

XXV International Baldin Seminar on High Energy Physics Problems  
"Relativistic Nuclear Physics and Quantum Chromodynamics"



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on High Energy Physics Problems  
*Relativistic Nuclear Physics & Quantum Chromodynamics*  
September 18 - 23, 2023, Dubna, Russia

Contribution ID: 49

Type: **not specified**

## Study of the possibility of lambda hyperon and short-lived neutral kaon reconstruction in the BM@N experiment.

*Tuesday, 19 September 2023 14:50 (20 minutes)*

This work is devoted to the search for lambda hyperons and short-lived neutral kaons after collision of Xe beams with a CsI target at  $E = 3.9$  AGeV at the BM@N experiment (JINR, Dubna). Simulation, reconstruction and filtering of 100,000 events were carried out. Peaks in the invariant mass distribution corresponding to lambda hyperons and kaons were obtained. Efficiency as a function of rapidity and transverse momentum was derived. All this will enable a better understanding of the transition from baryonic matter to (quark-gluon plasma) QGP in the future.

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**Session Classification:** Parallel: Relativistic heavy ion collisions