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**Sound in a strongly-interacting Fermi gas<sup>1</sup>** BASON CLANCY, LE LUO, J. KINAST, J. JOSEPH, A. TURLAPOV, J.E. THOMAS, Duke — Sound propagation in an optically-trapped gas of strongly interacting fermionic  ${}^6\text{Li}$  atoms is studied. The atoms are prepared as a 50/50 mixture of the two lowest-energy internal states. Strong interactions are achieved by applying a magnetic field in the vicinity of a broad (834 G) *s*-wave Feshbach resonance. A sound wave is excited by locally applying a pulse of a repulsive blue-light potential. We measure the propagation of the excitation along the axial direction of the cigar-shaped cloud.

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