1. A.B. Zylstra et al., Beryllium implosion experiments at high case-to-capsule ratio on the National Ignition Facility
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Abstract Submitted
for the DPP17 Meeting of
The American Physical Society

Beryllium implosion experiments at high case-to-capsule ratio on the National Ignition Facility[1] ALEX ZYLSTRA, AUSTIN YI, JOHN KLINE, GEORGE KYRALA, ERIC LOOMIS, TED PERRY, RAHUL SHAH, STEVE BATHA, Los Alamos National Laboratory, STEVE MACLAREN, JOE RALPH, JAY SALMONSON, LAURENT MASSE, ABBAS NIKROO, MICHAEL STADERMANN, DEBBIE CALLAHAN, OMAR HURRICANE, Lawrence Livermore National Laboratory, NEAL RICE, HAIBO HUANG, CASEY KONG, General Atomics — Using beryllium as an ablator material has several potential advantages for inertial fusion because of its low opacity and thus higher ablation rate. This could enable novel designs taking advantage of the reduced ablation-front growth rate, or operating at lower radiation temperature. To investigate the integrated performance of beryllium implosions, we conducted a tuning campaign leading into DT layered implosions using a 900um radius capsule in a 6.72mm diameter hohlraum (case-to-capsule ratio CCR=3.7); the large CCR enables direct study of the 1-D implosion performance. The tuning campaign shots demonstrate excellent control over the shock timing and implosion symmetry at this CCR. Performance data from the DT experiments will also be discussed.

[1]This work was performed under the auspices of the U.S. DoE by LANL under contract DE-AC52-06NA52396.

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Date submitted: 13 Jul 2017 Electronic form version 1.4