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Measurements of Vector boson fusion with the ATLAS detector

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The most recent results on the production of single W and Z bosons with two jets at high invariant mass at centre-of-mass energies of 7, 8 and 13 TeV are presented. Integrated and differential cross sections are measured in different phase space regions with varying degree of sensitivity to the electroweak production in vector boson fusion. The cross section for the electroweak W boson production has been extracted for both integrated and for the first time differential distributions. In addition, the cross-section for the electroweak production of two jets in association with a Z boson is measured for the first time at a centre-of-mass energy of 13 TeV. The results are compared to state-of-the-art theory predictions and are used to constrain anomalous gauge couplings.

Experimental Collaboration

ATLAS

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