Contribution ID: **1548** Type: **Oral**

Analysis of hypernuclei in simulated data of the BM@N experiment

Tuesday 29 October 2024 16:45 (15 minutes)

This work is devoted to the study of the simplest hypernuclei, namely
3HΛ (consisting of one proton, one neutron, and one Λ-hyperon) and
4HΛ (consisting of one proton, two neutrons, and one Λ-hyperon). They may be one of the possible markers of the phase transition from nuclear matter to quark-gluon plasma in high-energy ion collisions.
The aim of this work is to reconstruct the hypernuclei peak in the invariant mass distribution for simulated data for the BM@N experiment. In the report algorithm of geometrical parameters selection for both decays presented. Estimation of reconstruction efficiency in phase space {pt, y} done. Approach tocalculate lifetime of observed hypernuclei is presented.

Primary author: КОНСТАНТИНОВА, Елизавета (Николаевна)

Co-author: MERTS, Sergei (JINR, LHEP)

Presenter: КОНСТАНТИНОВА, Елизавета (Николаевна)

Session Classification: High Energy Physics

Track Classification: High Energy Physics