Electroweak production of two jets in association with a Z boson in proton-proton collisions

Keila Moral Figueroa[1],

[1]) Deutsches Elektronen-Synchrotron DESY, Hamburg, Germany
keila.moral.figueroa@desy.de

In recent years, the Large Hadron Collider (LHC) has played an important role in constraining extensions of the Standard Model (SM). One of the measurements which can contribute to it, is the electroweak production of the Z boson in association with two jets (EW Zjj). This process limits the anomalous weak-boson self-interactions, due to its sensitivity to the weak vector-boson scattering (VBS), an increasingly relevant process at the LHC.

So far, the theoretical predictions of the EW Zjj process diverge slightly among different Monte Carlo event generators. As a consequence, further studies are needed in order to obtain reliable model-independent measurements. The EW Zjj process is identified by imposing large invariant dijet mass and dijet pseudaripidty separation. Therefore, first distributions are shown using the full Run 2 dataset.