

Abstract Submitted
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Normal state spin susceptibility in the BEC-BCS crossover region.¹ YUN LONG, FENG XIONG, COLIN PARKER, Georgia Institute of Technology — The magnetic properties of Fermi gases around the BEC-BCS crossover is a topic of interest for its connection to strongly interacting material systems like the high-Tc cuprates. In particular, the spin susceptibility of the Fermi gas is a quantity that can be directly compared across these two very different physical platforms, and one in which the phenomenon of “pseudogap” has an established signature, at least on the material side. To this end, we develop a method which use a radiofrequency (RF) dressed spin state to measure the spin susceptibility of a trapped lithium-6 spin mixture near the BEC-BCS crossover region at temperatures from well above the Fermi temperature down to the critical point of the superfluid phase transition. In this talk, I will present our recent results and a comparison to theoretical calculations.

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