

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

The Superconducting State of $\text{Pr}_{2-x}\text{Ce}_x\text{CuO}_4$: Tunneling study¹

YORAM DAGAN, Tel Aviv University, ROY BECK, University of California, Santa-Barbara, RICHARD GREENE, University of Maryland — We report a tunneling study between the electron-doped high T_c cuprate superconductor $\text{Pr}_{2-x}\text{Ce}_x\text{CuO}_4$ and Lead as a function of doping, temperature and magnetic field. The temperature dependence of the gap follows the BCS prediction. Our data fits a nonmonotonic d -wave order parameter for the whole doping range studied. From our data we are able to conclude that the electron-doped cuprate $\text{Pr}_{2-x}\text{Ce}_x\text{CuO}_4$ is a weak coupling, BCS superconductor in the dirty limit. Phys. Rev. Lett. 99, 147004 (2007)

¹Support from NSF Grant No. DMR 0352735 and from the German-Israeli Foundation is acknowledged

Yoram Dagan
Raymond and Beverly Sackler School of
Physics and Astronomy, Tel Aviv University

Date submitted: 19 Dec 2007

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