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## **Measurement of the $WW$ production cross section at 8 TeV and 13 TeV and limits on anomalous triple gauge couplings with the ATLAS detector (13' + 2')**

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Measurements of the cross sections of the production of pairs of electroweak gauge bosons at the LHC constitute stringent tests of the electroweak sector of the Standard Model and provide a model-independent means to search for new physics at the TeV scale.

The ATLAS collaboration has performed detailed measurements of integrated and differential cross sections of the production of  $WW$  pairs in leptonic final states and no hadronic jets using data corresponding to 20.3 /fb at a centre-of-mass energy of 8 TeV. An extension of the measurement is presented, which covers also the  $WW+1jet$  production at 8 TeV. These measurements are compared to predictions at up to NNLO+NNLL in pQCD and provide constraints on new physics, by setting limits on anomalous triple gauge couplings.

In addition new studies of  $WZ$  and  $WW$  production in the semileptonic  $lnu\bar{jj}$  final state at 8 TeV are presented. These extend the measurements to high transverse momenta and are particularly sensitive to anomalous triple gauge couplings.

A first measurement of the  $WW$  cross section at a center-of-mass energy of 13 TeV using data corresponding to 3.2 /fb will be presented.

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