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Towards Polarized Backscattering with High resolution

Tuesday 5 December 2023 14:00 (3 hours)

Polarization analysis provides profound additions in knowledge for the field of soft condensed matter research. The ability to study dynamics of incoherent and coherent scattering contributions separately gives unique information on the cooperative vs local dynamics of a system. The JCNS is interested in exploring new instrumentation ideas as a polarization analysis upgrade to our SPHERES backscattering instrument and new ideas for the proposed High-brilliance Source (HBS). In particular we will discuss the current concepts on ways of achieving polarization analysis for the high resolution regime, i.e. $\Delta E < 1\mu$ eV on a traditional backscattering instrument such as SPHERES at MLZ and point out the differing instrumental challenges and application compared to near-backscattering type spectrometers being proposed for pulsed sources.

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