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Session DP1 - Poster Session III.

POSTER session, Monday afternoon, October 23

Exhibit Hall AB, Qu\{e}bec City Convention Centre

[\[DP1.019\] Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets in the Interstellar Medium and the Solar Wind](#)

A. Bhattacharjee, C. S. Ng (Department of Physics and Astronomy, The University of Iowa.)

A theoretical model is given of anisotropic magnetohydrodynamic turbulence in the interstellar medium, motivated by recent observations which show significant deviations from the Kolmogorov power-law. Dimensional and heuristic arguments are given and critically assessed. On the basis of a weak turbulence approximation dominated by three-wave interactions, analytical and numerical results are given on the anisotropic spectrum produced by the random scattering of shear-Alfvén waves propagating parallel to the background magnetic field. The results show that the energy spectrum is proportional to k_{\perp}^{-2} , qualitatively consistent with some recent observations and wave kinetic theory.

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