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Spike Extensions in Rayleigh-Taylor, Decelerating-Interface Experiments C.C. KURANZ, R.P. DRAKE, University of Michigan, M.J. GROSSKOPF, H.F. ROBEY, J.F. HANSEN, A.R. MILES, J. KNAUER, T. PLEWA, N. HEARN — This presentation discusses experiments well-scaled to the blast wave driven explosion phase of SN1987A. These experiments, performed at the Omega Laser facility, use $\sim$ 5kJ of laser energy to create a blast wave similar to those in supernovae. The blast wave crosses a perturbed interface with a density drop and produces Rayleigh-Taylor instability (RTI) growth. By performing experiments with more complex, three-dimensional initial conditions, we hope to observe the effect their complexity has on RTI growth. Recent advancements in x-ray backlighting have greatly improved the resolution of our x-ray radiographic images. These images show some mass extending beyond the spike tips. This presentation will discuss the amount of mass in these spike extensions. This research was sponsored by the NNSA through DOE Research Grants DE-FG52-07NA28058, DE-FG52-04NA00064, and other grants and contracts.

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