

# Search for $W'$ production in the single top channel with the ATLAS detector

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We present the search for  $W' \rightarrow tb$  using the LHC pp collision data collected with the ATLAS detector at a center-of-mass energy of 8 TeV. The primary backgrounds to this search are  $t\bar{b}$ ,  $W$ +jets, and multijets processes. To reduce the contributions of these backgrounds we require a leptonic final state and use Boosted Decision Trees to discriminate against background-like events. This measurement gives the latest limits on the  $W' \rightarrow tb$  cross section times branching ratio and the ratio of coupling constants  $g'/g$  as functions of the  $W'$  mass.

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