

ESM Magnetism School

Neutrons in magnetism (1.5 hours)

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- Principles of neutron diffraction and inelastic scattering.
- Scattering techniques to probe correlations.
- Neutron energy and wavelength.
- Neutron kinematics.
- Diffuse scattering.
- Coherent and incoherent scattering.
- Magnetic form factor.
- Scattering from phonons and magnetic excitations.
- The function $S(Q, \omega)$ and the fluctuation-dissipation theorem.
- Polarized neutrons.
- Some case studies of the power of technique, including in low-dimensional magnetic materials.