

Abstract Submitted  
for the DPP09 Meeting of  
The American Physical Society

**The effect of two-dimensional turbulence on resistive-MHD reconnection** NUNO LOUREIRO, IPFN, IST Lisbon, DMITRI UZDENSKY<sup>1</sup>, Princeton University/CMSO, ALEXANDER SCHEKOCHIHIN, R. Peierls Centre for Theoretical Physics, University of Oxford, STEPHEN COWLEY, EURATOM/UKAEA Culham Science Centre, TAREK YOUSEF, Imperial College London — Two-dimensional numerical simulations of the effect of background turbulence on 2D resistive magnetic reconnection are presented. For sufficiently small values of the resistivity ( $\eta$ ) and moderate values of the turbulent power ( $\epsilon$ ), the reconnection rate is found to have a much weaker dependence on  $\eta$  than the Sweet-Parker scaling of  $\eta^{1/2}$  and is even consistent with an  $\eta$ -independent value. For a given value of  $\eta$ , the dependence of the reconnection rate on the turbulent power exhibits a critical threshold in  $\epsilon$  above which the reconnection rate is significantly enhanced.

<sup>1</sup>supported by NSF

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Date submitted: 17 Jul 2009

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