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Weak boson production via vector-boson fusion @ NLO matched with POWHEG

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Abstract:

The production of weak vector-bosons in association with two jets is not only an important background to Higgs-boson searches in vector-boson fusion (VBF) at the LHC, as a signal process it also offers the possibility to investigate the central jet veto. In order to make reliable predictions, the combination of fixed-order NLO-calculations and parton-showers is indispensable. We present the implementation of the weak boson production via VBF in the POWHEG BOX and show some preliminary results. This is a first step towards interfacing VBFNLO, a fully flexible Monte Carlo program, with the POWHEG BOX.

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