The Development of SOL Transport Model for Integrate Core-SOL Simulation of L-mode Plasma

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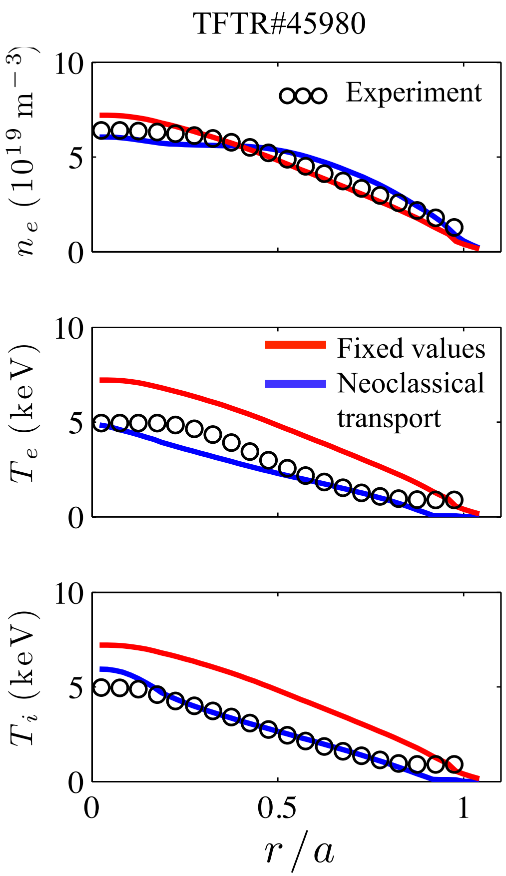
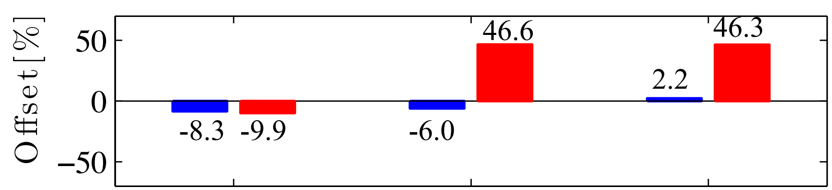
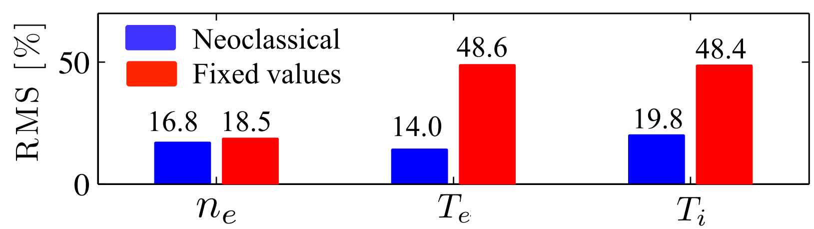
- Transport of the core plasma is solved using anomalous transport (MMM95) and neoclassical theory (NCLASS)
- Two models of SOL transport are determined using (a) a fixed constant, (b) the neoclassical transport.
- Simulation results are compared with 38 L-mode discharges (TFTR, DIII-D, and JET) and statistical analysis is performed
- SOL transport modeled by the neoclassical theory yields better agreement with the experimental data.





$$\mathrm{OFFSET} \equiv \frac{1}{N}\sum_{i=1}^{N}\left(\frac{x_{sim,i}-x_{exp,i}}{x_{exp,max}}\right)$$



$$\mathrm{RMS} \equiv \sqrt{\frac{1}{N}\sum_{i=1}^{N}\left(\frac{x_{sim,i}-x_{exp,i}}{x_{exp,max}}\right)^2} \times 100$$