

Abstract Submitted
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Edge Turbulence Scaling Studies¹ D.A. D'IPPOLITO, J.R. MYRA, D.A. RUSSELL, Lodestar Research Corp. — Recent simulations of edge and SOL turbulence using the Lodestar SOLT code ² have addressed a number of related questions : nonlinear saturation mechanisms for edge turbulence, the role of sheared flow in regulating turbulence and blob generation, and the role of dissipation in these processes. Here, we examine the scaling of the turbulent particle and heat flux with various parameters, such as the linear damping of the zonal flows and the equilibrium gradients. We will investigate the question of whether the 2D edge turbulence exhibits a critical-gradient behavior seen on some experiments. The transition between different nonlinear saturation mechanisms will also be discussed.

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²J. R. Myra, D. A. Russell, and D. A. D'Ippolito, Phys. Plasmas **15**, 032304 (2008); D. A. D'Ippolito et al., paper IAEA-CN-165/TH/P4-17 (2008).

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