Introduction

- Finite-frequency (ω–c_p/R) zonal-flow component
- n=0, m=1 standing-wave density fluctuation
- n=0, m=2 standing-wave magnetic component (sin(2θ))
- Flow and density components observed on several devices (Doppler backscattering, reflectometry, beam emission spectroscopy, heavy ion beam probe)

Shape & Collisionality Scan

Collisionality approximately constant from one discharge to the next

δe = (-0.4, 0.3, 0.0, 0.0, 0.0, 0.4)

δT_rad/δT_rad ↑ with ρ_vol and with δ going from –ve to +ve

δn/n↑ with ρ_vol from core plasma to the edge

δn/n↑ with δ from negative to positive

δ effect less significant deeper in the core but still present

GAM characterisation

n=0 global mode seen in magnetics (m=2)

Collisionality scaling of δn/n is also consistent with expectations

Discussion & Conclusions

- Experimental observations of dependence of δn/n & δT_rad on triangularity qualitatively consistent with Camenen’s picture of improvement of confinement with negative triangularity
- Collisionality scaling of δn/n is also consistent with expectations
- Does effect of triangularity penetrate .... Well yes despite the fact that triangularity does not penetrate and that kinetic gradients are the same
- Comparison global numerical results & synthetic diagnostics planned

GAM characterisation

- GAM positively identified
- ORBS5 numerical simulations consistent with experimental observations
- eigenmode → continuum spectrum transition at high q_95
- complex interplay between GAM drive (density) and damping (collisional damping)