Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Stray field and superconducting spin valve effect in $La_{0.7}Ca_{0.3}MnO_3/YBa_2Cu_3O_{7-\delta}$ bilayers[1] T. HU, H. XIAO, C. C. ALMASAN, Department of Physics, Kent State University, Kent, Ohio, 44242, USA, C. VISANI, Z. SEFRIOUI, J. SANTAMARIA, GFMC, Departamento Fisica Aplicada III, Universidad Complutense de Madrid, 28040 Madrid, Spain — Electronic transport and magnetization measurements were performed on $La_{0.7}Ca_{0.3}MnO_3/YBa_2Cu_3O_{7-\delta}$ (LCMO/YBCO) bilayers below the superconducting transition temperature. Two types of angular dependent magnetoresistance (MR) behavior were observed. One MR comes from the motion of weakly pinned vortices, which are induced by the out-of-plane stray field of the domain walls. The other MR depends on the relative angle between the magnetization at the LCMO/YBCO interface and the magnetization present in the interior of the LCMO layer and gives rise to the superconducting surface spin valve effect.

[1]This research was supported by the National Science Foundation under Grant No. DMR-0705959 at KSU and MCYT MAT 2005-06024 at U. Complutense de Madrid.

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Date submitted: 20 Nov 2009 Electronic form version 1.4