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Neutron detection system of the NDPS at RAON

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The Nuclear Data Production System (NDPS) was constructed at Rare Isotope Accelerator complex for ON-line experiments (RAON) to produce nuclear data for neutron-induced reactions at a few tens of MeV. For the neutron time-of-flight measurement, various neutron detectors, such as gas-filled Parallel Plate Avalanche Counter (PPAC), MICRO-MESH-GASEOUS (MICROMEAS), and EJ-301 liquid scintillation detectors, were installed in the NDPS neutron beamline.

The NDPS recently performed its first beam commissioning with 16 MeV/nucleon ^{40}Ar ion beams. For the measurement of the neutron beam, EJ-301 liquid scintillation detectors and activation foils (^{27}Al , ^{59}Fe , ^{205}Tl , ^{209}Bi , etc) were used to measure the neutrons from the graphite target. In this presentation, we report a detailed description of the NDPS neutron detection system with its current status.

Footnotes

Funding Agency

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Yes

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