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## Charged Higgs production as probe for extra top Yukawa couplings

We discuss the possibility of probing additional top Yukawa couplings via charged Higgs boson ( $H^\pm$ ) production at the Large Hadron Collider. The context is general Two Higgs Doublet Model (g2HDM). We show that additional top Yukawa couplings  $\rho_{tc}$  and  $\rho_{tt}$  in g2HDM can be searched via  $c g \rightarrow b H^\pm \rightarrow b t \bar{t}$  process at the LHC with evidence may emerge as early as in the Run 3 data. A discovery may shed light on the observed baryon asymmetry of the Universe.

Reference

### First author

Tanmoy Modak

### Email

tanmoyy@thphys.uni-heidelberg.de

### Collaboration / Activity

single author

**Primary author:** MODAK, Tanmoy (Universität Heidelberg, ITP)**Presenter:** MODAK, Tanmoy (Universität Heidelberg, ITP)**Session Classification:** T10: Searches for New Physics**Track Classification:** Searches for New Physics