

Abstract Submitted
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Studying Spin Transport with Ultracold Atoms MARY KATE PASHA, Lehigh University — Ultracold atoms can be used as a tool to study transport properties in quantum many-body systems. By inducing a magnetic field gradient, and thus a spin-dependent force, one can determine properties of spin diffusion at low temperatures close to the critical temperature for the superfluid phase transition. Studying ultracold fermions, like lithium-6, can reveal the impact that Cooper pairing has on spin transport.

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