

Abstract Submitted
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Modernization of Los Alamos Impact Facilities: From Ancho Canyon to the new Dynamic Equation-of-State Facility (DEOS) JOHN WRIGHT, JOSEPH RIVERA, SANTIAGO MARTINEZ, WILLIAM ANDERSON, BRAIAN JENSEN, Los Alamos National Laboratory — Los Alamos National Laboratory (LANL) researchers have played key roles in the development of high-pressure science and shock physics since the 1950s. At the heart of the laboratory's experimental capabilities are multiple gun systems that span impact velocities from a 100 m/s up to those in excess of 8 km/s. In recent years, there has been a focus on modernizing this important capability from creating a new shock physics facility and upgrading the standard suite of diagnostics to modernizing the gun platforms themselves. In this poster, we present a history of the shock physics capabilities at LANL beginning with those in Ancho Canyon to the new Dynamic Equation-of-State (DEOS) facility currently in commissioning. The DEOS facility research will continue to lead efforts to study high-pressure phenomena including phase transitions and kinetics, strength and damage, and compaction for a wide range of materials from single crystals to polycrystalline metals and granular systems.

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