

Abstract Submitted
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Dynamics of domain walls in chiral p-wave superconductors¹ KIRILL SAMOKHIN, Brock University — Two-fold degeneracy of the ground state of chiral p -wave superconductors or superfluids with $k_x \pm ik_y$ order parameter makes it possible for domain walls separating regions of opposite chirality to exist. In addition to affecting the scattering spectrum in the bulk, the domain walls also carry localized low-energy fermionic quasiparticles, whose energy essentially depends on the Josephson phase difference between the domains. Dynamical properties of the domain walls are determined by the transitions between different quasiparticle states induced by the domain wall motion. We present a microscopic calculation of the viscous friction coefficient and the effective mass of the domain walls.

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