

Abstract Submitted  
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**Effect of kinematic spin polarization in half-quantum vortex state on its stability**<sup>1</sup> 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  $\text{Sr}_2\text{RuO}_4$ .  
[1] V. Vakaryuk and A. J. Leggett, Phys. Rev. Lett. **103**, 057003 (2009).

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