Contribution ID: **70** Type: **Parallel talk**

Towards NNPDFs at N3LO with MHOUs and QED corrections

Tuesday 28 March 2023 14:00 (20 minutes)

We present recent progress within the NNPDF analysis of parton distribution functions aimed to i) improve the accuracy of the determination by accounting for (approximate) N3LO corrections to the splitting functions and partonic matrix elements, ii) estimate the impact of missing higher order uncertainties within the NNLO global analysis, and iii) account for QED corrections and the impact of a photon PDF, as required for LHC calculations in the presence of electroweak corrections. We also study the interplay of these various developments, in particular that of MHOUs in the context of the N3LO NNPDF determination. We assess the impact of these theoretical developments for key processes at the LHC.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

No

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