

Abstract Submitted  
for the DPP10 Meeting of  
The American Physical Society

**Results from TCSU Thomson Scattering Diagnostic** K.Y. LEE, R.P. GOLINGO, RPPL, University of Washington — A Thomson scattering system has been installed on the Translation, Confinement, and Sustainment Upgrade (TCSU) experiment at the University of Washington to make direct point measurements of electron temperature and density. In this experiment a Rotating Magnetic Field (RMF) is applied to form a Field Reversed Configuration (FRC). Magnetic field and interferometer measurements, combined with an assumption of pressure balance have led to plasma density and temperature estimates of  $(Te+Ti) \sim 150$  eV and a density of about  $5 \times 10^{18}$ . The Thomson scattering system uses a single pulse ruby laser and observes five spatial points on the bottom half section of the 40 cm radius in the TCSU device. Five General Atomics (GA) polychromators, each equipped with three PPPL pre-amplifiers, are used to analyze the scattered light. All signals are digitized by ADCs (LeCroy 2250L) and sent to the server for further analysis. The system design, calibration, and electron temperature estimates will be presented.

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Date submitted: 17 Jul 2010

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