Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Influence of growth field on Py, Fe3O4, and Py/Cr/Fe3O4 spin-valves[1] PRIYANGA JAYATHILAKA, CHRIS BAUER, DARYL WILLIAMS, CASEY W. MILLER — Thin films of Ni80Fe20, Fe3O4, as well as Py/Cr/Fe3O4 spin valves, have been grown with and without magnetic fields applied during the deposition, and their magnetotransport properties have been studied at room temperature. The applied field induces an anisotropy in both single layer films, which causes notable differences in their anisotropic magnetoresistance. In the spin valve system, the applied field enables the parallel and antiparallel states to be more well-defined, which reveals a possible giant magnetoresistance in the system. The origin of this signal is likely the interaction of electrons that have been polarized by spin-dependent reflection from the Cr/Fe3O4 interface with the Ni80Fe20 interface

[1]This work was supported by the National Science Foundation

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Date submitted: 09 Feb 2010 Electronic form version 1.4