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Assessment of spatial resolution and contrast in 3-dimensions at SANRAD

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Abstract content
 (Max 300 words)

The South African Neutron Radiography (SANRAD) facility at Necsa can perform radiography and tomography. The neutron imaging group operating this facility is part of the International Atomic Energy Agency (IAEA) collaborative research programme aimed at the establishment of international standards in digital thermal neutron imaging. As part of the standardization process, standard test phantoms for spatial resolution and contrast have been developed and round robin tests should be conducted in Switzerland, Indonesia, South Korea, Brazil and South Africa. The standard test phantoms for spatial resolution and contrast have been imaged at SANRAD for characterization of the facility. Spatial resolution and contrast standard test phantoms are physical objects with features designed to test facility capabilities to reveal spatial resolution and contrast properties without any ambiguity. The process of characterization involves design of the experiment, imaging of the test phantoms, processing and analysis of digital images.

This contribution presents results of characterization of the SANRAD facility using spatial resolution and contrast standard test phantoms.

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Prof. Elias Sideras-Haddad, University of the Witwatersrand

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