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[706] AMPLIFY - A Novel Neutron Instrument for Surface Scattering

Tuesday 10 September 2024 15:00 (15 minutes)

Grazing incidence small angle neutron scattering is a powerful techniqu to investigate surface-near lateral structures on the nanometer scale.

We develop a novel instrument concept as part of an investigation into a new guide hall at the PSI SINQ neutron source. The Adjustable Monochromator to Perform Liquid grazing Incidence, Focused or magnetic Yoneda scattering (AMPLIFY) makes use of two parabolic multilayer monochromators to provide a tunable wavelength resolution between 2% and 10%.

We have compared the expectec instrument performance with a SANS-like configuration. For collimations in the range of 5m to 20m AMPLIFY can reach similar or better angular resolution with slightly higher intensity and more homogenous beam profile.

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