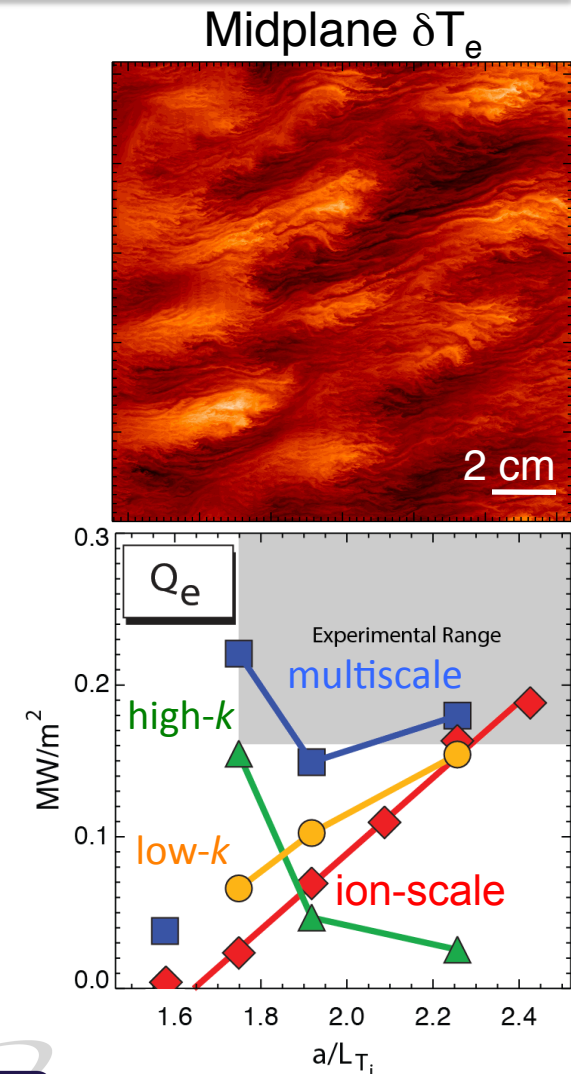


New gyrokinetic simulations demonstrate multiscale nature of turbulence in reactor-relevant plasmas

- Simulations must self-consistently resolve ion and electron scales to simultaneously match ion and electron energy fluxes in both Alcator C-Mod L-mode and DIII-D ITER baseline H-mode plasmas with dominant electron transport
 - High- k ETG modes can contribute more than 50% of total Q_e in these cases
- The multiscale results are not a simple sum of ion and electron scale dynamics: **cannot treat as such for accurate predictive transport modeling**



UC San Diego