

Phase correlation of hydromagnetic turbulence in the solar wind

Eiko Yamamoto[1], Tohru Hada[2]

[1] E.S.S.T, Kyushu Univ., [2] ESST, Kyushu Univ

http://www.esst.kyushu-u.ac.jp/CDS/index_j.html

Large amplitude MHD turbulence is common in a space plasma. Nonlinear interaction between the Fourier eigenmodes (MHD waves) are likely to produce finite correlation among the wave phases.

As we have reported in previous presentations, we have developed a new method to evaluate the phase coherence in the MHD turbulence, based on the surrogate data technique and fractal analysis.

In this presentation, we discuss our recent attempt to determine the waves responsible for the generation of the phase coherence, by a method we call the band-surrogate technique. Details of the method and interpretations of the results will be given at the presentation.