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Transport properties in magnetic Griffiths phases DAVID NOZADZE, THOMAS VOJTA, Department of Physics, Missouri University of Science and Technology, Rolla, MO 65409 — We study the temperature dependence of the electrical resistivity in the quantum Griffiths phases associated with the ferromagnetic and antiferromagnetic quantum phase transitions in itinerate systems. The resistivity is calculated by means of the semi-classical Boltzmann equation. We show that the contribution to the resistivity due to the scattering by spin-fluctuations in rare regions varies as T^λ with the logarithmic correction for both ferromagnetic and antiferromagnetic systems. Here λ is the usual Griffiths exponent which takes the value 0 at the critical point and increases with the distance from the criticality. We also consider other transport properties such as thermal resistivity, thermopower and Peltier coefficient.

David Nozadze
Department of Physics, Missouri University of Science
and Technology, Rolla, MO 65409

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