Contribution ID: **84** Type: **Instruments**

SPODI multidetector upgrade

Wednesday, 26 April 2023 16:00 (30 minutes)

Historically high-resolution neutron diffractometers create the large portion of scientific output at large scale facilities. This holds true for both steady-state and pulsed neutron sources, as reflected in the publication statistics arising from monochromatic (D2B, BT1, ECHIDNA) and time-of-flight (POWGEN, HRPD, S-HRPD) high-resolution machines. Instrument SPODI fits well into the selection of high-resolution neutron diffractometers in terms of the resolution, performance, user request, output etc.
After almost 20 years of successful operation the instrument upgrade is proposed in two stages. Transfer of FIREPOD and corresponding upgrade of shielding, primary and secondary optics at SR8 will bring the neutron optics at SPODI to the modern state, creating the best compromise between the achieved neutron flux at the sample position and the Q-resolution in the broad range of momentum transfer. If the efficiency of SPODI data collection is aimed to be increased, only the remaining option\target is the modification of SPODI multidetector, which is the topic of the current contribution.

Primary author: SENYSHYN, Anatoliy

Presenter: SENYSHYN, Anatoliy

Session Classification: Structure