

Abstract Submitted
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Non-stationary Magnetic Reconnection: plasmoids, turbulence, and what it all means DMITRI UZDENSKY¹, Princeton University/CMSO, NUNO LOUREIRO, IPFN, IST Lisbon, ALEXANDER SCHEKOCHIHIN, R. Peierls Centre for Theoretical Physics, University of Oxford — In this contribution the recent progress on understanding the role of secondary tearing instabilities and small-scale turbulence in resistive-MHD reconnection with very large Lundquist numbers $S \geq 10^4$ is reviewed. It is argued that the resulting formation of multiple plasmoids and their rapid nonlinear evolution greatly affect the basic structure of the reconnection layer and force upon us a total revision of the conventional picture of the reconnection processes. In particular, the very definition of the reconnection rate and its scaling with S are discussed and compared with the results of recent numerical simulations.

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