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[ ] Theory    [ X ] Experiment

**Impurity Flow Measurements in DIII-D using Coherence Imaging Spectroscopy\***, S.L. Allen, E.T. Meier, T.R. Weber, D.N. Hill, W.H. Meyer, G.D. Porter, *Lawrence Livermore National Laboratory*; J. Howard, *The Australian National University* — Imaging interferometers have been used to measure the 2-D distribution of the Doppler shift of impurity emission in both the lower and upper DIII-D divertors. The interferometer design has been simplified to a single birefringent plate between two polarizers, and improved calibration techniques have been implemented, including temperature stabilization. Measurements of other impurity species such as CII have been added. An image-intensified camera in the upper divertor has enabled measurement of the flows in the crown of the plasma during lower single-null divertor operation. In general, flows are in opposite directions on the inner and outer scrape-off layers in the divertor, as expected from the magnetic geometry. Initial results from a wide view periscope of the whole plasma cross section will also be presented.

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