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A Gyrokinetic Study of Intermittency and Coherent Structures in Kinetic Alfvénic Turbulence JASON TENBARGE, University of Maryland — Turbulence is a ubiquitous process in space and astrophysical plasmas that serves to mediate the transfer of large-scale motions to small scales at which the turbulence can be dissipated and the plasma heated. In situ solar wind observations and direct numerical simulations demonstrate that sub-proton scale turbulence is dominated by highly anisotropic and intermittent, low frequency, kinetic Alfvénic fluctuations. Previous gyrokinetic studies of kinetic Alfvén wave turbulence have focused on the energy transport and wave-like properties of the turbulence; however, a recent gyrokinetic simulation examined the non-local and non-self-similar nature of the energy cascade. We use the same simulation data to examine the intermittency and coherent structures that are responsible for the non-local energy cascade.

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