

Abstract Submitted  
for the DPP19 Meeting of  
The American Physical Society

**Analysis of the development of Hydrodynamic Instability waves<sup>1</sup>**

LIAM ALEXIS, MATTHEW TRANTHAM, University of Michigan, GUY MALAMUD, Nuclear Research Center Negev, CAROLYN KURANZ, University of Michigan — Hydrodynamic instabilities occur in high energy density situations which contain pressure, density and velocity gradients such as those which are found in astrophysical and inertial confinement fusion experiments. Our experiment produces a shockwave that collides with a wedge shaped target that produces Kelvin-Helmholtz and Richtmyer-Meshkov instabilities. We use the CRASH code, a radiation hydrodynamic code developed at the University of Michigan to simulate the experiment. IDL software was then used to analyze these simulation results and determine the height of the waves (manifestations of the hydrodynamic instabilities) produced and give a better illustration of the development of the instabilities as the shock progresses along the targets diagonal interface.

<sup>1</sup>This work is funded by the U.S. DOE NNSA Center of Excellence under grant number DE-NA0003869, and the NLUF Program, grant number DE-NA0002719, and through the LLE, University of Rochester by the NNSA/OICF under Cooperative Agreement No. DE-NA0003856.

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Date submitted: 15 Jul 2019

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