

Abstract Submitted  
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**High-yield implosions via high rho-R+radiation trapping using Mo doped Be ablaters (PSS)**<sup>1</sup> Y. M. WANG, D. D.-M. HO, S. A. MACLAREN, LLNL — Beryllium ablaters with inner layer doped with increasing Mo concentration towards the center can increase rho-R with the benefit of radiation trapping. Configurations of this type with acceptable RT growth were reported.[1] Here we present further improvement against RT growth by placing a thin layer of Be between the DT fuel and the ablator inner surface. 2D simulations show this method is effective in reducing the interface mix during post-ignition expansion. Because of the heavier shell mass, the fall-line behavior is good at both the hotspot surface and the fuel-ablator interface. The RT growth factor at the hotspot surface is only 1/3 that of the same-size HDC capsule. There is essentially no mix at the fuel-ablator interface at ignition and in addition to high rho-R, make the PSS an attractive platform for achieving ignition. The good confinement behavior of the PSS allows the use of wetted-foam for high gain. The yield of DT-gas only capsules can be considerably higher than the same-size DT-gas capsules using conventional low-Z ablaters. [1]. D. Ho et al., APS-DPP (2018).

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