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Singularities and Reconnection in MHD Turbulence ETHAN VISHNIAC, McMaster University, ALEXANDER LAZARIAN, University of Wisconsin, GREGORY EYINK, Johns Hopkins University — Observations of reconnection in plasmas indicates that it is typically fast, i.e. at a speed which is a significant fraction of the Alfven speed. Recent theoretical and numerical work has provided support for the hypothesis that in a turbulent medium it occurs at the turbulent velocity. We will discuss the nature of the singularities necessary for fast reconnection, and its speed as a function of scale. Simulations of fast reconnection in three dimensional turbulence provide evidence that the process is mediated by localized current sheets.

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