

Abstract Submitted
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Magnetism, disorder and non-Fermi liquid behavior in a $\text{Na}_{0.78}\text{CoO}_2$ single crystal¹ ALEXANDER FEHER, A. ZORKOVSKA, M. KAJNAKOVA, A. BARAN, Centre of Low Temp. Physics, P. J. Safarik Univ. and Inst. Exp. Physics SAS, Kosice, Slovakia, C.T. LIN, J.P. PENG, Max-Planck-Institute for Solid State Research, Stuttgart, Germany, J.S. XIA, L. YIN, M.W. MEISEL, NHMFL and Dept. Physics, Univ. Florida — In recent years, significant interest has been devoted to high Na-doped cobaltates, in which the competition between geometric frustration, strong electronic correlations, and magnetic interactions leads to disorder, either correlated or non-correlated, and a variety of ground states with possible QPTs are expected. Specific heat down to 100 mK and the ac-susceptibility at several frequencies and temperatures, down to 40 mK and in fields up to 10 T, of a layered $\text{Na}_{0.78}\text{CoO}_2$ single crystal have been measured. The results will be discussed in terms of disorder induced non-Fermi liquid behavior, related to the spin dynamics of the ferromagnetic nano-domains coexisting with antiferromagnetically correlated regions in the system.

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