

Abstract Submitted
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Control of Spin-Triplet Josephson Junctions with Perpendicular Anisotropy¹ ERIC GINGRICH, Michigan State University, SIMON DIESCH, University of Konstanz, WILLIAM PRATT, NORMAN BIRGE, Michigan State University — We present recent work on S/F'/F/F''/S Josephson Junctions with the magnetic multilayer Ni/[Co/Ni]_n as the central F layer [1]. This multilayer possesses strong intrinsic perpendicular (out-of-plane) anisotropy at Co and Ni thicknesses of a few monolayers. If a hard ferromagnet is used for F', and a softer ferromagnet is used for F'', both with magnetizations in plane, the direction of the F'' layer's magnetization is predicted to control the state of the junction [2]. We are fabricating such junctions with the goal of controllably switching the junction between the 0 and π states. By integrating these junctions in a SQUID device, a measurement of the 0 and π state of the junction can be performed. We will report on our progress.

[1] E.C. Gingrich, P. Quarterman, Y. Wang, R. Loloee, W.P. Pratt, and N.O. Birge, arXiv:1208.3118v1.

[2] A.F. Volkov, F.S. Bergeret, and K.B. Efetov, Phys. Rev. Lett. **90**, 117006 (2003).

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