Abstract Submitted
for the DPP09 Meeting of
The American Physical Society

**Experimental Tests of Elongation Scaling in Gyrokinetic Turbulence Simulations**[1] C. HOLLAND, G.R. TYNAN, UCSD, T.L. RHODES, W.A. PEEBLES, L. SCHMITZ, J.C. HILLESHEIM, G. WANG, L. ZENG, E.J. DOYLE, UCLA, G.R. MCKEE, Z. YAN, M.W. SHAFER, U. Wisc., A.E. WHITE, ORISE, J. CANDY, R.E. WALTZ, J.E. KINSEY, G.M. STAEBLER, J.C. DEBOO, R. PRATER, K.H. BURRELL, C.C. PETTY, General Atomics, M.A. MAKOWSKI, LLNL — Comparisons of nonlinear GYRO simulations of DIII-D discharges with low and high elongation against experimental measurements are presented. Comparisons of measured low-$k$ density spectra (from beam emission spectroscopy), intermediate-$k$ density spectra (from Doppler backscattering), and low-$k$ electron temperature spectra (from correlation electron cyclotron emission radiometry) to synthetic spectra predictions at multiple flux-surfaces are shown. Results using both direct fits to profile measurements and flux-matching profiles predicted by the new TGYRO code [1] are presented, with agreement between model and experiment assessed via a simple set of newly developed validation metrics.

[1] J. Candy, et al., General Atomics Report GA-A26380 (2009).

[1]Work supported by US DOE under DE-FG02-07ER54917, DE-FG03-08ER54984, DE-FG02-89ER53296, DE-FG02-08ER54999, DE-AC05-06OR23100, DE-FG03-95ER54309 and DE-AC52-07NA27344.

C. Holland
UCSD

Date submitted: 16 Jul 2009 Electronic form version 1.4