

Search for the Standard Model Higgs boson produced in association with top quarks and decaying into bb in the ATLAS detector

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The Standard Model Higgs boson produced in association with a top-quark pair($t\bar{t}$) can permit direct measurement of the top Yukawa coupling. This poster is focused on the Higgs- $\rightarrow b\bar{b}$ channel with $t\bar{t}$ decaying into one or two electrons or muons. The analysis used pp collision data at the center of mass energy of 13 TeV, collected with the LHC-ATLAS detector in 2015-2016. The search is already limited by systematic uncertainties mostly in background modeling. In order to improve the sensitivity of the analysis, events are categorized according to their jet multiplicities and b-tagging properties. We present the latest result from the ATLAS experiment with improved techniques to discriminate signal from background dominated by $t\bar{t} + \text{jets}$ production.

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