

Abstract Submitted
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Particle transport in DIII-D and JET plasmas¹ S. MORDIJCK, X. WANG, Coll. William and Mary, L. ZENG, E.J. DOYLE, UCLA, T. TALA, A. SALMI, VTT:JET — Particle transport is currently still poorly understood in magnetic confinement devices. Using a perturbative gas puff technique, both DIII-D and JET are able to extract perturbative transport coefficients D and v for various plasma conditions, ranging from L- to H-mode (with and without RMPs), scanning collisionality, torque and electron dominant versus ion dominant heating. We find that heating as well as torque changes affect the individual v/D contributions in the core, while keeping the ratio fairly constant. However, we find that when comparing the v/D ratio with the peaking of the density and fueling profile that the absolute v/D values are larger than the steady state conditions would merit. Using 1.5 D transport simulations along with SOLPS simulations we will address whether the ratio of v/D along with the changes in fueling are a good representation of the changes in steady-state transport.

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