

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 63

Type: **Parallel talk**

Diboson production and polarization measurements with the ATLAS Detector

Wednesday 29 March 2023 09:40 (20 minutes)

Measurements of multiboson production at the LHC are important probes of the electroweak gauge structure of the Standard Model and give constraints on anomalous gauge boson couplings. In this talk we present recent ATLAS measurement of double-polarization in WZ events and highlight the first observation of simultaneous pair-production of longitudinally polarized vector bosons. We also show results on $Z\gamma$ and WW production in association with jet activity. These precise differential measurements provide inputs for QCD modelling of diboson events. Moreover, precise boson, diboson and Higgs differential cross-section measurements are interpreted in a combined Effective Field Theory analysis, allowing to systematically probe gauge boson self-interactions.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

No

Primary authors: YUAN, Man (University of Michigan (US)); YUAN, Man (University of Michigan)

Presenters: YUAN, Man (University of Michigan (US)); YUAN, Man (University of Michigan)

Session Classification: WG3

Track Classification: WG3: Electroweak Physics and Beyond the Standard Model