



Kolloquium

Dr. Karol Flachbart
(Slovak Academy of Sciences)

Magnetic ordering in a frustrated fcc-antiferromagnet below and above T_N

We will present results of specific heat, magnetization, electrical resistivity and neutron scattering experiments on frustrated antiferromagnet HoB_{12} above and below Néel temperature. Diffuse neutron scattering patterns indicate that above $T_N = 7.4$ K pronounced correlations between neighboring magnetic moments of Ho-ions appear, similar to one-dimensional magnets. Analogous behavior in 3D systems is not known, although it was predicted by theory. Results below T_N and in applied magnetic field, on the other hand, reveal three amplitude-modulated incommensurate magnetic structures in this compound. The role of various interactions leading to this behavior (above and below T_N) is being discussed. Additional attention is paid also to $\rho(T)$ resistivity dependencies in various magnetic fields close to and above the critical point.

Wann? Freitag 20.10.2006, 14:00 Uhr

Wo? Universität Stuttgart, Raum 2.136