

Abstract Submitted  
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**Simultaneous PIV-PLIF measurements in a Richtmyer-Meshkov-unstable gas curtain at Mach 1.2** B.J. BALAKUMAR, G.C. ORLICZ, K.P. PRESTRIDGE, C.D. TOMKINS, Los Alamos National Laboratory, NM — The effects of re-shocking an already Richtmyer-Meshkov-unstable gas curtain at Mach 1.2 will be presented. Concentration measurements reveal growth rate amplification associated with the reshock and vorticity measurements before and after reshock quantify circulation changes. Turbulence statistics obtained using simultaneous PIV-PLIF techniques, from tightly controlled and well quantified initial conditions, will also be presented. Methods to select a subset of initial conditions (from many shots) that correlate well with each other are shown. Further, the compression of the initial conditions due to the shock wave are quantitatively measured. Finally, we show some results that point towards the tendency of such flows to approach homogeneity upon reshock.

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