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A Computation Study of the Richtmyer-Meshkov Instability for an Inclined Interface JACOB MCFARLAND, Texas A&M University, JEFFERY GREENOUGH, Lawrence Livermore National Laboratory, DEVESH RANJAN, Texas A&M University — A computational study of the Richtmyer-Meshkov instability is presented for an inclined interface perturbation in support of experiments to be performed in the Texas A&M shock tube facility. Simulations were performed using the ARES code developed at Lawrence Livermore National Laboratory. A parametric study was performed for two high Atwood number gas pairs, air-SF₆ and helium-SF₆, where interface inclination angle and incident shock wave Mach number were varied. From this parametric study selected cases were run to late times where reshock occurs. The total circulation for these cases and the circulation production over time is presented. Mix mass and mixing width growth rate are found for before and after reshock.

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