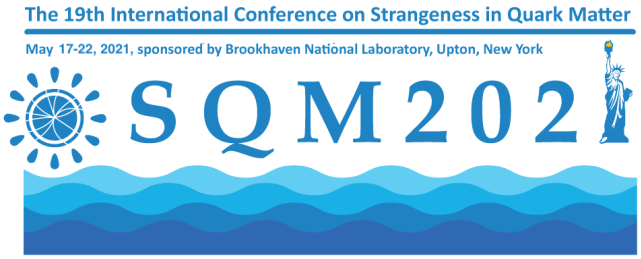

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Hyperon-type dependence of global polarization in heavy-ion collisions

Wednesday 19 May 2021 10:10 (20 minutes)

In heavy-ion collisions, the spin polarization of Λ hyperon is an important measure to probe the vorticity of the quark-gluon plasma. On the other hand, other hyperons such as Ξ^- and Ω^- should also possess the global polarization similar to Λ.

In this talk, I will show our recent theoretical results on the global polarization of Λ, Ξ^- and Ω^- hyperons in non-central Au+Au collisions in the energy range $\sqrt{s_{\rm NN}} = 7.7 - 200$ GeV. The effect of resonance decays on the global polarization of Λ and Ξ^- is also investigated. Our results provide a quantitative relation between the global polarization of Λ, Ξ^- and Ω^- hyperons. This provides us a means to further test the vorticity interpretation of the global polarization in experiments.

Collaboration

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