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Compression Dynamics of an Indirect Drive Fast Ignition Target[1] R.B. STEPHENS, General Atomics, S.A. HATCHETT, R.E. TURNER, LLNL, K.A. TANAKA, R. KODAMA, ILE, J. SOURES, LLE — We have compared the compression of an indirectly driven cone-in-shell target, a type proposed for the fast ignition concept, with models. The experimental parameters -500 μm diameter plastic shell with 60 μm thick wall were a 1/5 scale realization of a fast ignition target designed for NIF (absorbing 180 kJ for compression and $\sim$30 kJ for ignition, and yielding $\sim$30 MJ) [1]. The implosion was backlit with 6.4 keV x-rays, and observed with a framing camera which captured the implosion from $\sim$2.6 to 3.3 ns after the onset. The collapsing structure was very similar to model predictions except that non-thermal m-band emissions from the hohlraum penetrated the shell and vaporized gold off the reentrant cone. This could be eliminated by changing the hohlraum composition.

[1] S. Hatchett, *et al.*, 5th Wkshp on Fast Ignition of Fusion Targets (Satellite Wkshp, 28th EPS Conf. on Contr. Fusion and Plasma Phys.), Madeira, Portugal (2001).

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