

# Compact Neutron Imaging System for the Investigation of Large and Dense Objects

*Thursday, 12 September 2013 09:00 (20 minutes)*

The aim of our project - financed by BMBF and undertaken in cooperation by RWTH Aachen University, Forschungszentrum Jülich, and SIEMENS AG - is to study the feasibility of a compact neutron imaging system. The system will be based on a 14 MeV neutron source and an advanced detector system, with the first concept consisting of a commercial aSi-flat-panel-detector linked with an exclusive converter/ scintillator for fast neutrons (currently under development). The compact system could be used for the characterization of large and compact like archaeological or cultural artefacts. Subject matters for the investigation are especially the structure of objects capsuled in concrete, clay or lead matrices. Detailed simulations of the neutron and photon transport are part of the current development program. Experiments are scheduled to start in the middle of 2013. The actual status of the project as well as the application spectrum will be presented.

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