

Abstract Submitted
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Pedestal Turbulence Evolution After L-H Transition and During ELM Cycles on DIII-D¹ G. WANG, W.A. PEEBLES, E.J. DOYLE, T.L. RHODES, L. ZENG, X.V. NGUYEN, UCLA, G.J. KRAMER, R. NAZIKIAN, PPPL, P.B. SNYDER, T.H. OSBORNE, R.J. GROEBNER, K.H. BURRELL, A.W. LEONARD, E.J. STRAIT, GA, M.E. FENSTERMACHER, LLNL — High-resolution quadrature reflectometer density fluctuation measurements (\tilde{n}_e) have been obtained on DIII-D during H-mode pedestal studies. Initial results indicate that turbulence evolution after the L-H transition and prior to the first ELM appears dependent on pedestal beta (β_{ped}); in high β_{ped} discharges, there is a significant increase in both local \tilde{n}_e and magnetic turbulence (as observed on magnetic loops) leading up to the first ELM, while the turbulence in low β_{ped} discharges shows little change. This β_{ped} dependence suggests electromagnetic effects on pedestal turbulence. Later during Type-I ELM cycles two cases are observed: a low level of magnetic turbulence together with an increased \tilde{n}_e level just after the ELM crash, and high magnetic fluctuation levels with a decrease in \tilde{n}_e after the ELM crash. Comparisons will be made with electromagnetic turbulence models.

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