

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Progress in Doppler Velocity Measurements of Ions in the DIII-D Divertor and SOL¹ S.L. ALLEN, W.H. MEYER, C. SAMUEL, LLNL, J. HOWARD, ANU, M. GROTH, Aalto Univ. — We present recent progress in Doppler velocity measurements of ions using coherence imaging. A new in-situ calibration technique has been developed, focusing on CIII emission (465nm), and an optimized tomographic inversion routine provides time-resolved (~ 2 ms) flow images between shots. The CIII flow velocity in the divertor changes direction in response to a change in the sense of the DIII-D toroidal field, indicating the importance of drifts; the details of the flow image also changes near the x-point. Initial comparisons with UEDGE modeling will be presented. A second polarization interferometer system has been installed on the LLNL wide-view periscope, providing a tangential view of the scrape-off region around the plasma core. Initial measurements with a high spatial resolution camera (5.5 Megapixel) with ~ 10 ms time resolution will be presented. Both systems have a remote filter wheel to select visible impurity lines, e.g. CIII, CII, along with the main ion in Helium plasmas.

¹Work supported by the US Department of Energy under DE-FC02-04ER54698 and DE-AC52-07NA27344.

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Date submitted: 17 Jul 2015

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