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## Promp photon yield and $v_2$ from gluon fusion induced by magnetic field

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## Content

We compute the production of prompt photons and the  $v_2$  harmonic coefficient in relativistic heavy-ion collisions induced by gluon fusion in the presence of an intense magnetic field, during the early stages of the reaction. The calculations take into account several parameters which are relevant to the description of the experimental transverse momentum distribution, and elliptic flow for RHIC and LHC energies. The main imput is the strenght of the magnetic field which varies in a magnitude from 1 to 3 times the pion mass squared, and allows the gluon fusion that otherwise is forbidden in the absence of the field. The high gluon occupation number and the value of the saturation scale also play an important role in our model, as well as a flow velocity and geometrical factors. Our results support the idea that the origin of at least some of the photon excess observed in heavy-ion experiments may arise from magnetic field induced processes, and gives a good description of the experimental data.

## Session

Poster sessions

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