

## **$t\bar{t}$ backgrounds in charged Higgs searches**

Top quark pair production is the main background for searches in most charged Higgs boson channels. The characteristics of this background are shown, as well as the contribution of the different  $t\bar{t}$  decay modes: they can be separated into “irreducible”  $t\bar{t}$  modes with the same final state as the signal, and “reducible” modes which contributes e.g. if an electron is misreconstructed as a tau. I will then present techniques to suppress and estimate the  $t\bar{t}$  background contribution to the charged Higgs boson searches.

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