

Spectrum of frustrated magnets

Wednesday 25 June 2025 16:00 (30 minutes)

Magnetic frustration, a situation where all interactions in the magnetic Hamiltonian can be realized either from geometry of the lattice, or from anisotropic interactions. In some cases frustration can be strong enough to destroy magnetic long-range order in favor of a quantum disordered “spin liquid” regime. Such a state is highly sought after due to its entanglement and topological excitations. However, in the systems with magnetic order anisotropic interactions may strongly affect its ground state and spectral properties. We are going to show, using several examples, how anisotropic exchanges affect spectrum of magnetic excitations, and how, in turn, inelastic neutron scattering measurements can be used to identify the strength of anisotropic interactions.

Author: Dr MAKSIMOV, Pavel (Joint Institute for Nuclear Research)

Presenter: Dr MAKSIMOV, Pavel (Joint Institute for Nuclear Research)

Session Classification: Wednesday