

Abstract Submitted
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Quasi-Isentropic Compression of Ta Using Graded Density Impactors¹ J.R. PATTERSON, LLNL, J.H. NGUYEN, D.A. ORLIKOWSKI, R.W. MINICH, L.P. MARTIN, N.C. HOLMES — Recent advances in the fabrication of graded density impactors have enabled the production of smooth, continuous quasi-isentropes for gas gun experiments. Using these impactors, we have performed experiments on Ta in which the sample is initially shocked to 66 GPa on the Hugoniot and then quasi-isentropically compressed to over 1 Mbar. We will present the results of lagrangian analysis of the data and compare with previous Hugoniot measurements as well as the calculated isentrope of Ta. We will also discuss potential sources of error in both the data and analysis and their effect on the measured quasi-isentrope.

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