

NEW PERSPECTIVES IN CONFORMAL FIELD THEORY AND GRAVITY

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N3LO Drell-Yan cross-sections confront data at several center-of-mass energies

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With the recent computation of cross-section calculations up to the third order in perturbative QCD, and the appearance of the first PDF fits at N3LO (albeit only approximately), it becomes interesting to study if the improved precision is accompanied by an analogue improvement in accuracy in describing experimental data.

To this aim, we calculated the theoretical total cross-sections for charged and neutral-current Drell-Yan production at NNLO and N3LO in QCD and NLO in EW couplings using different NNLO and the aN3LO PDF sets.

We then performed a systematic comparison of these predictions with measurements performed at pp and $p\bar{p}$ colliders at different center-of-mass energies.

Summary

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