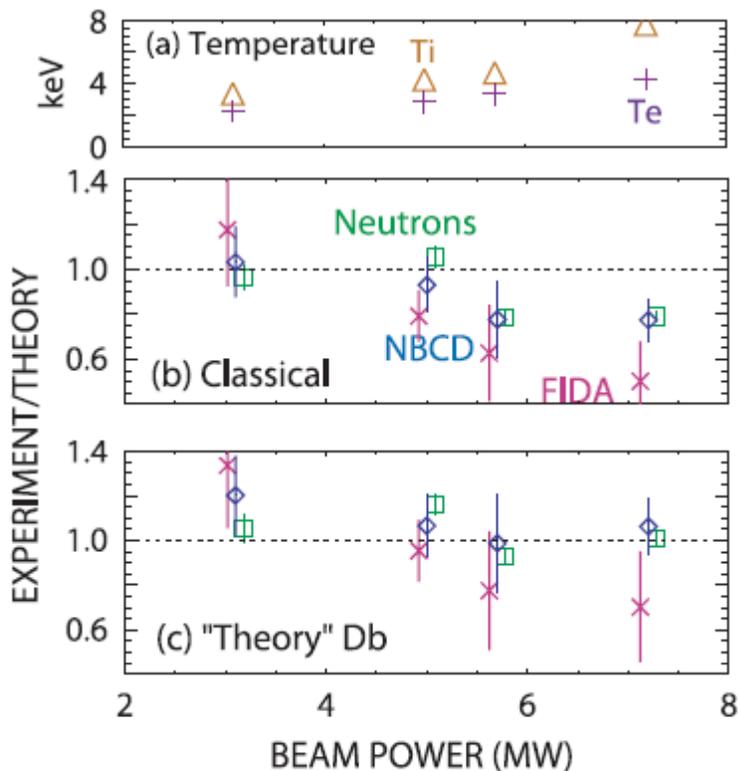


Assesment of Fast Ion Loss Due To Microturbulence

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- Fast ions more sensitive to microturbulence at lower W/T

– DIII-D observations (Heidbrink et al.) indicate more ion loss at higher beam power (higher T) for fixed beam energy

- Proposed NSTX experiment

– Compare higher W/T with lower W/T in L- and H-modes

– High W/T case: 90 keV beams, no HHFW ("low" T_e)

– Low W/T case: 65 keV beams coupled into pre-heated HHFW plasmas (increase T_e to ~ 4 keV?)

– Do in both L-mode and H-mode plasmas

- Different microturbulence characteristics

– Issues

- Will W/T ~ 15 low enough to see effect (< 10 in DIII-D)?
- Need to couple NBI and HHFW (and maintain high T_e with NBI)
- Is fundamental T ion or electron value?