Abstract Submitted
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NIF symmetry capsule modeling[1] S.V. WEBER, D.T. CASEY, J.E. PINO, D.P. ROWLEY, V.A. SMALYUK, B.K. SPEARS, R.E. TIPTON, LLNL — NIF CH ablator symmetry capsules are filled with hydrogen or helium gas. SymCaps have more moderate convergence ratios ~ 15 as opposed to ~ 35 for ignition capsules with DT ice layers, and better agreement has been achieved between simulations and experimental data. We will present modeling of capsules with CD layers and tritium fill, for which we are able to match the dependence of DT yield on recession distance of the CD layer from the gas. We can also match the performance of CH capsules with D^3He fill. The simulations include surface roughness, drive asymmetry, a mock-up of modulation introduced by the tent holding the capsule, and an empirical prescription for ablator-gas atomic mix.

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