

Tamped Heavy Ion Targets

Monday, 13 August 2012 15:50 (20 minutes)

The deeply penetrating nature of heavy ion beams makes for unique opportunities in the design of ICF targets. We describe a class of targets that take advantage the long range and Bragg peak-like deposition profile of to drive an implosion contained within a dense, high-Z tamper. The The targets consist of spherical shells of DT ice, plastic, and a thin gold tamper. The design uses two different mechanisms to provide pressure to drive the implosion. Early in time, the heavy ion beams volumetrically heat the plastic layer, whose tamped expansion compresses the fuel. As the pusher density blows down, the drive transitions to radiation driven ablation with the gold tamper now acting as a spherical hohlraum. We will discuss ongoing studies on the hydrodynamic stability of these targets and the implications for illumination uniformity.

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Session Classification: HIF Targets - Chairs: B. Sharkov and S. Kawata - Featured Posters: A. Ortner, A Bret, I.V. Lomonosov