Transitions between strong shock and elastic-plastic shock regimes in tin and Lennard-Jonesium. J.M.D. LANE, MICHAEL MARDER, Center for Nonlinear Dynamics/Dept. of Physics, SHOCK TEAM — We have recently developed the Continuous Hugoniot Method as an efficient numerical approach to study the front dynamics of steady shocks. This method produces a continuous set of shock states as a function of the shock strength driving parameter. We use our method to investigate the shock states at and near the transition between the strong shock and elastic-plastic shock regimes in both single-crystal tin and Lennard-Jonesium along the $\langle 100 \rangle$ directions.

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