Abstract Submitted for the DPP00 Meeting of The American Physical Society

Sorting Category: 6.2.2 (Experimental)

Recent High Density Experiments in Open and Closed Divertors in DIII-D¹ T.W. PETRIE, A.W. LEONARD, M.A. MAH-DAVI, T.H. OSBORNE, GA, M.E. FENSTERMACHER, C.J. LAS-NIER, LLNL, W.M. STACEY, Georgia Tech, J.G. WATKINS, SNL -We examine several important characteristics of high density H-mode performance (e.g., detachment, H-L density limit, energy confinement, and heat flux reduction) in "open" vs "closed" divertor geometry. We find little difference in either the line-averaged or the edge pedestal densities near the H-L back transition density when comparing unpumped open and closed divertor cases. "Closing" the divertor in unpumped high density discharges also does not change the weak dependence of the H-L density limit on power input observed in open geometries. For closed divertors, changing the location of the outer strike point (OSP) in the divertor slot has little impact on the highest densities achievable in Hmode. In the closed divertor cases we observe no clear difference in the H-L back transition density between actively pumped and unpumped discharges. When gas puffing at high density in the closed geometry, we observe strong pumping by the outer divertor pump, even when the OSP is far from the pump entrance.

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Prefer Oral Session Prefer Poster Session T.W. Petrie petrie@fusion.gat.com General Atomics

Special instructions: 1st poster in Divertor Session (before Boedo)

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