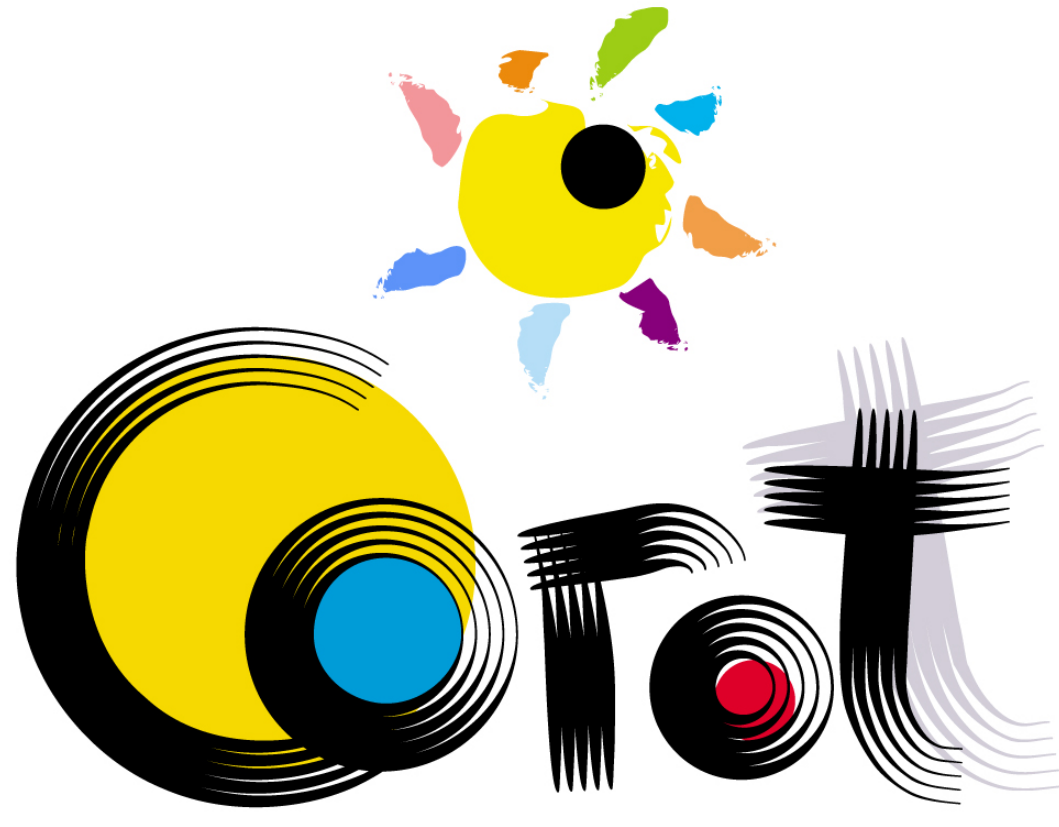


# Hungarian contribution to the first winter seismo targets

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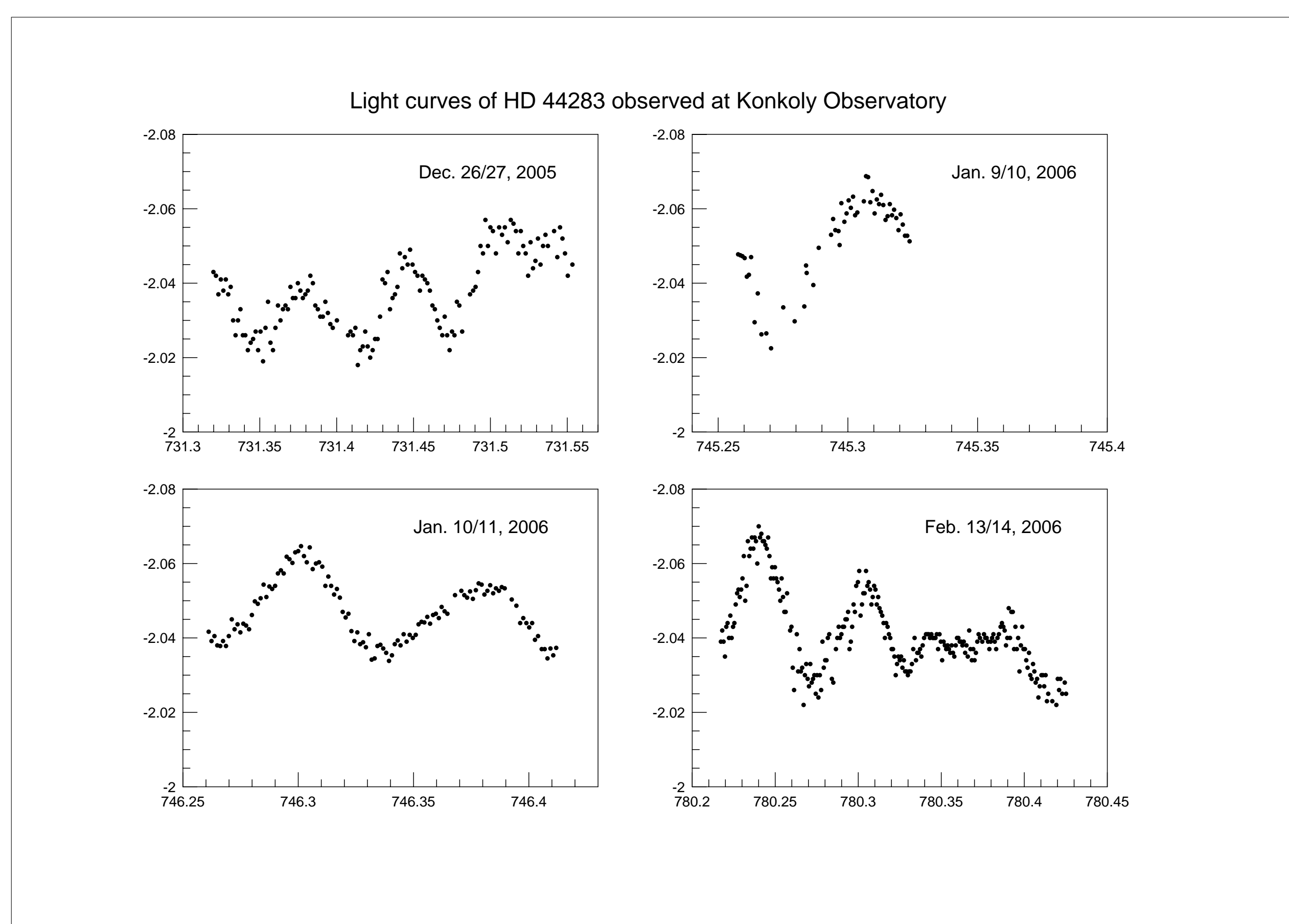
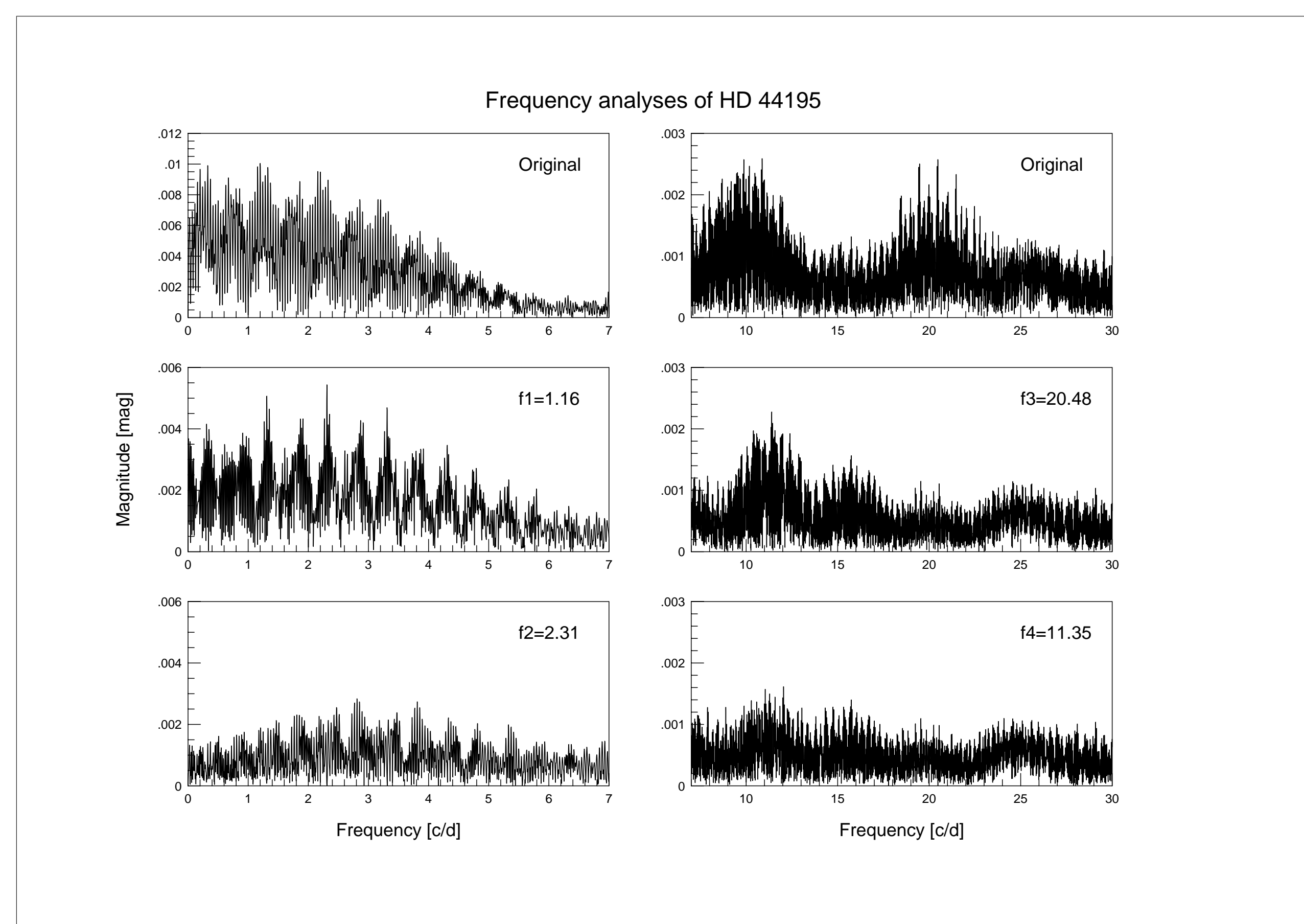
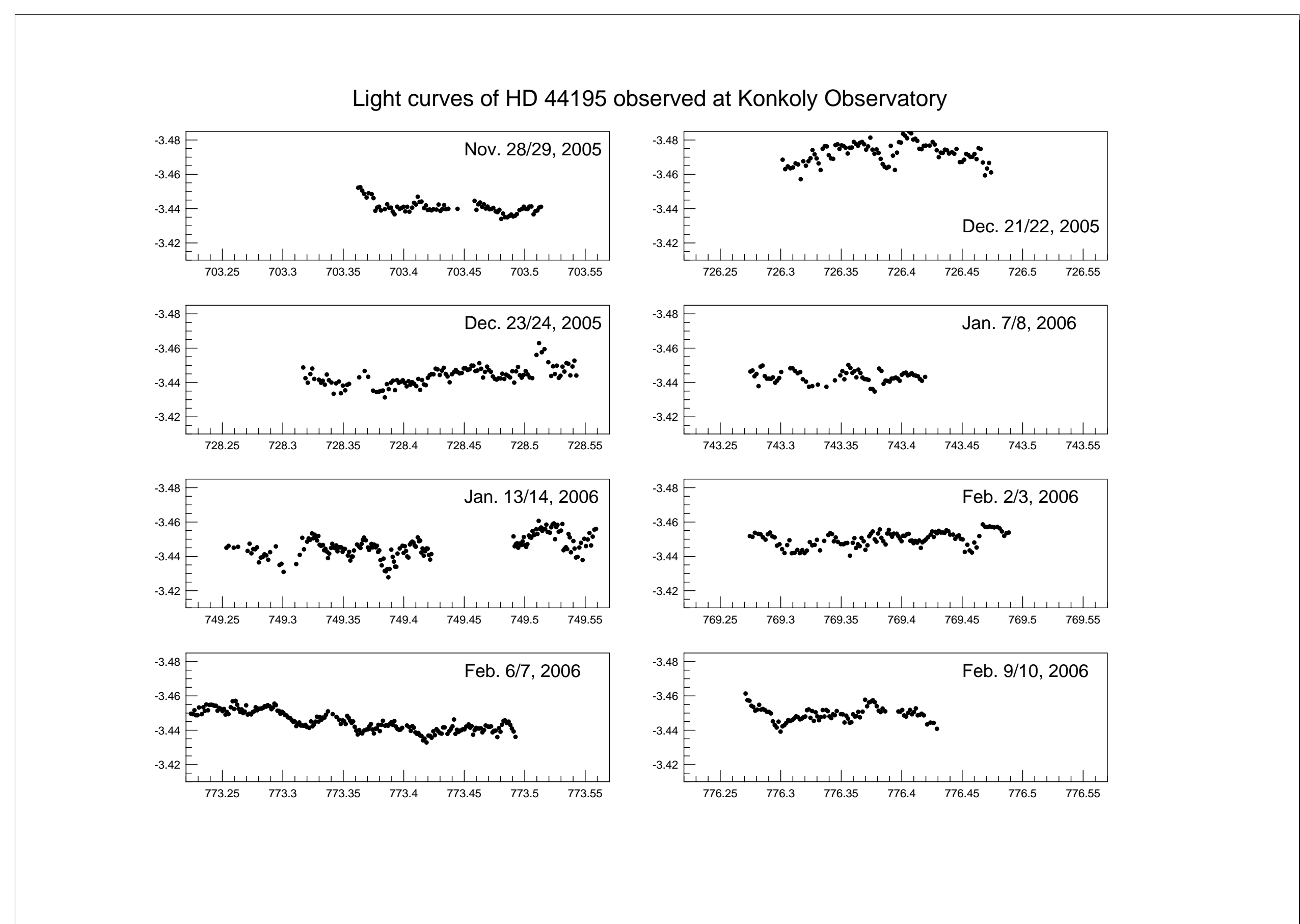
## HD 44195: $\delta$ Scuti and $\gamma$ Doradus type star as a secondary target?

Four consecutive nights were observed in 2003 (Poretti et al. 2005, *AJ*, 129, 2461.). Both the low (at  $\sim 3$  c/d) and the higher frequency range ( $\sim 20.5$  c/d) showed peaks in the frequency spectrum. It has been mentioned as  $\gamma$  Dor candidate according to spectra (Matthias et al. 2004, *A&A*, 417, 189.).

We present new observations in 2005/2006 season; 8 nights over 70 days interval. The rapid  $\delta$  Scuti pulsation at 20.48 c/d is confirmed. Another peak seems to exist at 11.35 c/d in our dataset. The amplitude of both frequencies are low, only 2 mmag.

Two frequencies were identified in the low frequency region at 1.16 and 2.31 c/d values. Amplitudes are 15 mmag and 6 mmag, respectively. The 0.86 day period is acceptable as a typical  $\gamma$  Doradus period. However, the interpretation of the 1:2 frequency ratio of the two identified modes can be questionable in the  $\gamma$  Doradus hypothesis.

HD 44195 as a secondary target is exciting in both cases.  $\delta$  Scuti and  $\gamma$  Doradus type pulsation in a single star improves our knowledge on the nature of pulsation. A  $\delta$  Scuti star in a binary system turns our interest to the pulsation in external gravitational field. Regular behaviour and tidal excitation of modes can be expected.



## HD 44283: $\delta$ Scuti secondary target with regular frequency distribution?

Six consecutive nights were observed by Poretti et al. (2005, *AJ*, 129, 2461.). The short timebase (7 days) restricted their frequency solution to a single mode at 15 c/d, although additional components were suspected in the 14-16 c/d range.

New observations on 4 nights over 50 days interval allowed us to identify three frequencies: 14.14 (8 mmag), 9.14 (4 mmag) and 20.20 c/d (4 mmag). The third frequency can be biased by -1 c/d alias. The possible equidistant distribution of the modes, with the largest amplitude one in the middle, suggests a nice regularity in the pulsation.

Interpretation of the one-hour long constant part of the light curve at HJD 2453780 is a challenging task. However, the opposite phase of the two side peaks to the middle peak can explain the constant part. The sum of amplitudes supports this hypothesis.

