

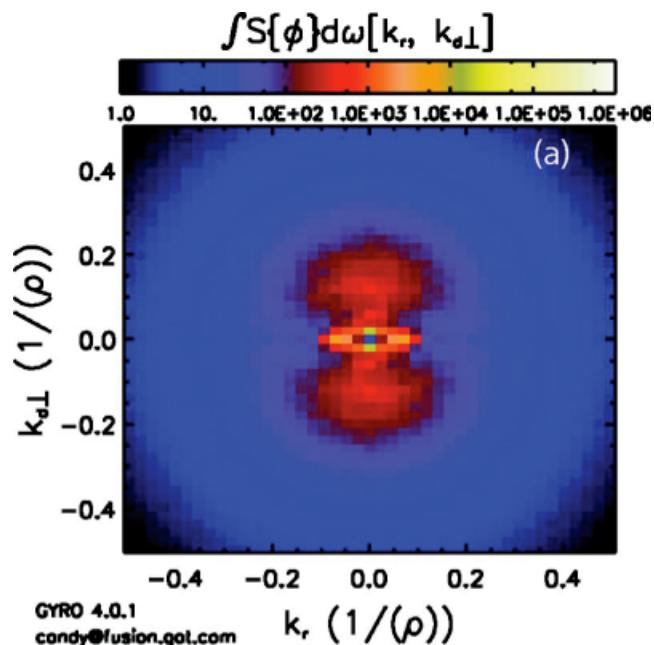
XP to investigate
the k_r - k_θ isotropy of high-k fluctuations

David Smith
UW-Madison

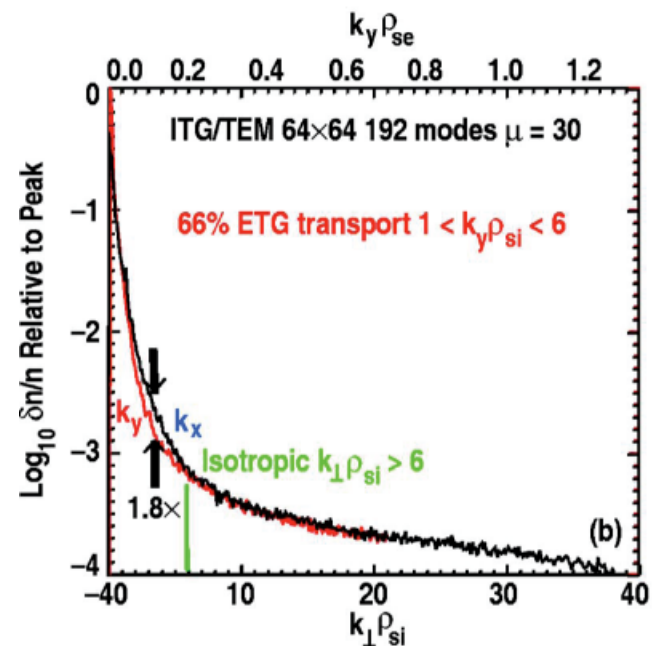
June 12, 2009
NSTX Mid-Run Assessment

The k_r - k_θ isotropy of ETG turbulence is an area of disagreement among NL GK simulations

Nevins et al, PoP, 2006
predict strong ETG anisotropy



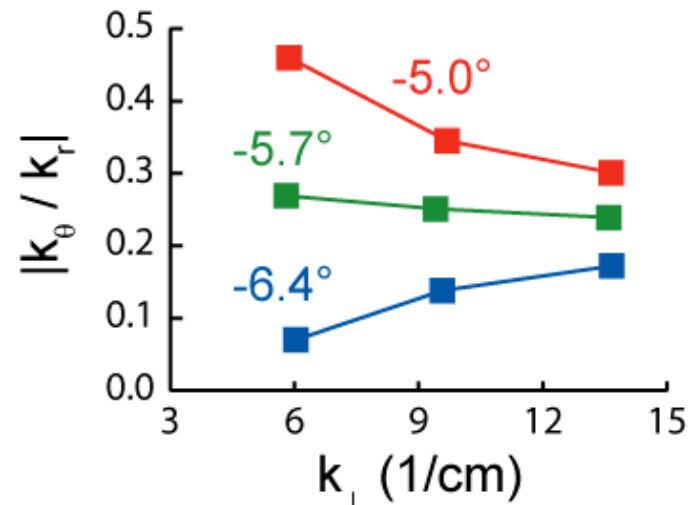
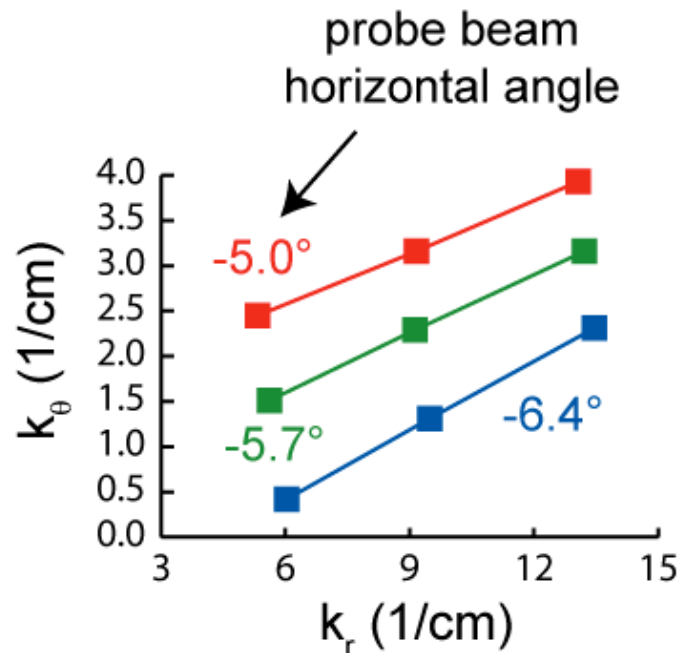
Waltz et al, PoP, 2007
predict ETG isotropy
(or slight anisotropy)



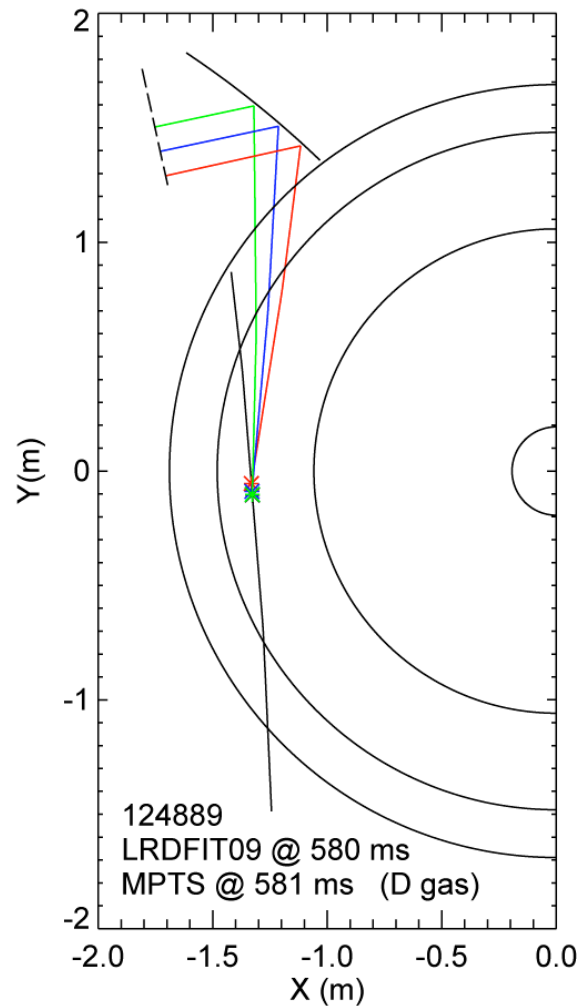
ETG radial streamers are anisotropic features
(simulations above do not use the same plasma conditions)

The NSTX high-k scattering system can access a wide range of k_θ/k_r ratios

unique capability for NSTX



Previous measurements provide a starting point



700 kA, 5.5 kG, 4 MW NBI
baseline shot: 124889

high-k measurements
at $R=133$ cm and $r/a=0.55$

