

Figure 1: This figure shows the ΔE distributions of B candidates in 472 pb^{-1} of collision data, in the mode $B \rightarrow J/\psi K_s^{(*)}$. Events are required to contain at least three good tracks to purify the sample with processes of the type $e^+e^- \rightarrow \text{hadrons}$, while rejecting beam induced background, Bhabha scattering, and other low multiplicity background sources. The lepton, kaon and pion tracks are required to have impact parameters, $|d_0|$ and $|z_0| < 0.5\text{cm}$ and 3.0 cm respectively. $E_{ECL}/p \geq 0.9$ is applied to select e^+ and e^- . While for selecting muons, $E_{ECL} < 0.3\text{ GeV}$ and $M_{uid} \geq 0.1$ by atleast one of the muons. The J/ψ and K^* candidates are selected within $3.0 \leq M_{l+l^-} \leq 3.12\text{ GeV}/c^2$ and $0.845 \leq M_{K\pi} \leq 0.942\text{ GeV}/c^2$. $q\bar{q}$ background is suppressed with $R_2 \leq 0.3$. The internal document reference is BELLE2-NOTE-PH-2018-014.

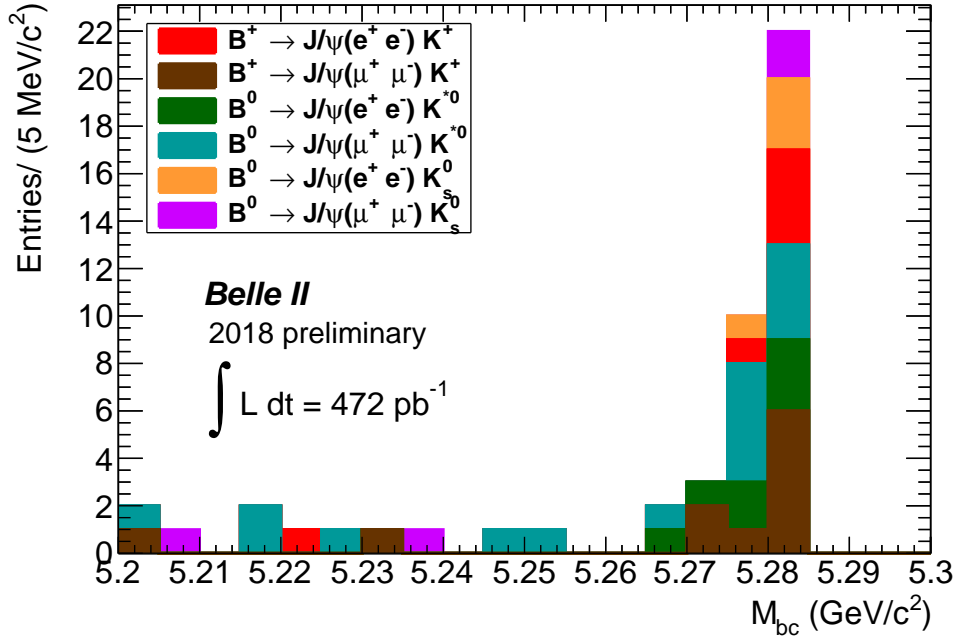


Figure 2: This figure shows the M_{bc} distributions of B candidates in 472 pb^{-1} of collision data, in the mode $B \rightarrow J/\psi K_s^{(*)}$. Events are required to contain at least three good tracks to purify the sample with processes of the type $e^+e^- \rightarrow \text{hadrons}$, while rejecting beam induced background, Bhabha scattering, and other low multiplicity background sources. The lepton, kaon and pion tracks are required to have impact parameters, $|d_0|$ and $|z_0| < 0.5 \text{ cm}$ and 3.0 cm respectively. $E_{ECL}/p \geq 0.9$ is applied to select e^+ and e^- . While for selecting muons, $E_{ECL} < 0.3 \text{ GeV}$ and $M_{uid} \geq 0.1$ by atleast one of the muons. The J/ψ and K^* candidates are selected within $3.0 \leq M_{l+l^-} \leq 3.12 \text{ GeV}/c^2$ and $0.845 \leq M_{K\pi} \leq 0.942 \text{ GeV}/c^2$. $q\bar{q}$ background is suppressed with $R_2 \leq 0.3$. The internal document reference is BELLE2-NOTE-PH-2018-014.