Contribution ID: **90** Type: **Poster**

MIASANS at the longitudinal neutron resonant spin echo spectrometer RESEDA

Friday 9 December 2022 15:30 (1h 30m)

The RESEDA (Resonant Spin-Echo for Diverse Applications) instrument has been optimized for neutron scattering measurements of quasi-elastic and inelastic processes over a wide parameter range. One spectrometer arm of RESEDA is configured for the MIEZE (Modulation of Intensity with Zero Effort) technique, where the measured signal is an oscillation in neutron intensity over time prepared by two precisely tuned radio-frequency (RF) flippers. With MIEZE, all of the spin-manipulations are performed before the beam reaches the sample, and thus the signal from sample scattering is not disrupted by any depolarizing conditions there (i.e. magnetic materials and fields). The MIEZE spectrometer is being further optimized for the requirements of small-angle neutron scattering (MIASANS), a versatile combination of the spatial and dynamical resolving power of both techniques. We present the current status of (i) newly installed superconducting solenoids as part of the RF flippers to significantly extend the dynamic range (ii) development and installation of a new detector on a translation stage within a new larger SANS-type vacuum vessel for flexibility with angular coverage and resolution, and (iii) efforts to reduce background.

Primary authors: LEINER, Jonathan (Technical University of Munich); FRANZ, Christian; JOCHUM, Johanna K.; PFLEIDERER, Christian

Presenter: LEINER, Jonathan (Technical University of Munich)

Session Classification: Poster Session

Track Classification: Neutron Methods