

Abstract Submitted
for the DPP09 Meeting of
The American Physical Society

Resistive Wall Mode Studies in NIMROD¹ ANDREA MONTGOMERY, CHRIS HEGNA, ANDREW COLE, University of Wisconsin, Madison, SCOTT KRUGER, Tech-X Corp. — Resistive wall kink stability is considered using both ideal and resistive MHD models. A simple equilibrium with no pressure, a flat current profile and either a vacuum or a resistive plasma between the plasma and the wall is studied using the NIMROD code. Resistive wall boundary conditions for a periodic cylinder with this equilibrium are implemented in NIMROD through the inclusion of a surface electric field in the induction equation. Simulation results are compared with analytic predictions for the effect of a thin resistive wall on ideal MHD and resistive MHD stability [J. M. Finn, *Phys. Plasmas* **2**, 198 (1995).] The NIMROD code is also used to study the effects of rigid plasma rotation on resistive wall modes. The effects of rotation on ideal plasma resistive wall modes and resistive tearing modes are compared and contrasted. Further plans for generalization of this work to toroidal tokamak equilibria will be discussed.

¹Research supported by U.S. DoE under grant no. DE-FG02-86ER53218

Andrea Montgomery
University of Wisconsin, Madison

Date submitted: 17 Jul 2009

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