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Measurement and Characterization of a Two-Shock Explosive Drive. JEREMY DANIELSON, AMY BAUER, Los Alamos National Laboratory — In many of our dynamic experiments at Los Alamos, we use an explosive drive to deliver two shocks to a target surface. This multiple-shock loading is accomplished by reflecting shocks between tantalum layers and a metal target, similar to that employed by Buttler et al. We want a detailed understanding and prediction of this drive, which is complicated by two areas of uncertainty: relight across a shock transmission plate; and reflected shocks traversing reacted HE products. In this talk, we will present a number of experiments to make detailed measurements of reshock using optical velocimetry and proton radiography for both explosive and gun-driven HE drives; as well as modelling efforts calibrated against them.

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