

The New Beamline for Neutron Optics and other Approaches BOA

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The purpose of the instrument is to test new kinds of neutron optics and other applications e.g. in the field of neutron imaging and detector development.

Presently the neutron beamline BOA is in the final commissioning phase at PSI/SINQ. The beamline is a redesign of the former fundamental physics instrument FUNSPIN. BOA is a 18 m long instrument located at beam channel 51 looking on the SINQ cold source.

The existing primary polarization of the former FUNSPIN instrument is not changed because research with polarized neutrons is one of the key interests of the neutron community. The position of the beamline close to the cold source effects the performance of the instrument: The measured polarized neutron flux is around $2 \times 10^8 \text{ n (cm}^2 \text{ s mA)}^{-1}$. The secondary instrument is equipped with three turn able axes with flexible translation tables and aperture units. The maximum available space along the beam path is 12 m. An area sensitive CCD-camera system, a He-3 2d PSD neutron detector and a single He-3 neutron detector are available for the data acquisition.

Primary author: Dr PANZNER, Tobias (Paul Scherrer Institut , LDM)

Co-authors: Dr HAUTLE, Patrick (Paul Scherrer Institut , LDM); Dr FILGES, Uwe (Paul Scherrer Institut , LDM)

Presenter: Dr PANZNER, Tobias (Paul Scherrer Institut , LDM)

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