Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Isotropic superconducting gap structure in BaFe1.90Pt0.10As2 from low temperature thermal conductivity[1] KEVIN KIRSHENBAUM, Center for Nanophysics and Advanced Materials, Dept. of Physics, University of Maryland, College Park, SHANTA SAHA, National Institute for Standards and Technology, Gaithersburg, MD, STEVEN ZIEMAK, RONGWEI HU, Center for Nanophysics and Advanced Materials, Dept. of Physics, University of Maryland, College Park, JEAN-PHILIPPE REID, RYAN GORDON, LOUIS TAILLEFER, Universite de Sherbrooke, Sherbrooke, QC, JOHNPIERRE PAGLIONE, Center for Nanophysics and Advanced Materials, Dept. of Physics, University of Maryland, College Park — In this study we present measurements of thermal transport down to 50 mK in single crystals of the iron-based superconductor BaFe1.90Pt0.10As2 with Tc = 23 K [1]. Magnetic fields up to 15 T were applied along the c-axis of the crystal as well as along the basal plane direction to probe the anisotropy of the superconducting gap. The lack of any significant residual electronic term in thermal conductivity for all field directions and values confirms the absence of nodes and places limits on the depth of gap minima in this system.

[1] S.R. Saha et al, JPCM 22 072204 (2010).

[1]This work was supported by AFOSR-MURI FA9550-09-1-0603 and by an ICMR fellowship.

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Date submitted: 26 Nov 2012 Electronic form version 1.4