

Abstract Submitted
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Shockless Compression Studies of HMX-Based and TATB-Based Explosives¹ MELVIN BAER, SETH ROOT, Sandia National Laboratories, DANA DATTELBAUM, Los Alamos National Laboratory, DAN HOOKS, Los Alamos National Laboratory, RICK GUSTAVSEN, BRUCE ORLER, TIM PIERCE, Los Alamos National Laboratory, FRANK GARCIA, KEVIN VANDERSALL, Lawrence Livermore National Laboratory, STAN DEFISHER, BRIAN TRAVERS, U.S. Army ARDEC — Several HMX-based and TATB-based explosive samples along with their constituent binders were subjected to shockless compression to determine the material response at high stresses. A Velocity Interferometer System for Any Reflector (VISAR) was used to measure the transmitted wave profiles. The measured wave profiles were compared to calculated profiles generated from backward and forward analysis procedures using optimization methods. These results were used to determine the constitutive and equation of state (EOS) properties of the explosives and binders.

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