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Effect of boundary conditions on drift turbulence and zonal flows in a linear plasma device SAIKAT CHAKRABORTY THAKUR, MIN XU, PETER MANZ, NICOLAS FEDORCZAK, GEORGE TYNAN — **Controlled Shear De-correlation eXperiment (CSDX)** is a linear magnetized plasma device dedicated to the studies of drift wave turbulence-zonal flow (DWT-ZF) interaction and the generation of intrinsic rotation in a simple plasma configuration. Previous experimental studies which demonstrated the existence of an azimuthally symmetric radially sheared plasma fluid flow (zonal flow) were carried out in the configuration where all the magnetic field lines exiting the two ends of the device terminate on insulating surfaces. To study the effect of parallel currents flowing through the end plates, the experimental set up is modified such that the magnetic field lines now end in conductors. Preliminary results from the conducting boundary condition experiments show the absence of drift wave turbulence and zonal flows. Results will be shown from a series of controlled experiments comparing the effects of the insulating and the conducting boundary conditions on the plasma behavior.

Saikat Chakraborty Thakur

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