INELASTIC NEUTRON SCATTERING AROUND THE MAGNETIC BRILLOUIN ZONE CENTRE AND AT THE ZONE BOUNDARY IN Mn(18% Cu) ALLOY

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9.7 cm

The temperature dependence of magnetic excitations was studied in the Mn(18% Cu) 70% - single domain sample by inelastic neutron scattering. We observed the magnetic excitations below T_N around the point on the MBZ (magnetic Brillouin zone) boundary, equivalent crystallographically to the MBZ centre ("unfulfilled" MBZ centre) and we were able to separate these excitations from the spin waves observed around the MBZ centre. The intensity of neutrons scattered on these excitations decreases with decreasing temperature below T_N, in a different way than that predicted by the population factor for spin waves. They persist even at 300K, what is far below T_N. We interpret them as dispersionless excitations similar to those observed above the critical temperature.

13.4 cm

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