Abstract Submitted
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Doping dependence of the upper critical field in the electron-doped cuprate superconductor PCCO via the Nernst effect F. LALIBERTÉ, F.F. TAFTI, M. DION, J. GAUDET, P. FOURNIER, L. TAILLEFER, Université de Sherbrooke — Superconducting fluctuations are known to persist above the critical temperature T_c and above the upper critical magnetic field H_{c2}. The Nernst effect was shown to be a powerful probe of these fluctuations [1], in quantitative agreement with theory [2]. Here we report a detailed study of the Nernst effect in high-quality films [3] of the electron-doped cuprate superconductor PCCO, from which we extract H_{c2} as a function of doping. We find that H_{c2} follows the dome-like doping dependence of T_c, revealing that the pairing strength decreases with underdoping, as it does in hole-doped cuprates [4].

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