NEUTRON SCATTERING ANISOTROPY IN PARAMAGNETIC PHASE OF Mn(38%Ni) ALLOY

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The inelastic neutron scattering was studied for 0 - 33 meV energy transfers in the paramagnetic phase of Mn(38%Ni) alloy at LLB, Saclay. The substantial inelastic scattering component found in the vicinity of reciprocal lattice points corresponding to the AF1 structure was anisotropic in reciprocal space yielding anisotropy of the spin diffusion coefficient. The same type of the anisotropy has been found previously for critical scattering due to transverse spin component fluctuations. It is found that the observed anisotropy can be discussed in terms of the localized spin model for the fcc lattice as well as within the phenomenological model of longitudinal spin density waves.

9.7 cm

13.4 cm

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