Abstract Submitted
for the DPP12 Meeting of
The American Physical Society

Comparison of Pedestal Stability on the Power Scrape-Off Layer Width in NSTX[1] TRAVIS GRAY, RAJESH MAINGI, JOON-WOOK AHN, Oak Ridge National Laboratory, THOMAS OSBORNE, General Atomics, ADAM MCLEAN, Lawrence Livermore National Laboratory — Recent analysis shows that the pedestal ballooning parameter, α_{MHD} [1] can be used as a dimensionless parameter to describe NSTX H-mode pedestals across a wide range of plasma current and power. Similar analysis has been performed on Alcator C-MOD [2] and DIII-D [3]. α_{MHD} can also be used to describe the pedestal changes that occur when varying amounts of pre-discharge lithium evaporation are used [4]. Varying amounts of lithium deposition has also been shown to directly effect the power scrape-off layer width, λ_q on NSTX [5]. Preliminary results indicate a corresponding correlation between α_{MHD} and λ_q. This suggests that the H-mode pedestal plays a critical role in setting λ_q.

[1]This work is supported by US DOE contracts DE-FG02-03ER54731, DE-AC02-76CH03073, DE-AC05-00OR22725, DE-AC02-09CH11466.

Travis Gray
Oak Ridge National Laboratory

Date submitted: 20 Jul 2012 Electronic form version 1.4