

Contribution submission to the conference Aachen 2019

Probing anomalous quartic gauge couplings at the International Linear Collider — •JAKOB BEYER^{1,2}, MICHAEL KOBEL³, and JENNY LIST¹ — ¹DESY Hamburg — ²Universität Hamburg — ³Technische Universität Dresden

Precision measurements of the electroweak sector are sensitive probes for physics beyond the Standard Model. With the future International Linear Collider (ILC) such measurements can be performed in the low-background environment of e^+e^- collisions at center-of-mass energies up to 1 TeV. At these high-energy collisions the process of vector boson scattering can be tested for signs of anomalous quartic gauge couplings. The potential of this measurement has been recently studied in an updated EFT framework on theory level. Such results assume detector and analysis performances which must be validated using detector simulations.

A study of the reconstruction of the fully hadronic $\nu\bar{\nu} + 4\text{jets}$ final state is performed to investigate the challenges to this analysis. Data sets from a full, GEANT4-based simulation of the International Large Detector at the 1 TeV ILC are used to accurately predict its measurement capability.

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