

Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Direct Shock-Timing Measurements in CH Using Streaked X-Ray Radiography P.M. NILSON, M. LAFON, C.R. STILLMAN, C. MILEHAM, R. BONI, T.R. BOEHLY, D.H. FROULA, D.D. MEYERHOFER, Laboratory for Laser Energetics, U. of Rochester — One-dimensional streaked x-ray radiography is used to measure shock coalescence in multishocked plastic. A two-shock system was generated using a ramped drive on the OMEGA EP Laser System. The data show the first shock wave propagating into solid material, followed 2 ns later by the second shock wave. The measured shock trajectories were used to track the system dynamics and determine the shock-coalescence times for different initial shock strengths. The measured shock timings are compared to radiation–hydrodynamic model predictions. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

P.M. Nilson
Laboratory for Laser Energetics, U. of Rochester

Date submitted: 10 Jul 2014

Electronic form version 1.4