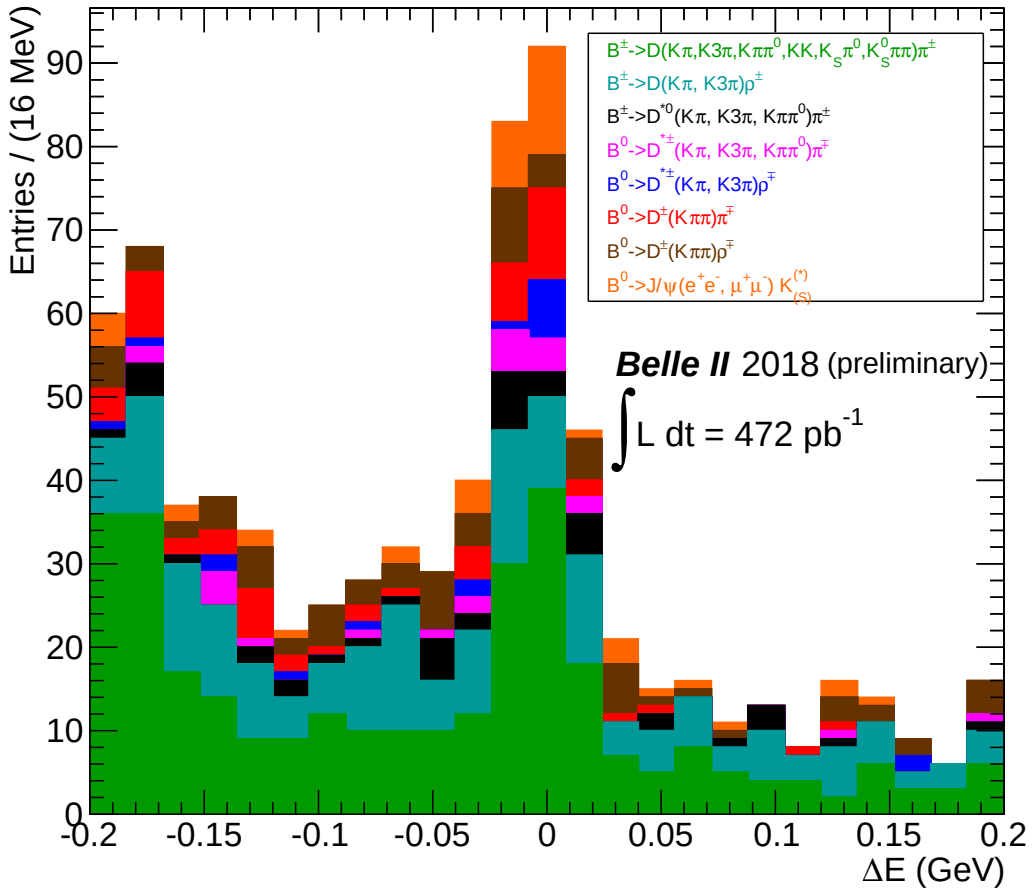

Figure 1: This figure shows the ΔE distribution of B candidates in 472 pb^{-1} of collision data, in the mode $B \to D^{(*)}h, J/\psi K^{(*)}$ where $h = \pi, \rho$. Events are required to contain at least three good tracks to purify the sample with processes of the type $e^+e^- \to$ hadrons, while rejecting beam induced background, Bhabha scattering, and other low multiplicity background sources. The charged kaon and pion tracks are required to have impact parameters, $|d_0|$ and $|z_0|$ less than 0.5 cm and 3.0 cm respectively. Particle identification criteria $>$ 0.5 is applied to K. The K^0_S, D^0, ρ^+, J/ψ and K^* candidates are selected within $0.489 < M_{\pi^+\pi^-} < 0.506$ GeV/c^2, $1.85 < M_D < 1.89$ GeV/c^2, $0.675 < M_{\pi^+\pi^0} < 0.875$ GeV/c^2, $3.0 < M_{l^+l^-} < 3.12$ GeV/c^2 and $0.845 < M_{K\pi} < 0.942$ GeV/c^2, respectively. The D^{*+} candidates are required to have $0.143 < \Delta M < 0.147$ GeV/c^2 and D^{*0} candidates are required to have $0.140 < \Delta M < 0.144$ GeV/c^2. $q\bar{q}$ background is suppressed with $R_2 < 0.3$, 0.25 and 0.4 for $B \to D\pi$ and $B \to J/\psi K^{(*)}$, $B \to D\rho$ and $B \to D^*h$ modes, respectively. The internal document reference is BELLE2-NOTE-PH-2018-004.

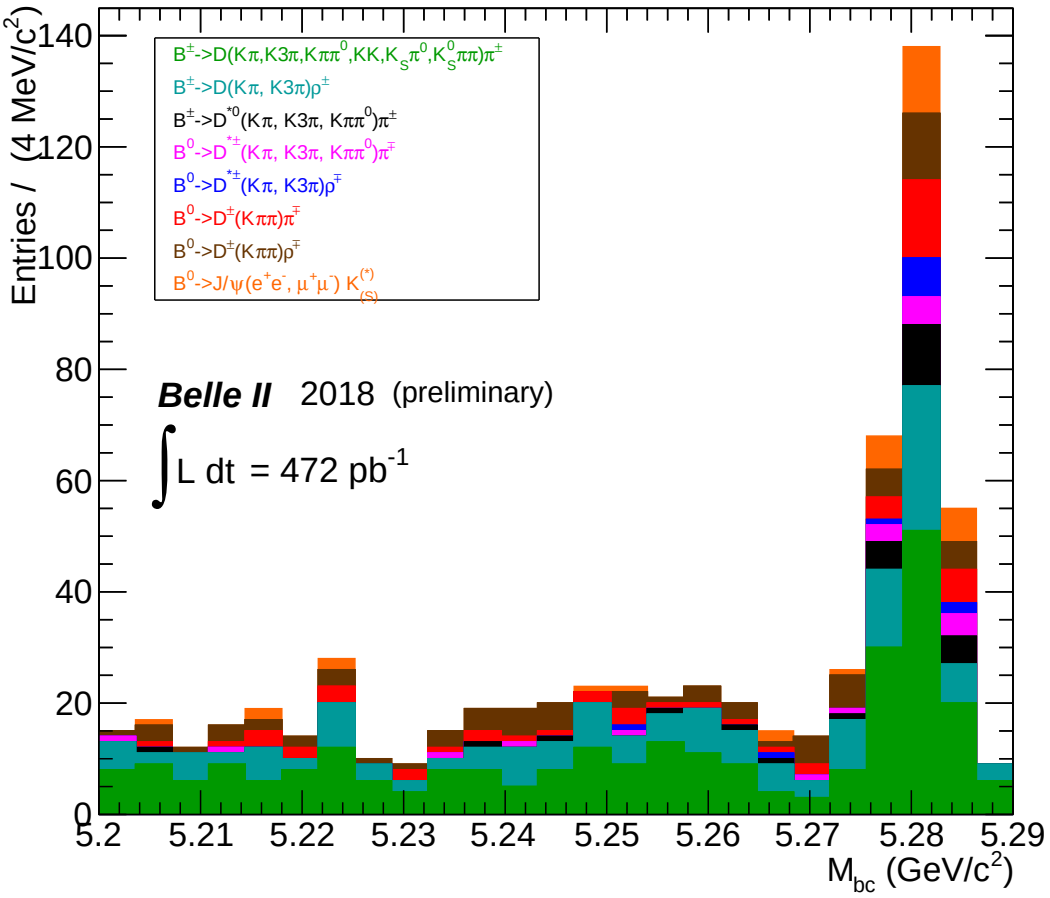

Figure 2: This figure shows the M_{bc} distribution of B candidates in 472 pb^{-1} of collision data, in the mode $B \to D^{(*)}h, J/\psi K^{(*)}$ where $h = \pi, \rho$. Events are required to contain at least three good tracks to purify the sample with processes of the type $e^+e^- \to$ hadrons, while rejecting beam induced background, Bhabha scattering, and other low multiplicity background sources. The charged kaon and pion tracks are required to have impact parameters, $|d_0|$ and $|z_0|$ less than 0.5 cm and 3.0 cm respectively. Particle identification criteria $>$ 0.5 is applied to K. The K^0_S, D^0, ρ^+, J/ψ and K^* candidates are selected within $0.489 < M_{\pi^+\pi^-} < 0.506$ GeV/c^2, $1.85 < M_D < 1.89$ GeV/c^2, $0.675 < M_{\pi^+\pi^0} < 0.875$ GeV/c^2, $3.0 < M_{l^+l^-} < 3.12$ GeV/c^2 and $0.845 < M_{K\pi} < 0.942$ GeV/c^2, respectively. The D^{*+} candidates are required to have $0.143 < \Delta M < 0.147$ GeV/c^2 and D^{*0} candidates are required to have $0.140 < \Delta M < 0.144$ GeV/c^2. $q\bar{q}$ background is suppressed with $R_2 < 0.3$, 0.25 and 0.4 for $B \to D\pi$ and $B \to J/\psi K^{(*)}$, $B \to D\rho$ and $B \to D^*h$ modes, respectively. The internal document reference is BELLE2-NOTE-PH-2018-004.