

Abstract Submitted  
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**Andreev Reflection Measurement of Spin Polarization in GaMnAs** KHALID EID, DIANA DAHLIAH, ROBERT TOLLEY, TAYLOR REID, Miami University, XINYU LIU, JACEK FURDYNA, University of Notre Dame — Current measurement geometries in high-resistivity materials suffer from a large extra resistance that comes from the bulk of the ferromagnet. We use the Circular Transfer Line Method (CTLTM) [1-2] to measure the Andreev reflection effect at GaMnAs/superconductor interface and to extract GaMnAs spin polarization. This technique works especially well for high-resistivity films. It has multiple advantages over the point contact and planar geometries, like eliminating the extra resistance contribution from the bulk, producing actual conductance values and not normalized conductance, and eliminating the broadening of the superconducting gap. The effect of the Schottky barrier at the GaMnAs/superconductor interface plays a crucial role and will also be discussed.

[1] K.F. Eid et al, Appl. Phys. Lett 100, 212403 (2012)

[2] K.F. Eid et al, IEEE Trans. Magn. 47, 2636 (2011)

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