Reduced Ablative Rayleigh-Taylor growth Measurements in Indirectly Driven Laminated Foils

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Indirectly driven, ablative Rayleigh-Taylor instability growth measurements in homogeneous and laminated foils were performed on the Omega laser facility using face-on x-ray radiography. Stabilization was observed for the first time in the case of laminated samples. Side-on radiography confirms this behaviour and shows that the sample trajectory in independent of the ablator structure (laminated or homogeneous). Foil trajectories and growths were found to be in good agreement with 2D hydro simulations based on theoretical and numerical predictions published earlier [1], encouraging new designs using laminated structures for ignition capsules.

References