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[306] Search for $t\bar{t}H(bb)$ in the all-hadronic channel

Wednesday, August 29, 2018 3:00 PM (15 minutes)

Measuring the top quark Yukawa coupling is an important test of the standard model (SM) of particle physics and the production of a Higgs boson in association with top quarks ($t\bar{t}H$) is the only channel that allows a direct measurement of this SM parameter. This talk will focus on a search for $t\bar{t}H$ where the Higgs boson decays to bottom quarks and the top quark pair decays hadronically. The data were collected by the CMS experiment during Run 2 of the LHC at a center-of-mass energy of 13 TeV. Because of the small cross section and challenging final state, sophisticated methods for signal/background rejection as well as signal extraction, such as the matrix element method, are required.

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