

## Measurement of Z/gamma+jet+X and photon+b/c +X Cross Sections with the D0 Detector

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We present measurements of differential cross sections for the inclusive Z/gamma plus jet production and for the inclusive photon plus heavy flavor production in a data sample of 1fb-1 collected with the D0 detector in proton antiproton collisions at  $\sqrt{s}=1.96\text{TeV}$ .

In the first measurement, we compare kinematic distributions of the Z/gamma and the jet as well as of the various angles of the Z+jet system, with different Monte Carlo event generators and next-to-leading order perturbative QCD (NLO pQCD) predictions with non-perturbative corrections applied.

In the second measurement, we compare the results with next-to-leading order perturbative predictions, covering photon transverse momenta 30-150 GeV, photon rapidities  $|y_{\text{gamma}}| < 1.0$ , jet rapidities  $|y_{\text{jet}}| < 0.8$ , and jet transverse momenta  $p_{T_{\text{jet}}} > 15\text{ GeV}$ .

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