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## Single Top quark production cross-section measurements using the ATLAS detector at the LHC

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Measurements of single top-quark production in proton proton collisions at the Large Hadron Collider are presented at center-of-mass energies of 8 TeV and 13 TeV. For the t-channel measurement, the single top-quark and anti-top-quark total production cross-sections, their ratio, as well as measurements of the inclusive production cross sections are presented. Differential cross-section measurements of the t-channel process are also discussed. 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. Finally, measurements of the properties of the  $Wtb$  vertex allow to set limits on anomalous couplings. All measurements are compared to state-of-the-art theoretical calculations.

### Summary

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**Session Classification:** Top