

Abstract Submitted  
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**Dynamic Strength Measurements of Meteorites<sup>1</sup>**

DAWN GRANINGER, Lawrence Livermore Natl Lab, BENJAMIN BRUGMAN, Michigan State University, LAURA RIORDAN-CHEN, European Molecular Biology Laboratory, ERIC B. HERBOLD, Lawrence Livermore Natl Lab, SUSANNAH M. DORFMAN, Michigan State University, DAMIAN SWIFT, MEGAN SYAL, Lawrence Livermore Natl Lab — Simulations of impacts during both planetary accretion and for planetary defense rely on material properties of impacted bodies, most of which may be chondritic. However, as the dynamic response of chondrite to shock is poorly understood, shock properties of more common terrestrial rocks, such as granite or basalt, are often used in models as an approximation. We aim to increase the knowledge of chondritic material properties through measurements of dynamic strength. Global measurements of dynamic strength under high strain rates produced via laser shock were obtained with the Janus laser at the Jupiter Laser Facility and Velocity Interferometer System for Any Reflector (VISAR). The VISAR was used to observe the shock compression of Tamdakht, Allende, and recovered Antarctic meteorites. These measurements will help to inform planetary-scale models and provide a unique dataset for comparison with the compositional analysis of these meteorite samples.

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