

Abstract Submitted  
for the DPP15 Meeting of  
The American Physical Society

**Characterization of Turbulence in the Texas Helimak** C.B. WILLIAMS, K.W. GENTLE, University of Texas at Austin — The Texas Helimak is an approximation to the cylindrical slab with large physical size compared to the correlation lengths of its instabilities and open magnetic field lines. As such, it functions efficiently as a test-bed for the physics of the SOL at low densities and temperatures that allow for the usage of Langmuir probe diagnostics. Much of the research performed on the device has focused on its high turbulent amplitudes. It was initially believed, both experimentally and theoretically, that the turbulence is dominated by a fluid drift wave. However, more recent evidence suggests that the identification of the Helimak instabilities is not so straightforward, but may vary with the connection length of the magnetic field lines through both drift wave and interchange instability regimes. In this work we document efforts to characterize the turbulence based on measurements of both parallel and perpendicular wavenumbers and other Langmuir probe data.

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Date submitted: 24 Jul 2015

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