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**Magnetic Diagnostics on the Magnetized Shock Experiment (MSX)**[1] T.M. HUTCHINSON, T.E. WEBER, Los Alamos National Labs, J.C. BOGUSKI, U. Wisconsin/CMSO, T.P. INTRATOR, Los Alamos National Labs, R.J. SMITH, U. Washington, J.P. DUNN, Los Alamos National Labs — The Magnetized Shock Experiment (MSX) at Los Alamos National Laboratory was built to investigate the physics of high-Alfvénic, supercritical, magnetized shocks through the acceleration and subsequent stagnation of a Field Reversed Configuration (FRC) plasmoid against a magnetic mirror and/or plasma target. An array of high-bandwidth, multi-axis, robust, internal magnetic probes has been constructed to characterize flux compression ratios, instability formation, and turbulent macro-scale features of the post-shock plasma. The mirror magnet is mounted on a linear translation stage, providing a capability to axially move the shock layer through the probe field of view. An independent, external probe array also provides conventional information on the FRC shape, velocity, and total pressure during the formation and acceleration phases. Probe design, characterization, configuration, and initial results are presented.

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