Abstract Submitted
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Large Survey of Neutron Spectrum Moments Due to ICF Drive Asymmetry J.E. FIELD, D. MUNRO, B. SPEARS, J.L. PETERSON, S. BRANDON, J.A. GAFFNEY, J. HAMMER, S. LANGER, R.C. NORA, P. SPRINGER, Lawrence Livermore National Laboratory, ICF WORKFLOW COLLABORATION COLLABORATION — We have recently completed the largest HYDRA simulation survey to date ($\approx 60,000$ runs) of drive asymmetry on the new Trinity computer at LANL. The 2D simulations covered a large space of credible perturbations to the drive of ICF implosions on the NIF. Cumulants of the produced birth energy spectrum for DD and DT reaction neutrons were tallied using new methods.[1] Comparison of the experimental spectra with our map of predicted spectra from simulation should provide a wealth of information about the burning plasma region. We report on our results, highlighting areas of agreement (and disagreement) with experimental spectra. We also identify features in the predicted spectra that might be amenable to measurement with improved diagnostics. Prepared by LLNL under Contract DE-AC52-07NA27344.[2]

[1]see D.H. Munro, *Nucl. Fusion*, 56 (2016) 036001.
[2]IM release #: LLNL-PROC-697321

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