

Abstract Submitted  
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**A comparison of NIMROD simulations of RMF current drive with 3-axis probe data from the TCSU experiment** RICHARD MILROY, PSI-Center, University of Washington, KATHERINE VELAS, RPPL, University of Washington — The NIMROD code has been adapted to simulate the formation and sustainment of FRCs using Rotating Magnetic Fields (RMF) [R.D. Milroy, C.C. Kim and C.R. Sovinec, Phys. Plasmas, **17**, 062502 (2010)]. Calculations have been performed with the magnetic boundary conditions adjusted to match those of recent experimental measurements as closely as possible. First the  $n=0$  flux on the radial wall is set to match that measured in the experiment, and secondly the  $n=1$  fields imposed are made to approximate the boundary fields measured by the recently installed 3-axis probe. The experimental measurements were made with a new 3-axis probe that was installed on TCSU shortly before its final shut-down. This probe has 90 windings that can simultaneously measure  $B_r$ ,  $B_\theta$ , and  $B_z$  at 30 radial positions. Calculations and experiments were performed with both even-parity and odd-parity antenna sets. For both cases, a comparison of the steady  $n=0$  component of the calculated field shows a very similar structure to that obtained with experimental measurements.

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