

**Abstract Submitted for the Forty-Sixth Annual Meeting  
Division of Plasma Physics  
November 15–19, Savannah, Georgia**

Category Number and Subject: 5.6.2 DIII-D Tokamak

☐ Theory    ☒ Experiment

**Comparison of Resonant Field Amplification in High Beta Plasmas in DIII-D and JET,\*** H. Reimerdes, A.M. Garofalo, G.A. Navratil, *Columbia U.*, M. Bigi, M.P. Gryaznevich, T.C. Hender, D.F. Howell, *UKAEA*, M.S. Chu, G.L. Jackson, R.J. LaHaye, J.T. Scoville, E.J. Strait, *GA*, Y.Q. Liu, *Chalmers U.*, M. Okabayashi, *PPPL*, S.D. Pinches, *IPP* – The universality of resonant field amplification (RFA) of the stable resistive wall mode (RWM) has been investigated in fast rotating high beta plasmas in, both, the DIII-D and the JET tokamaks. The plasmas have been probed with pulsed and slowly oscillating (with frequencies of a few Hertz)  $n=1$  fields generated with internal and external control coils. A JET-like configuration with a relatively smaller wall separation has been developed in DIII-D, providing a sensitivity study of the effects of the wall location and the machine size on the RWM stability. In both devices, the RFA amplitude is observed to increase when beta is increased above the no-wall beta limit. The RFA amplitude and phase and its frequency dependence is used to describe the characteristics of the RWM. RWM damping rates and mode rotation frequencies are found to be similar. The detailed analysis should provide a cross-machine basis for understanding RWM stabilization by plasma rotation.

\*Supported by U.S. DOE under DE-FG02-89ER53297, DE-FC02-04ER54698, and DE-AC02-76CH03073 and performed partly under the European Fusion Development agreement.