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Testing the validity of the Fisher-Langer relation in the vicinity of a quantum critical point¹ TIMOTHY ELMSLIE, DERRICK VANGENNEP, DANIEL JACKSON, DMITRII MASLOV, JAMES HAMLIN, University of Florida — Fisher and Langer pointed out that, in the vicinity of a magnetic order-disorder transition, the magnetic part of the specific heat and the temperature derivative of the electrical resistivity should be proportional to each other. This behavior has been observed in a wide variety of systems. However, it is unknown if this scaling relation remains valid as the system is tuned towards a quantum critical point. I will present our recent experiments aimed at testing the validity of the Fisher-Langer relation in the vicinity of a disorder-driven ferromagnetic quantum critical point.

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