

Abstract Submitted
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Rayleigh-Taylor Instability with Ideal Gases¹ ANDREW COOK,
BRITTON OLSON, LLNL — Turbulence developed from Rayleigh-Taylor instability between two compressible fluids is widely regarded as a low Mach number phenomenon. Numerical simulations of the flow are typically performed either with incompressible flow solvers or else in computational domains that are small compared to the pressure scale height. Simulations in larger domains have reported an upper bound on the turbulent Mach number of 0.25 to 0.6. However, some recent large-eddy simulations in very large domains have produced a surprising new phenomenon. Visualizations from the simulations will be presented along with quantitative discussion of the results.

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