

Abstract Submitted
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**Scaling of the Critical Beta for Onset of the $m/n=2/1$
Neoclassical Tearing Mode in Conventional H-Mode Dis-**
charges in DIII-D¹ R.J. LA HAYE, C.C. PETTY, E.J. STRAIT, Gen-

eral Atomics — While $m/n = 3/2$ NTMs have been observed and studied in detail,² their consequences are small compared to the $m/n = 2/1$ mode which tends to lock, destroy the H-Mode and cause disruption. The $2/1$ modes in DIII-D H-Mode discharges appear to be NTMs in that they are excited as beta is rising, are triggered by a sawtooth crash, ELM or both and have a nearly linear critical beta with rhoistar (the ion gyroradius normalized to the plasma minor radius). Analysis of a $2/1$ database in DIII-D will be presented. Preliminary comparison to the polarization/inertial theory,³ particularly of the key issue of island propagation in the local ($q = 2$) $E_r = 0$ quasi-neutrality frame, shows consistency with a stabilizing effect, *i.e.*, a threshold.

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²R.J. La Haye *et al.*, to be in the August 2000 Phys. Plasmas.

³H.R. Wilson *et al.*, Phys. Plasmas **3**, 248 (1996).

Prefer Oral Session
 Prefer Poster Session

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