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Anomalous Gauge Couplings from diboson production

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Double gauge boson production is one of the most important processes under study at the LHC. Of particular importance is the measurement of the trilinear electroweak gauge boson coupling, which sheds light on the gauge structure of the Standard Model. We study the impact of anomalous gauge boson and fermion couplings on the production of W+W– pairs at the LHC and how these couplings affect the measurements of the trilinear gauge boson couplings. Although constrained to be very small by LEP, anomalous fermion-gauge boson couplings can have important effects in LHC fits to anomalous couplings due to a strong growth with energy. We perform this study at NLO in QCD, determining the effects of higher order corrections as well.

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