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A Neural-Network Extraction of Unpolarized Transverse-Momentum Distributions

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We present the first proof of concept extraction using neural networks (NNs) of the unpolarised transversemomentum distributions (TMDs) at next-to-next-to-next-to-leading logarithmic(N³LL) accuracy. By offering a more flexible and adaptable approach, NNs overcome some of the limitations of traditional functional forms, providing a better description of data. This work focuses exclusively on Drell-Yan (DY) data and establishes the feasibility of NN-based TMD extractions.

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