

Abstract Submitted
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Zero Sound in Fermi Dipolar Condensates SHAI RONEN, JOHN BOHN, JILA and University of Colorado — We study zero sound in degenerate dipolar Fermi in the normal phase. Zero sound is a coherent superposition of particle-hole excitations near the Fermi surface. This phenomena is of particular interest in dipolar gases due to the long range and non-isotropic interactions. In fact, these interactions already deform the equilibrium Fermi surface so that it is no longer spherical. We find that zero sound can propagate parallel to the polarization direction of the gas but is damped in the transverse direction.

Shai Ronen
JILA and University of Colorado

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