

Abstract Submitted
for the DPP12 Meeting of
The American Physical Society

Edge Thomson Scattering System for the Lithium Tokamak Experiment¹ E. SHI, R. KAITA, C.M. JACOBSON, B.P. LEBLANC, Princeton Plasma Physics Laboratory, Q. ZANG, Institute of Plasma Physics, Chinese Academy of Sciences, R. MAJESKI, Princeton Plasma Physics Laboratory — An edge Thomson scattering system is currently being implemented on the Lithium Tokamak Experiment (LTX). The completed system will provide five edge spatial channels with 5 mm resolution. Scattered light from a 15 J, 30 ns FWHM pulsed ruby laser at 694.3 nm is imaged onto optical fibers by a single-element lens and spectrally resolved into five different wavelength bands in the 680 nm to 750 nm range with filter polychromators and avalanche photodiode detectors. The output waveforms are digitized by fast sampling (250Ms/s) 12-bit ADCs. This system is intended to measure edge densities and temperatures with varying amounts of lithium deposition on plasma-facing components, providing insight on the effect of a low-recycling surface on the edge plasma. It can also be used to measure fluctuations in the emission from this region. Preliminary results will be presented.

¹Work supported by U.S. DOE contract DE-AC02-09CH11466.

E. Shi
Princeton Plasma Physics Laboratory

Date submitted: 13 Jul 2012

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