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TYC 6849 00019 1, a New Double-Mode Cepheid

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Star Name:	TYC 6849 00019 1, ASAS 175258-2736.1		
Coordinates (J2000):	17 52 58.14, -27 36 00.5		
Variability type:	CEP(B);	**Limits, System:**	10.03 - 10.50 (V);
Period:	(see Remarks) d;	**Epoch:**	JD (see Remarks)

Remarks:

According to ASAS-3 data (Pojmanski 2002), TYC 6849 00019 1, listed in the ASAS catalog of variable stars as a fundamental mode Cepheid (period 3.3801 d), is actually a double-mode Cepheid. The phased light curves plotted for the following elements:

JD(max) = 2453187.24 + 4.82201 x E (fundamental mode) and

JD(max) = 2453185.60 + 3.37986 x E (first overtone mode),

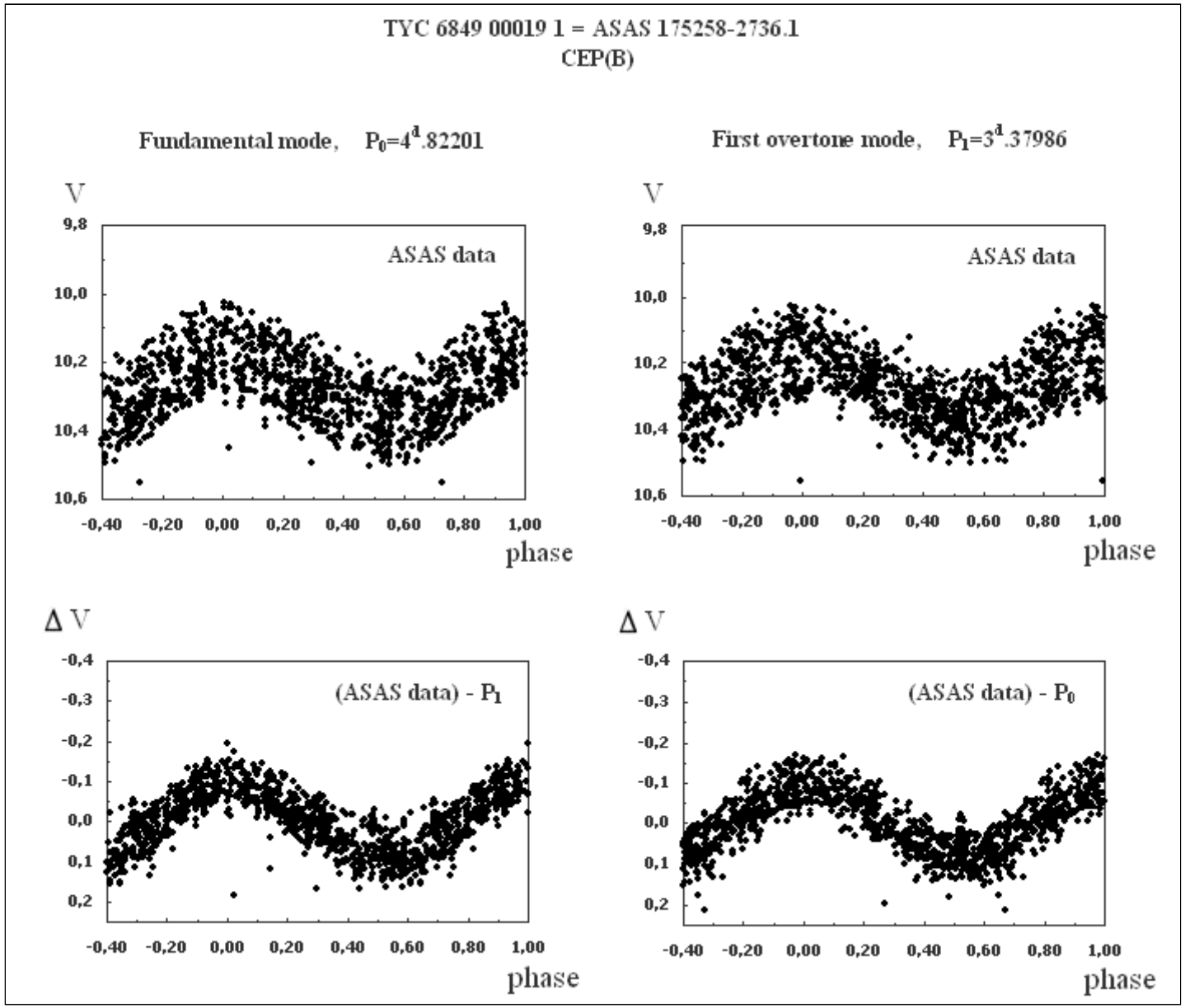
are given in the Figure. The period ratio P1/P0=0.7009 is typical for beat Cepheids.

B - V = 1.523 (Tycho2), J - H = 0.571 (2MASS). ASAS-3 observations were analyzed using the period-search software developed by Dr. V.P. Goranskij for Windows environment. The coordinates are from the Tycho2 catalog.

References:

Pojmanski G., 2002, Acta Astronomica, 52, 397

Light Curve



The phased light curves. Top panels: ASAS-3 data folded with the fundamental-mode and the first overtone periods. Bottom panels: the same curves after prewhitening the other oscillation