

**Abstract Submitted for the Forty-Seventh Annual
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Category Number and Subject: 7.2.3. Target Fabrication

Theory Experiment

Radially-Resolved Measurements of the Effect of Boundary Walls in Radiation Transport Experiments,* C.A. Back, *General Atomics*, O.A. Hurricane, J.H. Hammer, J.I. Castor, S.A. Maclaren, O.L. Landen, M.D. Rosen, *LLNL* – We have performed high-powered laser experiment to investigate the effect of the boundary wall of finite mm-sized samples on the propagation of a Marshak wave. We present radially-resolved emission measurements of a Ta₂O₅ aerogel heated from the opposite side by x-ray drive created by a halfraum. The experiments are performed on the Omega laser and data are obtained by a 1D streaked spectrometer which records photon energies of 550 eV. It complements work presented previously in which we measured the propagation of a diffusive supersonic Marshak wave in different length samples [1]. Here we give details of the measurements and the effects of boundary conditions of finite samples. Data will be compared from a high-Z Au boundary versus a low-Z Be cylindrical and discussed with respect to an analytic model that takes into account the albedo of the boundary wall.

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