

Measurements and searches for Higgs boson decays to bottom and charm quarks with the CMS Experiment

Thursday 17 November 2022 15:15 (15 minutes)

The most recent measurements and searches for the Higgs boson decaying into a pair of bottom or charm quarks by the CMS Collaboration will be presented. The results are obtained using the entire Run 2 LHC data collected in proton-proton collisions at a center of mass energy of 13 TeV, targeting the associated production of the Higgs boson with a Vector boson (W or Z boson) and the gluon fusion production mechanism. These analyses exploit the different transverse momentum regimes of the Higgs boson, and different reconstruction strategies and background estimation techniques have been adopted to increase the sensitivity of these searches. The Higgs to charm decays results represent the world's most stringent constraints on Higgs-charm Yukawa coupling.

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