

$$\rho_X = \frac{\mathcal{B}(X)_{PDG}}{\mathcal{B}(X)_{GEN}}$$

$$N_{CS} = \frac{N_{CS,MC}^{\text{Sig. window}}}{N_{CS,MC}^{\text{Con. window}}} N_{CS,DATA}^{\text{Con. window}}$$

$$\mathbf{1} \quad B \rightarrow \bar{D}^* \ell^+ \nu, D^0 \rightarrow K^+ K^-$$

$$\eta_1 = \frac{N_1^+ \times \rho_{B^+ \rightarrow \bar{D}^{*0} \ell^+ \nu} + N_1^0 \times \rho_{B^0 \rightarrow D^{*-} \ell^+ \nu}}{N_{CS} \times \rho_{B^+ \rightarrow \bar{D}^0 \ell^+ \nu}} \quad (1)$$

$$\mathbf{2} \quad B \rightarrow \bar{D}^* \ell^+ \nu, D^0 \rightarrow K^+ K^- X$$

$$\eta_2 = \frac{N_2^+ \times \rho_{B^+ \rightarrow \bar{D}^{*0} \ell^+ \nu} + N_2^0 \times \rho_{B^0 \rightarrow D^{*-} \ell^+ \nu}}{N_{CS} \times \rho_{B^+ \rightarrow \bar{D}^0 \ell^+ \nu} \times \rho_{D^0 \rightarrow K^+ K^-}} \quad (2)$$

$$\mathbf{3} \quad B^+ \rightarrow \bar{D}^0 \ell^+ \nu, D^0 \rightarrow K^+ K^- X$$

$$\eta_3 = \frac{N_3^+}{N_{CS} \times \rho_{D^0 \rightarrow K^+ K^-}} \quad (3)$$

$$\mathbf{4} \quad B \rightarrow \bar{D}^{(*)} \ell^+ \nu, D^0 \rightarrow K^+ K^- X\text{-cascade}$$

$$\eta_4 = \frac{N_4^+ \times ? + N_4^0 \times ?}{N_{CS} \times \rho_{CS}} \quad (4)$$

$$\mathbf{5} \quad \text{Other } B \rightarrow X_c \ell \nu$$

$$\eta_5 = \frac{N_5^+ \times ? + N_5^0 \times ?}{N_{CS} \times \rho_{CS}} \quad (5)$$