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V+jet production at the LHC: Electroweak radiative corrections

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The investigation of weak bosons (Wˆ+/Wˆ-,Z) produced with associated hard QCD jets will be of great phenomenological interest at the LHC, since such processes constitute an important background to a large variety of BSM-physics signatures. At the same time - owing to their large production cross sections and the clear decay signatures of the vector bosons - they can be used to monitor and calibrate the luminosity of the collider, constrain the PDFs, or for detector calibration.

To match the excellent experimental accuracy that is expected at the LHC, we have worked out a theoretical NLO analysis of V+jet production at hadron colliders. The focus of this talk will be on new results on the electroweak corrections to Z+jet production at the LHC. We present some details of the calculation, and discuss the phenomenological implications of our results.

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