

Reaction plane alignment with linearly polarized photon in heavy-ion collisions

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The collective observables play critical roles in probing the properties of quark-gluon-plasma created in relativistic heavy-ion collisions, in which the information on initial collision geometry is crucial. However, the initial collision geometry, e.g., the reaction plane, cannot be directly extracted in the experiment. In this talk, we demonstrate the idea of determining the reaction plane via the feature of linear polarization of the coherent photoproduction process. We present the theoretical results of the resolution of the reaction plane and discuss the advantages of the proposed approach in comparison with traditional methods. This talk is based on the published article - Phys. Rev. Research 4, L042048.

Theory / experiment

Theory

Group or collaboration name

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