Supplementary material for LHCb-PAPER-2018-013

This figure shows the invariant mass spectra for $\Lambda_b^0 \to \Lambda_c^+ \pi^-$, $\Lambda_b^0 \to \Lambda_c^+ \mu^- X$ and $\Xi_b^0 \to \Xi_c^+ \mu^- X$ candidates for the combined 7, 8 and 13 TeV data sets. Also shown are the combined mass difference distributions for the $\Xi_b(6227)^-$ candidates in each of the above final states.

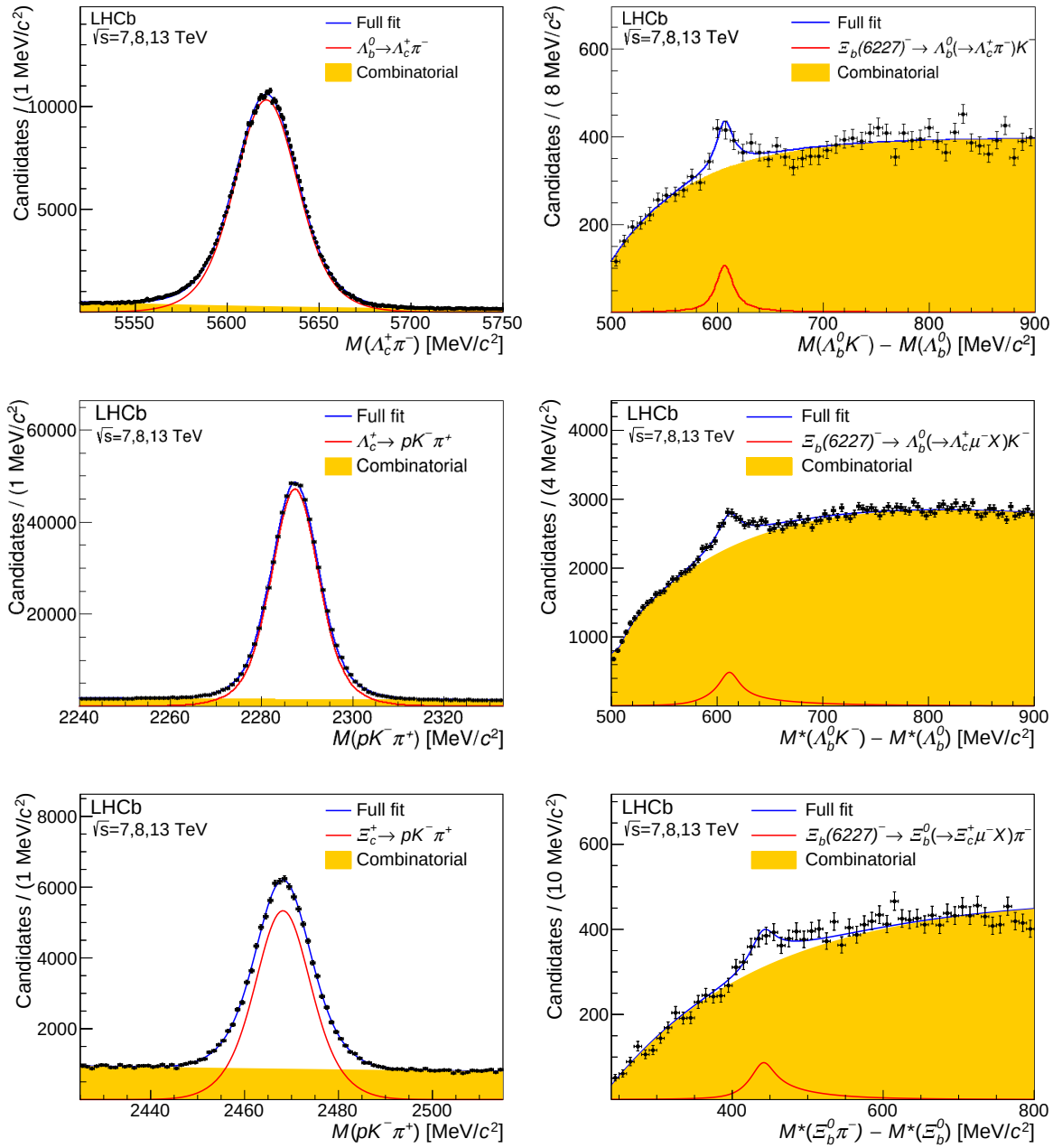

Figure 1: (Left column) Invariant mass spectra for (top row) $\Lambda_b^0 \to \Lambda_c^+\pi^-$, (middle) Λ_c^+ from $\Lambda_b^0 \to \Lambda_c^+\mu^- X$, and (bottom) Ξ_c^+ from $\Xi_b^0 \to \Xi_c^+\mu^- X$ candidate decays for the combined 7, 8 and 13 TeV data sets. (Right column) Spectra of mass differences for $\Xi_b(6227)^-$ candidates, reconstructed in the final state shown in the corresponding plot in left column. The symbol M^* represents the mass after the constraint $(p_{H_c^+} + p_{\mu^-} + p_{\rm miss})^2 = m^2_{H_b^0}$ is applied, as described in the text. Fits are overlaid, as described in the text. The $\Lambda_b^0 \to \Lambda_c^+\mu^- X$ mode (top left only) has been prescaled by a factor of ten.