Abstract Submitted
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Phase Transitions in Bi using laser ICE[1] J.O. KANE, R.F. SMITH, LLNL — Experiments are underway at the Janus laser to study phase transitions in isentropically compressed Bi. The targets consist of 14-35μm of Bi attached to windows of LiF or sapphire. The Bi side of the target is loaded using a ramped laser ICE drive. The velocity history of the Bi:window interface is recorded using line VISAR. The response of the targets is modeled by evolving the 1D Euler equations with an assumed pressure source on the drive side of the target. The pressure source is deduced by back integration from shots performed with Al:window targets. The Hayes three-phase EOS parameters are used for the Bi. Following Hayes, we also model the I-II transition with rate dependence. We present results of the data and comparisons to the modeling.

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