Resistive wall boundary conditions on nonlinear MHD simulations in toroidal geometry[1] A.L. MONTGOMERY, C.C. HEGNA, C.R. SOVINEC, University of Wisconsin, Madison, S.E. KRUGER, Tech-X Corp. — The resistive wall present in tokamaks is important for both unstable modes and feedback control. The case of a periodic cylinder with a resistive wall and external resonant magnetic perturbations was studied using the Nimrod code. This boundary condition is now being generalized to toroidal geometry. The magnetic fields inside the domain are matched with external fields found using a vacuum-field solver. The toroidal boundary condition is tested in the large aspect ratio, circular cross-section limit, and compared to the results from the periodic cylinder boundary condition. The mechanics of the addition of external resonant magnetic perturbations to the toroidal boundary condition will be discussed.

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