

# Single top production at ATLAS and CMS

*Wednesday, 1 June 2016 14:40 (20 minutes)*

## Summary

Measurements of single top quark production are presented, performed using ATLAS and CMS data collected in 2011, 2012 and 2015 at centre-of-mass energies of 7, 8 and 13 TeV [twiki.cern.ch] respectively. The inclusive cross sections for the electroweak production of single top quarks in the t- and s-channels and in association with W bosons are measured. The three channels are used to place constraints on the CKM matrix element  $V_{tb}$ . The t-channel cross section is also measured differentially, as a function of the kinematic variables of the top quark, and the ratio of top and anti-top production cross sections is determined and compared with predictions from different parton density distribution functions. Fiducial measurements allow also test to the signal modelling. Measurements of top quark properties in single top quark production are also presented, such as the top-quark polarisation, the probe of  $tWb$  vertex through the W-helicity measurement in top quark decay and the searches for anomalous couplings to gluons, photons or Z bosons.

**Primary author:** ANDREA, Jeremy (Institut Pluridisciplinaire Hubert Curien (FR))

**Presenter:** ANDREA, Jeremy (Institut Pluridisciplinaire Hubert Curien (FR))

**Session Classification:** EW + Top + Higgs