Abstract Submitted for the MAR08 Meeting of The American Physical Society

Thermal transport at a field-tuned quantum critical point in CeCoIn5 JEAN PHILIPPE REID, MAKARIY TANATAR, Univ of Sherbrooke, JOHNPIERRE PAGLIONE, Univ of Maryland, C. PETROVIC, Brookhaven National Laboratory, L. TAILLEFER, Univ of Sherbrooke, J. PAGLIONE COLLAB-ORATION, C. PETROVIC COLLABORATION — The heavy-fermion metal CeCoIn5 exhibits a field-tuned quantum critical point which coincides with the upper critical field for superconductivity for directions of magnetic field both parallel [1] and perpendicular to the tetragonal c-axis of the material [2]. Here we report a study of this field-tuned critical point using electrical resistivity and thermal conductivity measurements performed in magnetic fields parallel to the conducting plane. [1] J. Paglione et al., Phys. Rev. Lett. 91, 246405 (2003). [2] F. Ronning et al., Phys. Rev. B. 71, 104528 (2005).

Jean Philippe Reid Univ of Sherbrooke

Date submitted: 06 Feb 2008

Electronic form version 1.4