Abstract Submitted for the DPP05 Meeting of The American Physical Society

Non-Driven Bulk Ion Velocity in DIII-D ECH H-ModeDischarges¹ J.S. DEGRASSIE, General Atomics, L.R. BAYLOR, Oak Ridge National Laboratory, W.M. SOLOMON, Princeton Plasma Physics Laboratory, 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).

¹Work supported by U.S. DOE under DE-FC02-04ER54698, DE-AC05-00OR22725, and DE-AC02-76CH03073.

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Date submitted: 26 Aug 2005

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