Phenomenology 2016 Symposium



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Single Top-Quark Production Cross-Section Measurements Using the ATLAS Detector at the LHC

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Abstract.

Measurements of single top-quark production in proton-proton collisions are presented at a centre-of-mass energy of 8 TeV and 13 TeV. A measurement of the cross-section where a W boson is exchanged in the t-channel is discussed and the results for the inclusive production cross-section are presented. A measurement of the production cross-section of a single top quark in association with a W boson, the second largest single-top production mode, is also presented. Evidence for single-top production in the s-channel with the 8 TeV ATLAS dataset is discussed. Finally, measurements of the properties of the Wtb vertex allows to set limits on anomalous couplings. All measurements are compared to state-of-the-art theoretical calculations.

Summary

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