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Turbulent Reconnection in Space and Laboratory Plasmas

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Astrophysical fluids are generally turbulent and this preexisting turbulence must be taken into account for the models of magnetic reconnection which are attepmted to be applied to astrophysical, solar or heliospheric environments. In addition, reconnection itself induces turbulence which provides an important feedback on the reconnection process. In this paper we discuss both theoretical model and numerical evidence that magnetic reconnection gets fast in the approximation of resistive MHD. We consider the relation between the Lazarian
Vishniac turbulent reconnection theory and Lapentaś numerical experiments testifying of the spontaneous onset of turbulent reconnection in systems which are initially laminar.