

Abstract Submitted
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Mix Models Applied to the Pushered Single Shell Capsules Fired on NIF¹ ROBERT TIPTON, EDUARD DEWALD, JESSE PINO, JOE RALPH, RYAN SACKS, JAY SALMONSON, Lawrence Livermore Natl Lab — The goal of the Pushered Single Shell (PSS) experimental campaign is to study the mix of partially ionized ablator material into the hotspot. To accomplish this goal, we used a uniformly Si doped plastic capsule based on the successful Two-Shock campaign [1]. The inner few microns of the capsule can be doped with a few percent Ge. To diagnose mix, we used the method of separated reactants [2]; deuterating the inner Ge-doped layer, CD/Ge, while using a gas fill of Tritium and Hydrogen. Mix is inferred by measuring the neutron yields from DD, DT, and TT reactions. The PSS implosion is fast (~ 400 km/sec), hot (~ 3 KeV) and round ($P2 \sim 0$). This paper will present the calculations of RANS type mix models such as KL along with LES models such as multicomponent Navier Stokes on several PSS shots. The calculations will be compared to each other and to the measured data. [1] S.F. Khan et al. Physics of Plasmas **23**, 042708 (2016) [2] D.C. Wilson et al. Physics of Plasmas **18**, 112707 (2011)

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