Abstract Submitted for the Forty-Seventh Annual Meeting Division of Plasma Physics October 24–28, 2005, Denver, Colorado

Category Number and Subject: 5.6.2 DIII-D tokamak

[ ] Theory [X] Experiment

Modification of Intermittency by External Perturbations,* – J.A. Boedo, D.L. Rudakov, R.A. Moyer, E.M. Hollmann, *UCSD*, T.E. Evans, A.W. Leonard, M.A. Mahdavi, W.P. West, *GA*, J.G. Watkins, *SNL*, S.L. Allen, M.E. Fenstermacher, C.J. Lasnier, *LLNL*, A.G. McLean, *U. Toronto,*– It is desirable to spread the particle, and most importantly, the heat load to the divertor components. Any methods that allow a degree of control of the intermittent transport may be also applicable to ELMs, which can be seen as large blobs, and therefore be quite relevant for ITER. We present results from a study on effects of applied ergodic magnetic fields using the DIII-D non-axisymmetric coil sets. The application of an ergodic field results on broadening of the SOL T_e and N_e profiles as the intermittent transport becomes larger. The filaments become more frequent, carry more plasma and feature increased radial velocity.

*Work supported by U.S. DOE under DE-FG02-04ER54758, DE-FC02-04ER54698, DE-AC04-94AL85000, and W-7405-ENG-48.

[ ] Oral [X] Poster