

Abstract Submitted  
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**The Effect of Error Fields on Resistive Wall Modes<sup>1</sup>**

J.T. SCOVILLE, E.J. STRAIT, R.J. LA HAYE, General Atomics, A.M. GAROFALO, Columbia University — Experiments on the DIII-D tokamak have shown that the onset of the resistive wall mode (RWM) instability is correlated with an increase in normalized beta above the ideal resistive wall stability limit and a reduction in the rotation speed below a threshold value. The high beta RWM is also seen to become less stable as the fractional amount of error field correction is reduced. A reduction in the beta limit is observed in the presence of an error field and the RWM typically appears locked in phase to the error field. The intrinsic error field of the tokamak (typically about 10 G) may destabilize the RWM by reducing plasma rotation, by providing a seed perturbation, or by inhibiting the rotation of the RWM. Recently, the error field correction system on DIII-D was modified to also allow closed loop feedback control of the resistive wall mode. This joint role of the new RWM feedback control system and the relationship of error fields to the stability of the resistive wall mode will be discussed.

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- Prefer Oral Session  
 Prefer Poster Session

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Special instructions: DIII-D Poster Session 1, immediately following M Gryaznevich

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