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## **A search for a charged Higgs decaying into a top and a bottom quark with single leptonic, an electron or a muon, final state at 13 TeV**

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A charged Higgs boson is predicted by many beyond the Standard Model theories. Among those, the two-Higgs-doublet model (2HDM) extends the standard model with two Higgs doublets. Especially type II model of 2HDM predicts five Higgs bosons, negative/positive charged Higgs pair and three neutral bosons including light and heavy scalar Higgs bosons, and a pseudoscalar Higgs boson. In this talk we present a search for a charged Higgs boson decaying into a top and a bottom quark with single leptonic, an electron or a muon, final state. The dataset analyzed correspond to an integrated luminosity of 35.86 fb<sup>-1</sup> collected by CMS experiment at 13 TeV in proton-proton collisions in 2016.

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