

Abstract Submitted
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Improving Target Characterization for Laboratory Astrophysics Experiments D.C. MARION, M.J. GROSSKOPF, C.C. KURANZ, R.P. DRAKE, C.M. HUNTINGTON, F.W. DOSS, C.M. KRAULAND, C.A. DISTEFANO, University of Michigan — We have fabricated and characterized targets for laboratory astrophysics since 2003, and have made improvements focusing on characterizing particular target features and their variances. Examples of measurements include machined features, material thickness and uniformity, location and thickness of glue, and mating conditions between adjacent materials. Measurements involve new technology and characterization methods, such as pre-shot radiography. More accurate characterization also leads to improvements in fabrication techniques, and helps integrate new technology into our build process. Quantifying variances more precisely also helps us better evaluate each fabrication method for both accuracy and consistency. We present these characterization methods and their impact on fabrication. This work is funded by the Predictive Sciences Academic Alliances Program in NNSA-ASC via grant DEFC52-08NA28616, by the NNSA-DS and SC-OFES Joint Program in High-Energy-Density Laboratory Plasmas, grant number DE-FG52-09NA29548, and by the National Laser User Facility Program, grant number DE-FG52-09NA29034.

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