

Search for a light charged Higgs boson decaying to $c\bar{s}$ in pp collisions at $\sqrt{s}=7$ TeV

We present the search results for a light charged Higgs boson produced in top pair events and decaying into $c\bar{s}$ in pp collisions at $\sqrt{s}=7$ TeV with the ATLAS detector. The analysis uses a data sample corresponding to an integrated luminosity of 35 pb^{-1} . The search is based on the semi-leptonic channel of $t\bar{t}$ candidates and analyzes the invariant mass distribution of two jets in the final state. With no observation of the charged Higgs signal, we set 95% upper limits on the decay branching ratio of top quarks to charged Higgs bosons.

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