

Abstract Submitted
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Mix in Omega and NIF Capsules with an Eulerian Code¹ PAUL BRADLEY, G. MAGELSEN, M. SCHMITT, E. DODD, S. HSU, F. WYSOCKI, I. TREGILLIS, S. FINNEGAN, K. DEFRIEND OBREY, Los Alamos National Laboratory — There is much evidence that mixing of capsule shell material into the DT fuel in ICF capsules significantly reduces the nuclear yield. Mix occurs as a result of capsule manufacturing tolerances that grow during the implosion. Additional mix will occur if defects, such as cracks or material inhomogeneities, are present. Verifying the predictive capabilities of our codes for mix and defects is a crucial part of achieving robust ignition on NIF. We are performing a series of simulations to assess the influence of feature driven mix on the performance of Omega capsules. Our usage of a subgrid turbulent mix model allows us to obtain neutron yields within a factor of 2 to 6 of the Omega data. We will present results of these simulations along with predictions for follow-on experiments that will be performed on NIF in the near future.

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