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Detailed simulation of neutron scattering from phonons in highly oriented pyrolytic graphite

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Pyrolytic graphite (PG) is often used in neutron instruments, for example much PG is used in the multiplexing indirect Time-of-flight (ToF) spectrometer BIFROST at ESS. To simulate possible background effects of PG, experiments and modeling of the experimental data by the simulation package McStas have been done.

In this poster I will present the progress of modeling of the phonon in PG with Born-von Karman method along with the testing of the component in McStas, including results from theoretical calculations, and from simulations. This new component takes up to fourth-nearest neighbors into consideration, and will help building a better model of PG.

Field of study

Physics of Complex Systems

Supervisor

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Session Classification: Poster session: Enjoy the posters!!!