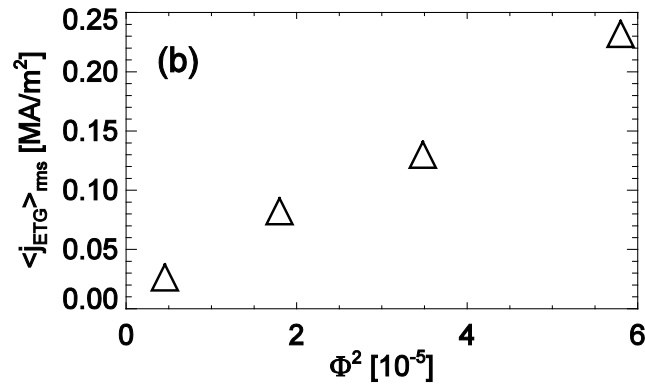
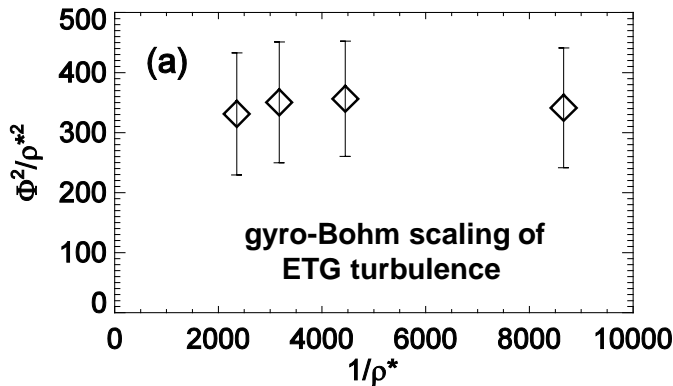


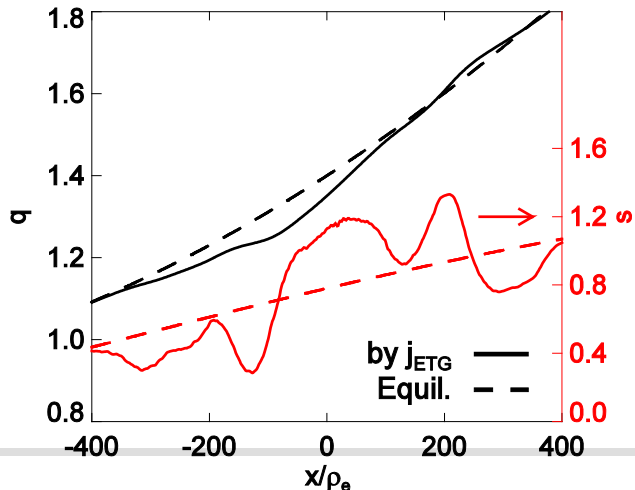
GK Simulations of an ETG Turbulence-Driven Current (TH/P2-5)

- GK simulations of ETG turbulence to clarify the characteristics of a turbulence-driven current in realistic toroidal plasmas.
- ETG current density j_{ETG} increases with ρ_e^* owing to the gyro-Bohm scaling,

$$\langle j_{ETG} \rangle_{RMS} \sim \phi^2 \sim \rho_e^*$$



A proportional relation between turbulence and ETG-driven current density



- In the large ρ_e^* ($= 1/2350$) case, the perturbation on equilibrium q -profile becomes noticeable. A large change in magnetic shear ($s = 0.78 \rightarrow 1.13$) can impact on micro-instabilities.