Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Understanding Magnetic Proximity in Topological Insulators with Raman[1] GAVIN OSTERHOUDT, KENNETH BURCH, Boston Coll, JAGADEESH MOODERA COLLABORATION, FERHAT KATMIS COLLABORATION — The magnetic proximity effect in Topological Insulators has been extensively studied due to predictions of quantum anomalous Hall effect and numerous applications in spintronics. Nonetheless, the origin of the proximity effect remains unclear. To uncover the role of the lattice we have used Raman scattering to investigate the magnetic proximity effect of thin film ferromagnetic insulator EuS grown by MBE on the topological insulator Bi_2Se_3. Through these measurements we are able to probe the magnetic fluctuations in the EuS. We will discuss the results of our measurements and their implications for the role of strain in ferromagnetic/topological insulator heterostructures.

[1]We gratefully acknowledge support from the National Science Foundation (Grant No. DMR-1410846)

Gavin Osterhoudt
Boston Coll

Date submitted: 05 Nov 2015 Electronic form version 1.4