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**Shot H3837: Darht's First Dual-Axis Explosive Experiment** JACOB MENDEZ, WENDY VOGAN MCNEIL, JAMES HARSH, LAWRENCE HULL, Los Alamos National Laboratory — Test H3837 was the first explosive shot performed in front of both flash x-ray axes at the Los Alamos Dual Axis Radiographic HydroTest (DARHT) facility. Executed in November 2009, the shot was an explosively-driven metal flyer plate in a series of experiments designed to explore equation-of-state properties of shocked materials. Imaging the initial shock wave traveling through the flyer plate, DARHT Axis II captured the range of motion from the shock front emergence in the flyer to breakout at the free surface; the Axis I pulse provided a perpendicular perspective of the shot at a time coinciding with the third pulse of Axis II. Since the days of the Manhattan Project, penetrating radiography with multiple frames from different viewing angles has remained a high-profile goal at the Laboratory. H3837 is merely the beginning of a bright future for two-axis penetrating radiography.

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