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Comparison of Blast Wave Simulations Using Spatially Uniform and Experimentally Measured X-ray Sources HEIDI TIERNEY, ROBERT PETERSON, DARRELL PETERSON, THOMAS TIERNEY, Los Alamos National Laboratory — The dynamics of energy loss through diagnostic and/or laser-entrance holes with or without shine shields is of interest to a class of inertial confinement fusion experiments envisioned for the National Ignition and ZR Facilities. We discuss the energy source in 2-D radiation-hydrodynamic simulations using Lasnex [G. Zimmermann et al.] for blast wave experiments recently fielded at the Z facility driven by a dynamic hohlraum. In the past the simulations used a time and spectrum-dependent 1-D source, which created a blast wave in an adjacent region of SiO₂ aerogel foam. We have now included a spatial dependence in the source and constrained this dependence and the spectrum to closely resemble recent data [Nash et al., 2001]. We show a comparison of results from both simulations to identify sensitivities to the characteristics of the source function.

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