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Interaction Effects in Normal 2D Fermion Gases[1] S. LAALITYA UPPALAPATI, DANIEL SHEEHY, Louisiana State University —
We present results on the effect of short-range, attractive interactions on the properties of balanced 2D Fermi gases in the non-superfluid (normal) phase. Our approach combines the renormalization group (RG) with perturbation theory, yielding observables such as the equation of state and compressibility. We find good agreement with recent experiments that measured the equation of state in trapped gases in the balanced regime [1,2], showing that these results are consistent with logarithmic corrections in the equation of state. We also discuss predictions for our theory in the imbalanced regime.
[1] K. Fenech et al, Phys. Rev. Lett. **116**, 045302 (2016)
[2] I. Boettcher et al, Phys. Rev. Lett. **116**, 045303 (2016)

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