



Contribution ID: 10

Type: Poster

McXtrace: simulating X-ray beamlines and experiments, with samples

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McXtrace <https://www.mcxtrace.org> is a general Monte Carlo ray-tracing software for simulation X-ray beamlines and experiments. It benefits from the acquired experience gained from the McStas <https://www.mcstas.org> neutron code.

Compared to other X-ray modelling software (SRW, Shadow, XRT), McXtrace has been built in a modular way, allowing anybody to **contribute** with minimal involvement. Also, **sample models** are included (SAXS, MX, XRD, XAS, Tomography, and soon to come IXS). McXtrace can handle beam coherence, and runs on clusters and GPU's.

We have modelled a set of source-to-detector beam-lines at Synchrotron SOLEIL

- ANATOMIX (tomography)
- DISCO (imaging, UV)
- MARS (powder diffraction, XRD)
- PX2a (protein crystallography, MX)
- ROCK (absorption spectroscopy, XAS)
- SWING (small angle, SAXS)

We shall present the work done in our group, with these BL, as well as contributed components for the package.

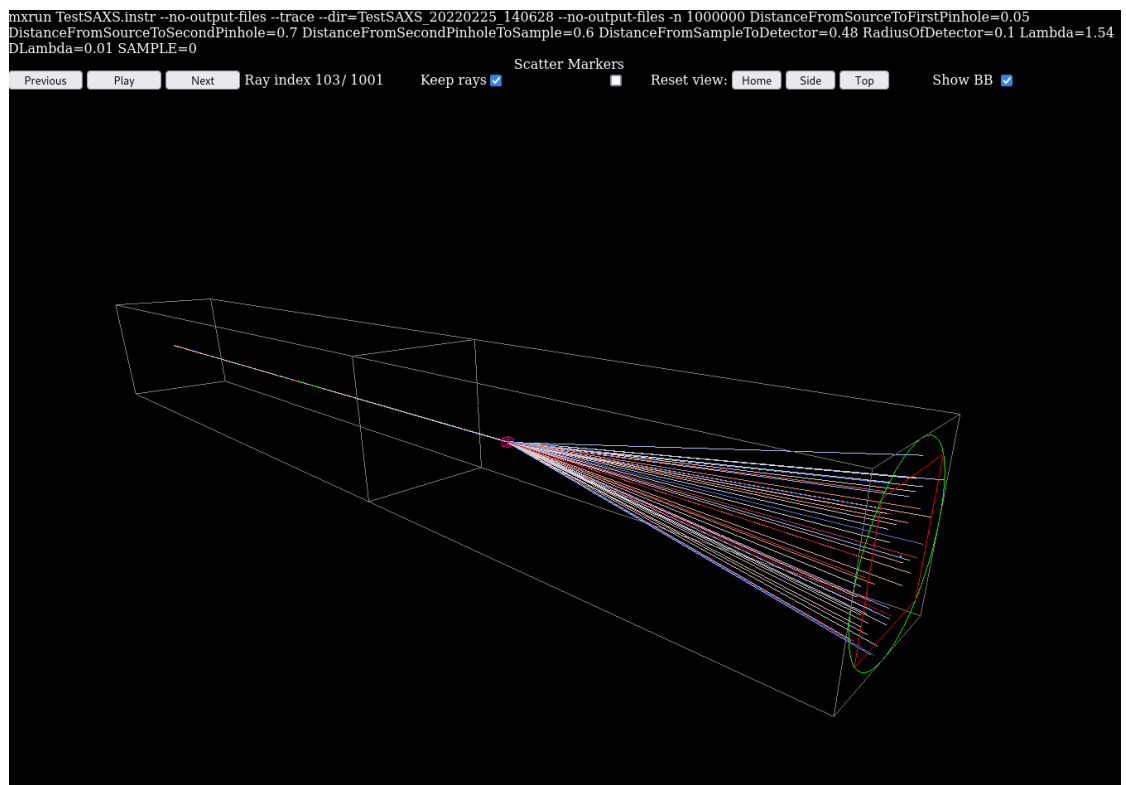


Figure 1: McXtrace: SAXS model

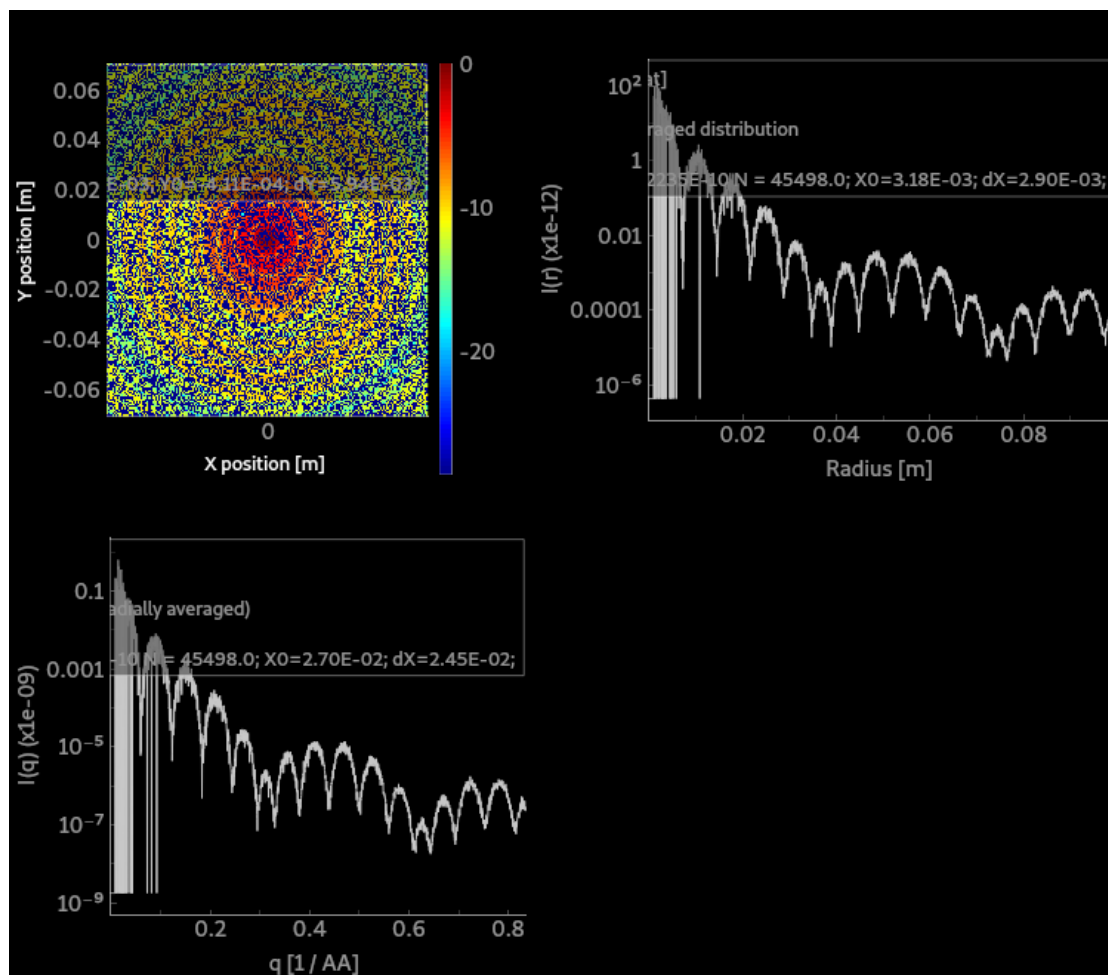


Figure 2: McXtrace: SAXS image

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