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Technology applications for Magneto Inertial Fusion[1] T. INTRATOR, Los Alamos Natl Lab, T. WEBER, K. GAO, C. YOO, J. KLARENBEEK, LANL — We describe several technology advances that we believe will be helpful for Magneto Inertial Fusion (MIF) experiments. We are developing plasma guns to improve the startup and flux trapping for magnetized plasma field reversed configuration (FRC) targets for MIF compression. This should aid initial pre ionization, freezing in of bias flux, line tie each end to the middle to retard toroidal rotation, and provide end shorting of radial electric fields. We are also developing a novel magnetic field diagnostic that uses a tiny section of Terbium doped optical fiber as a Faraday rotation medium. The optical path and hardware is inexpensive and simple, and has a small form factor that will fit inside a MagLIF capsule, and can be radation hardened. Low noise, optically coupled magnetic field measurements will be possible for vacuum MaGLIF shots.

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