

We request that this talk is scheduled in a group with the submission of Channing Huntington (DPP17-2017-000597) and Jason Bender (the three talks present different, complementary aspects of the same experiment).

Abstract Submitted  
for the DPP17 Meeting of  
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**Shock-driven Rayleigh-Taylor / Richtmyer-Meshkov 2D multi-mode ripple evolution before and after re-shock**<sup>1</sup> SABRINA NAGEL, CHANNING HUNTINGTON, JASON BENDER, KUMAR RAMAN, TED BAUMANN, STEPHAN MACLAREN, SHON PRISBREY, YE ZHOU, Lawrence Livermore National Laboratory — Laser-driven hydrodynamic experiments allow for the precise control over several important experimental parameters, including the timing of the laser irradiation delivered and the initial conditions of the laser-driven target. Our experimental platform at the National Ignition Facility enables the investigation of the physics of instability growth after the passage of a second shock (“reshock”). This is done by varying the laser to change the strength and timing of the secondary shock. Here we present x-ray images capturing the rapid post-reshock instability growth for a set of reshock strengths. The radiation hydrodynamics simulations used to design these experiments are also introduced.

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