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The Design of Useful Mix Characterization Experiments for the LLNL Reshock Platform TANIM ISLAM, Lawrence Livermore Natl Lab — The NIF Re-shock platform has been extensively engineered to minimize boundary effects and polluting shocks. It is capable of comprehensively and reproducibly exploring a large parameter space important in mix experiments: strength and timing of shocks and reshocks; the amplitude and wavelength of Richtmyer-Meshkov-unstable interfaces; the Atwood number of these mixing layers; and using a technique developed with experiments at the Omega laser, the simultaneous visualization of spike and bubble fronts. In this work, I explore multimodal and roughened surface designed, and combinations of light and heavy materials, that may illuminate our understanding of mix in plasmas.

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