

Exploring the Regime of Validity of Global Gyrokinetic Simulations with Spherical Tokamak Plasmas, Y. Ren et al. (EX/P4-35)

- Gradient-driven GTS simulations predict similar electron energy flux before and after RF cessation in a set of RF-heated L-mode plasmas
 - Consistent with the small equilibrium profile changes before and after RF cessation
 - Inconsistent with the observed factor of 2 decrease in electron heat flux after RF cessation from power balance analysis
- However, gradient-driven GTS simulations demonstrate decent agreement in ion thermal transport with a set of NBI-heated NSTX H-mode plasmas
 - Experimental ion heat flux can be explained with predicted ion energy flux plus neoclassical ion heat flux
- More GTS simulations are needed to understand the above discrepancy and to quantify the regime of validity of the GTS code

