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.