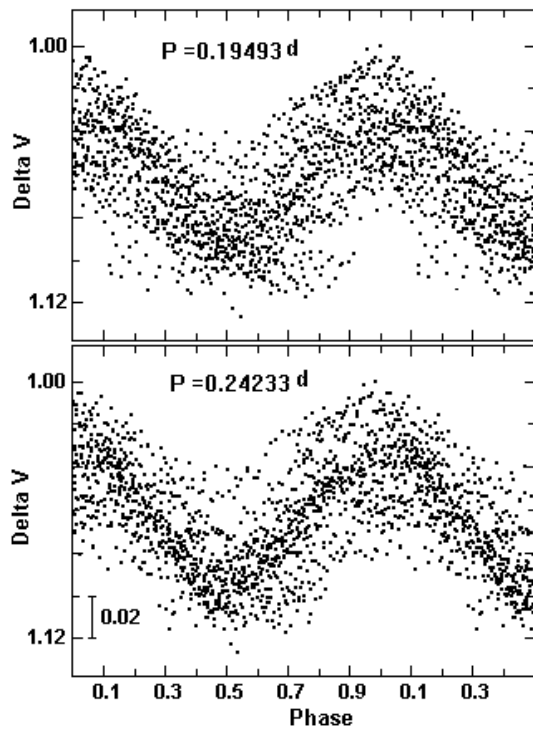


Figure 1.

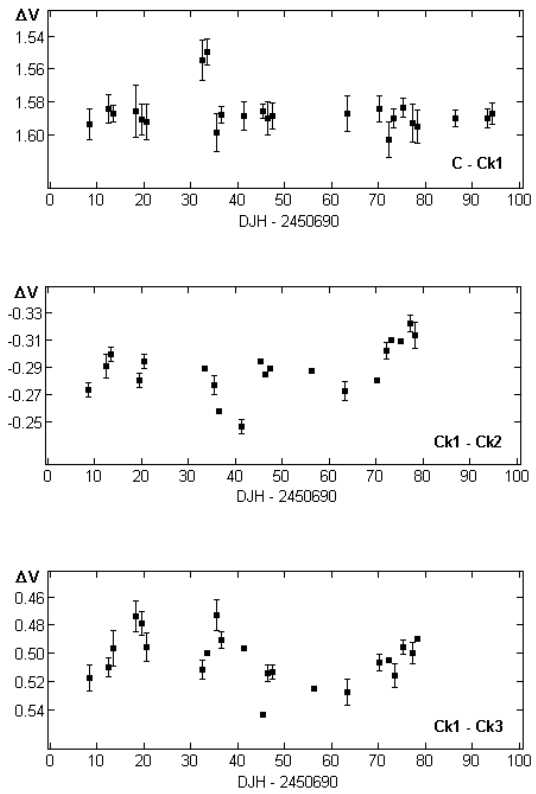


Figure 2.

References:

Breger, M., 1990, *Comm. Asteroseismology (Vienna)*, **20**, 1
 ESA, 1997, *The Hipparcos and Tycho Catalogues*, ESA SP-1200