Abstract Submitted
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Point-Contact Spectroscopy Study of the Ferromagnetic Superconductor $ZrZn_2$[1] M.A. TANATAR*, C.S. TUREL, J.Y.T. WEI, Department of Physics, University of Toronto, R.W. HILL, Department of Physics, University of Waterloo, S.M. HAYDEN, H.H. Wills Physics Laboratory, University of Bristol — Superconductivity and ferromagnetism are competing orders, but in $ZrZn_2$ evidence for superconductivity has been observed in the ferromagnetic state [1]. We have performed point-contact spectroscopy measurements on single-crystal samples of $ZrZn_2$ using Au and Pt-Ir tips. We present differential conductance spectra measured down to 100 mK, along with their magnetic-field evolution. Implications of our data on possible pairing symmetry [2] and pairing mechanism [3] will be discussed. *Permanent address: Inst. Surface Chemistry, N.A.S. Ukraine, Kyiv, Ukraine. [1] C. Pfleiderer et al. Nature **412,** 58 (2001). [2] M.B. Walker and K.V. Samokhin, Phys. Rev. Lett. **88,** 207001 (2002). [3] D.J. Singh and I.I. Mazin Phys. Rev. Lett. **88,** 187004 (2002).

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