

Abstract Submitted
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Sorting Category: 10 (experimental)

Transport Modeling of the DIII-D Collisionality Experiments¹ A. ER, Berea College, D.P. SCHISSEL, J.C. DEBOO, C.C. PETTY, General Atomics, J.E. KINSEY, Oak Ridge Associated Universities — Simulations have been carried out to determine the predicted scaling of heat transport with normalized collisionality ν_* in DIII-D L- and H-mode discharges where all other dimensionless parameters were held fixed.² Using the MLT transport code,³ a variety of theory based transport models are tested and the predicted temperature profiles are compared against experimental data where ν_* was varied by as much as a factor of eight. We examine the intrinsic collisionality scaling of each model and show how small variations in the plasma conditions, within the uncertainty of the experimental data, alters the scaling of the predicted electron and ion thermal transport.

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²T.C. Luce, C.C. Petty, and J.G. Cordey, in *Controlled Fusion and Plasma Physics*, Proc. 16th IAEA Fusion Energy Conf., Montréal, 1996 (International Atomic Energy Agency, Vienna, 1997).

³J.A. Konings and R.E. Waltz, *Nucl. Fusion* **37**, 863 (1997).

Prefer Oral Session
Prefer Poster Session

D.P. Schissel
schissel@gav.gat.com
General Atomics

Special instructions: Student Session, immediately before J. Liptac

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