

Abstract Submitted
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Improving Target Repeatability Yields Broader Results in Component Fabrication and Overall Build¹ SALLEE KLEIN, ELISEO GAMBOA, ROBB GILLESPIE, CHANNING HUNTINGTON, CHRISTINE KRAULAND, CAROLYN KURANZ, CARLOS DI STEFANO, PETER SUSALLA, University of Michigan, BRUCE LAIRSON, Luxel Corp., FRED ELSNER, General Atomics, PAUL KEITER, R. PAUL DRAKE, University of Michigan — The University of Michigan has been fabricating targets for high energy density experiments since 2003. Our experiments study physics relevant to laboratory astrophysics. Machined acrylic structures serve as a backbone supporting all the components on our targets, as well as providing us with a method that eases our build. A most vital component to nearly every target we build, is shielding. Employing techniques to bend gold foils, enables complex geometries and eliminates seams that possibly allow unwanted emission in our diagnostics. Many of our experiments explore the dynamics of a radiative shock launched into xenon or argon gas. Polyimide (PI) tubing confines the gas and is transmissive to the diagnostic x-rays used to probe the experiment. Recent interest in the shock dynamics of non-axisymmetric shocks has lead to the development of PI tubes with non-circular cross sections. We present the techniques we use to produce repeatable targets as well as recent improvements in our techniques.

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