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Inclusive photon production to NLO at small x as a probe of gluon saturation

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We report on a first NLO computation of inclusive photon production at small x in $e+A$ collisions. The computation is performed to next-to-leading-log x accuracy and resums all multiple scattering (higher twist) computations within the CGC effective theory. In the soft photon (Low) limit, we recover results the NLO results of Balitsky and Chirilli for inclusive DIS. We point to key technical improvements of our computation relative to the latter which opens the door to more efficient small x computations. We also discuss the relation of this work to analogous computations by us for $p+A$ collisions.

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