VIRGO Science Proposal B7
Maximum Likelihood Estimators package

Main Investigator

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Co-Investigators

Objectives

To provide a tool for Maximum Likelihood fitting of mode spectrum. It is assumed that the fit is performed in the power spectrum, each frequency bin is independent from each other, and the data are distributed as a χ^2 with 2 degrees of freedom.

Work plan

All the necessary routines have been written in IDL. They are available on the VIRGO home page, ready to be β tested! The routines are available for fitting single spectrum of the GOLF or SPM type, and for fitting $m-\nu$ diagram such as for the LOI and MDI. The routines are sufficiently general so that anyone can tune it to its own purpose: the only input required are the frequency, the power spectrum and an analytical profile of the modes.

Outstanding problems

A similar package for fitting the amplitude spectrum should be written. This would very useful for the LOI data.

Responsabilities and Management

T.Appourchaux is (so far) the main responsible.