

Abstract Submitted
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Phases of the attractive Hubbard model in a trap ELIAS ASSMANN, TU Graz, GEORGE BATROUNI, Institut Non-Lineaire de Nice, SIMONE CHIESA, UT Knoxville, HANS GERD EVERTZ, TU graz, RICHARD SCALETAR, UC Davis — We present a quantum Monte Carlo study of the fermion attractive Hubbard model in a quadratic trap. A rather dramatic failure of the local density approximation occurs in the half-filled region where coupling to nearby superfluid domains induces a strong suppression of charge fluctuations. By monitoring the behavior of the equal-time pairing correlations, we show the existence of a low temperature phase consistent with quasi-long-range order.

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