Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Magnetic ordering temperatures at oxide interface $LaAlO_3/SrTiO_3$ TOMOYA ASABA, GANG LI, BEN LAWSON, FAN YU, ZIJI XIANG, COLIN TINSMAN, Univ of Michigan - Ann Arbor, HAROLD HWANG, Stanford University, JOCHEN MANNHART , Max Planck Institute for Solid State Research, LU LI, Univ of Michigan - Ann Arbor — A number of recent experiments demonstrate the existence of magnetic ordering at the conductive oxide interface $LaAlO_3/SrTiO_3$ (LAO/STO). Understanding the origin of this magnetism requires determination of the magnetic state at elevated temperature. In this study we carried out torque magnetometry measurements to track the magnetic transition temperatures in the interface samples with different LAO thickness. The magnetic ordering temperature is found to vary greatly as the thickness of LAO changes. . Our results suggest that the growth condition such as LAO thickness affects the magnetic coupling of the interface magnetic moments.

Tomoya Asaba
Univ of Michigan - Ann Arbor

Date submitted: 14 Nov 2013 Electronic form version 1.4