BV Cnc: A multiperiodic Delta Scuti star

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During a period of 3 weeks, the two members of the Praesepe cluster, BN Cnc (HD73763) and BV Cnc (HD73746), were observed with a CCD detector mounted on the 1m RCC-telescope at Piszkéstetö Observatory, Hungary. These observations were preparations for "The STACC 1998 campaign on BN Cnc" (Frandsen et al., this issue, where the field is displayed in Fig. 1.2). We obtained 840 CCD-frames, covering a total observing time of 49 hours (7 nights). Differential photometry was performed for BN and BV Cnc, using the fainter stars in the field as references. We find that BV Cnc is, as BN Cnc, a multiperiodic Delta Scuti star, and that 5 oscillation-frequencies are present in the light curve. The amplitude spectrum can be seen in Fig. 1, and the found frequencies are listed in Table 1. For BN Cnc, the observations confirm the frequencies found in the STEPHI-data (see Frandsen et al., this issue). We note that the oscillation-frequencies for the two stars appear in different frequency bands in the amplitude spectrum. A paper with the results of these observations will be submitted to A&A later.

In the proposal for the STACC 1998 campaign we suggested to use BV Cnc as the reference star for BN Cnc. This is clearly not a good idea, but the observations prove that the other, fainter stars in the field serve well as reference stars. In fact the project becomes more interesting as we now are able to observe two Delta Scuti stars simultaneously.

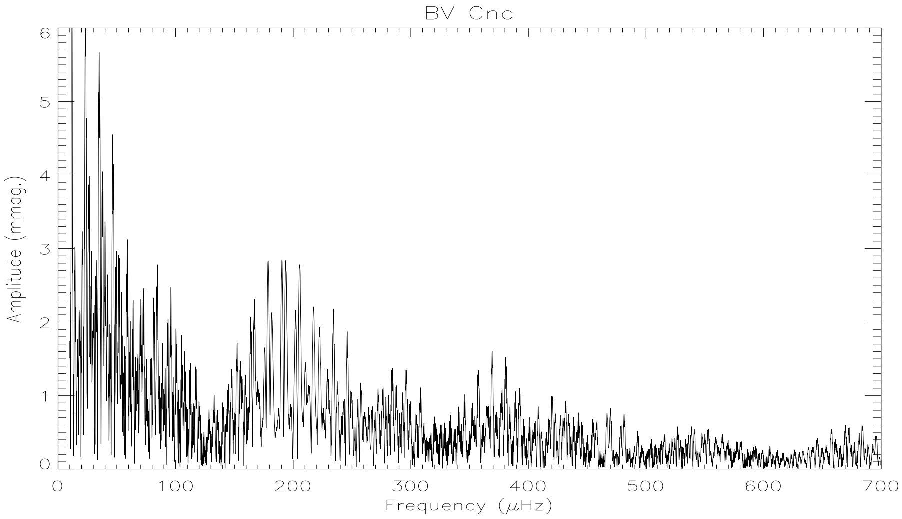

Figure 1: Amplitudespektrum for BV Cnc.

Table 1: Detected frequencies in BV Cnc

ν [μHz]	164	195	202	234	369
A [mmag.]	1.53	2.40	1.40	2.09	1.58
S/N	4.8	7.5	4.4	6.5	6.6