



Contribution ID: 425

Type: Parallel talk

Observation and measurements of vector-boson scattering with ATLAS

Saturday, 13 July 2019 10:00 (15 minutes)

The scattering of electroweak bosons tests the gauge structure of the Standard Model and is sensitive to anomalous quartic gauge couplings. In this talk, we present recent results on vector-boson scattering from the ATLAS experiment using proton-proton collisions at $\sqrt{s}=13$ TeV. This includes the observation of WZ and same-sign-WW production via vector-boson scattering along with a measurement of VV production in semileptonic final states. If available, measurements of $Z\bar{Z}$ and ZZ production via vector-boson scattering will also be presented. The results can be used to constrain new physics that manifests as anomalous electroweak-boson self interactions. Predicted cross sections for electroweak scattering of two same-sign W bosons in association with two jets are compared for a number of Monte Carlo configurations. The sensitivity to the choices of renormalisation and factorisation scales, the Parton Distribution Functions and showering models are studied into detail.

Primary author: ATLAS COLLABORATION**Presenter:** SOMMER, Philip (University of Sheffield (GB))**Session Classification:** Top and Electroweak Physics**Track Classification:** Top and Electroweak Physics