

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



Contribution ID: 335

Type: **Parallel talk**

## **Precision calculations in boson and diboson processes with transverse-momentum and jet-veto resummation**

*Tuesday 28 March 2023 15:20 (20 minutes)*

Precision theory predictions are crucial for interpreting LHC data. In this talk, we present our public code and predictions for Drell-Yan production up to the order N<sup>3</sup>LO, including transverse momentum resummation up to N<sup>4</sup>LLp. We discuss the impact of these higher-order corrections and compare them with experimental data. Furthermore, we investigate the influence of N<sup>3</sup>LO parton distribution functions on the precision of our predictions. Finally, we discuss recent advancements in jet-veto resummation at N<sup>3</sup>LLp+NNLO for boson and diboson processes. The public availability of our code allows experimental analyses to easily and directly compare their results with higher-order predictions.

**Participate in poster competition?**

**Submitted on behalf of a Collaboration?**

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**Session Classification:** WG3