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# Jet production at NLO in the Parton Branching method

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Transverse momentum dependent (TMD) parton distributions obtained from the Parton Branching (PB) method are combined with next-to-leading-order (NLO) calculations of jet production to obtain predictions for LHC jet final states. In addition, a new initial state Parton Shower, which is based on the TMD distributions, and final state Parton Showers are included together with hadronization. We compare our predictions with jet and Z+jet measurements performed at the LHC, finding good agreement. We present first results for multi-jet merging with PB-TMDs, illustrating the application of the method to differential jet rates and transverse momentum spectra.

## I read the instructions

## Secondary track (number)

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