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Cluster recognition in High Granular Neutron detector of the BM@N experiment

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BM@N is a fixed-target experiment aimed at studying of heavy ion collisions at beam energies up to 4 A GeV. The new High Granular Neutron detector (HGN) is being developed for this experiment. This detector will be able to carry unique measurements of flow of the neutrons. Due to these measurements it will be possible to explore the isospin degree of freedom of the QCD phase diagram.
This talk is devoted to the algorythm of cluster recognition and determination of energy of the neutrons in the HGN. The proposed methods are checked by Monte-Carlo simulation and using data from the prototype of the HGN detector collected in Xe+CsI collisions in the beginning of 2023 at beam energy 3.8 A GeV.

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