

Abstract Submitted  
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**Doping evolution of nodal quasiparticles in the cuprate superconductor YBCO via low-temperature thermal conductivity** SAMUEL RENE DE COTRET, J.-PH. REID, N. DOIRON-LEYRAUD, L. TAILLEFER, University of Sherbrooke, Sherbrooke, Canada, B.J. RAMSHAW, R. LIANG, D.A. BONN, W.N. HARDY, University of British Columbia, Vancouver, Canada — The thermal conductivity of the cuprate superconductor  $\text{YBa}_2\text{Cu}_3\text{O}_y$  was measured at temperatures down to  $T \sim 50$  mK in magnetic fields up to  $H = 15$  T on high-quality single crystals with a hole doping ranging from  $p = 0.08$  to  $p = 0.18$ . The residual linear term at  $T \rightarrow 0$ , a direct measure of the nodal quasiparticle velocities [1], is tracked as a function of doping, and compared to recent, high-resolution ARPES measurements of the Fermi velocity and gap magnitude as a function of doping, in the related cuprate superconductor  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$  [2].

[1] D.G. Hawthorn *et al.*, Phys. Rev. B **75**, 104518 (2007).

[2] I.M. Vishik *et al.*, Phys. Rev. Lett. **104**, 207002 (2010).

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