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Neutron imaging of cultural heritage objects at Budapest Neutron Centre

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Both archaeologists and conservators can benefit from the investigations of cultural heritage and art objects carried out by means of neutrons. Inner morphology, provenance, manufacturing techniques, workshop assignment, as well as fake identification, conservation or preservation are the usual questions.

Neutrons are perfect tools of cultural heritage studies due to their deep penetration into the matter, and their non-destructive and non-invasive nature. In particular, classical 2D and 3D neutron imaging techniques (tomography/radiography) as well as the coupled prompt-gamma activation analysis and neutron imaging (PGA-NT) play important role in the careful object characterization. Moreover, the parallel use of neutron and X-ray imaging, as two complementary techniques, is also very informative.

All these methods are available at Budapest Neutron Centre; their recent applications to the cultural heritage science will be presented through case studies.

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