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NMX, a long neutron beamline at the European Spallation Source

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NMX, the neutron macromolecular crystallography beamline, with its 157m distance between neutron source and sample, is one of the long instruments about to enter into commissioning phase with neutrons at the European Spallation Source in Lund. While the neutron shielding system, 3 chopper disks and more than 150m of finely aligned neutron guide mirrors safely transport a tailored beam to the sample position, the end-station delivers extended automation capability to the experiment: As a robotic goniometer exchanges, positions, precisely aligns and orients the crystal sample, three industrial robots arrange the bespoke neutron detectors to optimize neutron scattering detection. Although the scientific technique has similarities with synchrotron MX beamline, some engineering challenges are specific to the integration in a modern neutron spallation source.

Footnotes

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Author: APRIGLIANO, Giuseppe (European Spallation Source)

Co-authors: LUNDSTROM, Daniel (European Spallation Source); OKSANEN, Esko (European Spallation

Source; Lund University); CAMILLERI LLEDO, Rosa (European Spallation Source)

Presenter: APRIGLIANO, Giuseppe (European Spallation Source)

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