

Abstract Submitted
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Controlling the yield of high yield ignition capsules¹ L. SUTER, S. HAAN, Lawrence Livermore National Laboratory, G. STROBEL², Univ. of Georgia, M. EYLER, United States Naval Academy — The National Ignition Facility ultimately has the potential to drive capsules that absorb in excess of 500kJ of energy. Such capsules are very robust and may produce yields of many hundreds of mega-joules. For a number of reasons, lower yield but equally robust versions of these capsules might also be useful for experiments. Consequently, we have investigated controlling the yield of high yield capsules by replacing a significant fraction of the DT fuel with other materials, such as ablator. These first studies indicate that replacing the DT with an equal rho-r of other-material reduces the yield but also reduces the margin for ignition. This paper quantifies that observation and tests the hypotheses for the change in margin such as differences in the equations of state or the outer DT's playing a subtle role in ignition.

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