Contribution ID: **73** Type: **Poster**

Imaging from meV to MeV Neutrons at the NECTAR Instrument

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

Located at the SR10 at the FRM II, NECTAR is a versatile instrument and designed for the non-destructive inspection of various objects by means of fission neutron radiography and tomography. Compared to the Z-dependency of X-ray and gamma imaging, fission neutrons have the strong advantage of often providing similar contrast for heavy and light materials. Only few facilities around the world provide access to well collimated fast neutrons, with NECTAR at the FRM II being the only instrument that has a dedicated user program for fast neutron imaging. Aside from fast neutrons, thermal neutron as well as gamma imaging is possible by using different scintillator materials with the same detector system, extending NECTAR's imaging capabilities to different modalities.
Here, we present the most recent upgrades to the NECTAR beam-line, including unparalleled elemental imaging capabilities with examples provided for archaeology, batteries and scintillator materials, as well as recent progress in event-mode imaging with fast neutrons.

Primary author: LOSKO, Adrian (Technische Universität München, Forschungs-Neutronenquelle MLZ (FRMII))

Co-authors: WOLFERTZ, Alexander (TUM FRM2); SOMMER, Lucas; SCHULZ, Michael; KUMAR, Richi

Presenter: LOSKO, Adrian (Technische Universität München, Forschungs-Neutronenquelle MLZ (FRMII))

Session Classification: Poster Session

Track Classification: Neutron Methods