

# Isolated photon and photon+jet production at NNLO QCD accuracy

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Based on 1904.01044, I present recent results of a Next-to-Next-to-leading order (NNLO) calculation of inclusive isolated photon and photon-plus-jet production using the Monte-Carlo event generator NNLOJET. In order to mimic experimental photon isolation criteria we apply a staged isolation procedure. A smooth-cone isolation with small cone size is used to ensure numerical stability, followed by a hard-cone isolation with larger cone size, tailored to the actual experimental setup. We compare the results to recent 13TeV data by ATLAS (1701.06882, 1801.00112, 1901.10075) and CMS (1807.00782). We observe substantial corrections in certain kinematical regions, leading to a significant improvement of theory uncertainty and description of the data.

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