Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Direct measurements of ion dynamics in magnetic presheaths[1] M. UMAIR SIDDIQUI, West Virginia University, CORY JACKSON, JUSTIN KIM, NOAH HERSHKOWITZ, University of Wisconsin - Madison — Ion velocities and temperatures are measured in the presheath of a grounded plate downstream from a helicon plasma source using laser-induced fluorescence. The plate is held 16 to 60 degrees relative to the 1 kG background magnetic field. Velocity profiles are compared to a 1D ion fluid model and are shown to agree well. Implications for ion flow to tokamak and Hall thruster walls are discussed.

[1]Work supported by U.S. DOE Grant No. DE-FG02-97ER54437

M. Umair Siddiqui
West Virginia University

Date submitted: 09 Jul 2014 Electronic form version 1.4