

Abstract Submitted
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The Tri-lab Tantalum Strength Consortium¹ DAWN G. FLICKER, Sandia National Laboratories (SNL), THOMAS A. ARSENLIS, RYAN AUSTIN, NATHAN R. BARTON, Lawrence Livermore National Laboratory (LLNL), JOHN F. BENAGE, SNL, CURT A. BRONKHORST, Los Alamos National Laboratory (LANL), JUSTIN L. BROWN, SNL, STACI L. BROWN, National Nuclear Security Administration, WILLIAM T. BUTTLER, SHUH-RONG SHEN, DANA M. DATTELBAUM, SAYU J. FENSIN, GEORGE T. III GRAY, LANL, J. MATTHEW D. LANE, HOJUN LIM, SNL, D.J. LUSCHER, LANL, THOMAS R. MATTSSON, SNL, DENNIS P. MCNABB, BRUCE A. REMINGTON, HYE-SOOK PARK, SHON T. PRISBREY, LLNL, MICHAEL B. PRIME, ROBERT J. SCHARFF, MARK W. SCHRAAD, LANL, AMY C. SUN, SNL — A Tri-lab consortium of experimentalists and theorists at SNL, LLNL, and LANL is joining forces to better understand tantalum strength across an unprecedented range of loading conditions. The team is collecting and comparing tantalum strength data from Hopkinson bar, Taylor cylinder, guns, Z, Omega and the NIF. These experiments, all using Ta from a single lot, span pressures from tenths to hundreds of GPa and strain rates from 10^3 to 10^7 . New experiments are underway to provide more overlap between the platforms. The experiments are being simulated with a variety of models in order to determine which processes are important under which conditions. The presentation will show results to date.

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Thomas Mattsson
Sandia Natl Labs

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