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Developing a 1D "like" performance basecamp for beryllium capsule implosions JOHN KLINE, AUSTIN YI, ERIC LOOMIS, ANDREI SIMAKOV, GEORGE KYRALA, DOUB WILSON, LANL, EDDIE DEWALD, JOE RALPH, DAVID STROZZI, LLNL — Experiments with Beryllium capsules in high density gas filled targets showed little difference in performance with respect to CH or HDC capsules. The hypothesis for the lack of performance difference is attributed to poor control of symmetry based on work by Clark et al. Going forward, the goal is to develop a target design that enables better comparisons between the performance of Be capsules and other ablators, as well as with simulations. To develop a platform in which Be capsules maximize performance with respect to 1D calculations, we have increased the case-to-capsule ratio and reduced the hohlraum drive. The stability properties of beryllium are expected to be accentuated at lower radiation temperature drives compared with other ablators. Experiments have been carried out with case-to-capasule ratio of 3.1 and 4.3. Results from these experiments are being used to develop an optimized case-to-capsule ratio to achieve controllable symmetric implosions with maximum 1D like performance. This presentation will focus on how results of the experiments are used to design the next series of optimized experiments..

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