

Abstract Submitted  
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**Low temperature magnetic characterization of  $\text{EuO}_{1-x}$** <sup>1</sup> GAURAB RIMAL, JINKE TANG, University of Wyoming — EuO is a widely studied magnetic semiconductor. It is an ideal case of a Heisenberg ferromagnet as well as a model magnetic polaron system. The interesting aspect of this material is the existence of magnetic polarons in the low temperature region. We study the properties of oxygen deficient EuO prepared by pulsed laser deposition. Besides normal ferromagnetic transitions near 70K and 140K, we observe a different transition at 16K. We also observe a shift in the coercivity for field cooling versus zero field cooling. Possible mechanisms driving these behaviors will be discussed.

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Gaurab Rimal  
University of Wyoming

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