VIRGO Science Proposal C3
Pressure modes with the LOI and the LOI proxy of MDI

Main Investigator

T.Appourchaux

Co-Investigators

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Objectives

To obtain the frequencies, amplitudes, linewidths and splitting of low-degree p modes with the LOI and the LOI proxy of MDI. Both instruments will be used to cross check each other. This proposal is mainly for a preliminary assessment of the performances of the instruments.

Work plan

The data will be reduced in a manner similar as described in Appourchaux et al (1995) (*AA* **294**, L13). Everything is already in place for reducing the data. The new optimal filters using the real shape of the LOI flight detector can now be computed, for any change of the apparent solar radius, P and B angles. Two independent LOI time series will be generated, and intercomparison of the spectra will insure that mistakes are minimized.

A similar data reduction will be performed for the LOI proxy of MDI. A third independent time series will be generated by the Stanford team.

The characteristics of the p modes will be extracted either from the power spectrum or from the amplitude spectrum. The overlapping modes will be used to cross check the performances of the instruments.

Outstanding problems

The intensity perturbations should be updated from the finding of the Nice group to take into account the effect of the geometrical distorsion and opacity changes, or other effects. The intensity perturbation computed by the Stanford should be compared to that of Nice, and of course, both groups should agree...

Responsabilities and Management

T.Appourchaux will be responsible for the overall integrity of the information provided. He will be responsible together with M.C.Rabello-Soares and A.Jimenez for the generation of the time series, using his optimal filters; for the generation of the power spectra; and for providing the crosstalk for each spectra of an l, m mode. T.Toutain will be responsible for providing the intensity perturbation, and for the fitting of the spectra using the crosstalk provided. A.Kosovichev will be responsible for providing the intensity perturbation. Nice and Stanford will be responsible for the comparison of the intensity perturbations. T.Hoeksema will be the SOI coordinator.