

Abstract Submitted
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Reducing the effects of X-ray pre-heat in double shell NIF capsules by over-coating the high Z shell DOUGLAS WILSON, LANL, J.L. MILOVICH, LLNL, W.S. DAUGHTON, E.N. LOOMIS, J.P. SAUPPE, E.S. DODD, E.C. MERRITT, D.S. MONTGOMERY, D.B. RENNER, B.M. HAINES, T. CARDENAS, T. DESJARDINS, S. PALANIYAPPAN, S.H. BATHA, LANL — Hohlraum generated X-rays will penetrate the ablator of a double shell capsule and be absorbed in the outer surface of the inner capsule. The ablative pressure this generates drives a shock into the central fuel, and a reflected shock that reaches the inner high-Z shell surface before the main shock even enters the fuel. With a beryllium over-coat preheat X-rays deposit just inside the beryllium/high z interface. The beryllium tamps the preheat expansion, eliminating ablation, and dramatically reducing pressure. The slow shock or pressure wave it generates is then overtaken by the main shock, avoiding an early shock in the fuel and increasing capsule yield.

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