Experts Meeting on Fast Neutron Imaging

Sunday 20 October 2019 - Wednesday 23 October 2019

MLZ Garching

Scientific Program

Neutron sources for fast neutrons

Nuclear reactors
Accelerator based sources
Laser driven sources
Performance
Characterization

Beam formation

Beam geometry
Collimators
Beam scrapers
Filters
Moderators
Beam dump

Neutron detection

Converter reactions
Scintillators
Image detection systems (camera, flat panel, …)
Simulation of the detection process

Applications

Cross-section data for fast neutrons
Contrast mechanism
Examples and results
Quantification

Advanced approaches

Partly moderated beams
Data fusion with different energies of neutrons
Single Event Mode Imaging
Using the gamma component
Monte-Carlo Simulation