Contribution ID: **90** Type: **not specified**

Characterization of the instrumental function for wide angle scattering at the P21.2 beamline

The advent of efficient area detectors has accelerated the data acquisition of high-energy wide angle X-ray scattering (WAXS) by several orders of magnitude. By now, detectors with tens of megapixels are available which also enable high-resolution analysis in reciprocal space. To design optimized experiments, the angular resolution function of the instrument (i.e. the beamline configuration including the sample geometry) must be known and taken into account. The project builds on preliminary work to characterize the instrumental function and simulate the sample contribution. The student will get a detailed understanding of the pertinent X-ray optical components and simulations of the sample contribution will be discussed. As result, a strategy to characterize the instrumental function in a numerically efficient manner will be developed and demonstrated for specific setups.

Group

FS-PETRA-D (P21.2)

Project Category

A4. Development of experimental techniques

Special Qualifications

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