

Abstract Submitted  
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**Numerical Modeling Studies of Plasma Driven Magnetoinertial Fusion**<sup>1</sup> JASON CASSIBRY, Propulsion Research Center, UAH, CHARLES KNAPP, Los Alamos National Labs, S.T. WU, Center for Space Plasma and Aeronomy Research, UAH — Plasma liner driven magnetoinertial fusion is studied using a new 1D hydro code based on Smooth Particle Hydrodynamics (SPH) and with MACH2, a 2D magnetohydrodynamic code. The effort was undertaken as a step in studying the feasibility of using high-velocity plasma jets to implode a magnetized plasma as a stand-off-driver embodiment of magnetoinertial fusion. The 1D and 2D models were compared with the normal shock relations and results from self-similar analytical solutions of converging shocks in cylindrical and spherical geometries, allowance being made for the simplifying approximations made in the analytical results.

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