

Supplementary material

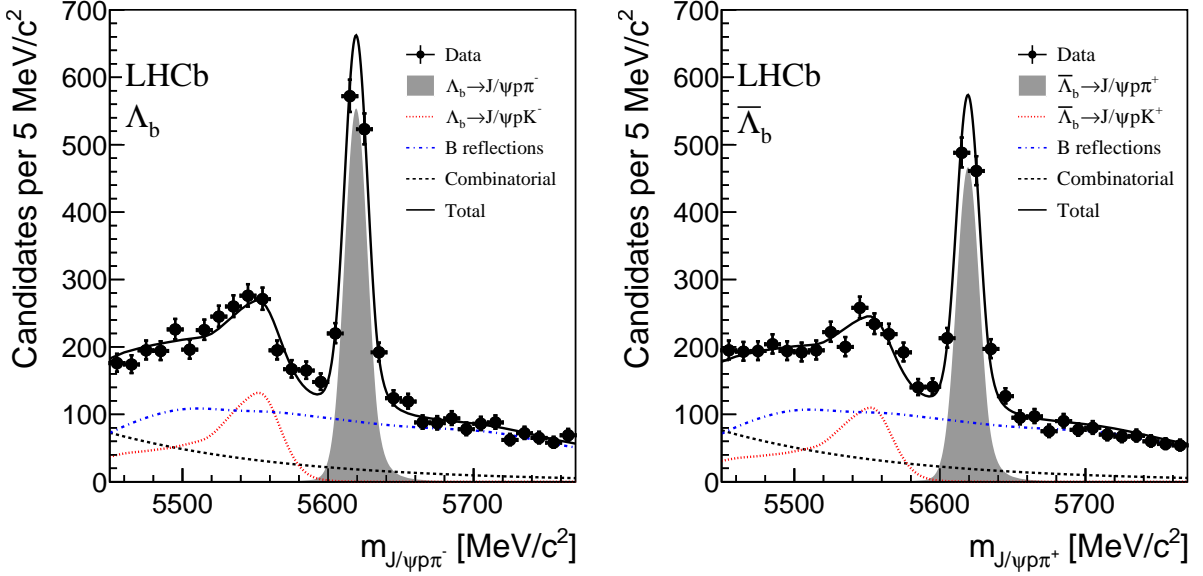


Figure 1: Mass distributions of $J/\psi p \pi^-$ candidates with fit overlaid, for (left) baryons and (right) anti-baryons in linear scale and with same vertical scale.

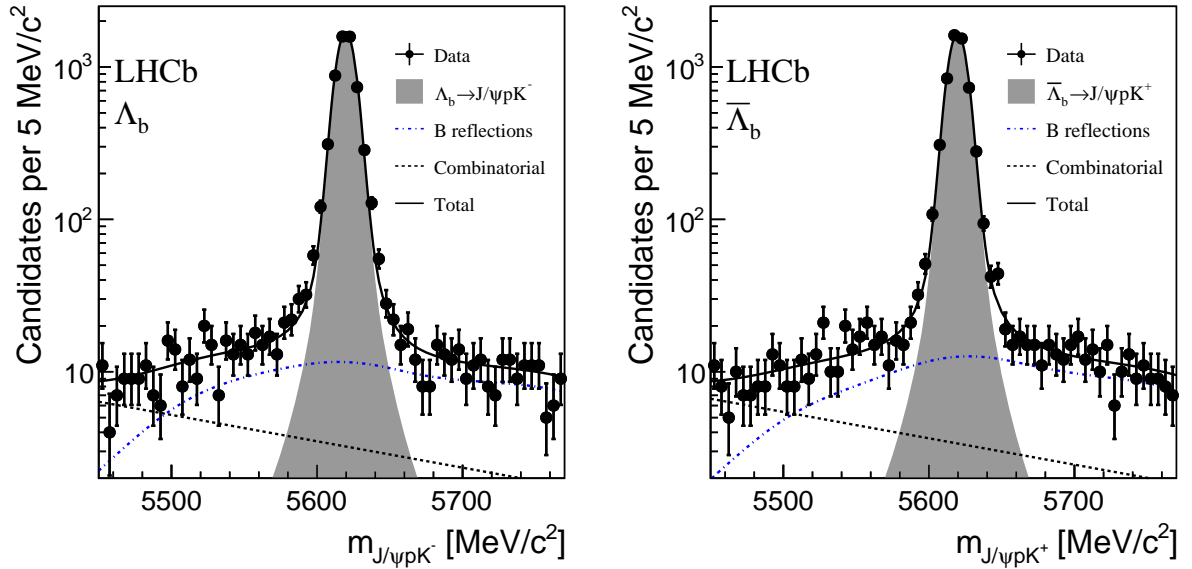


Figure 2: Mass distributions of $J/\psi p K^-$ candidates with fit overlaid, for (left) baryons and (right) anti-baryons in with same vertical scale. Only half of the data sample is used in these fits.

Additional mass distributions that may be useful for talks are shown in Fig. 1 and 2.

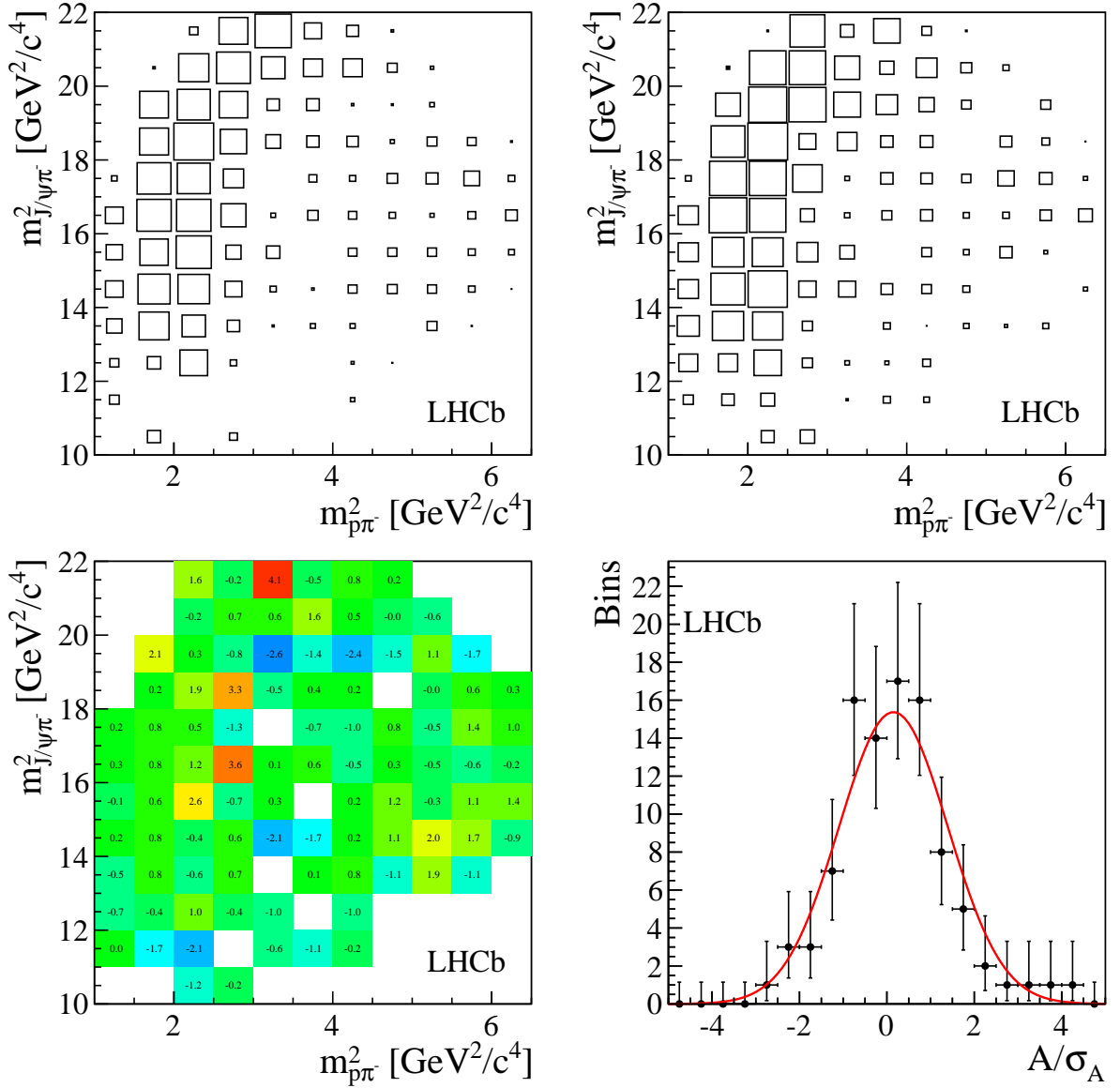


Figure 3: Background-subtracted and efficiency-corrected $J/\psi p\pi$ Dalitz plane for (top left) baryons and (top right) antibaryons. Bins with negative values appear empty. (Bottom left) the statistical significance of the CP asymmetry is calculated in bins of the Dalitz plane. The efficiency-correction is not applied in this plot. (Bottom right) the distribution of these significances is then plotted and fit by a Gaussian distribution. The outcome of the fit is a mean value of 0.15 ± 0.13 and a width of 1.25 ± 0.09 .

The Dalitz planes in background-subtracted data are shown in Fig. 3 for $\Lambda_b^0 \rightarrow J/\psi p\pi^-$ and $\bar{\Lambda}_b^0 \rightarrow J/\psi \bar{p}\pi^+$ decays separately.