

Abstract Submitted  
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**Low-converge ratio high-yield and large-scale implosions via high R + radiation trapping using Mo doped Be ablators (PSS)**<sup>1</sup> DARWIN HO, STEVE MACLAREN , Lawrence Livermore Natl Lab — Beryllium ablators with inner layer doped with increasing Mo concentration towards the center can increase R with the benefit of radiation trapping. Configurations of this type of high-R PSS implosions with acceptable RT growth were reported.<sup>1</sup> Based on this concept, we report new developments showing promises for achieving ignition that cannot be otherwise obtained using conventional approaches. (1) High-R and slow disassembly of the hotspot allow the use of DT liquid foam with high gas fill (1.5–2.0 mg/cc) and low-convergence ratio ( $\geq 20$ ) implosions to deliver a few MJ in 2D. (2) Large-scale capsule (1500  $\mu$ m) gives high yield at lower implosion velocities since R increases with scale. However, YoC is lower which is apparently caused by the higher growth factor for large scales. Methods to improve the YoC will be discussed. (3) The high-R PSS allows the use of nominal-scale Be capsule with realistic drive to achieve ignition and high-yield in 2D while configurations using conventional Be ablators cannot. 1. D. Ho et al., APS-DPP PO6.00011(2018) and BO4.00010 (2019).

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