## A New Zonal Flow Mixing Saturation Model Reproduces Nonlinear Transport Regimes G. M. Staebler TH-P2/8

- Zonal flow mixing rather than shearing is a new paradigm for the way gyrokinetic turbulence saturates
  - Zonal flow mixing is operative at both electron and ion scales
- Non-linear regimes can be modeled with quasilinear codes
  - The nonlinear **Dimits upshift** of the effective critical gradient
  - The Electron Temperature Gradient mode streamer regime
    at lower ion than electron temperature gradient drive

The new zonal flow mixing model improves the prediction of temperatures with TGLF



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