Gyrokinetic simulation of microturbulence in EAST tokamak and DIII-D tokamak (Poster TH/P2-44)

n=17

0.4 0.45 0.5 0.55 0.6 0.65

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0.6 0.65

• The new capabilities in the gyrokinetic simulation code GTC enable it to simulate the turbulent transport in real tokamak experiments

• Nonlinear gyrokinetic simulation for DIII-D discharge #101391 shows that radial profile of heat diffusivity simulated by GTC is highly consistent with that by GYRO

• Linear gyrokinetic simulation with collisional kinetic electrons is performed for EAST discharge #38300

• Linear eigenmode frequency from GTC simulation is ~39kHz, very close to experimental value ~30kHz

 $k_{\theta} \rho_{i} = 0.16$

0.15 0.2 0.25 0.3 0.35

0.25

0.3 0.35

0.4

 $k_{\alpha}\rho_{i}$

(C_s/R₀)

1.5 (**ZH**) 1 Θ

0.5

0.15 0.2



