Abstract Submitted
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Sorting Category: (Experimental)

Grad B Drift Dependence of Fluctuations and Turbulent Transport in DIII-D[1] R.A. MOYER, J.A. BOEDO, D.L. RUDAKOV, UCSD, T.N. CARLSTROM, R.J. GROEBNER, M.J. SCHAFFER, General Atomics, T.L. RHODES, C.L. RETTIG, UCLA, G.R. MCKEE, C. FENZI, UWM, X.Q. XU, LLNL — The ∇B drift direction can change the H-mode power threshold by factors of 2–8. Reversing the ∇B drift direction alters the divertor conditions and boundary flow direction. BOUT simulations predict that these flow changes will produce increased trbulence and turbulent transport levels with the ∇B drift away from the X-point. Experimentally when the ∇B drift is toward the dominant X-point, a region of sheared fluctuation propagation forms in the edge. When the ∇B drift is away from the dominant X-point, the fluctuation propagation is relatively uniform across the edge. Density and potential fluctuations in the far edge are reduced (density) or constant (potential) when the ∇B drift is away from the dominant X-point, the case predicted by BOUT to have higher fluctuation levels. Turbulent transport measured on the outboard midplane are similar for the two ∇B drift directions.

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R.A. Moyer
moyer@fusion.gat.com
University of California, San Diego

☐ Prefer Oral Session
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Special instructions: Transport (Edge), immediately following TN Carlstrom

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