

NLO EW corrections to polarised $W^+ W^-$ production and decay at the LHC

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With the help of the pole approximation, observables with polarised intermediate resonances can be calculated. Gauge-boson-pair production represents a particularly interesting class of processes to study polarisation. So far the computation of the NLO EW corrections was only possible for uncharged polarised resonances, since processes with charged resonances have additional infrared divergences from soft photon emission of the resonant propagators. In our calculation we canceled these infrared singularities with additional local counterterms.

This was used to compute the NLO EW corrections to polarised W^+W^- pair production in the double-pole approximation. On my poster I will present details of our calculation. It will be shown how the polarisation of the W bosons affects the shape of the differential distributions.

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