

Abstract Submitted
for the DPP00 Meeting of
The American Physical Society

Sorting Category: 6.6.2 (Computation/Simulation)

Simulations of DIII-D Discharges With Impurity Seeding¹ J. MANDREKAS, W.M. STACEY, Georgia Institute of Technology, M. MURAKAMI, M.R. WADE, Oak Ridge National Laboratory, G.L. JACKSON, W.P. WEST, General Atomics — Coupled main plasma and multi-charge state impurity transport simulations are performed for a number of recent L-mode DIII-D discharges with injection of noble gas impurities (Ne, Ar and Kr). Plasma transport is described by an L-mode Bohm transport model, and the observed confinement improvement following the impurity injection is modeled by reducing the multiplier in each transport channel as well as by employing theory-based rotation and magnetic shear correction factors. The transport of the impurity charge states is described by a simple fixed-shape model as well as by neoclassical theory. The effect of the particle pinch on the plasma and impurity core concentrations in the magnetic field and q_{95} scan discharges is also discussed.

¹Supported in part by US DOE Contracts DE-AC03-99ER54463 and DE-AC05-00OR22725.

Prefer Oral Session
 Prefer Poster Session

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Special instructions: 7th poster in Transport Core Session (before West, after Murakami)

Date submitted: July 12, 2000

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