

## **Magnetic properties and spin kinetics of two-dimensional Heisenberg antiferromagnets**

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### **Abstract**

In this report we present our study of two-dimensional Heisenberg magnets based on the picture of thermally excited skyrmions. The local order parameter, energy spectrum of elementary spin excitations above the skyrmion background, the skyrmion averaged radius and static magnetic susceptibility were obtained by the Green functions method. There was calculated the rate of nuclear relaxation caused by the interaction of nuclear spins with above mentioned spin excitations. The contribution of Moriya-Dzyaloshinskii and anisotropic symmetric interactions into EPR line was considered. A comparison with NMR and neutron scattering experiments in cuprates and with the results obtained by other methods is given. We discuss the consequences of an interaction between skyrmions as the result of the spin fluctuations.

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