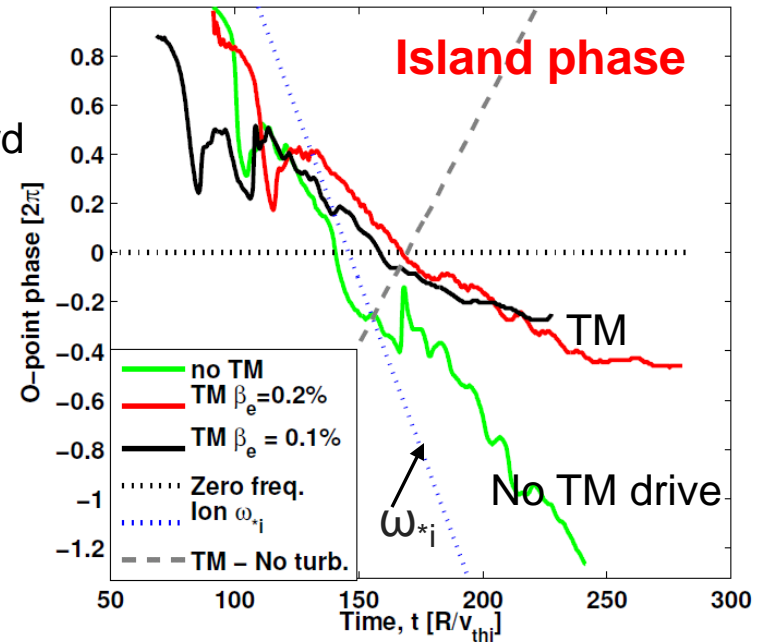
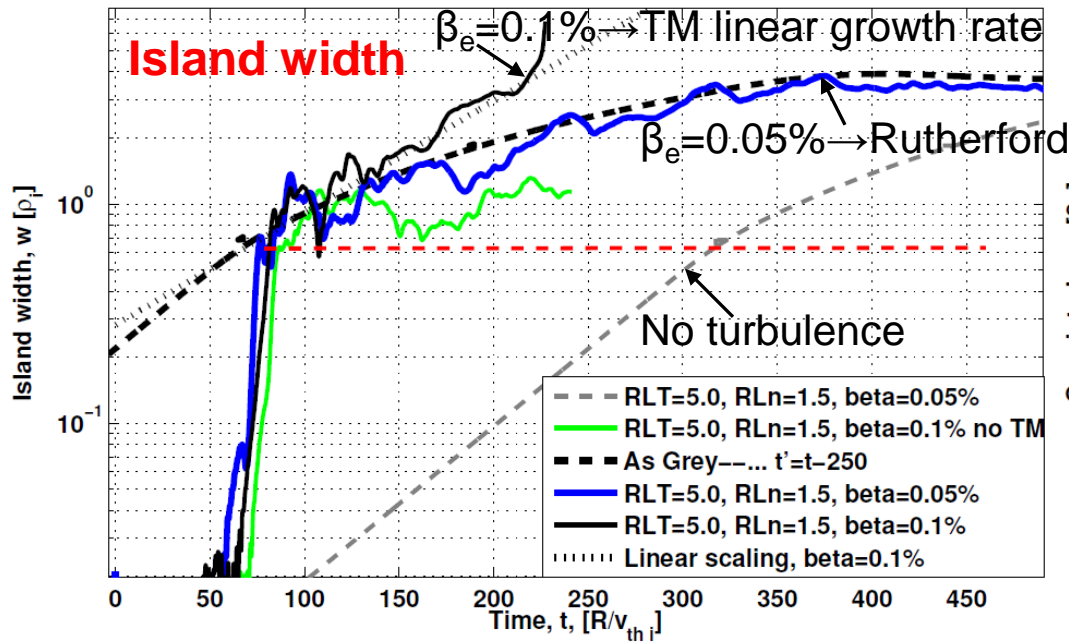


# Toroidal gyrokinetic simulations of the tearing mode

- Toroidal kinetic effects change qualitatively the dynamics of tearing modes (TM) in tokamaks
- First self-consistent gyrokinetic simulations of the tearing mode embedded in electromagnetic turbulence in toroidal geometry becoming available (GKW)



- (ITG) Turbulence seeding of magnetic islands provides fast growth of structures of the order of the ion gyroradius, further fate depends on  $\beta_e$  (disruption of the Rutherford phase observed, TM grows at its linear growth rate after theoretical singular layer width has been exceeded)
- Seeded islands rotate in the ion direction, slow down as they grow