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Measurements of inclusive photons and charged particles in hadronic and heavy-ion collisions with ALICE

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Particle production at the Large Hadron Collider (LHC) energies results from the interplay of hard and soft QCD processes and is sensitive to non-linear QCD evolution in the initial state. Global observables such as multiplicity and rapidity dependence of particle production provide important constraints for initial state models and help in understanding the underlying description of particle production. Moreover, investigating the system-size dependence of the particle production at the same collision energy is particularly important for directly studying medium effects in different collision systems.

In this contribution, we will present measurements of inclusive photons using the Photon Multiplicity Detector (PMD) at forward rapidities in pp and p—Pb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV. We will also present charged-particle production using the Forward Multiplicity Detector (FMD) at forward rapidities in pp, p—Pb and Pb—Pb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV. Finally, the results will be compared with the predictions from QCD-inspired Monte Carlo event generators.

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