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First attempts to use the dynamic neutron imaging method

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Marin Dinca

Institute for Nuclear Research, Campului Str., No. 1, POB 78, 115400 Mioveni, Arges County, Romania

Email: marin.dinca@nuclear.ro

The presentation shows the preparation, started this year, for the imaging facility (INUS) placed at the tangential channel of the TRIGA Annular Core Pulsing Reactor from the Institute for Nuclear Research (INR) to achieve dynamic (real-time) imaging for applications in industrial field. This new method in INR involves EM-CCD Hamamatsu C9100-02 camera using new lens (F number 0.95) with better gathering of the light emitted by scintillators and an improvement in neutron intensity, with a better transfer of thermal neutrons from reactor core to collimator. The aim is the application of the method to industrial field for testing the behaviour of complex moving mechanisms that contain solids and liquids. In the near future it is intended to have INUS an instrument available for research and development through tomography and real-time imaging as non-destructive examinations for requests coming from research institutes and industry.

Primary author: Dr DINCA, MARIN (Institute for Nuclear Research)

Presenter: Dr DINCA, MARIN (Institute for Nuclear Research)

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