

Abstract Submitted  
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**Ion Temperature Measurements and Preliminary Results from Ion Flow Measurements in TCSU** CHRIS DEARDS, University of Washington — Using a Princeton Instruments ICCD spectroscopic system the ion temperature of the TCSU plasma is determined within the instrument temperature limit. Since the ICCD system is not time resolved the temperature will be determined by examining the Si III, C III, and O III impurity lines at various times and comparing the results to the time resolved total temperature, which is inferred from magnetic field and density measurements. In addition, devices designed to measure the toroidal and poloidal ion flow when attached to the ICCD will be presented. The overall system's intended uses are to study the forces acting on the ions (ion spin-up) and ion flow with regard to velocity shear stabilization. Preliminary results will be discussed.

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