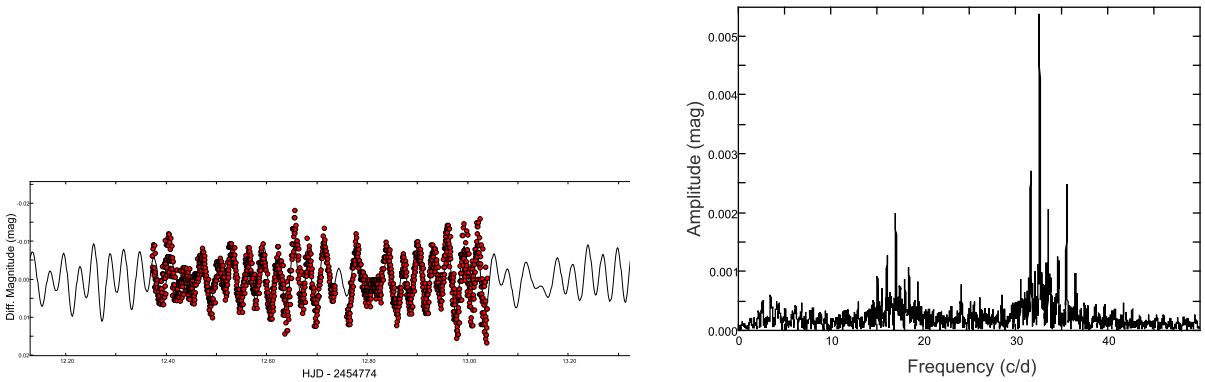

Fig. 1. (a) Example of the differential light curve V650 Tauri – Comparison. The solid line represents a fit to the observed data of the nine frequency detected in V650 Tauri. (b) Amplitude spectrum derived from the light curve V650 Tau – Comparison. The amplitude is in mag and the frequencies in c/d.

TABLE 1

FREQUENCY PEAKS DETECTED IN A PRELIMINARY ANALISYS OF THE LIGHT CURVE V650 TAURI – COMP. S/N IS THE SIGNAL-TO-NOISE RATIO IN AMPLITUDE AFTER THE PREWHITENING PROCESS

Freq. (c/d)	A (mag)	$\varphi/(2\pi)$	S/N
32.623471	0.005075	0.910606	34.3
35.565042	0.002194	0.777990	17.6
17.023812	0.002064	0.305423	8.9
18.460618	0.001216	0.659008	5.7
15.030028	0.000832	0.529173	4.2
32.705001	0.000761	0.605440	5.2
3.4312070	0.000646	0.249472	4.0
24.177849	0.000621	0.466309	4.6
32.862220	0.000672	0.144418	4.6
4.1768560	0.000598	0.383873	2.9

3. PERIOD ANALYSIS

The period analysis has been performed by means of standard Fourier analysis and least-squares fitting. In particular, the amplitude spectra of the differential time series were obtained by means of Period04 package (Lenz & Breger 2005), which considers Fourier as well as multiple least-squares algorithms. This computer package allows to fit all the frequencies simultaneously in the magnitude domain

The amplitude spectrum of the differential light curve V650 Tauri-Comparison is shown in Figure 1b. As can be seen, V650 Tauri presents high-amplitude peaks distributed between 12 c/d and 38 c/d.

The frequencies have been extracted by means of standard prewhitening method. In order to decide which of the detected peaks in the amplitude spectrum can be regarded as intrinsic to the star we follow Breger's criterion given by Breger et al. (1993), where it was shown that the signal-to-noise ratio (in amplitude) should be at least 4 in order to ensure that the extracted frequency is significant.

The frequencies, amplitudes and phases are listed in Table 1. Nine significant frequencies have been detected in V650 Tauri in this preliminary analysis. A detailed analysis of these observations will be given in a forthcoming paper.

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REFERENCES

Breger, M. 1972, ApJ, 176, 367
Breger, M., et al. 1993, A&A, 271, 482
Fox Machado, L., 2003, PhD Thesis, Universidad de La Laguna, Spain
Fox Machado, L., et al. 2000, ASP Conf. Ser. 203, The Impact of Large-Scale Surveys on Pulsating Star Research, ed. L. Szabados & D. Kurtz (San Francisco: ASP), 477
Fox Machado, L., et al. 2001, ESA-SP, 464, 427
Fox Machado, L., et al. 2002, A&A, 382, 556
Fox Machado, L., et al. 2006, A&A, 446, 611
Fox Machado, L., et al. 2008, CoAst, 157, 307
Kim, S.-L., & Lee, S.-W. 1996, A&A, 310, 831
Lenz, P., & Breger, M. 2005, CoAst, 146, 53
Li, Z. P., et al. 2002, A&A, 395, 873
Li, Z. P., et al. 2004, A&A, 420, 283
Liu, Y. Y., et al. 1999, Chinese A&A, 23, 349
Suárez, J. C., et al. 2002, A&A, 390, 523