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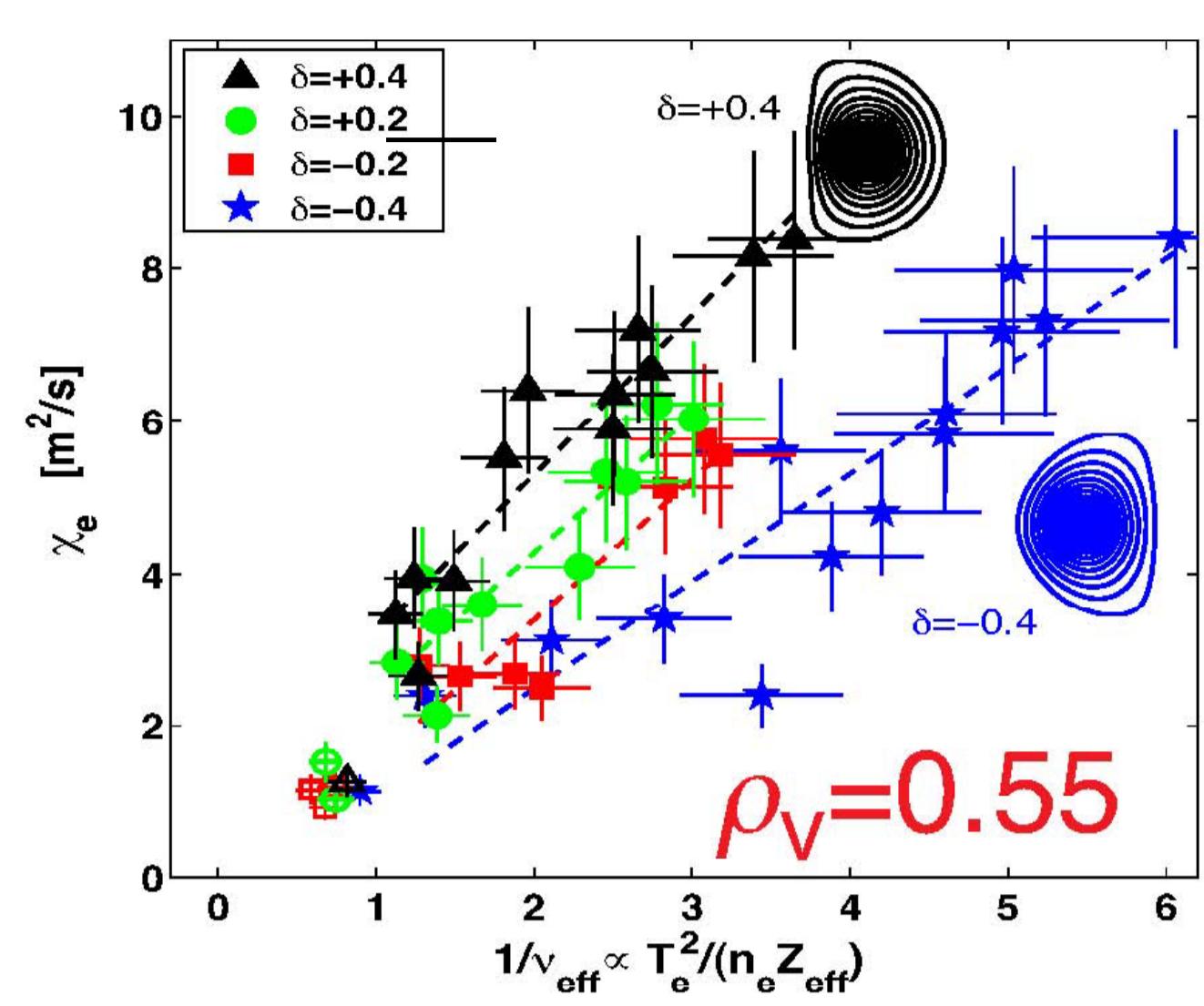
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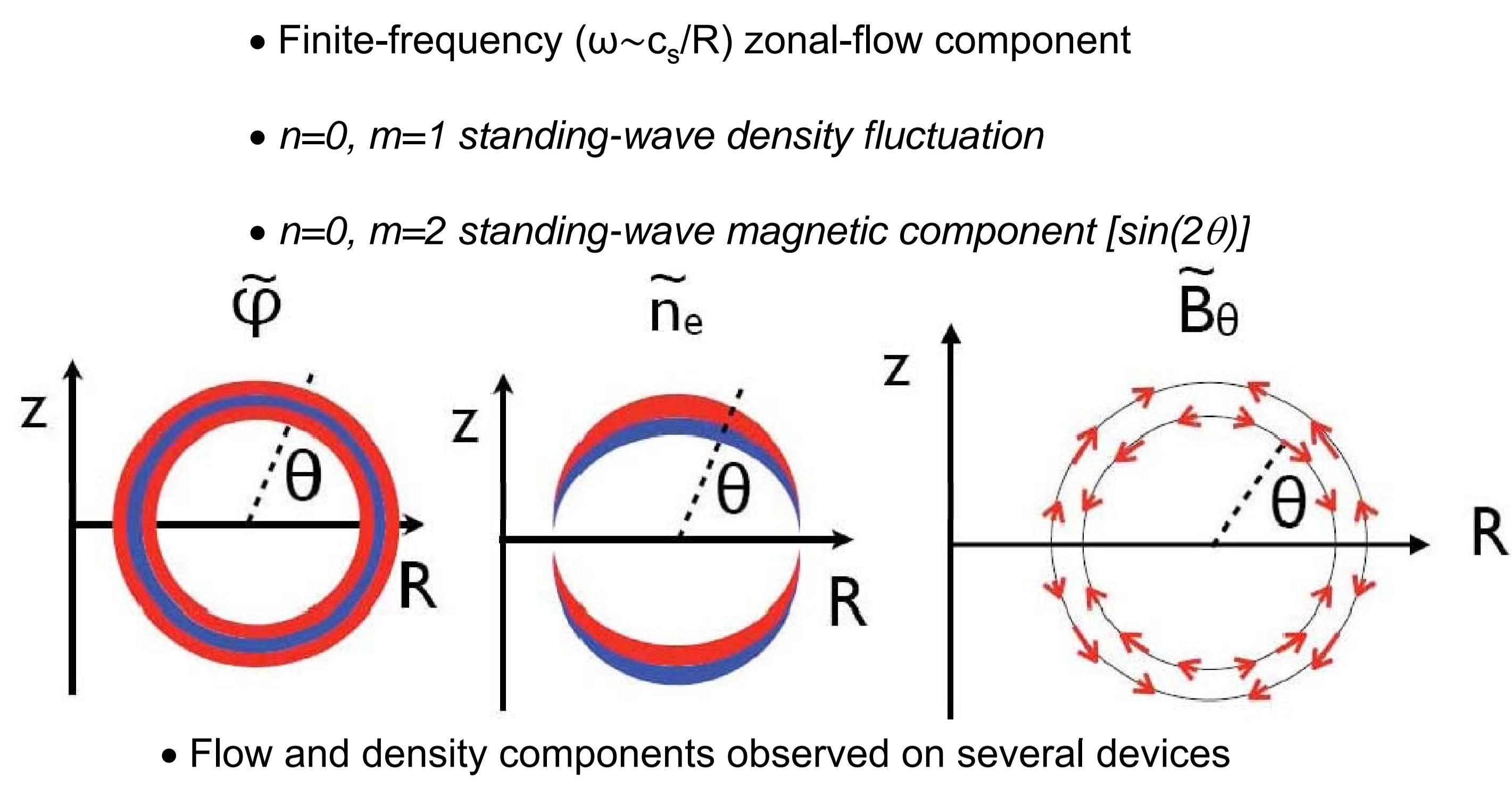
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Introduction

TCV power balance



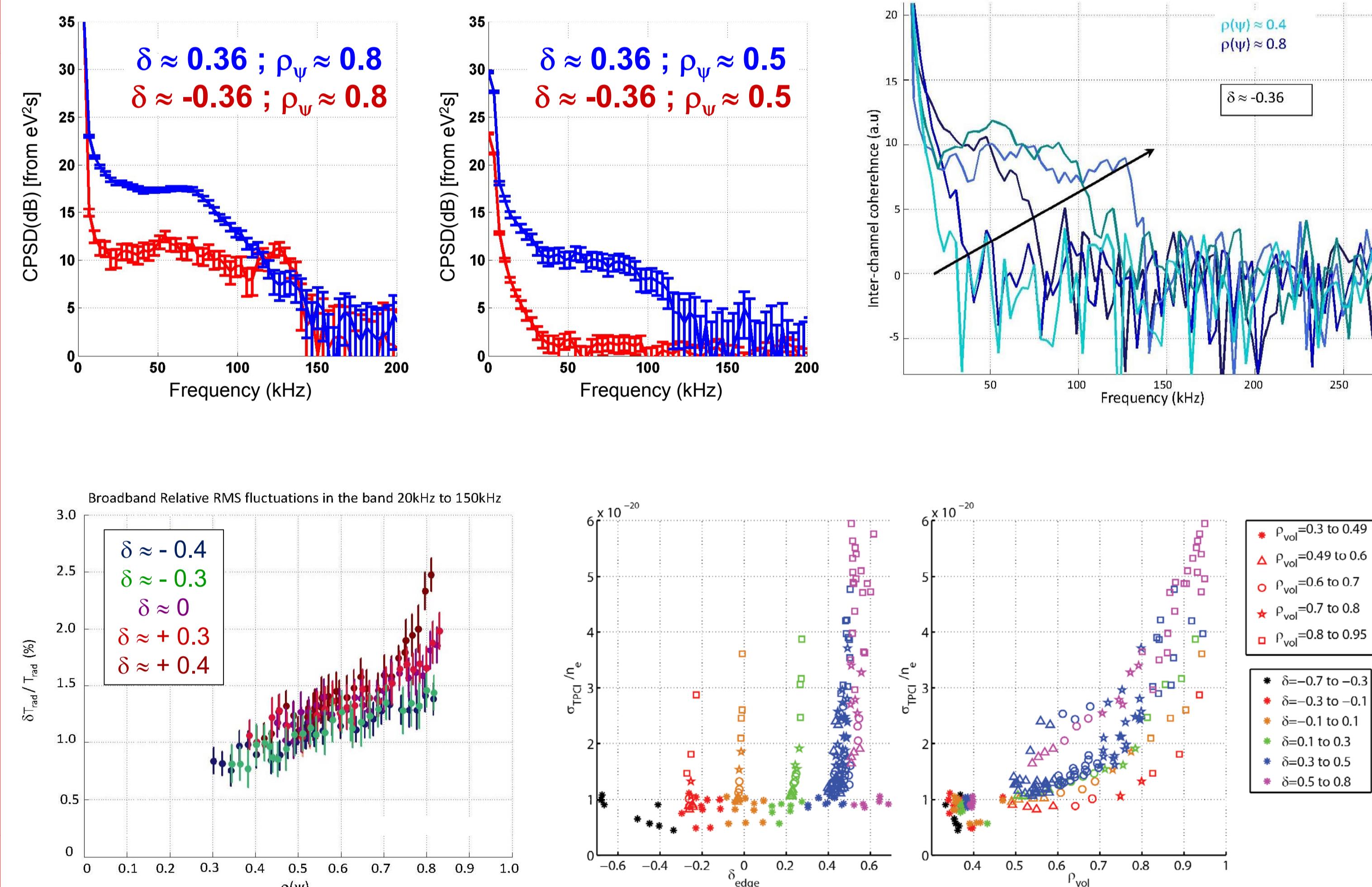
- increasing v_{eff} decreases thermal diffusivity (χ_e)
- factor 2 decrease in χ_e from positive to negative edge triangularity
- **is there a measurable trend in electron turbulence as function of v_{eff} or in δ ?**



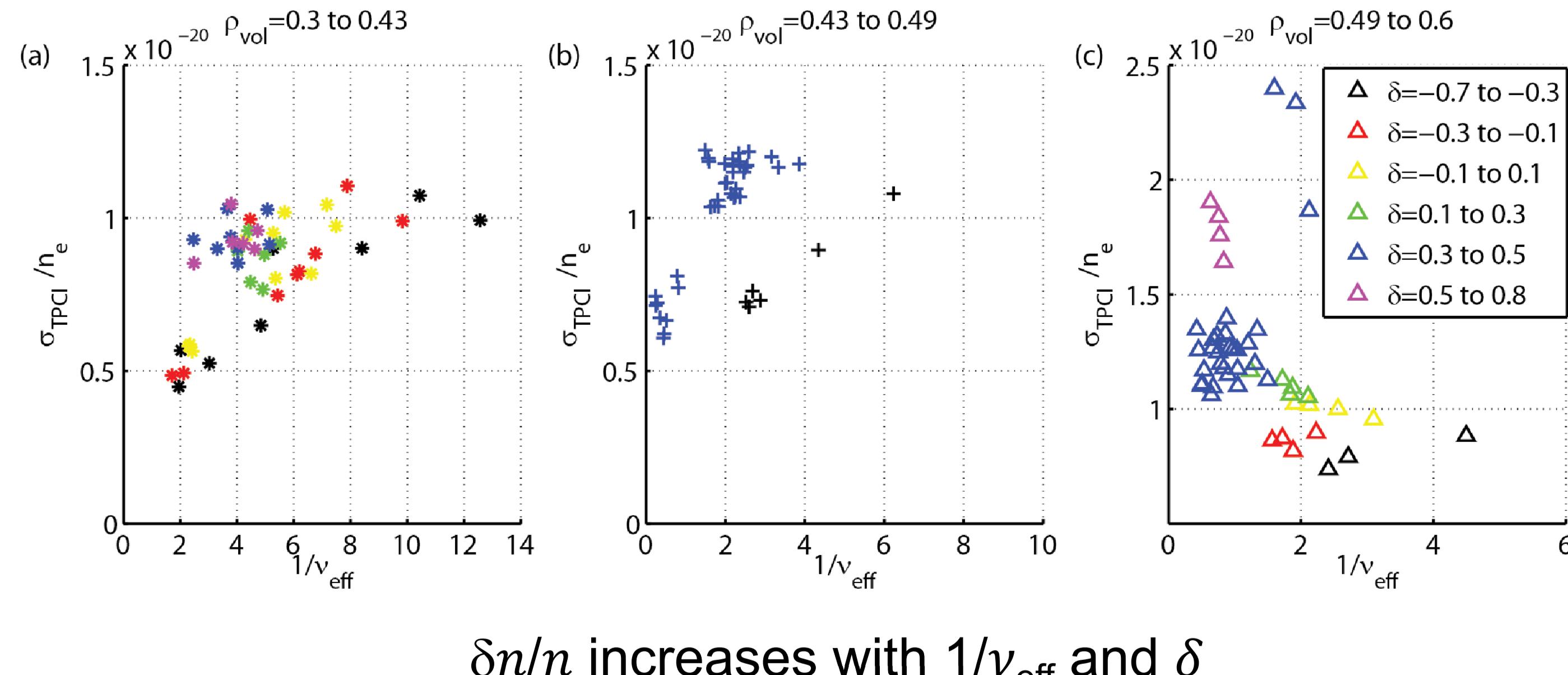
Shape & Collisionality Scan

$$\delta \in \{-0.4, 0.3, 0.0, 0.0, 0.4\}$$

Collisionality approximately constant from one discharge to the next



- $\delta T_{\text{rad}}/T_{\text{rad}} \uparrow$ with ρ_{vol} and with δ going from -ve to +ve
- $\delta n/n \uparrow$ with ρ_{vol} from core plasma to the edge
- $\delta n/n \uparrow$ with δ from negative to positive
- δ effect less significant deeper in the core but still present



Discussion & Conclusions

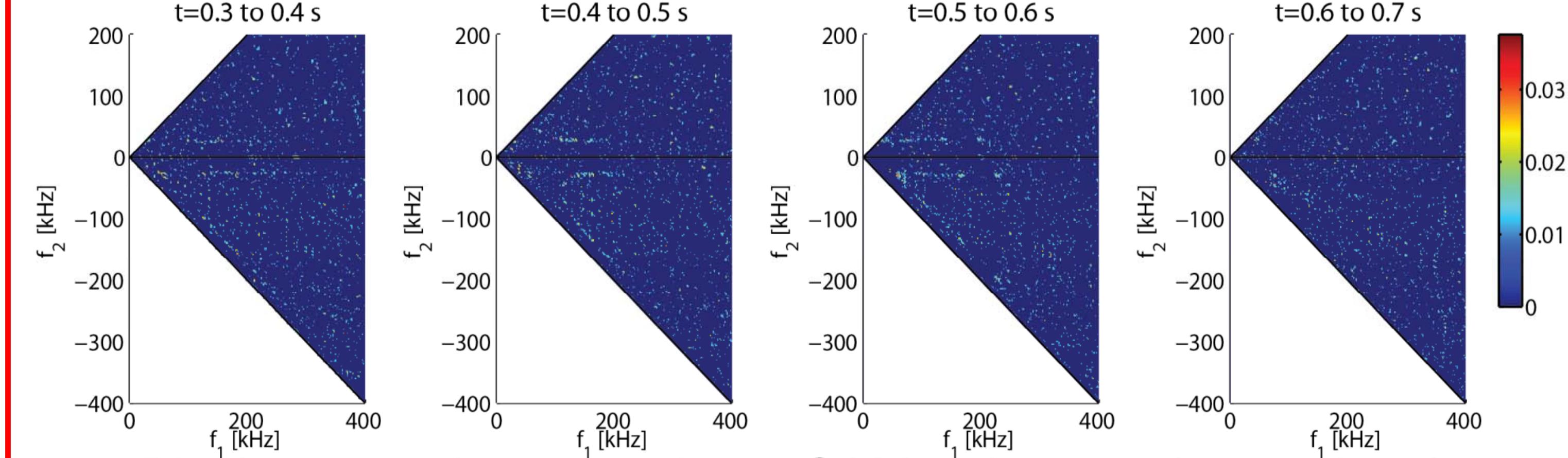
Broad-Band Turbulence

- Experimental observations of dependence of $\delta n/n$ & $\delta T_{\text{rad}}/T_{\text{rad}}$ on triangularity qualitatively consistent with Camenen's picture of improvement of confinement with negative triangularity
- Collisionality scaling of $\delta n/n$ 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
- ORB5 numerical simulations consistent with experimental observations
- eigenmode → continuum spectrum transition at high q_{95}
- complex interplay between GAM drive (density) and damping (collisional damping)

GAM amplitude is roughly constant during the density ramp-up, while broadband turbulence increases. Eventually GAM becomes undetectable. Is collisional damping compensating increased drive or reduced energy transfer from turbulence?



Bicoherence shows nonlinear GAM-turbulence interaction that disappears at highest densities