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**Exploring Lattice Bolzmann Fluid Methods for Astrophysics**[1] JACOB TINNIN, DAVID NEILSEN, Brigham Young University — Relativistic fluid dynamics can be computationally challenging for astrophysical systems that have very dynamic, but rarefied gases. Lattice Boltzmann fluid methods have recently been extended to relativistic fluids. These methods are based on a minimal lattice version of the kinetic Boltzmann equation, and they are efficient and easily parallelized. We use this method to model a blast wave interacting with a rarefied gas. We present tests of the method and preliminary results.

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