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MBAR Shock Measurements in Copper-Doped Beryllium Driven by ∼50-EV Methane-Filled Halfraums T.E. TIERNEY, B.G. DEVOLDER, D.C. SWIFT, J.A. COBBLE, D.L. PAISLEY, N.M. HOFFMAN, S.R. GOLDMAN, Los Alamos National Laboratory, W. ARMSTRONG, J. MILLER, T.R. BOEHLY, University of Rochester- Laboratory for Laser Energetics, C. SORCE, Lawrence Livermore National Laboratory — Copper-doped beryllium is being examined as a candidate ablator for National Ignition Facility capsules. 850-micron diameter, 30-60 micron thick, beryllium-copper wedges and steps were mounted on 800-micron diameter radiation exit holes of 1.6-mm diameter, 1.2-mm long, gold-wall, methane-filled halfraums. The halfraums were driven by three beams at the OMEGA laser (UR-LLE) to a steady radiation temperature Trad of ∼50-eV for up to 3.7 ns. An additional 10 beams, starting at 3.5 ns and ending ∼5.7 ns, are used to ramp the holhraums' Trad to ∼150 eV. VISAR measurements recorded shocks of approximately 1 Mbar. Measurements by a streaked optical pyrometer indicated that preheat was present for 30-40 micron thick samples within 1-ns of the start of the drive. We will present our data and analysis in comparison to as-shot simulations. *Work performed under U.S. DOE contract W-7405-ENG-36. LA-UR-05-5558

T.E. Tierney
Los Alamos National Laboratory

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