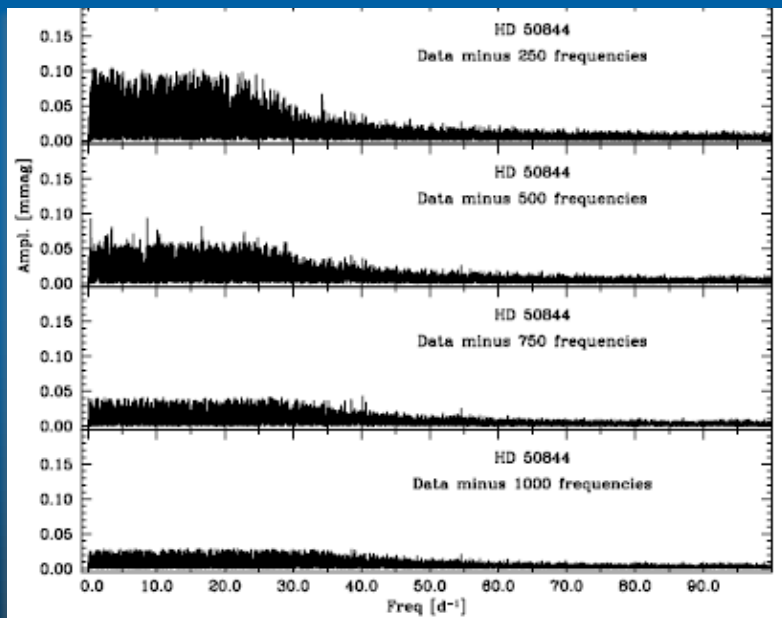


# Identifying biases in the harmonic analyses of massive astronomical datasets

Corresp.: [javier@iaa.es](mailto:javier@iaa.es)

The frequency content estimated through classical frequency analysis techniques might be biased if correlated residuals are found as a result of the fitting of harmonic components.



## HD 50844

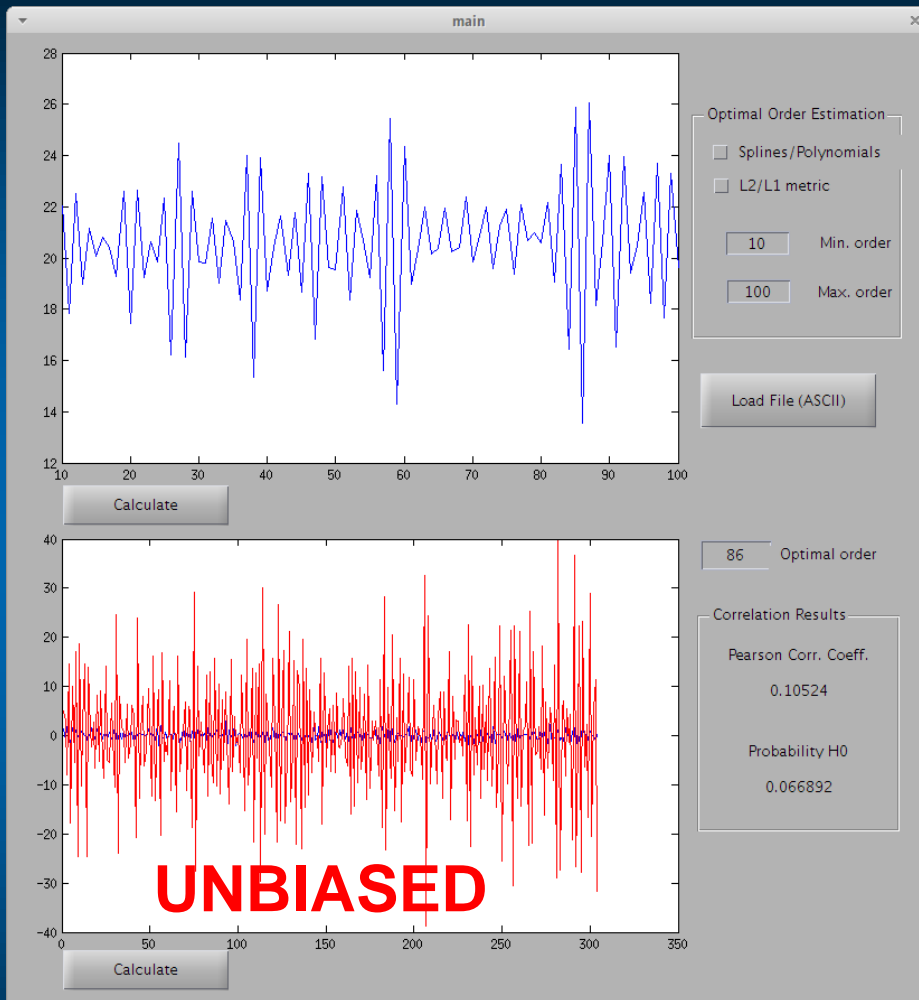
Thousands of harmonic components were fitted to the light curve and the residuals are still correlated.

Also in light curves of other stars:  
HD50870, HD49434, ...

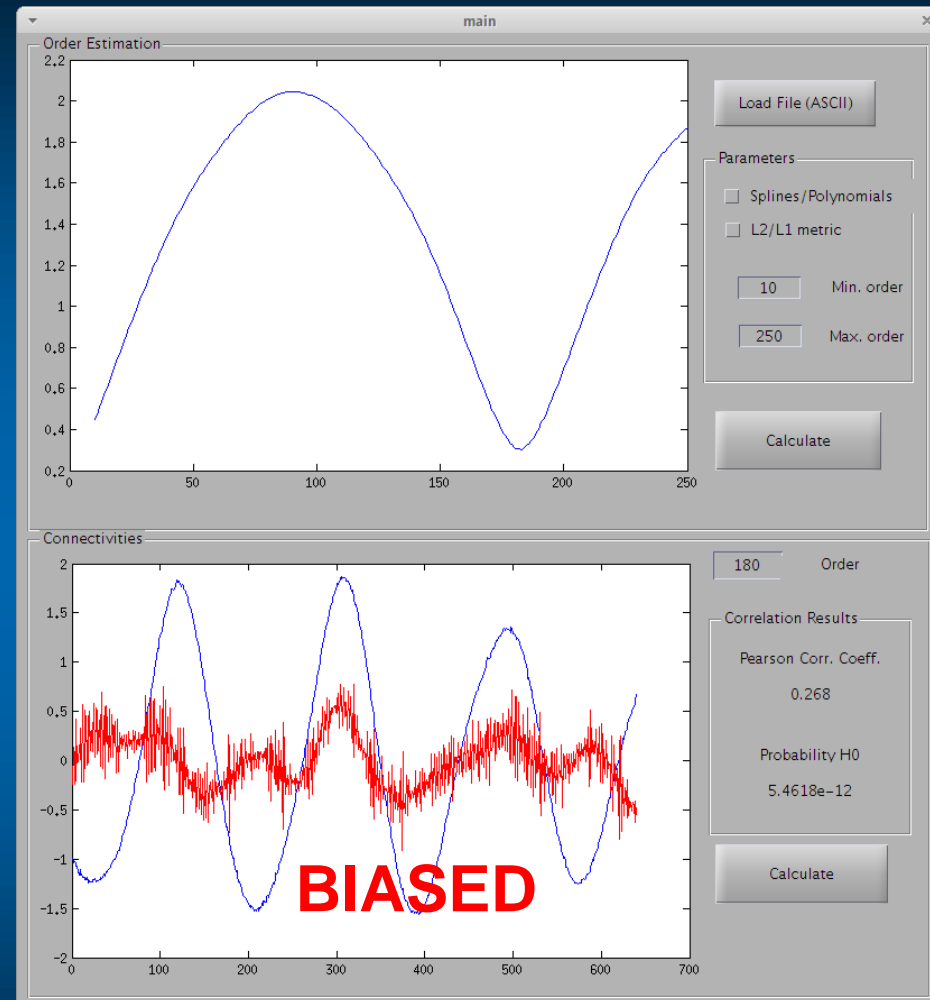
This could be the consequence of the non-analyticity of the function.

We propose to study analyticity of the underlying function of time series through the "connectivities"

An online tool is now in development to apply the test to massive datasets.



Constant star: KIC 6790335



Delta Scuti pulsating star: KIC 10273384

If you want to know more about the test please visit the poster S14.19