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NNLO predictions for dijet production in diffractive DIS

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We present the first calculations for dijet production in diffractive deep-inelastic scattering (DIS) at next-to-next-to-leading order accuracy (NNLO). The calculations are based on the antenna subtraction formalism, where the hard coefficients are convoluted with available PDFs for diffractive scattering (DPDFs). Unfortunately, these DPDFs are currently available only in NLO precision.
We outline the methodology of the calculations and compare the new predictions to a variety of observables measured single- and double-differentially at HERA.
The new calculations allow for improved tests of factorisation assumptions in diffractive DIS, tests of DPDFs, and hard QCD studies. In the future, these new calculations will help to constrain the gluon distribution in DPDFs.

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