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Asymptotic Convergence to a Full Nonlinear Solution LIAM POCHER, NATHANIEL MORGAN, TRAVIS PEERY, JONATHAN MACE, Los Alamos National Laboratory — A perturbation technique is used to investigate the nonlinear effects and asymptotic convergence to the full nonlinear solution in a flow that propagates omnidirectional waves in a modified set of Euler equations. The physical dissipative mechanisms considered within the differential system are viscosity (momentum diffusion) and heat conduction (energy diffusion). This asymptotic convergence is used to predict a lower bound calculated by the perturbation truncation error in the differential system.

Liam Pocher Los Alamos National Laboratory

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