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Evolution of magnetic order in the anisotropic Kondo insulator Ce(Ni,Cu)Sn ADANE GEBRETSADIK, ALMUT SCHROEDER, Kent State University, T. MIOKOVIC, R. VOLLMER, H. V. LOHNEYSEN, KIT, Y. ECHIZEN, T. TAKABATAKE, Hiroshima Univ, J. LYNN, NIST, G. AEPPLI, Univ College London, E. BUCHER, Univ of Konstanz — The characteristic feature of a Kondo insulator is the energy gap forming in the low temperature (T) coherent regime. An example is CeNiSn, which exhibits sharp gaps at particular wave vectors in the magnetic excitation spectrum as observed by neutron scattering and reduced low energy excitations as observed in thermodynamic quantities such as specific heat (C) and magnetic susceptibility (χ) best described in terms of a pseudo gap due to the anisotropic hybridization in this compound. We present C, χ and neutron data of CeNi_{1-x}Cu_xSn to see how magnetic order forms in such an anisotropic Kondo insulator upon doping. The magnetic gap seems to have collapsed already for x=0.13 as the magnetic correlation have become quasielastic. The long range magnetic order below T_N =1.4K is described by the same wave vector as the dominant inelastic correlations in x=0. For x=0.078, χ (T) shows still a shoulder at 4K reminiscent of a pseudo gap. At lower T, χ (T) and C(T) exhibit a maximum at T_N =0.4K indicating magnetic order, confirmed by neutron scattering. The magnetic order occurs at x_c =0.07 before the gap vanishes at x_g ≈0.1. The transition at x_c shows signs of a disordered quantum phase transition.

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