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Richtmyer-Meshkov instability and turbulence in a reshocked gas curtain BALAKUMAR BALASUBRAMANIAM, GREG ORLICZ, CHRISTOPHER TOMKINS, KATHERINE PRESTRIDGE, Los Alamos National Laboratory — We present new velocity and density field measurements of a curtain of SF₆ impacted by a Mach 1.2 shock and then reshocked by the reflected shock approximately 600 μ s after the initial shock impact. The initial conditions are those of a diffuse curtain of SF₆ surrounded by air, and the interface is perturbed with a large-scale, single-mode, varicose perturbation. Statistical data are collected from multiple experiments by quantitatively correlating repeatable initial conditions within a specified level of variation. We present density field images of both the instantaneous, time-averaged, and fluctuating evolution of the curtain in time, as well as selected mean and fluctuating velocity fields and their correlations.

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