

Abstract Submitted
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Ultracold polar KRb molecules¹ BRIAN NEYENHUIS, AMODSEN CHOTIA, STEVEN MOSES, JUN YE, DEBORAH JIN, JILA, NIST and University of Colorado — Ultracold polar molecules in the quantum degenerate regime open the possibility of realizing quantum gases with long-range, and spatially anisotropic, interparticle interactions. Currently, we can create a gas of ultracold fermionic ground-state KRb molecules in with a peak density of 10^{12} cm⁻³ and a temperature just 1.4 times the Fermi temperature. We will report on efforts to further cool this gas of molecules. One possibility is to evaporatively cool a spin-polarized molecular Fermi gas confined in quasi-2D, where we would rely on dipole-dipole interactions for rethermalization.

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