IAEA Training Workshop: Advanced Use of Neutron Imaging for Research and Applications: AUNIRA



Contribution ID: 34

Type: Talk

The neutron imaging facility ODIN at the European Spallation Source (ESS)

Friday 1 September 2017 10:00 (45 minutes)

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ODIN (Optical and Diffraction Imaging with Neutrons) is a beamline project at the European Spallation Source (ESS). It is collaboration between the ESS, PSI and TUM, with TUM as lead institution.

ODIN will provide a multi-purpose imaging capability with spatial resolutions down to the μ m range. The pulsed nature of the ESS source will give access to wavelength-resolved information. Different imaging techniques, from traditional attenuation-based imaging to advanced dark field, polarized neutron or Bragg edge imaging, will be available within the full scope of ODIN with unprecedented efficiency and resolution. A summary of the technical full scope and its science application will be given and the updated conceptual instrument design including its challenges, see figure 1, will be presented.



Figure 1: Image

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Session Classification: Friday