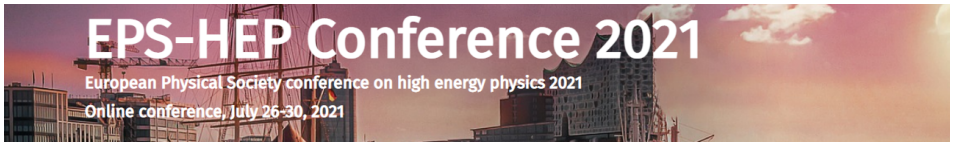

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Search for flavor-changing neutral current interactions of the top quark and the Higgs boson decaying to a b quark-antiquark pair at 13 TeV in CMS

A search for flavor-changing neutral current interactions between the top quark and the Higgs boson is presented. The search is based on a data sample corresponding to an integrated luminosity of 137 /fb recorded by the CMS experiment at the LHC in proton-proton collisions at the center of mass energy of 13 TeV. Events containing exactly one lepton (electron or muon) and at least three jets, among which at least two are identified as coming from the hadronization of a b quark are analyzed. The analysis further separates events into five categories based on the (b-)jet multiplicity. A deep neural network is used to make the association between the reconstructed objects and the matrix-element partonic final state while boosted decision trees are used to separate the signals and the backgrounds.

Collaboration / Activity

CMS

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