

## Excitation of Stable Eigenmode Branches in a Model of LAPD Turbulence

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A three field Braginskii fluid model that semi-quantitatively predicts turbulent statistics in the Large Plasma Device (LAPD) at UCLA is analyzed. A 3D simulation of turbulence in LAPD using the BOUT++ fluid code is shown to reproduce experimental turbulent properties such as the frequency spectrum and correlation length with semi-qualitative and semi-quantitative accuracy. In a preliminary attempt to explain turbulent saturation in the simulation, the turbulence is decomposed into its linear eigenmode basis. Stable eigenmode branches, which are damped at all scales, draw energy from the unstable branch and help to saturate turbulence by providing an energy sink in addition to the sink at high  $k$  viscous scales. The degree to which the stable eigenmode branches contribute is explored.