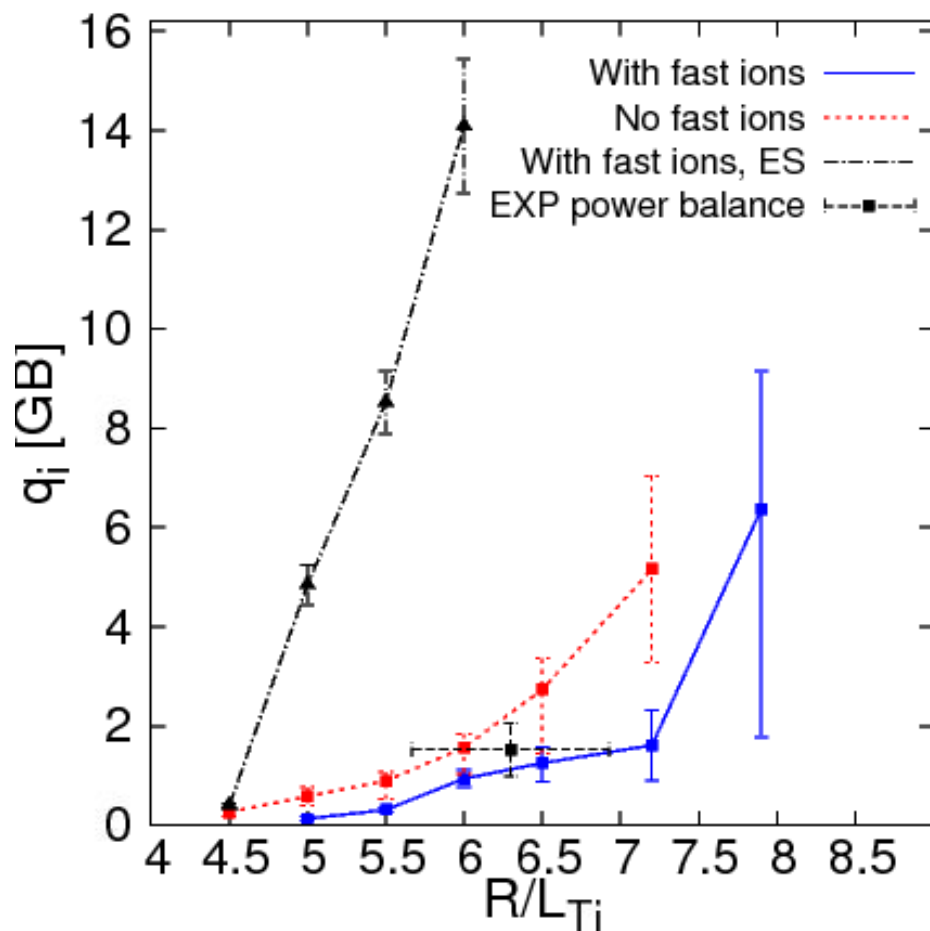


GENE nonlinear simulations of JET hybrid shot 75225 @ $\rho=0.33$. 4 ions species, finite- β , collisions, real geometry, rotation.



- Pressure gradients in electromagnetic simulations are a strong stabilizing mechanism for ITG turbulence
- Non-linear stabilization is stronger than linear due to coupling with zonal flows
- Fast ions provide a net source for stabilization as they increase pressure gradient without contributing to ITG drive
- Increased core pressure by fast ions expand pedestal pressure stable boundary region through Shafranov-shift
- More efficient than thermal particles as no turbulence contribution: mechanism efficiency increase with power
- Core-edge coupling for improved confinement by means of plasma stiffness
- Effects are similar for ITER hybrid scenario