

Abstract Submitted  
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**Modeling the constitutive response of tantalum across experimental platforms** NATHAN BARTON, RYAN AUSTIN, Lawrence Livermore National Laboratory, JUSTIN BROWN, Sandia National Laboratories, MARTY MARINAK, HYE-SOOK PARK, SHON PRISBREY, Lawrence Livermore National Laboratory — Given the complexities of the mechanics related to strength and the wide range of conditions of interest, it is useful to make comparisons across experimental platforms and across computational methods where possible. Modeling results will be presented from one such cross-platform study; including results from plate impact, ramp compression, and Rayleigh-Taylor instability growth experiments. Observables from strength experiments at more extreme conditions are influenced by a variety of material response characteristics, not just by the material's resistance to plastic deformation. Results include sensitivities to some of these other aspects, such as equation of state and shear modulus formulations. This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344 (LLNL-ABS-724459).

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