

Effect of the Dzyaloshinskii-Moriya interaction on the muon spin-lattice relaxation rate in MnSi

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We report measurements of the muon spin-lattice relaxation rate, λ_Z , for the weakly helimagnetic metal MnSi performed at ambient pressure and covering the temperature range from 2 to 280 K. The self-consistent renormalization theory is unable to explain the temperature dependence of λ_Z , in particular far below the ordering temperature and in the critical paramagnetic regime. On the other hand, it seems possible to describe that dependence using two recent theoretical works of S.V. Maleyev which takes into account the Dzyaloshinskii-Moriya interaction.