

Abstract Submitted
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Fermi surface reconstruction of electron-doped $\text{La}_{2-x}\text{Ce}_x\text{CuO}_4$ from transport experiments¹ TARAPADA SARKAR, PAMPA RANI MANDAL, JOSHUA HIGGINS, YI ZHAO, Center for Nanophysics & Advanced Materials, University of Maryland, College Park, Maryland 20742, USA., HESHAN YU, KUI JIN, Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, Beijing 100190, China, RICHARD L. GREENE, Center for Nanophysics & Advanced Materials, University of Maryland, College Park, Maryland 20742, USA. — We report Hall Effect, Nernst Effect, and resistivity measurements on $\text{La}_{2-x}\text{Ce}_x\text{CuO}_4$ (LCCO) thin films as a function of doping and temperature for magnetic fields up to 14T. A change in the sign of the low temperature Hall coefficient at 2K suggests that the Fermi surface reconstructs at a critical doping of $\text{Ce}= 0.14$. This agrees with some prior high field Hall Effect measurements of the LCCO system [*K. Jin, et al. PRB 78, 174521 (2008)*]. In addition, we find a large change in the carrier number at this doping, similar to that seen in PCCO films [*Y. Dagan, et al. Phys. Rev. Lett. 92, 167001 (2004)*] and hole-doped cuprates [*S. Badoux, et al. Nature 531, 210-214 (2016)*]. The implications of these results for quantum critical behavior in the electron-doped cuprates will be discussed.

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