Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Modeling the SNL-Z Opacity Platform MANOLO SHERRILL, BERNHARD WILDE, DARRELL PETERSON, TODD URBATSCH, PETER HAKEL, CHRIS FONTES, Los Alamos National Laboratory, JAMES BAILEY, GREGORY ROCHAU, Sandia National Laboratories — Driven by the need to validate computed opacity tables used for radiation hydrodynamic simulations, Los Alamos National Laboratory (LANL) and Sandia National Laboratories (SNL) have been involved in a collaboration to measure and characterize recorded opacities at the SNL-Z facility since 2009. The original success in measuring the spectral opacity of iron at a temperature of 156eV and at an electron density of $6.90\text{x}10^{21}\text{cm}^{-3}$ (reported by J.E. Bailey et al. in PRL **99** 265002 2007) led to an interest in expanding iron measurements to higher temperatures and densities to conditions consistent with those at the base of the convection zone of the Sun. To obtain these higher temperature/density conditions, the tamper masses that sandwich the metal foil of interest were increased. Several disturbing discrepancies exist between the higher temperature/density opacity measurements and theory and continue to be largely unresolved for the past several years (J. E. Bailey et al, NATURE **517** 56 1 JAN. 2015). This continuing discrepancy has prompted LANL to perform detailed rad-hydro simulations of the SNL-Z opacity platform. In these simulations, both the dynamic hohlraum and the opacity target are modeled together. We report on the simulation methods and comparisons with dynamic hohlraum measurements that are used to assess the simulation fidelity.

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Date submitted: 20 Jul 2015 Electronic form version 1.4