

Abstract Submitted
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Multi-Variable Sensitivity Studies of the Beryllium NIF Ignition Target¹ JAY SALMONSON, STEVEN HAAN, DANIEL CLARK, DEBRA CALLAHAN, Lawrence Livermore National Laboratory — We report the results of our continuing effort to optimize and control sensitivities for the Beryllium (Be) NIF ignition capsule. We will compare the two candidate scales for the latest (Revision 4) Be capsule: maximum hohlraum radiation temperature of 285 eV (capsule radius 1.18 mm) and 270 eV (1.3 mm). The performance of these capsules is assessed by performing a sensitivity analysis which integrates 35 1D capsule design parameters with 2D surface roughness specifications for each of the seven distinct capsule layer interfaces as well as laser drive asymmetry specifications. We will highlight efforts to understand and control the sensitivities deriving from inhomogeneities within the sputtered Be ablator material including the diffusion of Copper across the internal graded doped layers as well a clumping of impurities such as Argon associated with the Be crystal microstructure.

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