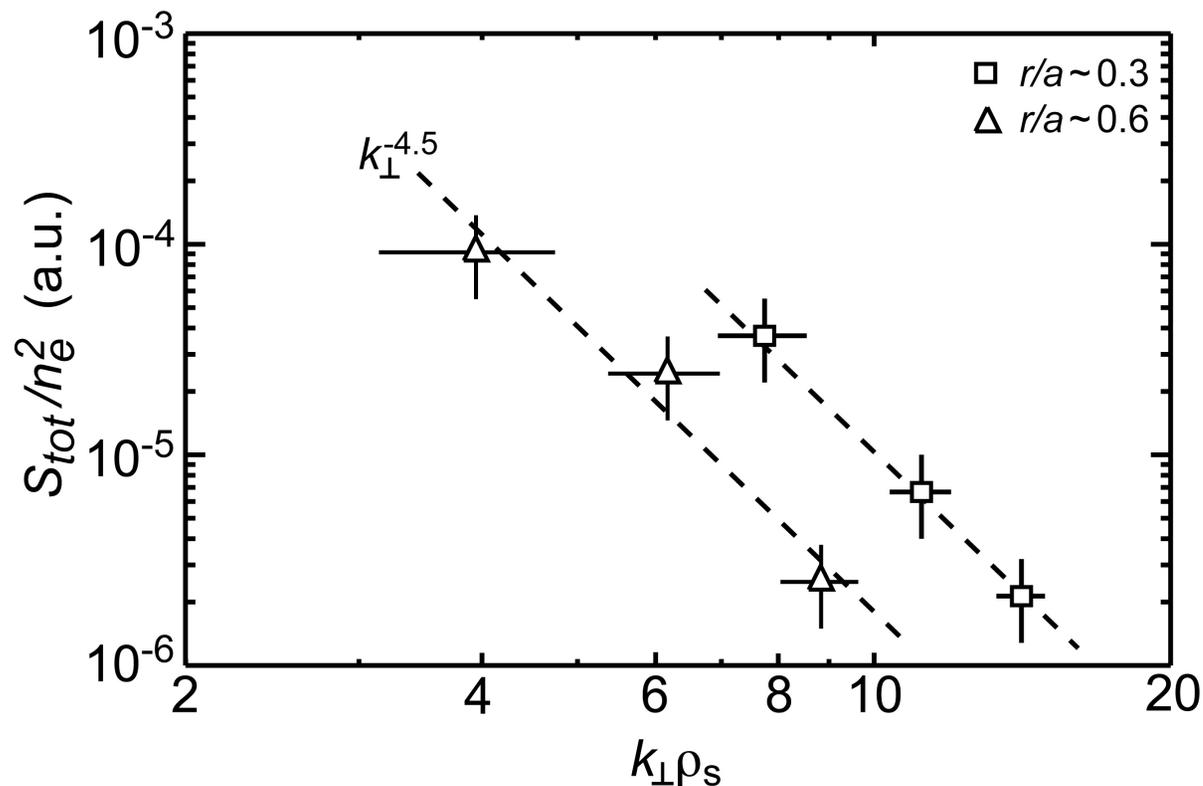


The spectrum of short scale turbulent fluctuations in NSTX

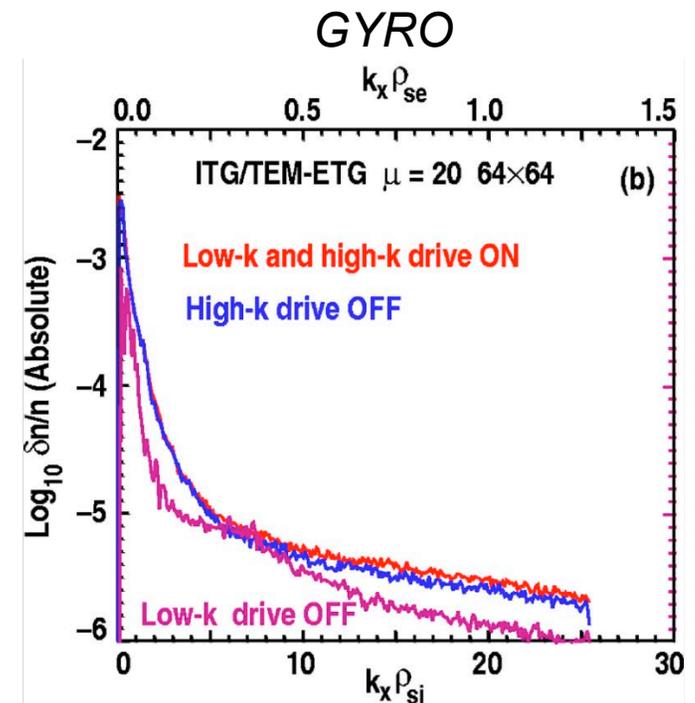
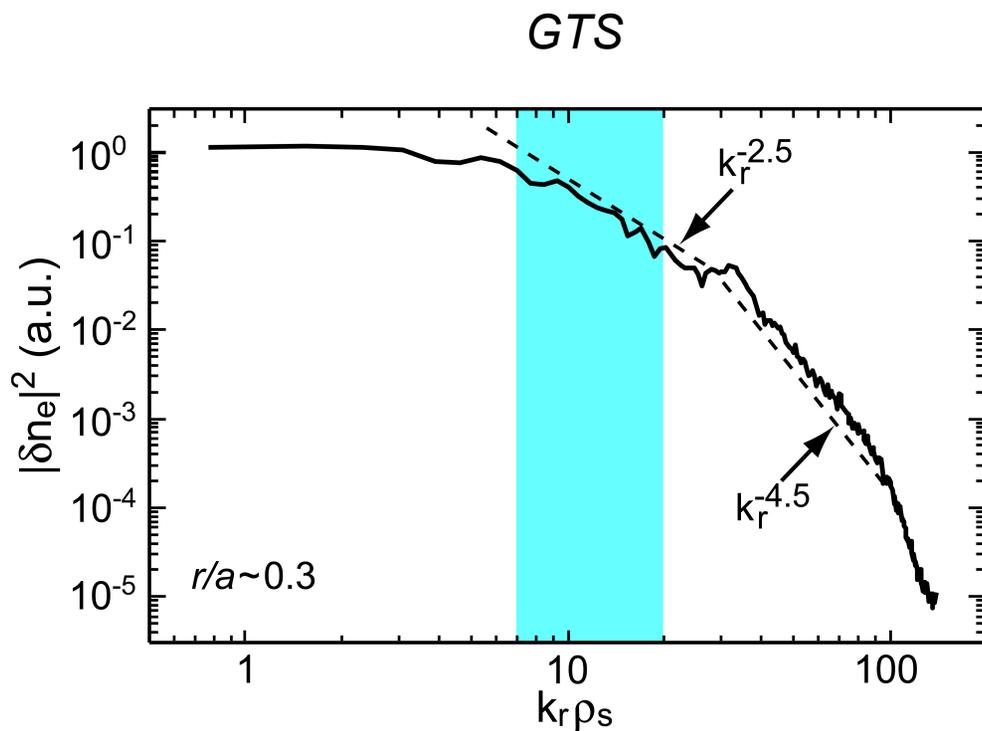
E. Mazzucato

- This XP follows up on last year's XP-821, where the dependence of the power spectrum of fluctuations on the radial wave number was measured
- Results showed spectra with the power law $(k_{\perp}\rho_s)^{-4.5}$



The spectrum of short scale turbulent fluctuations in NSTX

- A power law for the spectrum of turbulent fluctuations is consistent with numerical results from both GYRO and GTS. However, experimental and numerical results disagree completely on the power exponent.



The spectrum of short scale turbulent fluctuations in NSTX

- The goal of the present XP is to extend to smaller values the range of wave numbers of measured fluctuations
- Measurements with high- k scattering and Beam Emission Spectroscopy allow full coverage of the entire range of possible fluctuations

