

# DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Type: **Parallel talk**

## Forward photon+jet production in pA collisions at next-to-eikonal accuracy

*Tuesday, 28 March 2023 11:50 (20 minutes)*

One very promising observable to study gluon saturation effects at high energy is photon+jet production at forward rapidity in proton-nucleus collisions. Since the produced photon does not rescatter on the target, this observable provides a clean environment to study the interaction of the quark probe with the dense target. In this talk, we will present the results for the photon-quark production cross-section (as a proxy for photon+jet) at next-to-eikonal accuracy taking into account finite-width target effects, dynamics of the target and the interaction with the subleading components of the background field. Moreover, we will also discuss the link between the high-energy Color Glass Condensate (CGC) formalism and the TMD factorization for this specific process. We will argue that next-to-eikonal corrections change the pattern of photon-jet correlations.

### Submitted on behalf of a Collaboration?

No

### Participate in poster competition?

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