Abstract Submitted
for the DPP17 Meeting of
The American Physical Society

Measured vs. Predicted Pedestal Pressure During RMP ELM Control in DIII-D*[1] BAILEY ZYWICKI, U. Mich, MAX FENSTERMACHER, LLNL, RICHARD GROEBNER, ORSO MENEGHINI, GA — From database analysis of DIII-D plasmas with Resonant Magnetic Perturbations (RMPs) for ELM control, we will compare the experimental pedestal pressure (p_ped) to EPED code predictions and present the dependence of any p_ped differences from EPED on RMP parameters not included in the EPED model e.g. RMP field strength, toroidal and poloidal spectrum etc. The EPED code, based on Peeling-Ballooning and Kinetic Ballooning instability constraints, will also be used by ITER to predict the H-mode p_ped without RMPs. ITER plans to use RMPs as an effective ELM control method. The need to control ELMs in ITER is of the utmost priority, as it directly correlates to the lifetime of the plasma facing components. An accurate means of determining the impact of RMP ELM control on the p_ped is needed, because the device fusion power is strongly dependent on p_ped. With this new collection of data, we aim to provide guidance to predictions of the ITER pedestal during RMP ELM control that can be incorporated in a future predictive code.

[1]*Work supported in part by US DoE under the Science Undergraduate Laboratory Internship (SULI) program and under DE-FC02-04ER54698, and DE-AC52-07NA27344.

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Date submitted: 18 Jul 2017 Electronic form version 1.4