Abstract Submitted for the DPP15 Meeting of The American Physical Society

Examination of the Change in Intrinsic Rotation of the DIII-D Edge Pedestal Plasma During the L-H Transition¹ N. PIPER, W.M. STACEY, GA Tech, R. GROEBNER, General Atomics — A previous analysis of an L-H transition in DIII-D² found that the radial particle pinch changed from outward to inward and the co-current edge intrinsic rotation dropped as the plasma went through the L-H transition. Two additional DIII-D discharges are now being examined in the late L-mode and early H-mode stages to determine if these features are characteristic of the L-H transition. A particle-momentum-energy balance analysis of the measured temperature, density, and rotation velocity is being performed to determine if the particle pinch reverses and the co-current intrinsic rotation due to ion orbit loss drops in the edge pedestal region during the L-H transition.

¹Work supported by the US DOE under DE-FG02-00ER54538 and DE-FC02-04ER54698.

²W.M. Stacey, Phys. Plasmas 20, 012509 (2013).

N. Piper Georgia Tech

Date submitted: 22 Jul 2015

Electronic form version 1.4