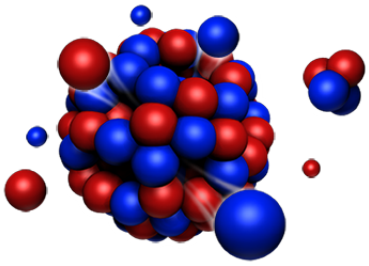

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Onion plots for a quick estimate of moderator-instrument interplay

Wednesday 16 October 2019 13:00 (2 hours)

When designing a neutron scattering instrument, many decisions about the instrument parameters will need to be made for both the primary flight path (e.g. flight path length, maximum divergence of a guide system) and the instrument itself (layout of detectors, pixel size of detector, etc.). McStas offers a way to simulate instrument performance as a function of these parameters, but attempting to fill in the multidimensional matrix of parameters by individual simulations is time-consuming work. We will present an approach using layers of detectors around the sample position to quickly map out e. g. the resolution space of the currently planned Second Target Station moderators as a function of divergence and flight path length. The method relies heavily on McStas'ability to generate Mantid readable NeXus event data files.

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