

Abstract Submitted
for the DPP00 Meeting of
The American Physical Society

Sorting Category: 6.6.2 (Experimental)

**Comparison of Experimental Measurements to ITG
Turbulence Predictions¹**

T.L. RHODES, C.L. RETTIG, J.-N. LEBOEUF, E.J. DOYLE, W.A. PEEBLES, UCLA, R.D. SYDORA, U. Alberta, G.R. MCKEE, U. Wisconsin, R.A. MOYER, UCSD, J.C. ROST, MIT, K.H. BURRELL, GA — Understanding and control of heat and particle transport in fusion plasmas is a problem of longstanding interest. Progress has been made in this area by many researchers and theorists, however the underlying instabilities responsible for the transport have yet to be conclusively identified. We report further work in this area that is ongoing at the DIII-D tokamak. Experimental measurements of the radial correlation length, fluctuation level, propagation direction, and spectra of density fluctuations have been made on the DIII-D tokamak and are compared to analytical and numerical predictions. Numerical diagnostics that simulate real diagnostic systems are being employed to make close comparisons between simulations and experiment. Results of these comparisons will be presented and discussed. Such comparisons are important as they serve to benchmark theory and codes as well as to help identify the type(s) of turbulence involved.

¹Supported by US DOE Grants DE-FG03-86ER53225, DE-FG02-92ER54139, DE-FG03-95ER54294, DE-FG02-94ER54235ATPE, and Contract DE-AC03-99ER54463.

- Prefer Oral Session
 Prefer Poster Session

T.L. Rhodes
rhodes@fusion.gat.com
University of California, Los Angeles

Special instructions: 11th poster in Transport Core Session (before Rost, after Hsieh)

Date submitted: July 12, 2000

Electronic form version 1.4