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Direct photons and hadrons at forward rapidities at LHC and saturation effects

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Please give a brief summary of your poster

We investigate direct photons and hadrons production at the energies of RHIC and LHC, at different rapidities employing various color-dipole models. The direct photon cross-section peaks at very forward rapidities due to the abelian dynamics of photon radiation. This opens new opportunities for measurement of direct photons at forward rapidities, where the background from radiative hadronic decays is strongly suppressed. Our model calculations show that photon and hadron production are sensitive to the gluon saturation effects, and strongly depends on the value of the anomalous dimension. We discuss implication of various saturation models for the upcoming LHC data.

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