Step 1: Subset of guns fire DT fuel (green). High-Z jets (blue) fire shortly after fuel jets.

Step 2: DT fuel (green) jets begin to merge. High-Z jets (blue) are close behind.

Step 3: DT fuel (green) jets have formed imploding spherical shell. High-Z jets (blue) beginning to merge to form dense high-Z liner.

Step 4: DT fuel (green) shell imploding. High-Z liner (blue) has formed and is imploding close behind fuel shell. Laser beat-wave pairs fire to induce seed magnetic field in target.

Step 5: Imploding high-Z liner (blue) contacts now-warm DT fuel target (yellow) at moment of target assembly, followed by liner-driven target compression and burn.

Step 6: Hot fusion fireball expands radially outward. Circulating liquid first wall moderates neutrons and softens blast. Residual gas pumped out and system reset for next shot.

---

Counter-propagating lasers drive electrical current in target

Guns fire radially towards center

High-Z Liner Jets

25 ft

High-Z Liner Jets Merging

DT fuel jets

DT fuel shell has formed and is imploding

Compressed diameter ~2 cm

Further implosion

Final peak compression size shown larger than actual for visual clarity

Shell thicknesses shown thicker than actual for visual clarity

Circulating liquid first wall (not shown) protects the vacuum chamber and other reactor and structural components outside the chamber.

Outer wall structure also contains tritium processing hardware (not shown).

Contact:

sco@lanl.gov

witherspoon@hyperv.com