

Supplementary material for LHCb-PAPER-2020-004

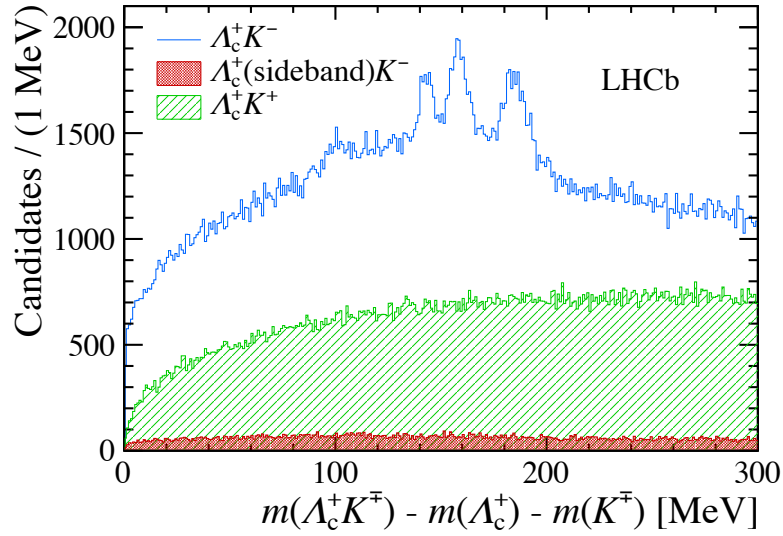


Figure 3: Candidates passing the selection requirements described in the text are shown, where the selected signal candidates are given in blue, the candidates in the wrong-sign $m(\Lambda_c^+ K^+)$ distribution in green and candidates in the Λ_c^+ sidebands in red.

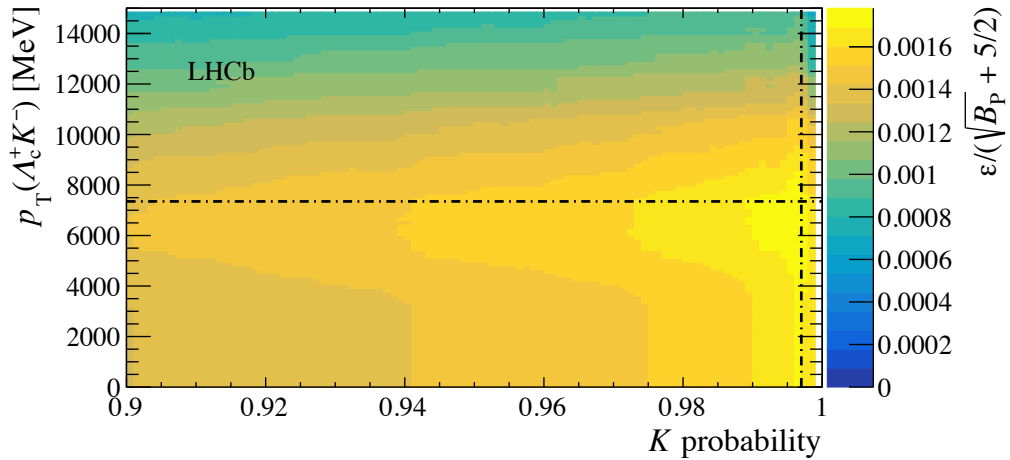


Figure 4: Two-dimensional optimisation in terms of the p_T of the $\Lambda_c^+ K^-$ system and the kaon probability, given by the probability that a kaon is positively identified as a kaon by the detector. The z -axis shows the Punzi figure of merit calculated assuming a selection which keeps candidates with values larger than the value along the x -axis and the y -axis. The black dashed lines indicate the position where the optimal selection requirement is found.

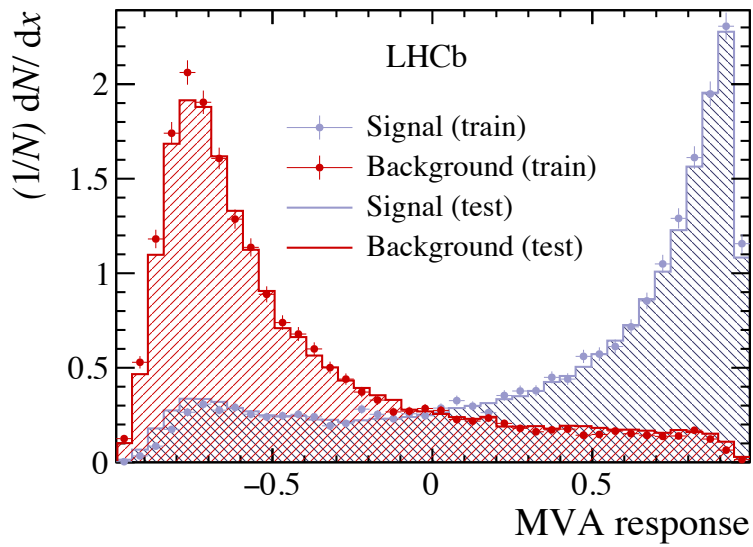


Figure 5: Response of the MVA variable for training samples (data points) and test samples (shaded histograms) for the selection of $\Lambda_c^+ \rightarrow pK^-\pi^+$ candidates. The signal candidate samples are shown in grey and the background samples in red.