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Multi-boson production including photon-photon fusion at ATLAS

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Measurements of multiple electroweak bosons production and vector boson scattering, as well as photon-photon fusion at the LHC are stringent tests of the electroweak sector and provide a model-independent means to search for new physics at the TeV scale. In this talk, we present the most recent results on multi-boson production in proton-proton collisions at $\sqrt{s}=13$ TeV performed by the ATLAS experiment with the full Run-2 dataset. Differential cross sections of inclusive diboson final states and diboson final states in association with jets are measured and the data are compared to predictions. Reinterpretation in terms of an effective field theory to constrain new physics beyond the Standard Model are also presented. Finally, we will also present results of the observation of photon-induced WW production. If available, new results will be also presented.

Summary

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