Contribution ID: **136** Type: **not specified**

Evolution of a skyrmion-like state in antiferromagnetic spinel MnSc2S4

Tuesday, 29 October 2019 14:05 (5 minutes)

MnSc2S4, a magnetically frustrated thiospinel with Mn forming a diamond lattice, shows multistep long-range ordering as a function of applied field, H and temperature, T [1]. We used neutron scattering to map the H(T), T(K) phase boundaries of the triple-k state for the magnetic field applied along (111) and (110) crystallographic directions and Monte Carlo simulations to examine the additional terms in the spin Hamiltonian, e.g. single ion anisotropy and exchange anisotropy that stabilize this fractional skyrmion topological state.
[1] S. Gao, O. Zaharko, V. Tsurkan, et al. Nature Physics,13,157–161 (2016).

Position

Phd

Primary author: Ms KAUR, Guratinder (PhD student)

Co-author: Dr ZAHARKO OKSANA, Zaharko

Presenter: Ms KAUR, Guratinder (PhD student)

Session Classification: Flash talks

Track Classification: Flash talks