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**Low-energy magnetic excitations in single-crystalline $CeCu_2Ge_2$ in fields up to 10 T** MICHAEL LOEWENHAUPT, IFP/TU Dresden, ASTRID SCHNEIDEWIND, ENRICO FAULHABER, HZB/PANDA, OLIVER STOCKERT, MPI-CPfS —
$CeCu_2Ge_2$ is a magnetically ordered ($T_N$ = 4.1 K) Kondo lattice with a moderate enhanced Sommerfeld coefficient of 140 mJ/molK$^2$. Calculations of the Fermi surface showed that the observed incommensurate antiferromagnetic order can only be explained by involving an itinerant component of the Ce 4f-moments in addition to their local character. We performed low-energy inelastic neutron scattering experiments on a 2 g single crystal of $CeCu_2Ge_2$ using the cold triple-axis spectrometer PANDA at FRM II. Data were taken at 1.5 K and in magnetic fields up to 10 T applied perpendicular to the (110/001) scattering plane. At zero field the magnetic excitations show an energy gap of 0.5 meV at all investigated $\Gamma$ points in the (110/001) plane with similar intensities. Away from the $\Gamma$ points the magnetic excitations become dispersive merging into a band of excitations around 1 meV. For increasing magnetic fields the gap energy decreases indicating opposite action of external and internal fields. The results will be discussed in the framework of local, crystal field related, and non-local, spin-wave-like, magnetic excitations.

Michael Loewenhaupt
IFP/TU Dresden

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