

Electron Temperature Profile Evolution During a Sawtooth in the MST Reversed-Field Pinch.* T.M. Biewer, M.R. Stoneking, D.J. Den Hartog, S.C. Prager University of Wisconsin-Madison. --- Discrete dynamo events, or "sawteeth," are a common occurrence during MST plasma discharges. New measurements of the electron temperature profile evolution over a sawtooth period have been made covering a range of r/a between 0 and 0.65. Measurements indicate a slightly hollow pressure profile, which is not yet understood. The sawtooth crash has two effects: 1) a flattening of the temperature profile, and 2) an overall reduction of ~50% in peak temperature, varying slightly for each I/n setting. The drop in T_e anticipates the sawtooth crash by ~0.5 ms and is coincident with a rise in \tilde{B} , indicating that the transport is magnetic fluctuation driven. A recent upgrade of the MST TS system will extend the radial measurement range to include r/a values from 0 to 0.9, covering the region where the temperature gradient is largest. Preliminary results are reported.

*This work was supported by the U.S. D.O.E.