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Higgs prospects with LHCb and its upgrades

Thanks to the excellent vertex reconstruction system, the LHCb detector has demonstrated its capabilities in the identification of b- and c-jets.

The LHCb upgrades could be used to measure the $H \rightarrow b\bar{b}$ production in a region complementary to ATLAS and CMS, and to search for the $H \rightarrow c\bar{c}$ decay.

In this talk the jet heavy flavour tagging algorithm used at LHCb is reviewed, and measurements with b- and c-jets are presented.

Moreover the LHCb sensitivity to the $H \rightarrow b\bar{b}$ and $H \rightarrow c\bar{c}$ observations is discussed, and prospects on the forward Higgs physics in the future LHC data taking periods are given.

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