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Precision measurements of jet and photon production at the ATLAS experiment

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The production of jets and prompt isolated photons at hadron colliders provides stringent tests of perturbative QCD. We present the latest measurements using proton-proton collision data collected by the ATLAS experiment at $\sqrt{s} = 13$ TeV. Prompt inclusive photon production is measured for two distinct photon isolation cones, $R=0.2$ and 0.4 , as well as for their ratio. The measurement is sensitive to gluon parton density distribution. In addition, we present the measurements of variables probing the properties of the multijet energy flow and measurements extremely sensitive to the strong coupling constant. If ready, the determination of the strong coupling constant will be presented. The measurements are compared to state-of-the-art NLO and NNLO predictions.

In-person participation

Yes

Primary author: ATLAS COLLABORATION**Presenter:** ROLOFF, Jennifer**Session Classification:** Strong interactions and Hadron Physics**Track Classification:** Strong interactions and Hadron Physics