

Abstract Submitted  
for the DPP10 Meeting of  
The American Physical Society

**Simultaneous two-dimensional laser induced fluorescence measurements in a helicon plasma** MATTHEW GALANTE, ALEXANDER HANSEN, DUSTIN MCCARREN, STEPHANIE SEARS, SAEID HOUSHMAND-YAR, EARL SCIME, West Virginia University — Recent upgrades to the laser induced fluorescence system at West Virginia University have made possible simultaneous two-dimensional ion velocity distribution function measurements in the Hot hELIcon eXperiment. A single dye laser is split into two beams, each modulated at a different frequency using a mechanical chopper. The two beams are then injected into the plasma chamber with one parallel and one perpendicular to the background magnetic field. Fluorescence signal from each beam is then collected simultaneously at single location using a single set of collection optics. We will present measurements of the thermal anisotropy as a function of the plasma radius obtained with a two-dimensional scanning mount.

Matthew Galante  
West Virginia University

Date submitted: 14 Jul 2010

Electronic form version 1.4