

Abstract Submitted
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Turbulent Alfvén waves and fast magnetosonic waves in the solar corona¹ BENJAMIN CHANDRAN, University of New Hampshire — High-frequency Alfvén waves and fast magnetosonic waves may play an important role in the heating of the solar corona and in the acceleration of energetic particles in solar flares. This presentation describes how MHD turbulence can generate such high-frequency waves through a cascade of wave energy from low frequencies to high frequencies. The three principle physical mechanisms governing this energy cascade will be discussed, and analytic and numerical results based on weak turbulence theory will be presented. These results show that MHD turbulence is a promising mechanism for explaining the anisotropic heating of minor ions in the solar corona, and for generating high-frequency MHD waves in solar flares that can accelerate both electrons and ions.

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