Abstract Submitted
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Interaction effects in two-dimensional Fermi gases[1] S.L. UPPALAPATI, DANIEL SHEEHY, Louisiana State Univ - Baton Rouge — Recent atomic physics experiments [1,2,3,4] have investigated two-dimensional fermionic atomic gases confined to a quasi two-dimensional trapping potential. Taking advantage of the fact that short-ranged attractive interactions are marginal in two-dimensions, we apply a renormalization group method to compute observable properties such as the local density, taking account of the harmonic trapping potential using the local density approximation. We compare our theoretical predictions to recent experimental data in the balanced and imbalanced regimes. [1] W. Ong et al, Phys. Rev. Lett. **114**, 110403 (2015) [2] K. Fenech et al, Phys. Rev. Lett. **116**, 045302 (2016) [3] I. Boettcher et al, Phys. Rev. Lett. **116**, 045303 (2016) [4] D. Mitra et al, Phys. Rev. Lett. **117**, 093601 (2016)

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