Associated photon and heavy quark production within k_T-factorization

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Summary

In the framework of the k_T-factorization approach, the production of prompt photons in association with a heavy (charm or beauty) quarks at high energies is studied.

The analysis covers the total and differential cross sections and extends to specific angular correlations between the produced prompt photons and muons originating from the semileptonic decays of associated heavy quarks.

Our numerical predictions are compared with the recent experimental data taken by the D0 and CDF collaborations at the Tevatron. Finally, we extend our results to LHC energies.

Primary authors: LIPATOV, A.V; MALYSHEV, M.A.; ZOTOV, N.P.

Presenter: ZOTOV, N.P.

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