

Abstract Submitted  
for the SHOCK19 Meeting of  
The American Physical Society

**Precision Measurements of Stopping Power in Shock-Compressed Carbon** J. R. RYGG, LLE, University of Rochester, A. B. ZYLSTRA, P. GRABOWSKI, M. MILLOT, LLNL, J. A. FRENJE, M. GATU-JOHNSON, B. LAHMANN, R. D. PETRASSO, F. H. SEGUIN, H. SIO, MIT, Y. H. DING, S. X. HU, LLE, University of Rochester — The slowing of energetic charged particles in matter is a sensitive probe of coupling and degeneracy effects on the Coulomb interactions, and is intimately connected to other charged-particle-transport quantities such as thermal and electrical conductivity. We will present the results of precision measurements of the stopping power of carbon, shock-compressed to 1-TPa pressure, on an isotropic source of monoenergetic 15-MeV protons. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0003856, the University of Rochester, and the New York State Energy Research and Development Authority.

J. R. Rygg  
LLE, University of Rochester

Date submitted: 02 Mar 2019

Electronic form version 1.4