

Supplementary material for LHCb-PAPER-2015-054

The three body decay diagrams for $B^+ \rightarrow D^- K^+ \pi^+$ and $B^+ \rightarrow D^+ K^+ \pi^-$ channels are shown in Fig. 1 (a) and (b).

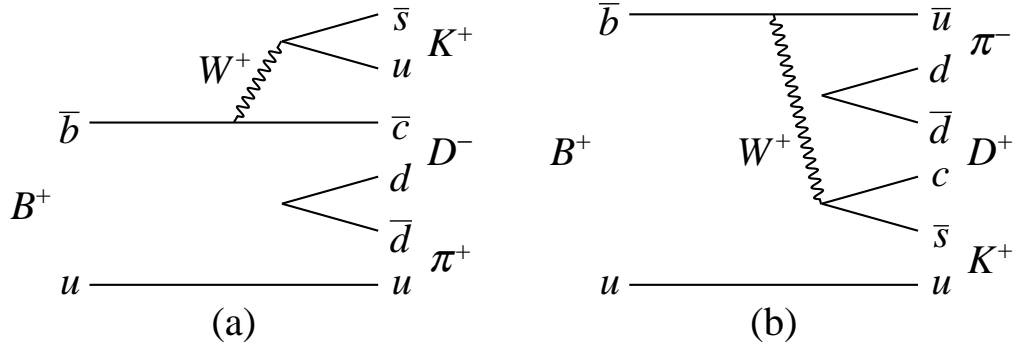


Figure 1: Decay diagrams for (a) $B^+ \rightarrow D^- K^+ \pi^+$ and (b) $B^+ \rightarrow D^+ K^+ \pi^-$ channels.

Figures 2 and 3 show the results of the fits to $B^+ \rightarrow D^- K^+ \pi^+$ and $B^+ \rightarrow D^+ K^+ \pi^-$ candidates, broken down by NN2 bin.

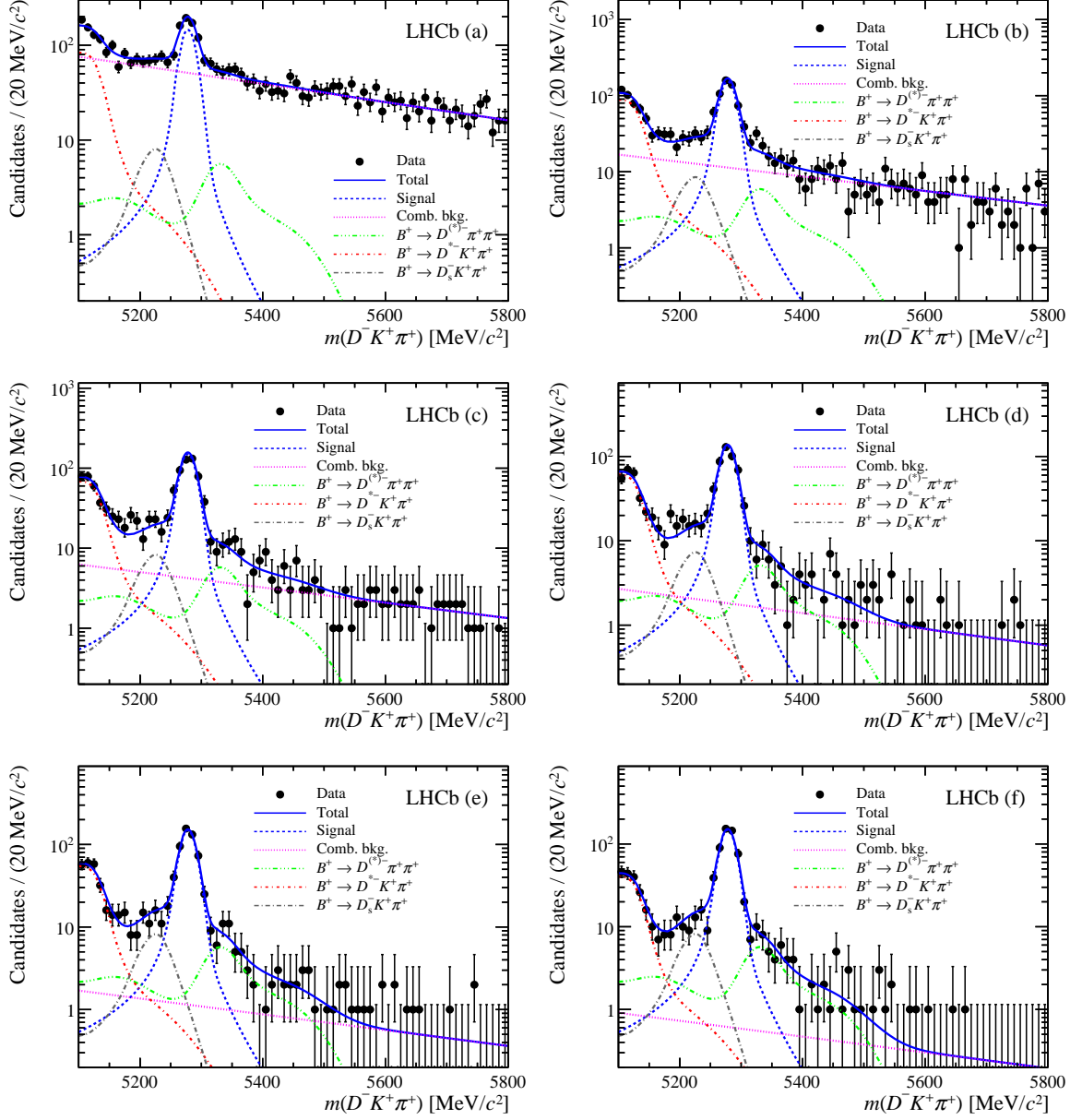


Figure 2: Invariant mass distribution of $B^+ \rightarrow D^- K^+ \pi^+$ candidates with fit projections overlaid, shown on a logarithmic scale. The components are as detailed in the legend. The subfigures with labels (a) to (f) show NN2 bins with increasing purity.

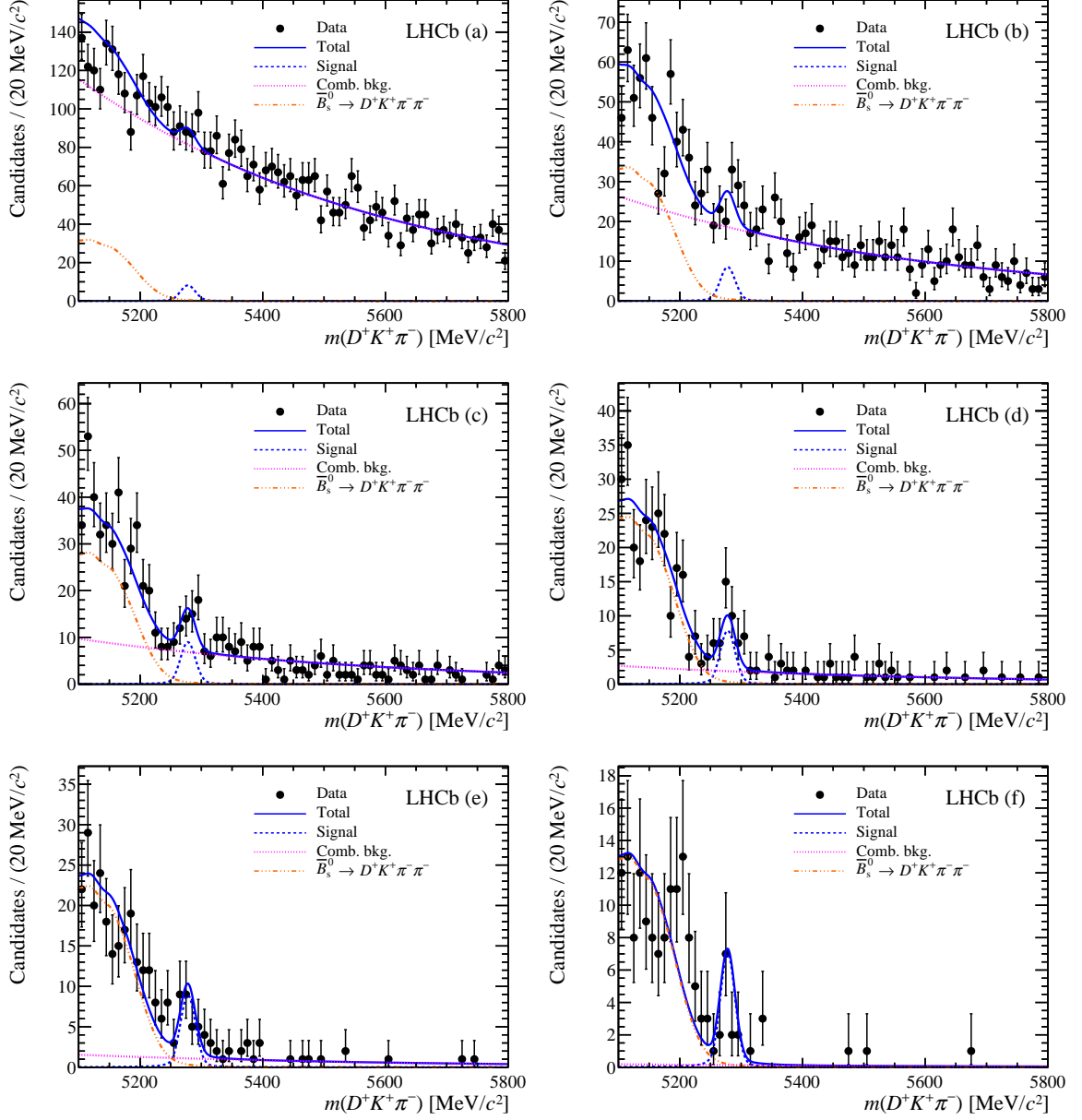


Figure 3: Invariant mass distribution of candidates in the $B^+ \rightarrow D^+ K^+ \pi^-$ data sample with fit projections overlaid. The components are as detailed in the legend. The labels (a) to (f) show NN2 bins with increasing purity.