

# Supplementary material for LHCb-PAPER-2018-019

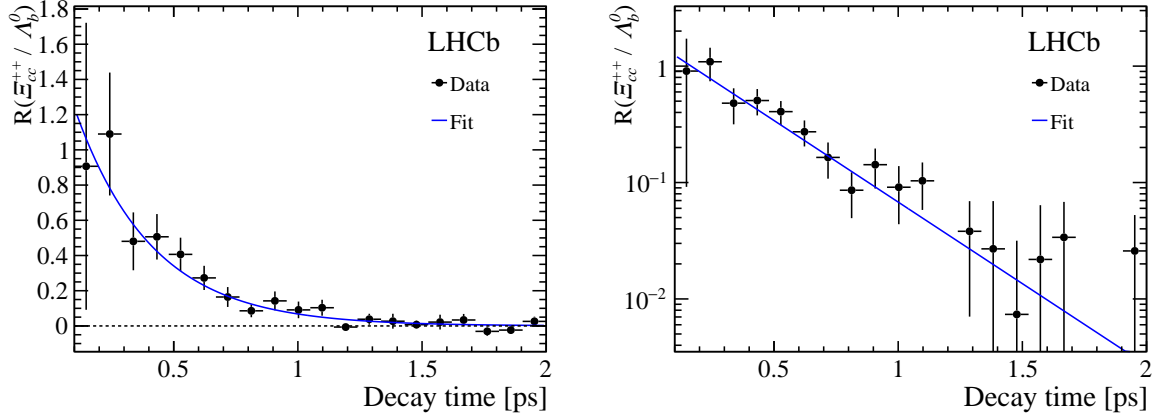


Figure 1: Background-subtracted and acceptance-corrected decay-time ratio between the  $\Xi_{cc}^{++} \rightarrow \Lambda_c^+ K^- \pi^+ \pi^+$  and  $\Lambda_b^0 \rightarrow \Lambda_c^+ \pi^- \pi^+ \pi^-$  decays, in (left) linear scale and (right) logarithmic scale. The bins with negative contents are not shown in the right figure. The solid lines correspond to the exponential function,  $e^{-\left(\frac{1}{\tau(\Xi_{cc}^{++})} - \frac{1}{\tau(\Lambda_b^0)}\right)t}$ , with the measured value of the  $\Xi_{cc}^{++}$  lifetime (0.256 ps) and the world-average value of the  $\Lambda_b^0$  lifetime (1.470 ps).