
Unconventional superfluid in quasi-one dimension

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Résumé

We show that an unconventional superfluid due to the breaking of inversion symmetry emerges in repulsively interacting quasi-one dimensional fermions. While the competition between spin singlet and triplet pairings occurs, it is shown that both superfluid orders decay algebraically with a same exponent except for special points. We also propose an experiment to observe such phases with cold atoms.

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