

# **Turbulence Measurement Possibilities for ITER\***

E.J. Doyle

*Dept. of Electrical Engineering and PSTI  
University of California  
Los Angeles, CA 90095*

This paper describes why turbulence diagnostics are required on ITER, how they can contribute to the ITER program, as well as the current plans and opportunities for such measurements. Turbulence measurement requirements for ITER are examined in terms of desired spatial resolutions, wavenumber ranges, measured turbulence properties, etc. General issues associated with the implementation of such measurements are discussed, along with an initial assessment of turbulence measurement possibilities associated with selected planned ITER diagnostic systems. Systems considered include the main (low field side) reflectometer system, ECE and tangential interferometer/polarimeter systems, and others.

\*Work supported by U.S. DOE under DE-FG03-01ER54615.