

Abstract Submitted
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Non Fermi liquid properties of Ni-V close to the ferromagnetic quantum critical point¹ ALMUT SCHROEDER, SARA UBAID-KASSIS, BRENDAN WYATT, Kent State University, Kent OH, THOMAS VOJTA, Missouri University of Science and Technology, Rolla MO — Resistivity (ρ) and magnetization (M) data of the d-metal alloy $\text{Ni}_{1-x}\text{V}_x$ are presented in the vicinity of the critical vanadium concentration $x_c \approx 11\%$ where the onset of long-range ferromagnetic (FM) order is suppressed to zero temperature. Above x_c the temperature (T) dependence of the magnetic susceptibility is best described by simple nonuniversal power laws (e.g. $M/H(T, H \rightarrow 0) \sim T^{\alpha-1}$). Also the resistivity displays power laws ($\Delta\rho \sim T^n$). Both exponents $\alpha(x)$ and $n(x)$ vary with x displaying signatures of a disordered quantum phase transition in a metal very different than of a clean 3D FM.

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