

Abstract Submitted for the Forty-Seventh Annual  
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Category Number and Subject:

Theory     Experiment

**Non-Driven Bulk Ion Velocity in DIII-D ECH H-Mode Discharges,\*** J.S. deGrassie, *GA*, L.R. Baylor, *ORNL*, W.M. Solomon, *PPPL*, DIII-D National Team – H-modes generated with ECH have nonzero toroidal and poloidal ion fluid velocity, although the auxiliary torque input is negligible [1,2]. We have measured such toroidal and poloidal velocity profiles for both the bulk ion, helium, and the dominant impurity ion, carbon. We will show comparisons of these data with neoclassical predictions. The poloidal Mach number is computed from the experimental data and the magnitude tested for relevance in establishing the H-mode pedestal [3].

- [1] J.S. deGrassie et al., *Phys. Plasmas* **11**, 4323 (2004).
- [2] J.S. deGrassie et al., EX/6-4Rb. Proc. 20th IAEA Fusion Energy Conf. Vilamoura, (2004).
- [3] N. Kasuya and K. Itoh, *Phys. Rev. Lett.* **94**, 195002-1 (2005).

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Oral     Poster