

Abstract Submitted  
for the MAR10 Meeting of  
The American Physical Society

**Pseudogap temperature from quasiparticle Nernst effect in La-based cuprates** O. CYR-CHOINIÈRE, R. DAOU, F. LALIBERTÉ, D. LE BOEUF, N. DOIRON-LEYRAUD, J. CHANG, S. PYON, T. TAKAYAMA, H. TAKAGI, Y. TANAKA, L. TAILLEFER — We compare the Nernst effect in stripe ordered Eu-doped  $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$  (Eu-LSCO) and similarly hole-doped LSCO. We show that at high temperatures they have essentially the same temperature dependence, showing an upturn and sign change starting at a temperature  $T_\nu$ . Relating  $T_\nu$  to the pseudogap temperature  $T^*$ , we present a general phase diagram for LSCO showing that  $T^*$  decreases as the doping increases until it is driven to zero within the superconducting dome. We compare the phase diagram and the  $T^*$  line to the similar ones of  $\text{YBa}_2\text{Cu}_3\text{O}_y$  shown in a recent study [1].

[1] R. Daou et al., arXiv:0909.4430

Olivier Cyr-Choinière  
Département de physique, Université de Sherbrooke

Date submitted: 17 Dec 2009

Electronic form version 1.4