2000 Fall Meeting
Search Results

Cite abstracts as *Eos Trans. AGU*, 81 (48), Fall Meet. Suppl., Abstract xxxxx-xx, 2000

Your query was: **"Ng, C"**

HR: 0830h
AN: **SH21C-13**
TI: Random Scattering and Anisotropic Turbulence of Shear-Alfven Wave Packets in the Solar Wind and the Interstellar Medium
AU: **Ng, C S**
EM: *chung-sang-ng@uiowa.edu*
AF: *The University of Iowa, Department of Physics and Astronomy, Iowa City, IA 52242 United States*
AU: *** Bhattacharjee, A**
EM: *amitava-bhattacharjee@uiowa.edu*
AF: *The University of Iowa, Department of Physics and Astronomy, Iowa City, IA 52242 United States*
AB: A theoretical model is given of anisotropic magnetohydrodynamic turbulence in the interstellar medium and the solar wind. The model is motivated by observations that show significant deviations from the Kolmogorov power-law and pronounced anisotropy in the presence of a directed magnetic field. Dimensional and heuristic arguments are given and critically assessed. On the basis of the weak turbulence approximation in which three-wave interactions dominate, analytical and numerical results are obtained for the anisotropic energy spectrum produced by the random scattering of shear Alfv,n waves propagating parallel to a large-scale magnetic field. The energy spectrum is shown to be proportional to k^{-2}, qualitatively consistent with some observations and wave kinetic theory.
DE: 7863 Turbulence
DE: 7868 Wave/wave interactions
SC: SH
JN: *Eos Trans. AGU, 81 (48), Fall Meet. Suppl., 2000*
MN: Fall Meeting 2000

New Search