

The Highly Granular Neutron Detector prototype at the BM@N experiment

Developed prototype of Highly Granular Neutron Detector (HGND) with multilayer longitudinal structure (absorber/scintillator), high transverse granularity and good time resolution (about 140ps) provide the ability to identify spectator neutrons in nucleus-nucleus collisions and measure its energies by time-of-flight in the range from 300 MeV to 4 GeV. At the first time the prototype was used to measure forward spectator neutron yields in the hadronic interactions and electromagnetic dissociation in the reaction Xe+CsI@3.8 AGeV in the BM@N experiment at the beginning of 2023. The experimental data and their comparison with models will be discussed.

Section

Nuclear physics (Section 1)

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