Reaching 30% Energy Coupling Efficiency For Al and HDC Capsules Using Rugby Hohlraums at NIF

Advanced hohlraums enhance energy coupling by accommodating larger capsules

- ~3x energy coupling from 10% to 30%, or ≥ 500kJ, is possible for hot spot ignition
- Symmetry can be tuned by wall angle or wavelength detuning
- Larger hot spot is more robust to defects and instabilities

High coupling enables volume ignition

- Low convergence requirement
- High-adiabat to suppress instabilities
- Confinement dominated by ablator
- Entire fuel is hot spot, more tolerance to asymmetry and perturbations