Study of neutron emission from target fragmentation in Xe + CsI collisions at 3.8 A GeV with a compact TOF spectrometer

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The neutron emission from decay of spectators of target nuclei was studied in ^{124}Xe + CsI collisions at energy of 3.8 A GeV using a compact time-of-flight neutron spectrometer of the BM@N facility at Laboratory of High Energy Physics, JINR. The neutron energy spectra were measured at large angles in the energy range of 2 – 200 MeV. The trigger of BM@N experiment efficiently selected the collisions with centrality of < 60%. Common analysis with data from BM@N track detectors helps to select events in different intervals on the collision centrality.
In this report we discuss the characteristics of the TOF spectrometer, the neutron energy spectra obtained and application of a model with three moving sources for description of the measured neutron spectra.