

Abstract Submitted  
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**Superfluid Spin Transport through Easy-Plane Ferromagnetic Insulators**<sup>1</sup> SO TAKEI, YAROSLAV TSERKOVNYAK, University of California Los Angeles — Superfluid spin transport — dissipationless transport of spin — is theoretically studied in a ferromagnetic insulator with easy-plane anisotropy. We consider an open geometry where spin current is injected into the ferromagnet from one side by a metallic reservoir with a nonequilibrium spin accumulation, and ejected into another metallic reservoir located downstream. Spin transport through the device is studied using a combination of magnetoelectric circuit theory, Landau-Lifshitz-Gilbert phenomenology, and microscopic linear-response theory. We discuss how spin superfluidity can be probed using a magnetically-mediated electron-drag experiment.

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So Takei  
University of California Los Angeles

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