Abstract Submitted
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Pedestal Evolution Studies Using LIBEAM on DIII-D[1] D. THOMAS, T.H. OSBORNE, R.J. GROEBNER, A.W. LEONARD, General Atomics, H. STOSCHUS, ORISE, C.M. KOCH, Virginia Tech, M.F. MARTIN, Drexel University, M.A. MAKOWSKI, Lawrence Livermore National Library — Measurements using the refurbished LIBEAM accelerator have been used during the 2012 experimental campaign to address several pedestal issues on DIII-D. Careful measurements of the temporal and spatial evolution of the pedestal are important for improving our empirical understanding of pedestal development and for testing pedestal models. The 30 kV neutral lithium beam is particularly suited for these measurements because it is non-perturbative and can yield highly localized measurements of density and local poloidal field through the scrapeoff layer to the top of the pedestal for most DIII-D plasmas. Examples presented include the cyclic variation of edge current density with pedestal modification due to L-H-L transitions, localized effects due to the application of resonant Magnetic Perturbations, and variations in the pedestal width correlated with divertor strike point width and power. Studies are also underway to evaluate the potential of LIBEAM to yield other pedestal parameters including localized ion temperature and Z_{eff} profiles.

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