

Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

Pulsed Polarimeter instrument for the Magnetized Target Fusion program R.J. SMITH, University of Washington, T. INTRATOR, G.A. WURDEN, J. SEARS, T. WEBER, LANL — Pulsed polarimetry, a Lidar-*like* technique, promises to provide internal measurements of the distributions of n_e , $B_{||}$ and T_e for the MTF program, the FRX-L and FRCHX FRC experiments at LANL and Air Force Research Lab, Albuquerque. The instrument in its final form is mostly finished and testing is in progress. The optical system: collection and collimating optics, polarimeter, spectrometer and condensing optics are built. The laser and streak camera have been commissioned. A versatile instrument has been designed which is capable of covering a 30 cm depth of field for FRX-L plasma, has selectable spectrometers for different T_e ranges for the FRCHX plasma and can be stationed at discrete distances of 3, 4 and 5 m from the plasma. The design and performance and plans to implement the diagnostic on the FRX-L device at Los Alamos will be presented.

R.J. Smith
University of Washington

Date submitted: 26 Jul 2011

Electronic form version 1.4