

STUDY OF MAGNETIC CONTRIBUTION TO THE HEAT CAPACITY OF YbCu_4Ni

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Strong correlation between electrons, due to hybridization of f-electrons and conduction electrons, can cause a number of outstanding low temperature features. Among the rare earths, a large number of these phenomena is found for Ce- and Yb - based compounds. The interest in this topic was triggered by the investigation on the heavy fermions YbCu_4T (T = Ag, Au), which crystallize in an ordered derivative of the AuBe₅-type. Recently the new compounds YbCu_4Ni was studied. This compound is a new heavy fermion (HF) member of the series of YbCu_4M (M = metal). In this paper we present the results of study of the magnetic contribution to heat capacity of YbCu_4Ni 0.4 K. We measured the temperature dependence of heat capacity of an isomorphous LuCu_4Ni , in order to determine the magnetic part of entropy. The Schottky anomaly fit allowed us to estimate the CEF splitting.

13.4 cm

Subject category :

1. Strongly Correlated Electrons and High Temperature Superconductivity

Presentation mode :

poster

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9.7 cm