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Sorting Category: 5.6.2 (Experimental)

Critical Rotation for Stabilization of n=1 Ideal Kink (Resistive Wall Mode) in DIII-D¹ R.J. LA HAYE, M.S. CHU, E.J. STRAIT, General Atomics, A.M. GAROFALO, H. REIMERDES, Columbia U., M. OKABAYASHI, PPPL — Experiments in the DIII-D tokamak show that the n=1 ideal kink can be stabilized by a resistive wall if the plasma is rotating fast enough. A database of the onset of the n=1 RWM as a function of the equilibrium magnetic field, the plasma density and the toroidal rotation has been assembled for plasmas with beta in between the theoretically predicted no wall and ideal wall stability limits. The critical rotation frequency is found to scale as the inverse of the Alfvén time with $\omega * \tau_A \sim 0.02$ depending on beta. Comparison to theory will be made.

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- Prefer Oral Session
 Prefer Poster Session

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