

Abstract Submitted
for the DPP17 Meeting of
The American Physical Society

Data Analysis of the Gated-LEH X-Ray Imaging Diagnostic at the NIF¹ MATTHEW THIBODEAU, Rice Univ, HUI CHEN, Lawrence Livermore National Laboratory — The Gated Laser Entrance Hole (G-LEH) x-ray imaging diagnostic [1, 2] in use at the NIF offers a desirable combination of spatial and temporal resolution. By looking inside of NIF hohlraums with time resolution, G-LEH measures target features including LEH size and capsule size. A framework is presented for automated and systematic analysis of G-LEH images that measures several physical parameters of interest and their evolution over time. The results from these analyses enable comparisons with hohlraum models and allow model validation of LEH closure velocity and the extent of capsule blow-off.

1 H. Chen, N. Palmer, M. Dayton et al., Rev. Sci. Instrum. 87, 11E203 (2016)

2 L. Claus, L. Fang, R. Kay et al., Proc. SPIE 9591, 95910 (2015).

¹This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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Date submitted: 12 Jul 2017

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