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Off-Hugoniot Compression of Tantalum to Megabar Pressures
JEFFREY NGUYEN, DANIEL ORLIKOWSKI, FREDERICK STREITZ, ROGER MINICH, NEIL HOLMES, Lawrence Livermore National Laboratory — We recently carried out off-Hugoniot experiments on tantalum at the LLNL two-stage light gas gun. In these experiments, tantalum samples are subjected to a combination of shock, release and quasi-isentropic compression. High density and a lack of phase transitions at low pressures make tantalum an interesting material for this kind of experiments. In an approach similar other quasi-isentropic compression experiments, we used a VISAR to record the particle velocities at two different sample thicknesses in each of these experiments. These data and any associated analysis will be presented. This work was performed under the auspices of the U.S. Department of Energy by the University of California Lawrence Livermore National Laboratory under contract W-7405-Eng-48.

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