Effect of kinematic spin polarization in half-quantum vortex state on its stability\textsuperscript{1} VICTOR VAKARYUK, DAVID FERGUSON, RAFFI BUDAKIAN, University of Illinois at Urbana-Champaign — It has been shown recently [1] that a half-quantum vortex state in systems with equal spin pairing possesses, in addition to a regular spin polarization produced by the Zeeman coupling, a spin polarization of purely kinematic nature. We discuss implications of such kinematic spin polarization on the stability of the half-quantum vortex and its possible experimental signatures in candidate equal spin pairing systems such as Sr\textsubscript{2}RuO\textsubscript{4}.


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