

Abstract Submitted
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Doping dependence of the gap of cobalt doped BaFe_2As_2 from Point Contact Spectroscopy¹ JOHN TIMMERWILKE, Department of Physics, University of Florida, Gainesville, FL 32611, BRENDAN FAETH, Department of Physics, University of Florida, Gainesville, J.S. KIM, G.R. STEWART, AMLAN BISWAS, Department of Physics, University of Florida, Gainesville, FL 32611 — Point-contact spectroscopy (PCS) is a unique method which has been used for investigating the gap/s of various superconductors including the iron based superconductors. PCS measurements are capable of systematically identifying the size and number of gaps in a superconductor, certain features of various gap symmetries and gap anisotropy. We have performed a-b plane point contact measurements on single crystal $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ samples in the under, optimal, and over-doped cases. Previously we had shown clear evidence of two full gaps in the optimally-doped case. The under and over-doped crystals do not show such definitive evidence of two gaps. The changes in anisotropy and weight of the gaps for these dopings will be presented.

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