

Update on $B^0 \rightarrow K^+ K^- \pi^0$

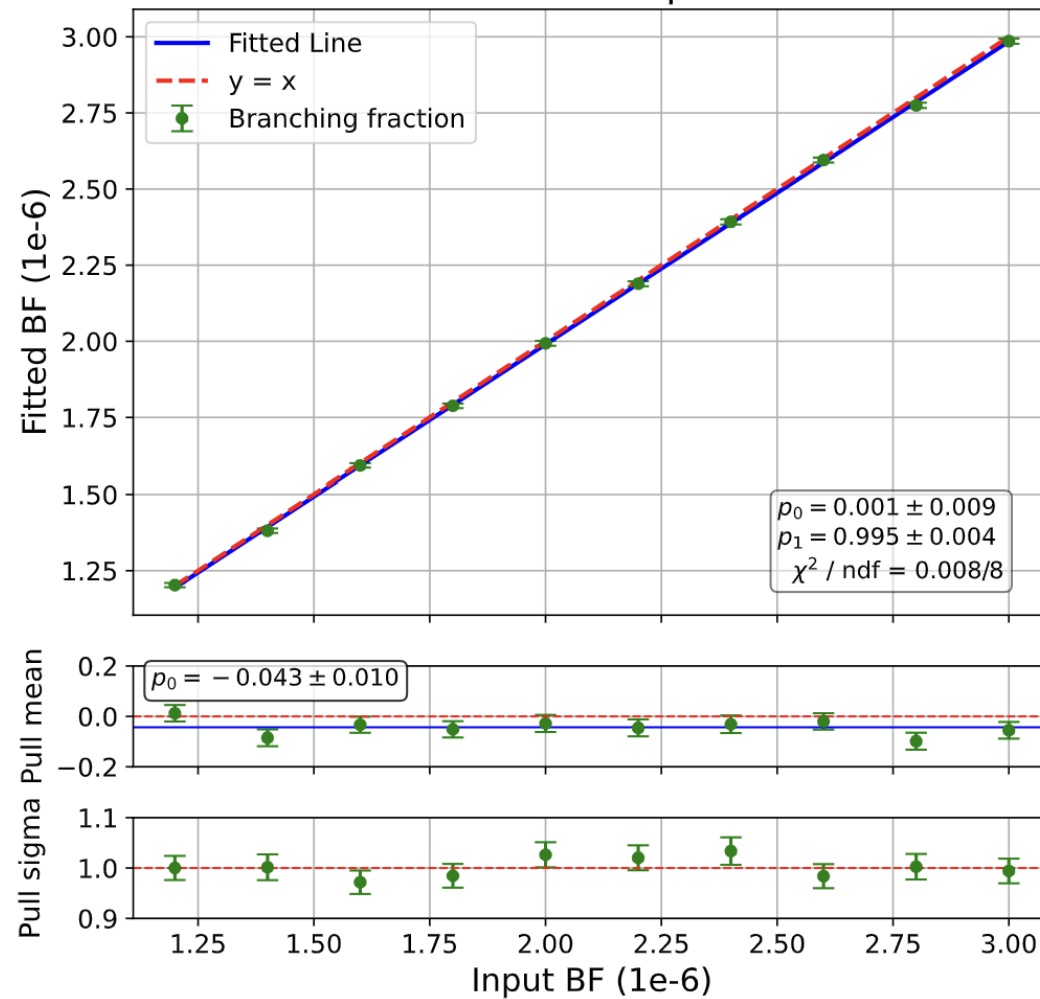
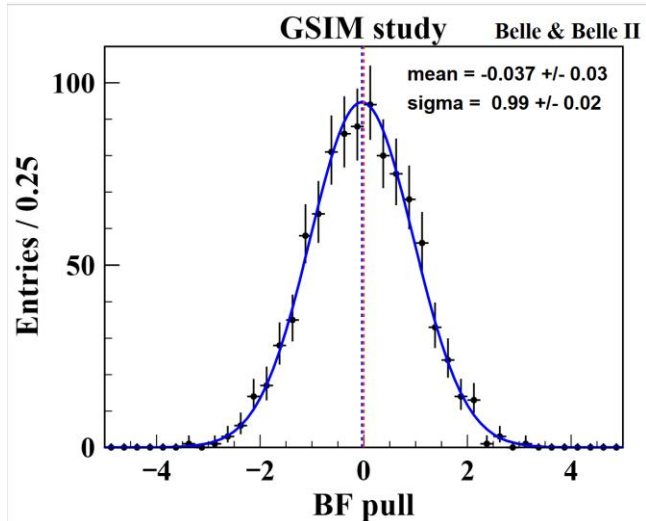
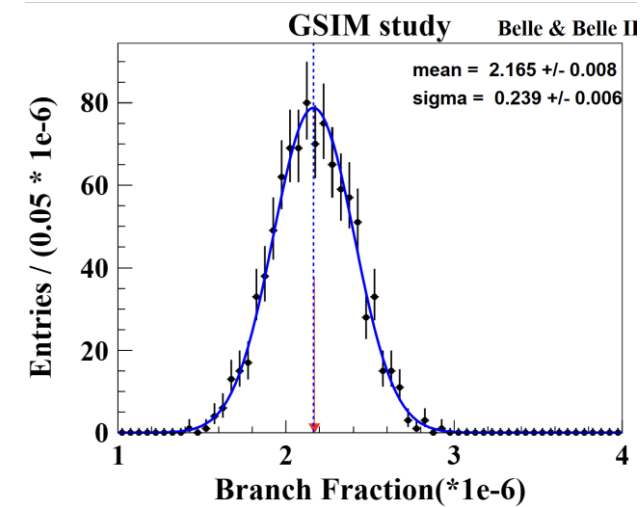
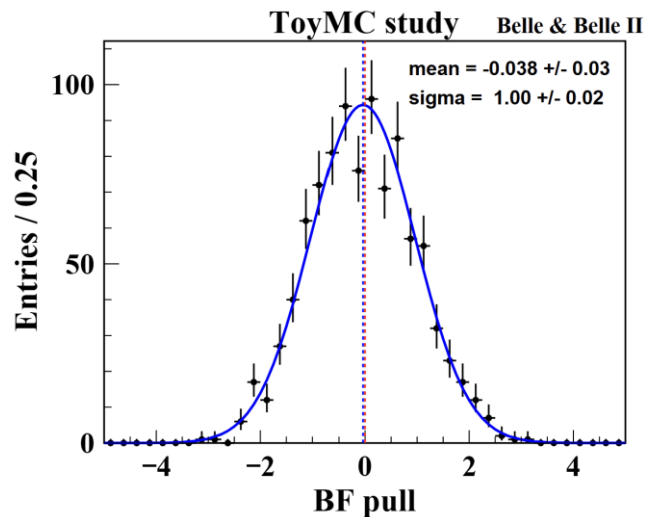
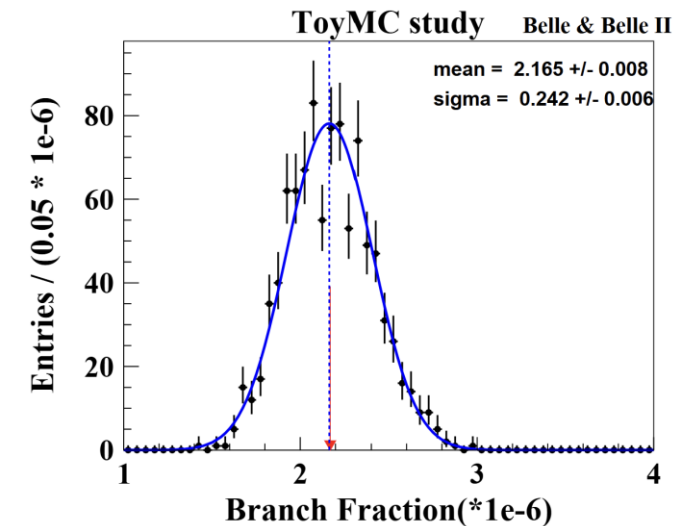
2026.6.26

Simultaneous Fit

ToyMC & GSIM Study

Linearity Check

Fitted BF vs Input BF



Systematic Uncertainty

The combined systematic uncertainty of Belle and Belle II is scaled by the luminosity of Belle and Belle II, i.e.,

$$\sigma_{\text{combined}} = \sqrt{\frac{L_1^2 \cdot \sigma_1^2 + L_2^2 \cdot \sigma_2^2}{(L_1 + L_2)^2}}$$

- ✓ **Tracking**
 - ✓ **Number of $B\bar{B}$ pairs**
 - ✓ **MC statistic**
 - ✓ **π^0 reconstruction efficiency**
 - ✓ **CS selection**
 - ✓ **PID correction**
 - ✓ **Fitting bias**
 - **Efficiency Model** : To be filled after box open
 - **Multiple candidates**
 - **PDF shapes**
 - **Calibration factors**
- } **To be done with ToyMC samples**

Backup

Fitting Results on a ToyMC sample

