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Comparison of Microturbulence Characteristics in Ohmic and ITB Discharges with Predictions of ITG Models[1]
C.L. RETTIG, T.L. RHODES, W.A. PEEBLES, E.J. DOYLE, UCLA, K.H. BURRELL, C.M. GREENFIELD, G.M. STAEBLER, General Atomics, J.E. KINSEY, Lehigh Univ., G.R. MCKEE, Univ. Wisconsin-Madison, C. ROST, MIT — Fluctuation characteristics measured in DIII–D discharges are compared with features predicted from gyro-fluid and kinetic codes using measured experimental profiles and geometry. In Ohmic discharges, the dominant instability is predicted to be the dissipative trapped electron mode or the ion temperature gradient mode, depending on specific conditions. Measurements of turbulence, spatial and temporal coherence, and propagation characteristics have been obtained through a density scan in neo-Alcator and saturated confinement regimes and allow comparison of measured turbulence characteristics with code predictions when the dominant mode changes. Additionally, dynamic evolution of turbulence is compared with predictions of empirical dynamical and gyro-fluid stability codes.

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☐ Prefer Oral Session
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