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Probing the nodal metal in LBCO with heat transport RAMZY DAOU, LOUIS TAILLEFER, Universite de Sherbrooke, QIANG LI, GENDA GU, Brookhaven National Laboratory — The cuprate superconductor $La_xBa_{2-x}CuO_4$ (LBCO) has a near-zero minimum in the superconducting transition temperature at $x = 1/8$. This is accompanied by the emergence of static one-dimensional spin and charge ordering in "stripes" [1]. Spectroscopic measurements at the same doping in the normal state have shown that a gap with d-wave symmetry is present in the single particle spectrum [2]. One possible origin of this gap is the destruction of the coherence of the superconducting ground state by phase fluctuations, suppressing T_c while leaving gapped but "uncondensed" Cooper pairs and nodal quasiparticles. We present measurements of the thermal conductivity of LBCO at very low temperature in both superconducting and field-induced nodal metal states. [1] P. Abbamonte et al., *Nature Physics* **1**, 155 (2005) [2] T. Valla et al., *Science.* 10.1126/1134742 (2006)

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