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Validating compressible turbulence models under reshock and shear-driven high energy density conditions ERIC LOOMIS, LESLIE WELSER-SHERRILL, FORREST DOSS, KIRK FLIPPO, JIM FINCKE, LANL — The implementation of turbulence models into radiation hydrodynamics codes requires its validation through comparisons with experimental data that isolate different aspects of the model. We are carrying out these validation experiments at the OMEGA laser facility isolating the effects of shear flow and reshock of Richtmyer-Meshkov unstable interfaces. The shear experiment uses the passage of counter-propagating shocks in adjacent CH foam semi-cylinders while the reshock experiment uses the collision of counter-propagating shocks in a single cylindrical foam. We will present recent data and simulations for both of these experiments and summarize our progress towards model validation.

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