

Abstract Submitted  
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**Characterization of a Helicon Plasma Source for Plasma Material Interactions** PETER FIFLIS, DAVIDE CURRELI, KYLE LINDQUIST, DAVID RUZIC, University of Illinois at Urbana Champaign — A helicon plasma device has been constructed at the Center for Plasma Material Interactions at the University of Illinois Experiments for the purpose of plasma material interaction studies. A MORI 200 helicon source is used to generate the plasma at 13.56 MHz. Measurements of the DC magnetic field provided by a Helmholtz coil were performed and are presented here as well as Langmuir probe measurements of the density and temperature. Radial and axial scans are performed to generate a profile of the plasma. A moveable stage for material substrates coupled with the experimental suite of material characterization devices at the Material Research Lab at the University of Illinois as well as this full characterization of the device will enable higher fidelity plasma material interaction studies, and potentially allow investigation of such phenomena as tungsten fuzz production.

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