

Abstract Submitted  
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**Measurement of an Explosively Driven Hemispherical Shell Using 96 Points of Optical Velocimetry** JEREMY DANIELSON, EDWARD DAYKIN, Los Alamos National Laboratory, ABEL DIAZ, National Security Technologies, DEAN DOTY, Los Alamos National Laboratory, BRENT FROGGET, National Security Technologies, MIKE FURLANETTO, Los Alamos National Laboratory, CENOBIO GALLEGOS, MIKE GIBO, ANSELMO GARZA, National Security Technologies, DAVID HOLTKAMP, Los Alamos National Laboratory, MANDY HUTCHINS, National Security Technologies, CANDACE JOGGERST, Los Alamos National Laboratory, CARLOS PEREZ, MIKE PENA, VINCENT ROMERO, National Security Technologies, MIKE SHINAS, Los Alamos National Laboratory, MATT TEEL, National Security Technologies, LENNY TABAKA, Los Alamos National Laboratory — We report the measurement of the surface motion of a hemispherical copper shell driven by high explosives. This measurement was made using four 32 channel multiplexed photonic Doppler velocimetry (PDV) systems, in combination with a novel compound optical probe. Clearly visible are detailed features of the motion of the shell over time, enhanced by spatial correlation. Significant non-normal motion is apparent, and challenges in measuring such a geometry are discussed.

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