(σ/σ_{SM} gg → H^0) \cdot \mathcal{B}(H^0 → πνπν) m_{πν} = 35\text{GeV}/c^2

Figure 1: Expected (open circles and dotted line) and observed (filled circles and solid line) upper limit versus lifetime for different $\pi_ν$ masses and decay modes. The green (dark) and yellow (light) bands indicate the quantiles of the expected upper limit corresponding to $±1σ$ and $±2σ$ for a Gaussian distribution. The decay $π_ν → b\bar{b}$ is assumed, unless specified otherwise. For comparison, the observed upper limits from the previous analysis [LHCb-PAPER-2014-062] are added with diamond symbols and a dotted line.
Figure 2: Observed upper limit versus lifetime for different $\pi_v$ masses, assuming the decay $\pi_v \rightarrow b\bar{b}$. This is an alternative version of Fig. 4 with $c\tau$ in m on the x-axis.
Figure 3: $\pi_v$ lifetime and mass ranges where branching ratios $\mathcal{B}(H^0 \to \pi_v \pi_v) > 50\%$ are excluded, assuming the production of $\pi_v$ particles in pairs in the decay of a Standard-Model-like Higgs boson with a mass of 125 GeV$/c^2$, due to searches performed by the LHCb, ATLAS and CMS collaborations. The LHCb exclusion region (in green) corresponds to the results in this paper, the ATLAS (blue) and CMS (red) exclusion regions are taken from [Phys. Rev. D92 (2015) 073008] where a combination was made of ATLAS results, taking the most sensitive result for each parameter point, and the CMS results were recast to take into account the different $H^0$ boson mass assumed in the experimental analysis.