Abstract Submitted
for the DPP97 Meeting of
The American Physical Society

Sorting Category: 5.1.1.2 (experimental)

Density Fluctuations During Perturbative Experiments on DIII–D[1] R.V. BRAVENEC, W.L. ROWAN, D.M. PATTERSON, A.J. WOOTTON, University of Texas at Austin, R.J. FONCK, G.R. MCKEE, M. JAKUBOWSKI, University of Wisconsin, Madison, C.M. GREENFIELD, D.P. SCHISSEL, General Atomics, M. KOTSCHENREUTHER, W. DORLAND, Institute for Fusion Research
— Plasma turbulence driven by ion-temperature-gradient (ITG) modes is a leading contender to explain anomalous transport in tokamaks, *e.g.*, the IFS/PPPL model.[2] A characteristic of such turbulence in strongly heated tokamak plasmas is that the ion temperature profile is "stiff," or "marginally stable," *i.e.*, large changes in the transport (and turbulence level) are required to perturb the profile. In this work we examine density fluctuation data from beam emission spectroscopy (BES) for evidence of marginal stability of the profiles during various perturbative events (L–H transitions, pulsed or modulated auxilliary heating, *etc.*). In addition, we compare characteristics and temporal behavior of the fluctuations (amplitude and spectra) to simulations that underlie the IFS/PPPL model.

[1]Work supported by U.S. DOE Contract DE-AC03-89ER51114, Grants DE-FG03-97ER54415, DE-FG03-96ER54373, DE-FG02-89ER53296.
[2]M. Kotschenreuther, *et al.*, Phys. Plasmas **2**, 2381 (1995).

☐ Prefer Oral Session
☒ Prefer Poster Session

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Date submitted: July 7, 1997 Electronic form version 1.2