

Abstract Submitted  
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**Absence of Magnetic Fluctuation Induced Raman Scattering in EuS/Bi<sub>2</sub>Se<sub>3</sub> Heterostructures**<sup>1</sup> GAVIN OSTERHOUDT, RYAN CARELLI, Boston Coll, FERHAT KATMIS, JAGADEESH MOODERA, Massachusetts Institute of Technology, KENNETH BURCH, Boston Coll — We present our recent Raman scattering results from EuS/Bi<sub>2</sub>Se<sub>3</sub> heterostructures which, surprisingly, reveal an absence of magnetic fluctuations in the EuS. Previous experiments have indicated that such heterostructures may indeed produce room temperature ferromagnetism in EuS. We will discuss the possible mechanisms which could explain the absence of magnetic fluctuation induced Raman scattering in our thin films. Furthermore, through the same Raman measurements we are able to investigate the role of interfacial strain in these heterostructures.

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