Supplementary material for LHCb-PAPER-2015-006

Figure 1 displays the fit to the four-body mass spectrum $(\pi^+\pi^-)(\pi^+\pi^-)$ for 2011 and 2012 data, respectively.
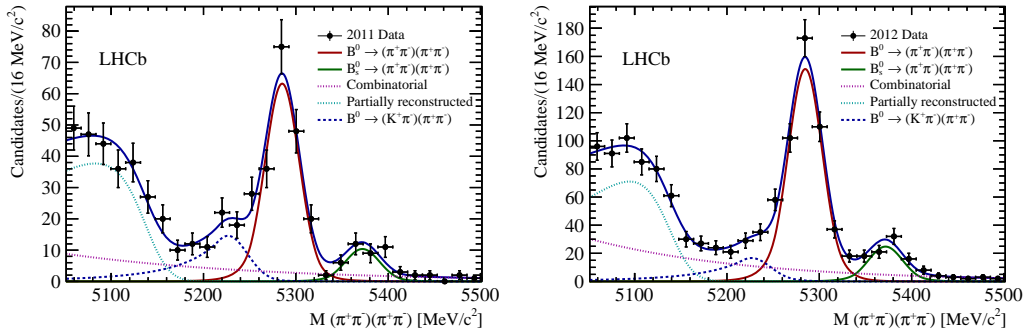

Figure 1: Reconstructed $(\pi^+\pi^-)(\pi^+\pi^-)$ spectrum. The 2011 (left) and 2012 (right) data are represented by the black dots. The fit result is represented by the solid blue line, the $B^0 \to (\pi^+\pi^-)(\pi^+\pi^-)$ signal distribution by the solid red line and the $B_s^0 \to (\pi^+\pi^-)(\pi^+\pi^-)$ by the solid green line. The combinatorial background is represented by the pink dotted line, the partially reconstructed background by the cyan dotted line and the cross-feed by the dark blue dashed line.

Figure 2 displays the fit to the four-body mass spectrum $(K^+\pi^-)(\pi^+\pi^-)$ for the whole data sample. This decay is used as a PID misidentification control sample.
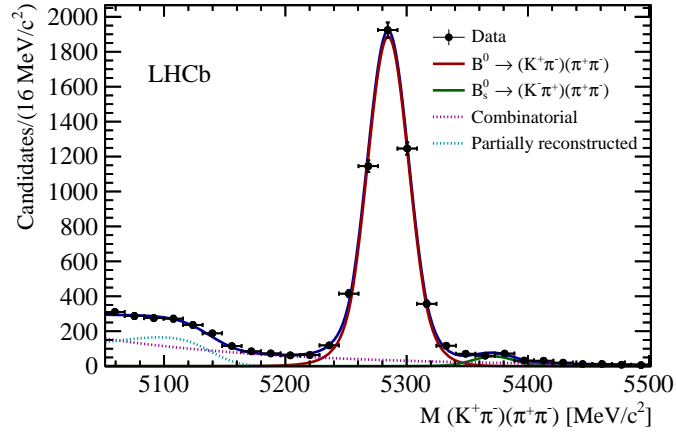

Figure 2: Reconstructed $(K^+\pi^-)(\pi^+\pi^-)$ spectrum. The data is represented by the black dots. The fit result is represented by the solid blue line, the B^0 signal distribution by the solid red line and the B_s^0 by the solid green line. The combinatorial background is represented by the pink dotted line and the partially reconstructed background by the cyan dotted line.