



NSTX Transport & Turbulence Issues: 2002 campaign

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Transport accomplishments to date in NSTX



- Limited & diverted plasmas
- Auxiliary heating
- $\beta \approx 25\%$
- H-mode
- $T_i > T_e$ during NBI
- Large v_ϕ
- NB current drive

Transport & turbulence diagnostics functioning



- $n_e(\psi)$: MPTS, FIRETIPS, edge reflectometer
- $T_e(\psi)$: MPTS, XCS, PHA
- $T_i(\psi)$: CHERS, NPA
- δn : GPI, reflectometer, fast probe
- δT : USXR
- δB : Mirnov coils

FY02 Milestone



- Measure transport in high β plasmas

Interesting issue: $T_i > T_e$ during some NBI plasmas



- Diagnostic calibration?
- Non-classical transport effects?
- Stochastic heating of ions from high frequency Alfvén modes?

Proposed priorities for FY02 campaign



- Calibration & cross-calibration of T_e & T_i diagnostics
- Documentation of profiles in high β & H-mode discharges
- Exploration of conditions in which $T_i > T_e$ & correlated phenomena
- Effects of field error on transport

T&T Breakout Session: Thursday morning