

Abstract Submitted
for the DPP07 Meeting of
The American Physical Society

Target Plate Profiles During ELM Suppression Experiments on DIII-D¹ J.G. WATKINS, SNL, T.E. EVANS, C.J. MURPHY, GA, M.J. MARTIN, Cornell U., A. NELSON, U. of St Thomas, M. JAKUBOWSKI, KFZ-Juelich, I. JOSEPH, R.A. MOYER, UCSD, C.J. LASNIER, M.E. FENSTERMACHER, LLNL — Radial profiles of target plate plasma conditions during ELM suppressed conditions have been measured with the new DIII-D lower divertor Langmuir probe array. ELM suppression was accomplished using n=3 resonant magnetic perturbations [1]. Evidence of the n=3 mode structure of the perturbation can be seen most clearly in the V_f profile on the target plate. The spacing of the multiple peaks in the V_f profile is similar to predictions of the TRIP3D field line integration code. T_e values >100 eV and V_f values down to -150 V were measured. We observe resonant behavior of the target plate parameters near the q_{95} value for maximum magnetic perturbation. Heat flux from the Langmuir probe measurements will be compared with infrared cameras and thermocouples. The resulting sheath power transmission factor profile will be shown. [1] T.E. Evans, *et al.*, Phys. Rev. Lett. **92**, 235003 (2004).

¹Supported by US DOE under DE-AC04-94AL85000, National Undergraduate Fusion Fellowship, DE-FC02-04ER54698, DE-FG02-04ER54758, and W-7405-ENG-48.

J.G. Watkins
Sandia National Laboratory

Date submitted: 22 Jul 2007

Electronic form version 1.4