

Abstract Submitted
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Search for a heavy charged Higgs boson decaying to $t\bar{b}$ in the single lepton final state at CMS ALEX GARABEDIAN, Brown University, CMS COLLABORATION — A possible extension to the Standard Model (SM) of particle physics would be to introduce a second Higgs Doublet. In such an extension, a total of five Higgs particles would exist: two of which are electrically charged. We present the search for charged Higgs bosons, being produced in association with a top quark and itself decaying into a top-bottom quark pair. Furthermore, we focus on the semi-leptonic channel where one top quark decays hadronically and the other leptonically. Results will be shown using the full 8TeV dataset collected at the Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC).

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