

Abstract Submitted  
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**Controlled Suppression of Turbulence in the Helimak** JAKUB FELKL, KENNETH GENTLE, KEVIN LEE, DYLAN MIRACLE, UT - Austin, Fusion Research Center — The Helimak design creates a helical magnetic field with cylindrical slab geometry. The plasma exhibits turbulence consistent with drift waves in argon. Insulated end plates permit one annular region to be biased with respect to another. The response to both positive and negative bias has a simple, strong bifurcation to a state of reduced turbulence, often with higher density. This transition is reversible with applied voltage/current and exhibits no hysteresis. Radial profiles of potential and density in argon, helium and hydrogen will be presented along with radial turbulent particle flux measurements. Work supported by the Department of Energy Office of Fusion Energy Sciences DE-FG03-00ER54609.

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