

Abstract Submitted
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High-temperature superfluidity in an ultracold Fermi gas¹ ANDRE SCHIROTZEK, MARTIN ZWIERLEIN, CHRISTIAN SCHUNCK, WOLFGANG KETTERLE, MIT — Quantum degenerate atomic Fermi gases provide a remarkable opportunity to study strongly interacting Fermions. In contrast to other Fermi systems, such as superconductors, neutron stars or the quark-gluon plasma of the early Universe, these gases have low densities and their interactions can be precisely controlled over an enormous range. Our recent observation of vortex lattices in a rotating Fermi gas provides definitive evidence for superfluidity in these systems. Scaled to the density of electrons in a solid, this new form of superfluidity would occur already above room temperature.

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