

The new Neutron Imaging Beam Line ANTARES at FRM II

Tuesday, 10 September 2013 10:30 (20 minutes)

Neutron imaging is a method which is being used in many different applications in the context of non-destructive testing. After six years of operation during which excellent experiments have been performed, the neutron imaging beam line ANTARES at FRM II has been completely rebuilt in the last two years and is now nearing completion. Together with the rebuild a major upgrade has been performed and the beam line now comes back to operation with new features, lower background and higher flexibility.

ANTARES now offers three separate chambers along the beam. The first chamber contains the collimators, instrument shutter as well as all beam formation devices such as filter crystals, double crystal monochromator, velocity selector, etc.

Following this chamber the user can choose between two experimental chambers. The first one offers a smaller beam for high resolution / high flux and low background experiments with an adjustable L/D ratio of 100 - 3600. A maximum flux of $1.9E9n/cm^2s$ can be achieved for time resolved imaging. The second chamber has a larger beam size and ample space for even large sample environment. Here the L/D ratio can be varied between 200 and 7100.

In this presentation the new ANTARES beam line and its performance and features will be shown.

Primary author: SCHULZ, Michael

Co-authors: SCHILLINGER, Burkhard; Mr BAUSENWEIN, Dominik (TUM/FRM2 ANTARES); SCHMAKAT, Philipp; Mr REIMANN, Tommy (FRM II)

Presenter: SCHULZ, Michael

Session Classification: Facilities I

Track Classification: NINMACH