



Figure 1: This figure shows the  $\text{cos}\theta_{BY}$  distribution of  $\bar{B}^0 \rightarrow D^{*+} e^- \bar{\nu}_e$  candidates using  $250 \text{ pb}^{-1}$  of collision data. Here the data (points with error bars) is overlaid with the combination of MC events. The MC histograms are scaled to the data luminosity, and then scaled by another factor of 0.44 to have the same area as the data. Signal events are selected based upon following selection criteria. The charged kaon and pion tracks are required to have the impact parameters,  $|d_0|$  and  $|z_0|$  less than 0.5 cm and 3.0 cm respectively. No particle identification criteria are applied. The  $D^0$  candidates reconstructed from a charged kaon and a pion are selected within the mass range  $1.85 \text{ GeV}/c^2 < m_{K\pi} < 1.88 \text{ GeV}/c^2$ . Momentum of pion from  $D^{*+}$  in center-of-mass frame is selected to be  $p_{\pi^\pm}^* < 0.4 \text{ GeV}$ . The mass difference between  $D^{*+}$  and  $D^0$  ( $\Delta m$ ) is required to be  $0.144 \text{ GeV}/c^2 < \Delta m < 0.148 \text{ GeV}/c^2$ , and momentum of  $D^{*+}$  in center-of-mass frame is required to have  $p_{D^{*+}}^* < 2.5 \text{ GeV}/c$ . Also continuum background is suppressed with  $R2 < 0.25$ . Leptons are required to have impact parameters,  $|d_0| < 2 \text{ cm}$ ,  $|z_0| < 5 \text{ cm}$ . Momentum of lepton in center-of-mass frame is selected to be  $1.2 \text{ GeV}/c < p_l^* < 2.4 \text{ GeV}/c$ . Further electrons are identified with  $E_{ECL}/p > 0.8$ ,  $E9/E21 > 0.94$ . The internal document reference is BELLE2-NOTE-PH-2018-018.