

## Measurement of neutron energy spectra in the region of large angles in Xe + CsI collisions at energy of 3.8 A GeV

*Tuesday 2 July 2024 15:55 (15 minutes)*

Neutron production double-differential cross section was measured for  $^{124}\text{Xe} + \text{CsI}$  collisions at energy 3.8 A GeV with a compact TOF spectrometer as a part of BM@N setup at external beam channel of the Nuclotron. The aim of this study is to obtain new experimental results on neutron emission from excited spectators of the target nuclei. The measurement was performed at angles  $\theta > 90^\circ$  and it covers an energy interval of emitted neutrons from 2 to 200 MeV. Neutron detectors based on stilbene with pulse shape discrimination of gamma-rays and a time resolution of 110 ps allow to use short flight distances of ~30 cm and by these to get small contribution from gamma-ray and neutron background. The preliminary results of data analysis are presented and discussed.

### Section

Heavy ion collisions at Intermediate and high energies

**Primary authors:** KAPISHIN, Mikhail (JINR, LHEP); LASHMANOV, Nikita (Joint Institute for Nuclear Research); PIYADIN, Semen; SEDYKH, Sergey; SERGEEV, Sergey (JINR); ROGOV, Victor (JINR); YUREVICH, Vladimir (JINR)

**Presenter:** LASHMANOV, Nikita (Joint Institute for Nuclear Research)

**Session Classification:** Heavy ion collisions at Intermediate and high energies