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**Experimental Evaluations of Theoretical Predictions for Plasma Rotation at the L–H Transition in DIII–D**<sup>1</sup> P. GOHIL, K.H. BURRELL, T.H. OSBORNE, *General Atomics*, A.B. HASSAM, *University of Maryland* — Experiments with off-axis neutral beam injection (NBI) have been used to test two theories of  $E \times B$  shear suppression of turbulence. In one, the perpendicular plasma flow is designed to be directly driven by beam injection<sup>2</sup> while in the other a poloidally asymmetric particle source can lead to plasma spin-up.<sup>3,4</sup> In this latter case, poloidally anti-symmetric parallel flows are driven at the plasma edge. To test this theory, measurements of the poloidal distribution of the main ion parallel flow are made using the DIII–D charge exchange recombination spectroscopy system observing the He II ion in helium plasmas with deuterium NBI. Comparisons will be presented between experimental results and predictions from both the above theories.

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<sup>2</sup>A.B. Hassam, General Atomics Report GA-A21624.

<sup>3</sup>A.B. Hassam *et al.*, Phys. Fluids B, **5**, 2519 (1993).

<sup>4</sup>T.E. Stringer, Phys. Rev. Lett. **22**, 1770 (1969).

Prefer Oral Session  
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