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Andreev Reflection Spectroscopy on $BaFe_{1.84}Co_{0.16}As_2$ Epitaxial Thin Films[1] GOUTAM SHEET, Department of Physics and Astronomy, Northwestern University, MANAN MEHTA, D. DIKIN, Department of Physics and Astronomy, Northwestern University, S. LEE, Department of Materials Science and Engineering, University of Wisconsin-Madison, J. JIANG, National High Magnetic Field Laboratory, Florida State University, C.W. BARK, Department of Materials Science and Engineering, University of Wisconsin-Madison, J.D. WEISS, E.E. HELLSTROM, D.C. LARBALESTIER, National High Magnetic Field Laboratory, Florida State University, M.S. RZCHOWSKI, Physics Department, University of Wisconsin-Madison, C.B. EOM, Department of Materials Science and Engineering, University of Wisconsin-Madison, V. CHANDRASEKHAR, Department of Physics and Astronomy, Northwestern University — We have performed point-contact Andreev reflection spectroscopy on high quality epitaxial thin films of $BaFe_{1.84}Co_{0.16}As_2$. In the Andreev reflection spectra, we observe the existence of multiple features which can be attributed to multiple order parameters in the material. Most of the features evolve with temperature and become less prominent close to the critical temperature. However, certain features survive up to a temperature considerably larger than the critical temperature. We discuss this observation in the light of other possible energy scales in this material.

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Goutam Sheet
Department of Physics and Astronomy,
Northwestern University

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