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Prompt photon production from a magnetized glasma

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Content

In this work, the photon production at the early stages of a heavy-ion collision is computed by taking into account the magnetic field effects on a magnetized glasma. In particular, the gluon fusion and gluon splitting channels are considered. The magnetic field effect is given in terms of the internal quark lines through the fermion propagator expressed in Landau levels. Moreover, the dependence on the centrality and colliding species for the time-evolution of the magnetic field and reaction volume is included using UrQMD. The photon yield and elliptic flow coefficient are obtained and compared with PHENIX data with a reasonable agreement on the lowest part of the transverse photon momentum.

Area of contribution

Theory and Phenomenology

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