

9 Supplementary Material

This appendix includes supplementary material for LHCb-PAPER-2013-036 to be posted alongside the paper on CDS.

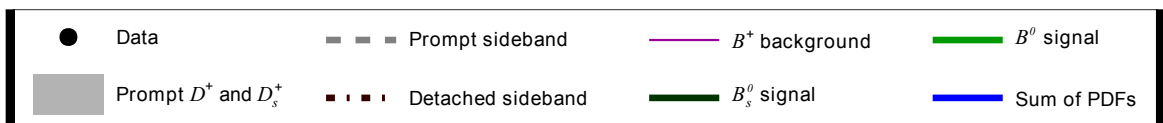
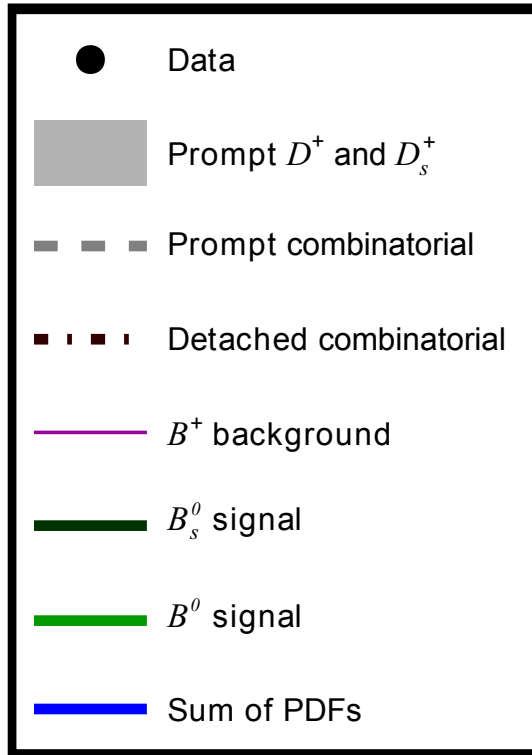


Figure 9: Alternative legends.

Figure 10: Animated figure demonstrating the fit, scanning across various $K^+K^-\pi^+$ mass regions. This animation does not function when printed or in older PDF viewers; a GIF can be provided on request (see Fig9-Animated.gif). The top left plot shows the $K^+K^-\pi^+$ mass fit for the entire data sample, with a section highlighted in blue. Data from the highlighted section are then displayed against the PDF projection in that region. The top right plot shows the corresponding measured decay time distribution, while the bottom plot shows the mixing asymmetry in the high- n region only, in order to highlight the Δm_s oscillations. Include in your own L^AT_EX with the animate package, and something like: `\animategraphics[autoplay,loop](3)(supplementary/figs/Fig9-individually/Fig9_)(0)(14)` replacing parentheses with curly braces.

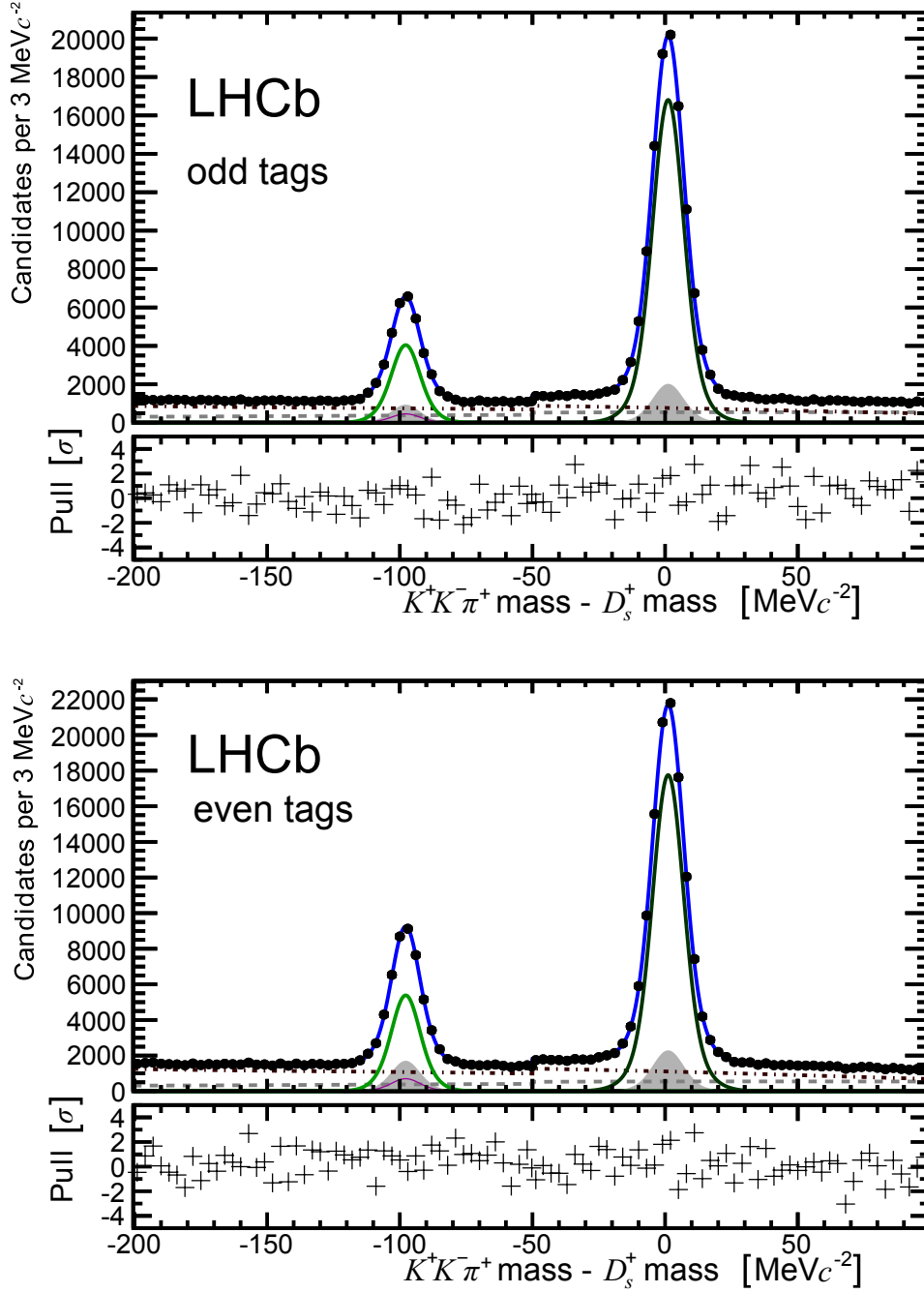


Figure 11: Distribution of measured $K^+K^-\pi^+$ mass, where the known mass of the D_s^+ has been subtracted: top, for the odd-tagged sample; bottom, for the even-tagged sample. Legend as in Fig. 9.

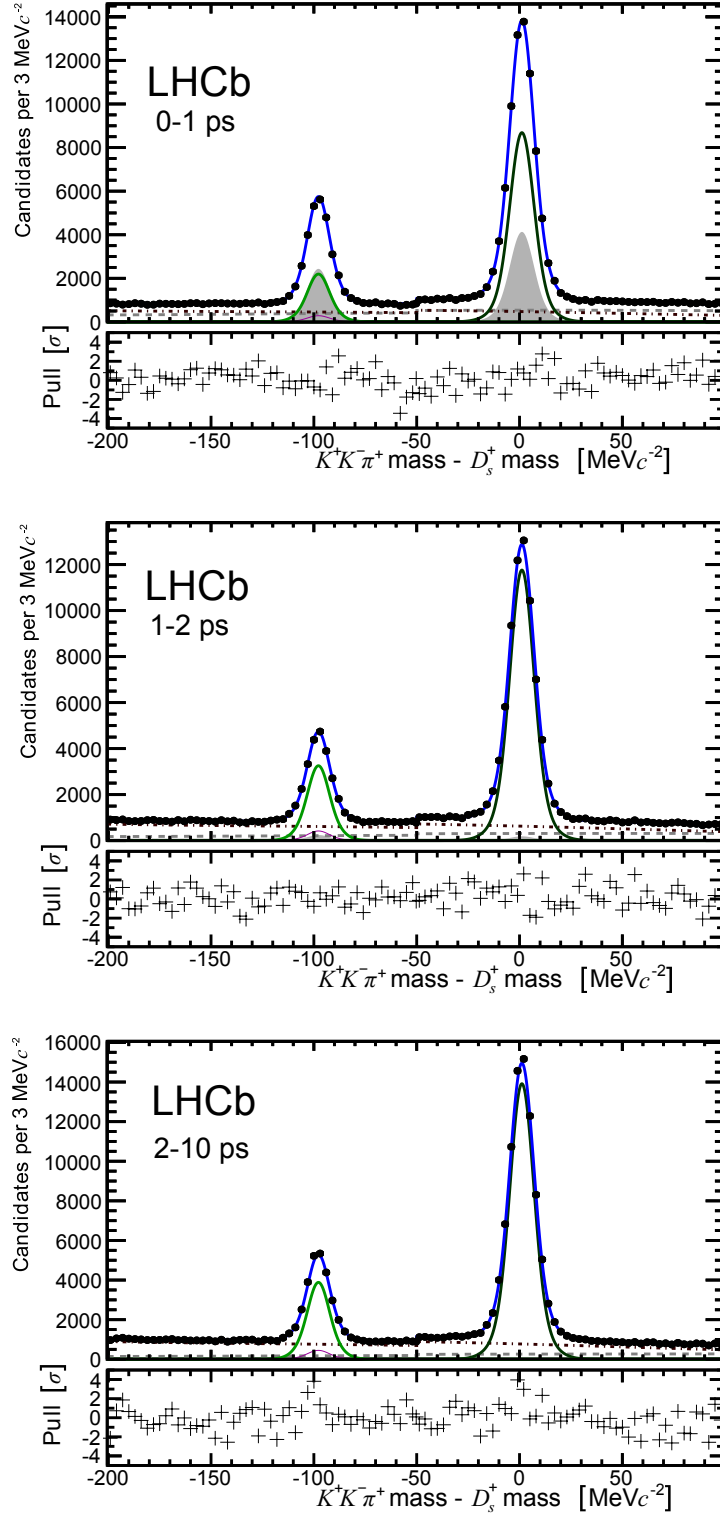


Figure 12: Distribution of measured $K^+K^-\pi^+$ mass, where the known mass of the D_s^+ has been subtracted, for three (indicated) proper-time regions. Legend as in Fig. 9.

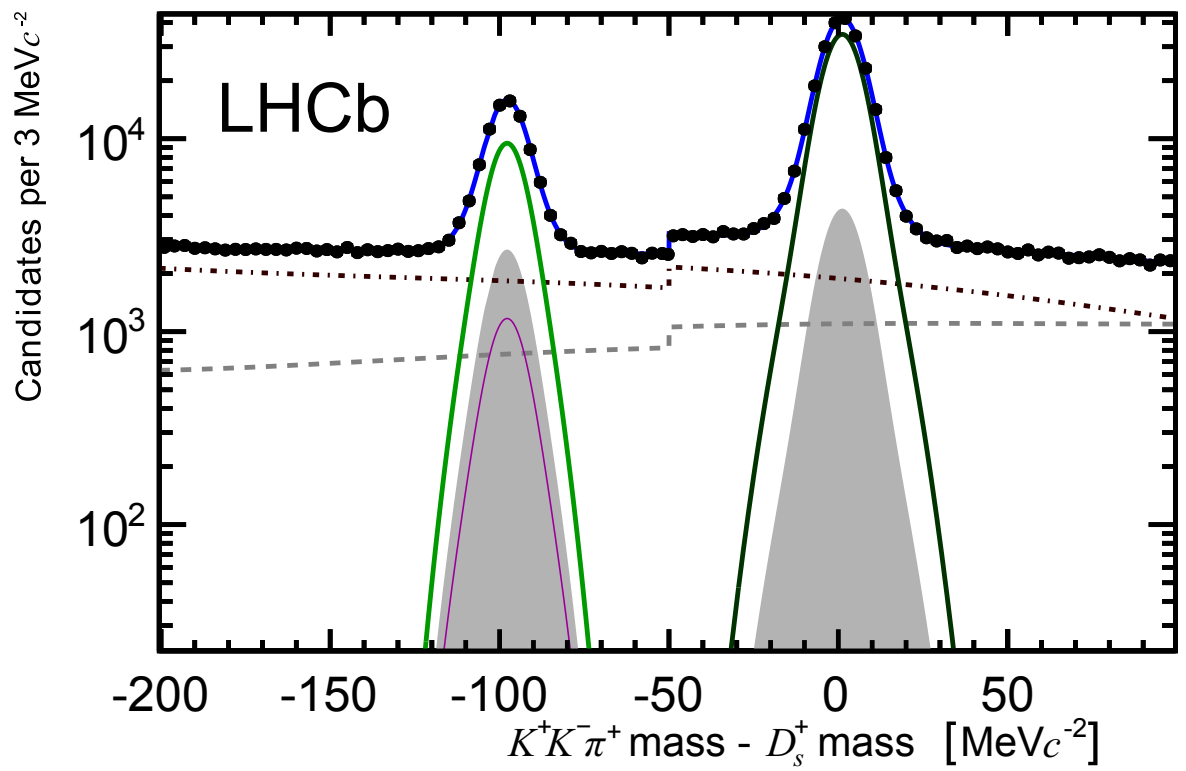


Figure 13: Distribution of measured $K^+K^-\pi^+$ mass, where the known mass of the D_s^+ has been subtracted, with a logarithmic scale for the y-axis. Legend as in Fig. 9.

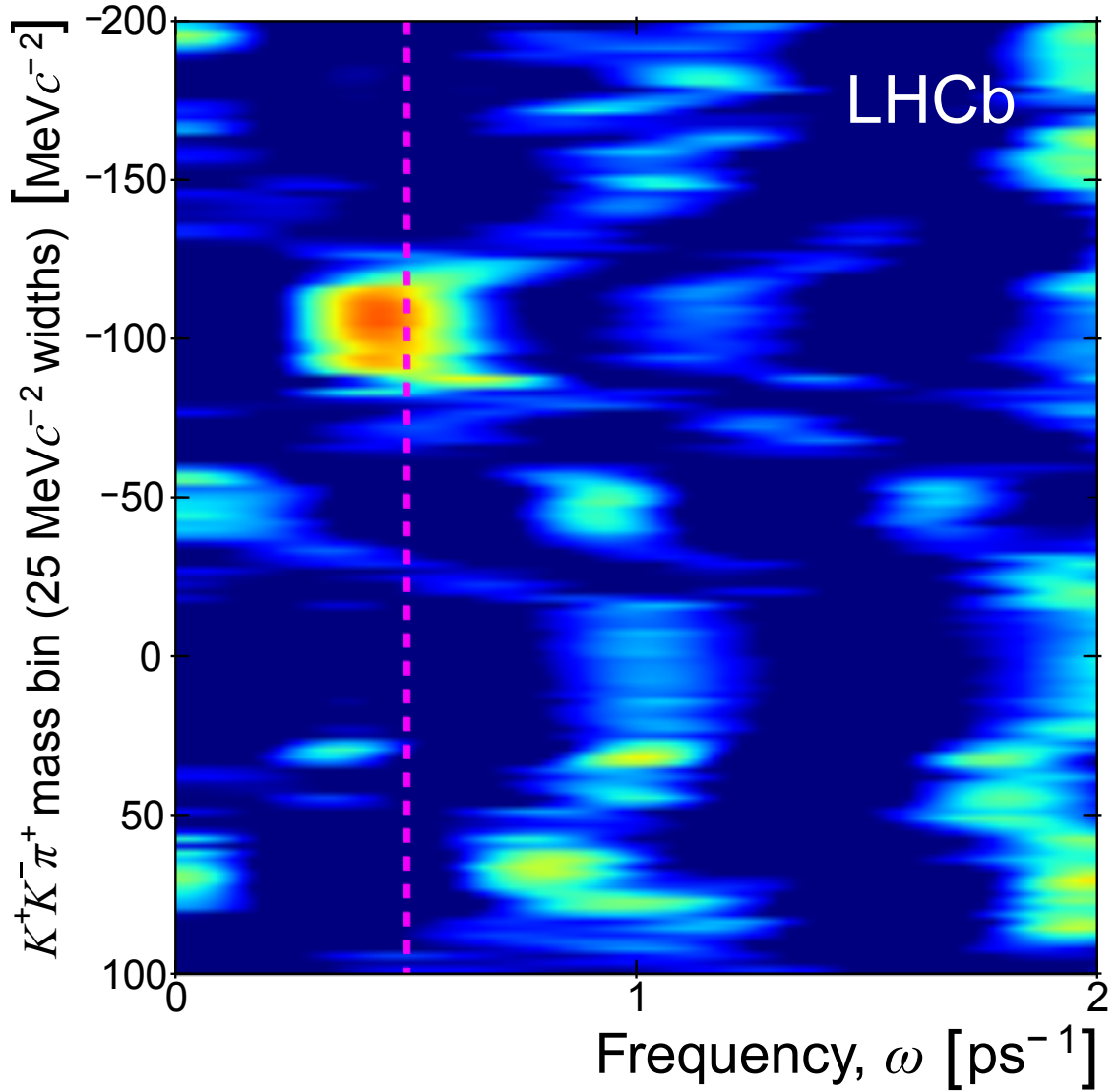


Figure 14: Fourier transforms of our data in bins of the $K^+K^-\pi^+$ mass (approximate mass scale). The bins are $25 \text{ MeV}c^{-2}$ in width, in steps of $5 \text{ MeV}c^{-2}$, such that a smooth image is produced. The colour scale (blue-green-yellow-red) is an arbitrary linear representation of the signal intensity; dark blue is used for zero and below. We here show the Fourier transform of the binned asymmetry, where an excess is visible around the value of Δm_d , although clearly it is heavily biased and imprecise. The vertical pink line is at 0.503 ps^{-1} .