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Observing hydrodynamic linear response in a uniform Fermi gas¹ LORIN BAIRD, XIN WANG, STETSON ROOF, JOHN THOMAS, North Carolina State University — We create a nearly uniform Fermi gas in a box-shaped repulsive optical potential. A spatially periodic optical potential of chosen wavelength is moved through the gas with a selected speed between subsonic and supersonic. We measure the linear hydrodynamic response of the density and numerically simulate the spatial profile to determine the relative contributions of shear viscosity and thermal conductivity.

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