

Belle data and generic MC

$$\begin{array}{ll} B^+ \rightarrow \bar{D}^0 \pi^+ & 4.61 \times 10^{-3} \\ \bar{D}^0 \rightarrow K^+ \pi^- & 3.947 \% \end{array}$$

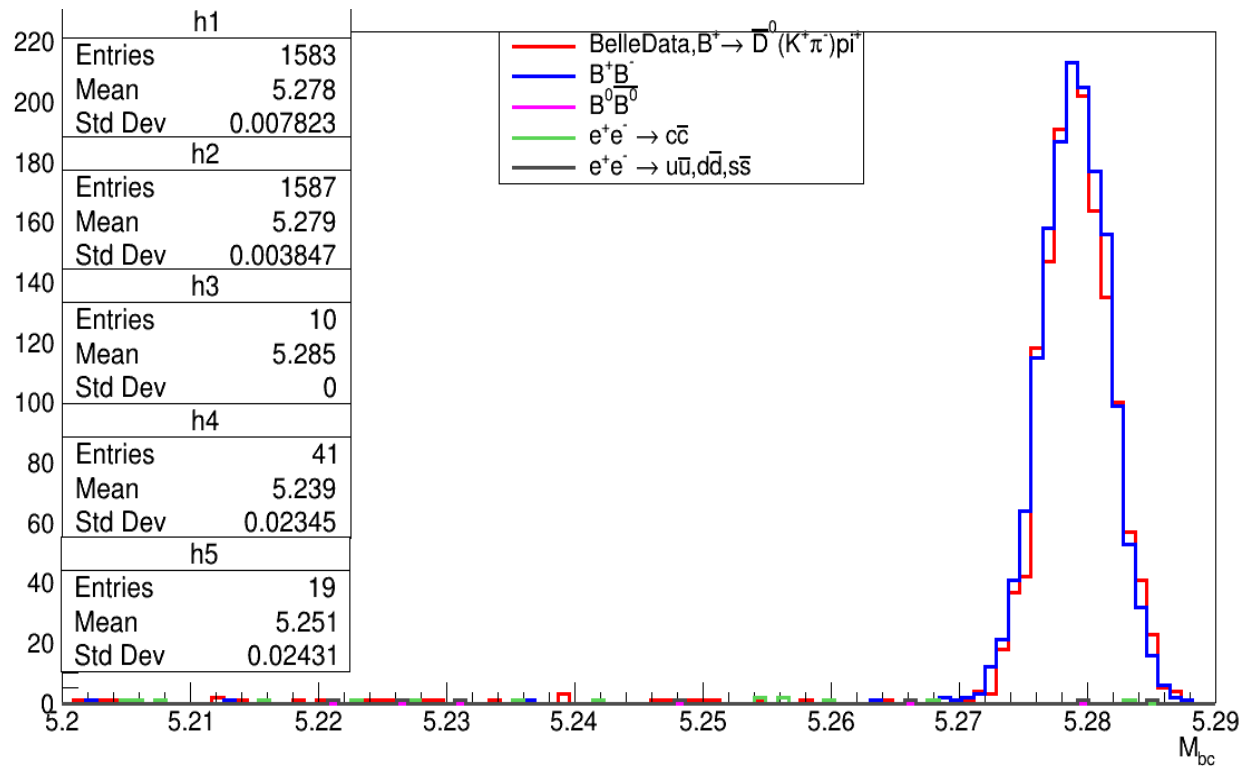
All Belle experiments data and 1.0 stream of generic MC

15 May 2024

M_{bc}

Cuts applied

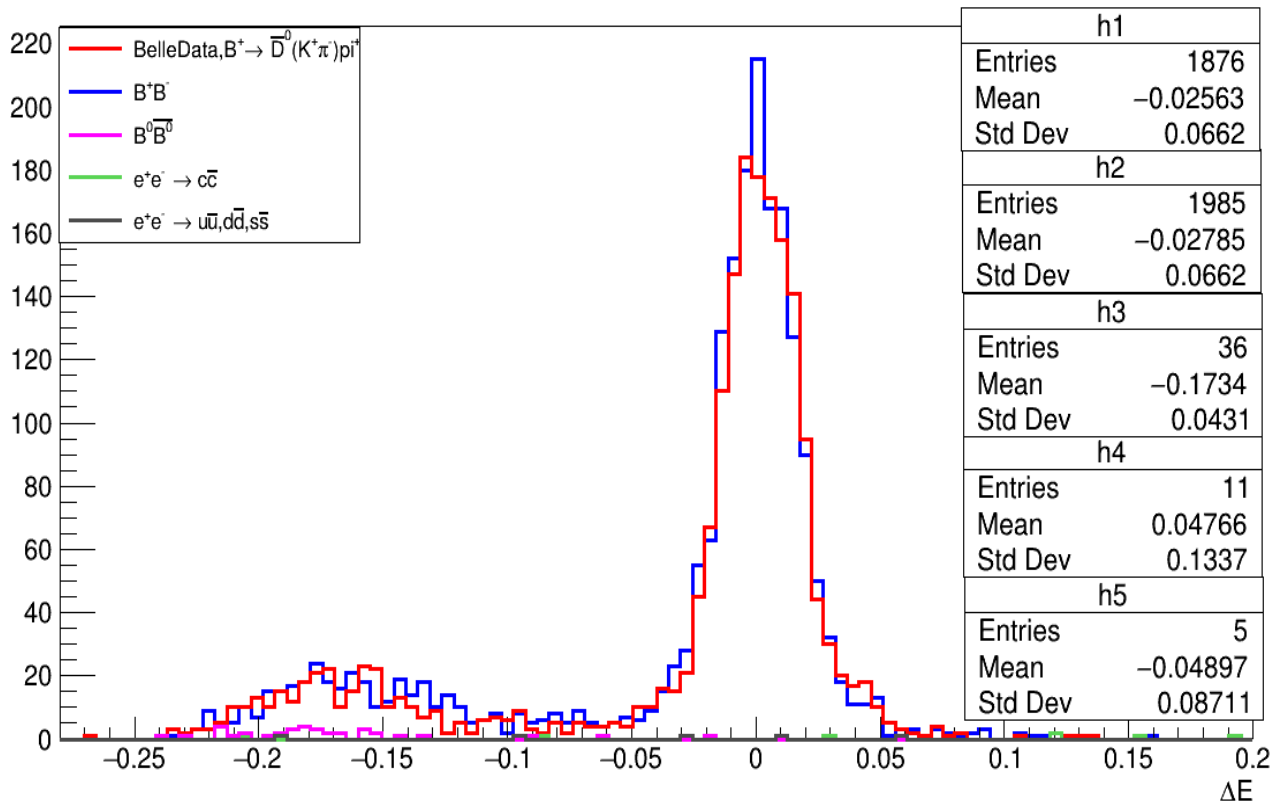
- Rank 1
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV



ΔE

Cuts applied

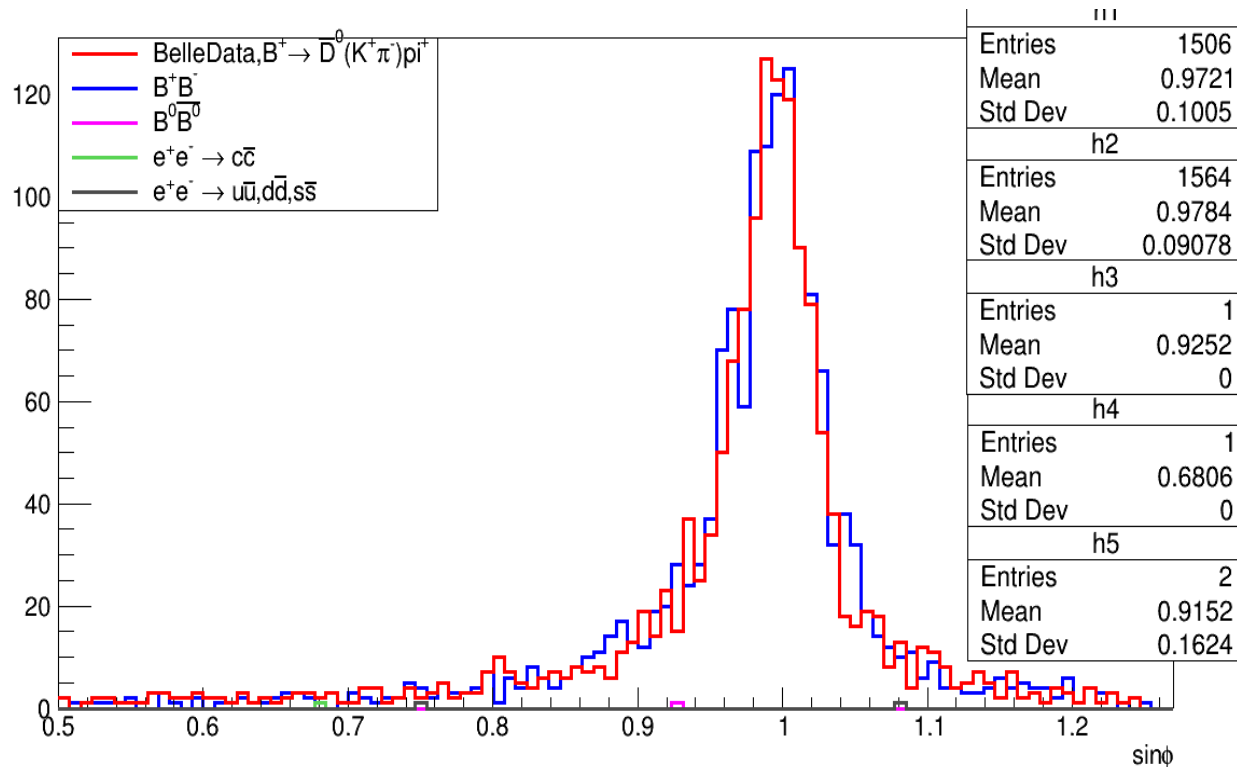
- Rank 1
- $M_{bc} > 5.27$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV



Sin_phi

Cuts applied

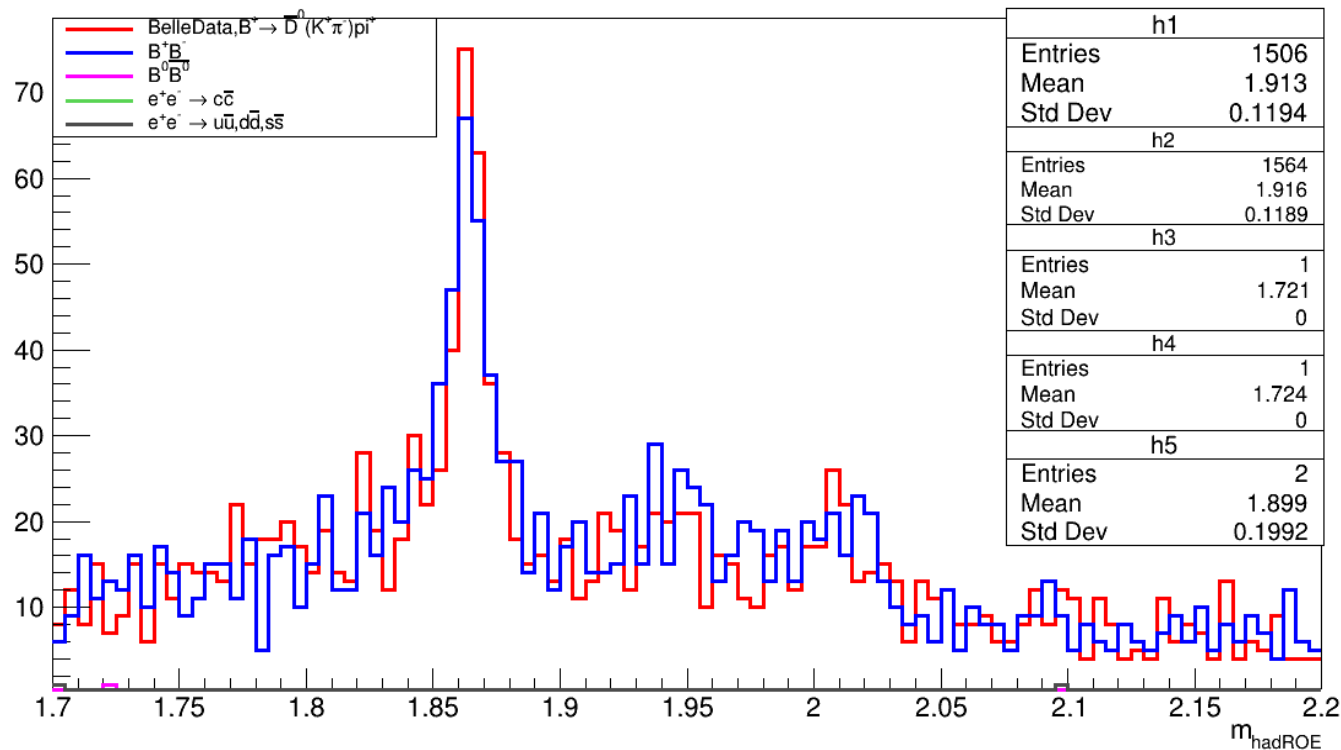
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\cos(p_{\text{Btag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV



m_hadROE

Cuts applied

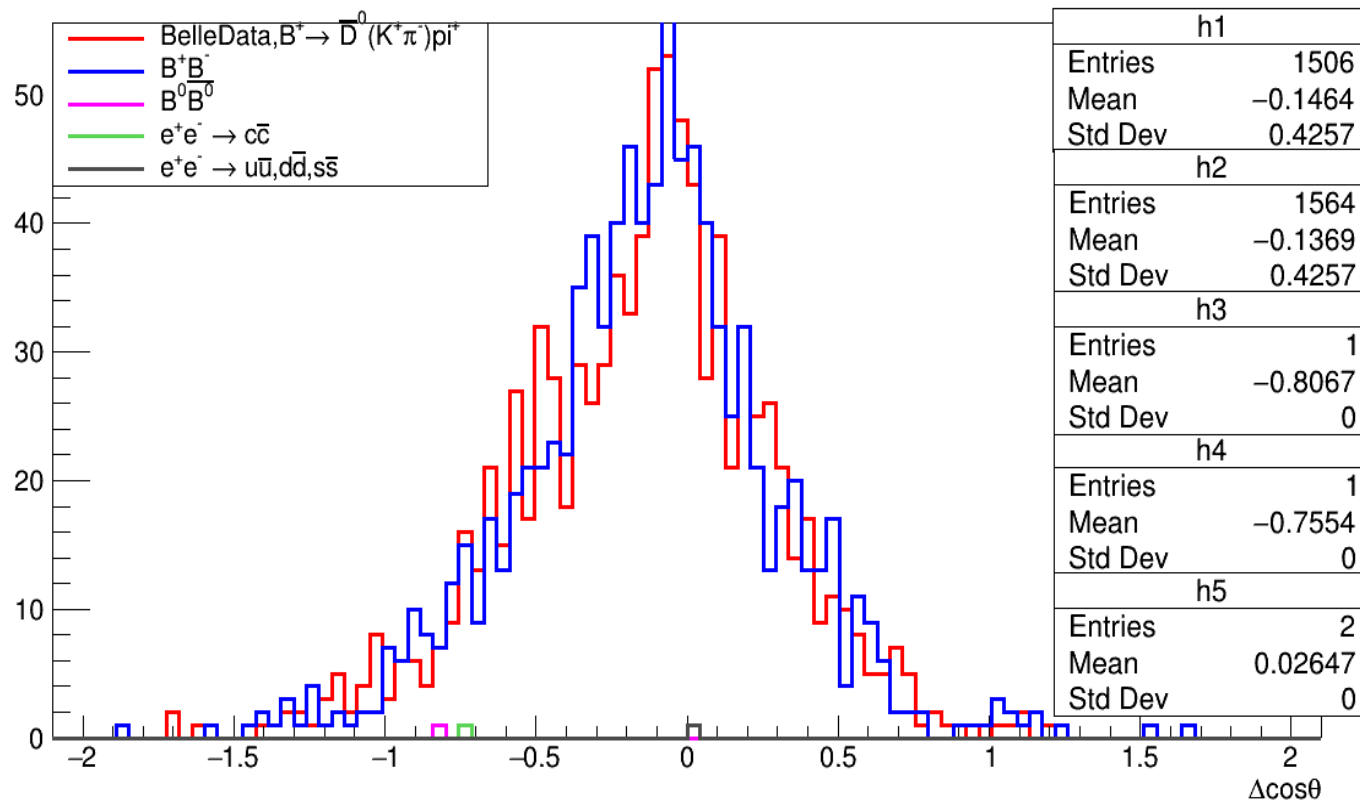
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{B\text{tag}}, p_{v\text{istag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV



Best sum of cosine angles

Cuts applied

- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV

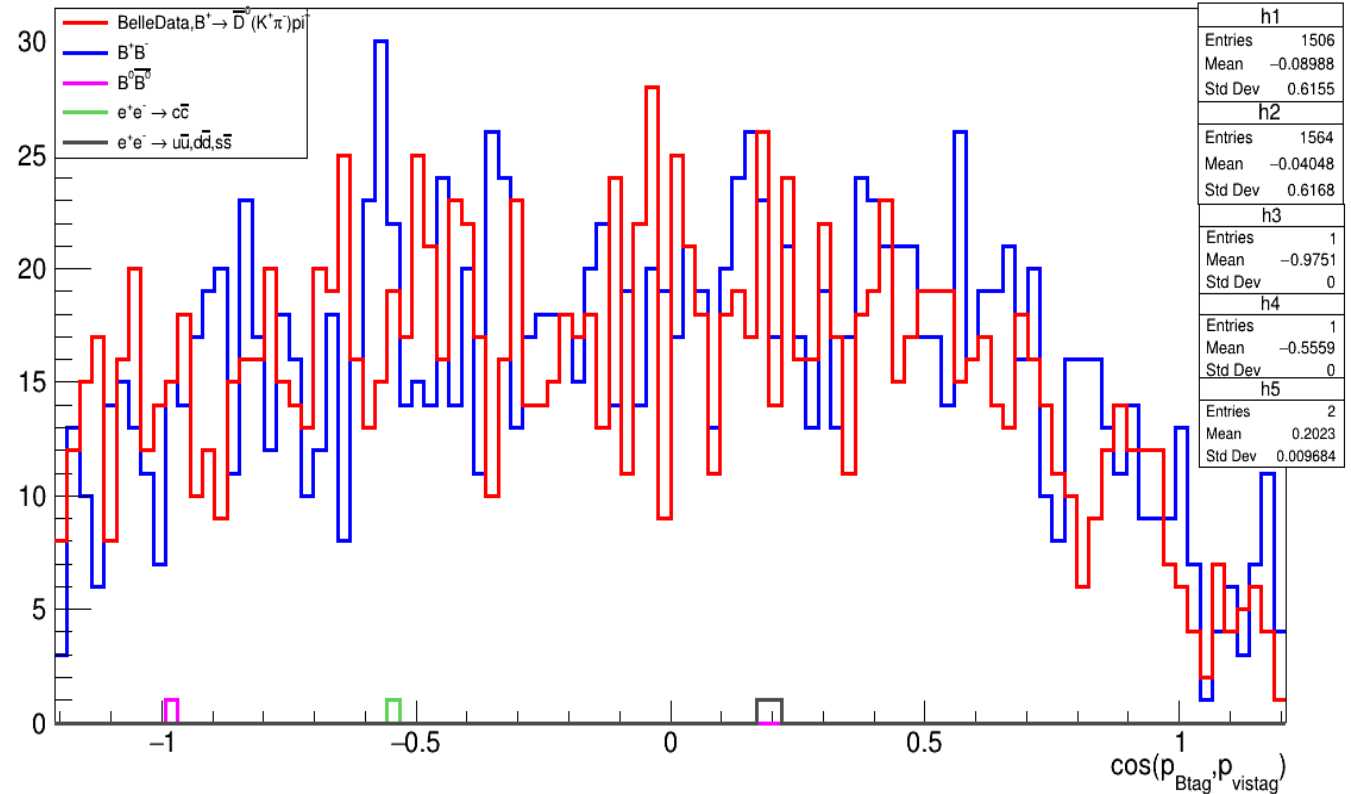


Back up

$\cos(p_{B\text{tag}}, p_{\text{vistag}})$

Cuts applied

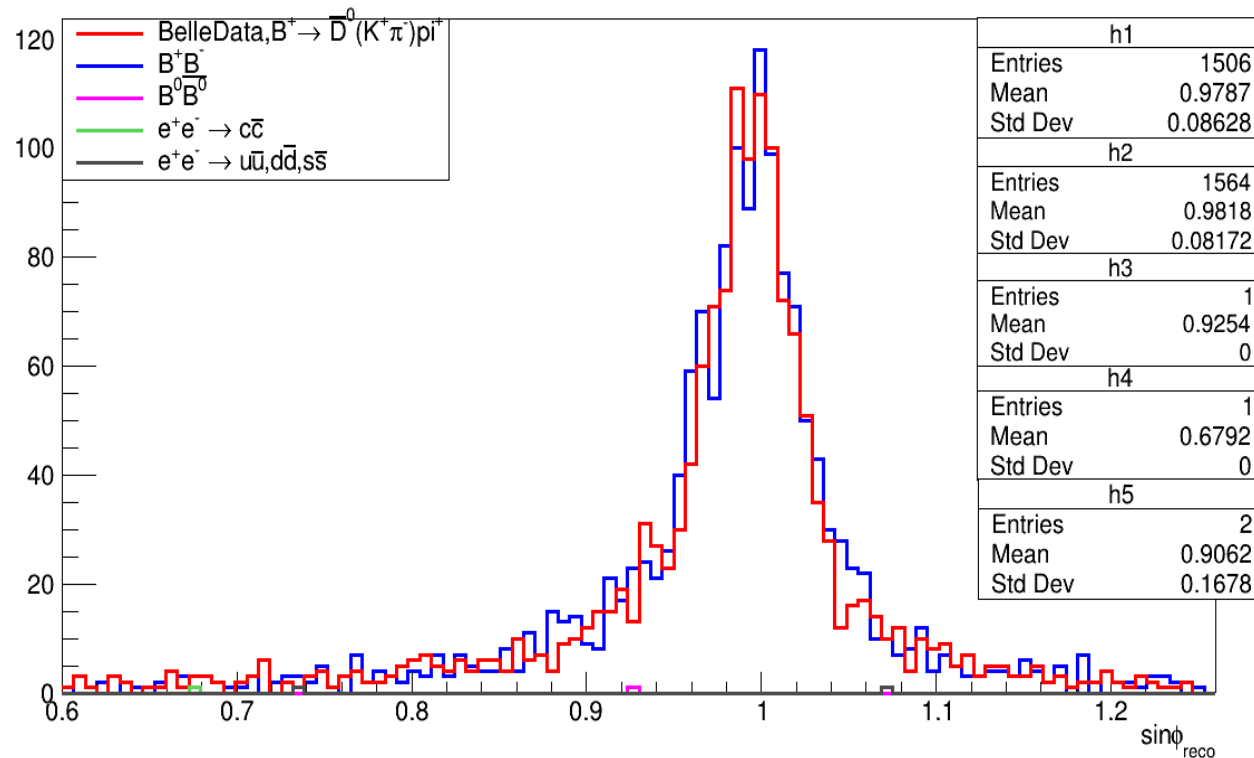
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{B\text{tag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV



Sin_phi_reco

Cuts applied

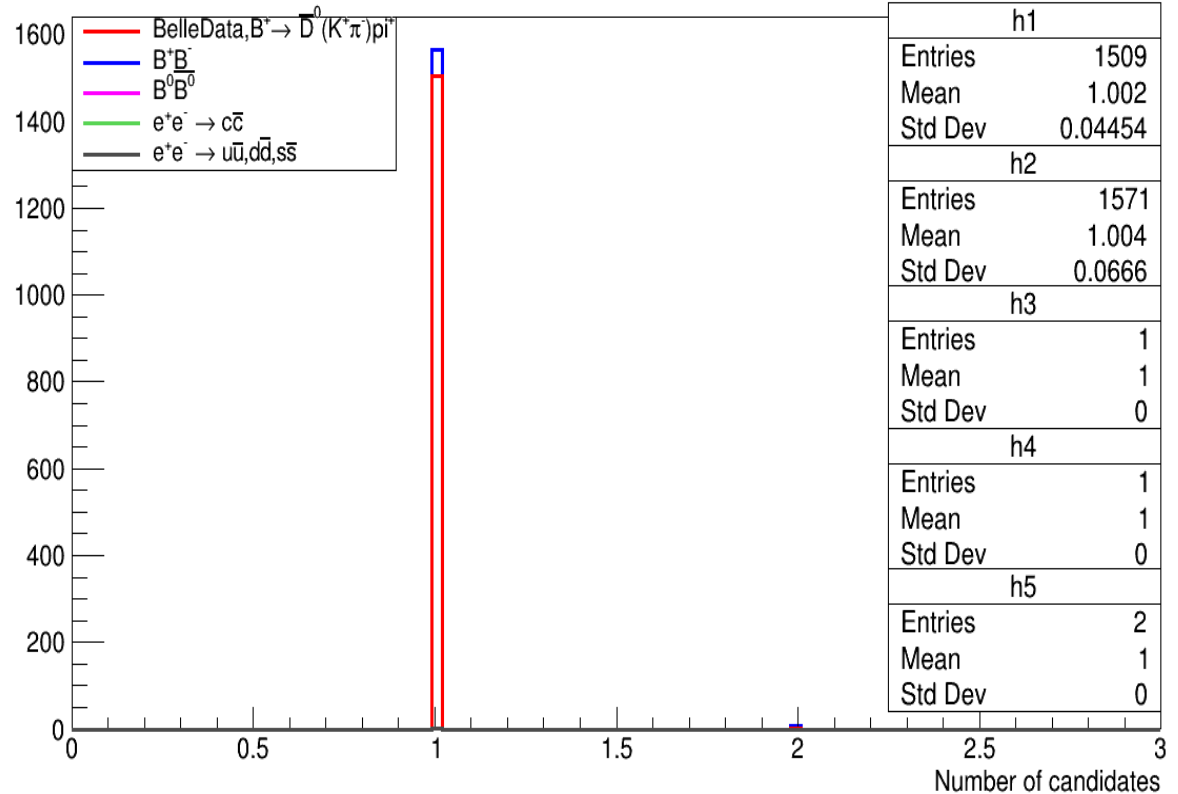
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\cos(p_{B\text{tag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV



Number of candidates

Cuts applied

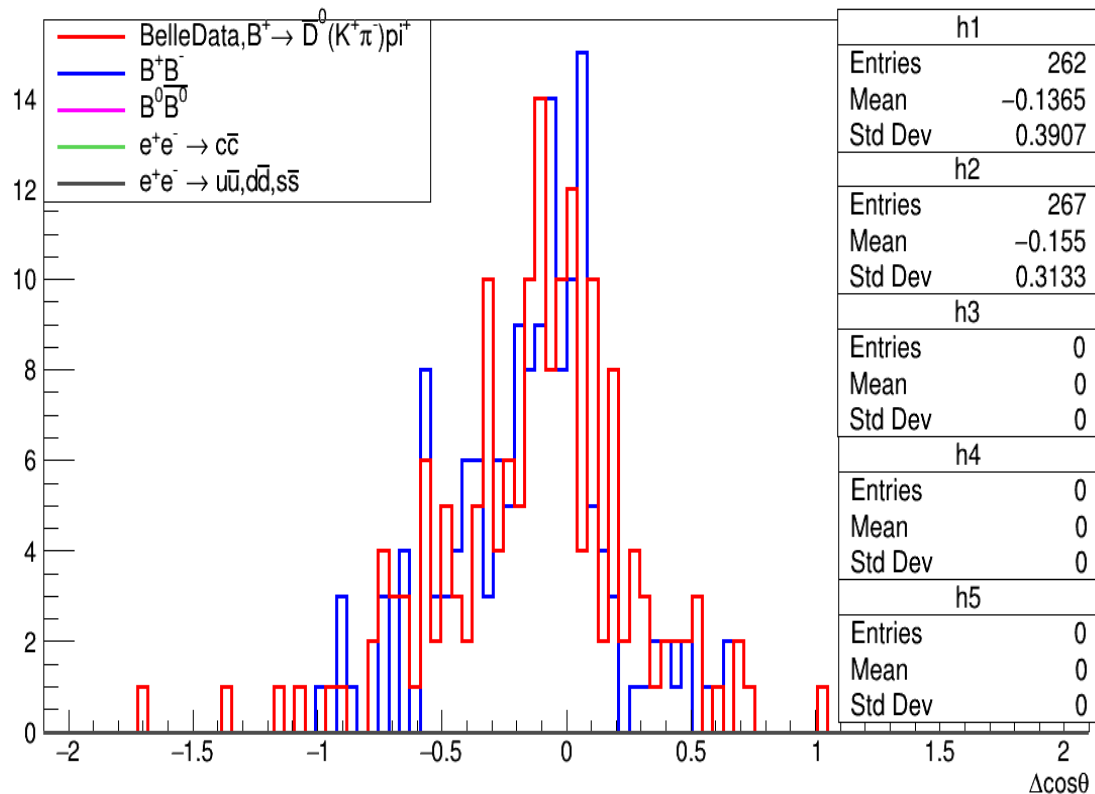
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\cos(p_{B\text{tag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV



Best sum around D0

Cuts applied

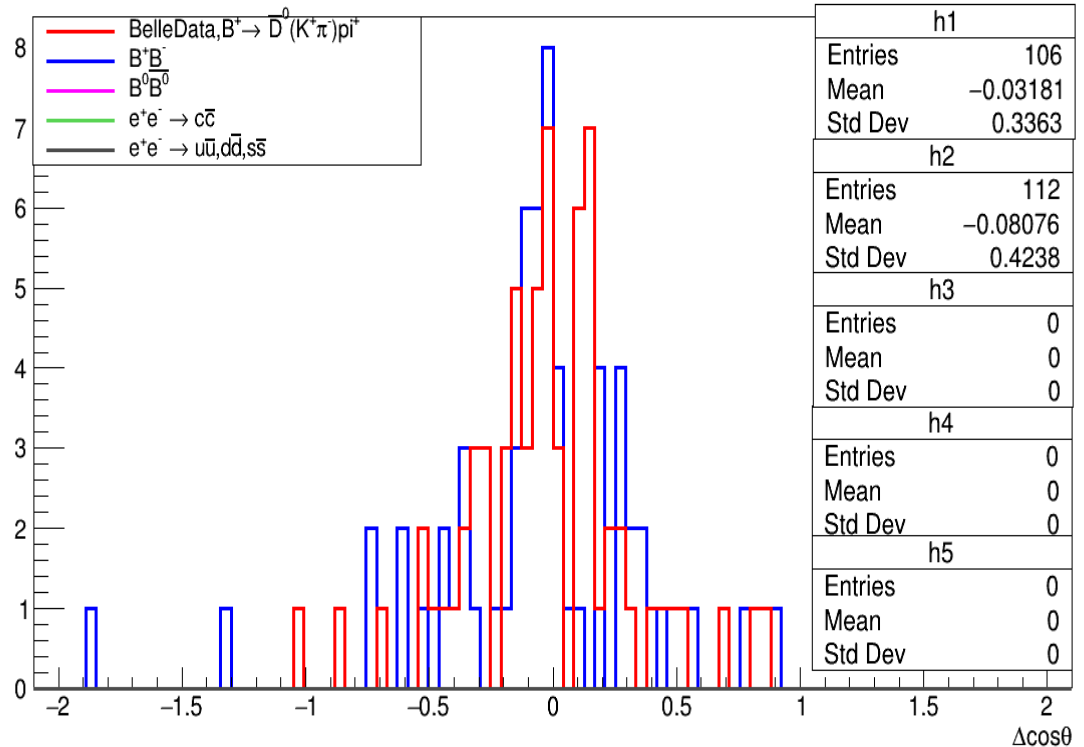
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $\text{abs}(m_{hadROE} - 1.86) < 0.015$ GeV



Best sum around D^*

Cuts applied

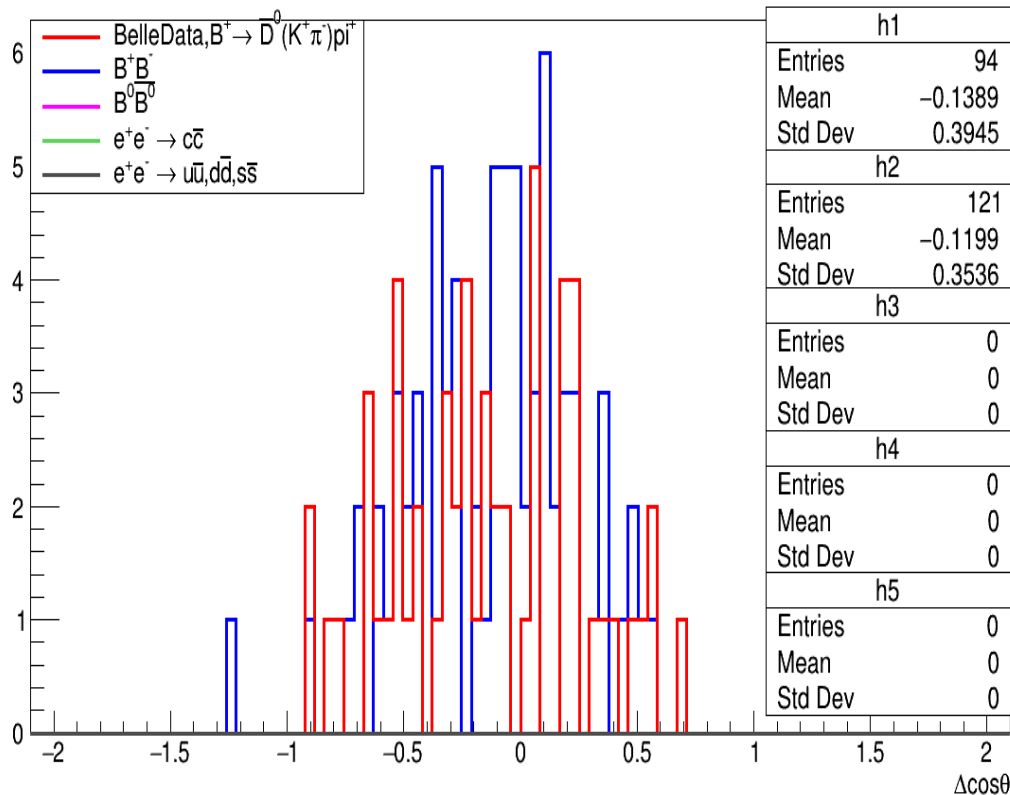
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $\text{abs}(m_{hadROE} - 2.006) < 0.015$ GeV



Best sum b/w D and D*

Cuts applied

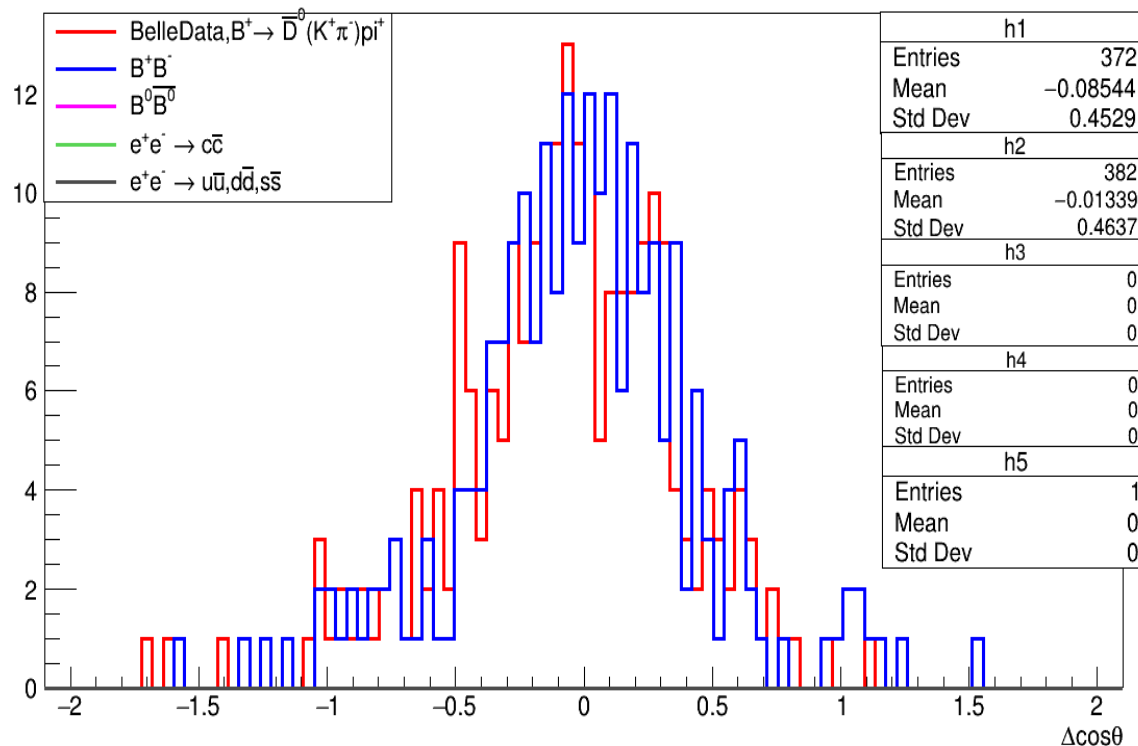
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $\text{abs}(m_{hadROE} - 1.96) < 0.015$ GeV



Best sum greater than D^*

Cuts applied

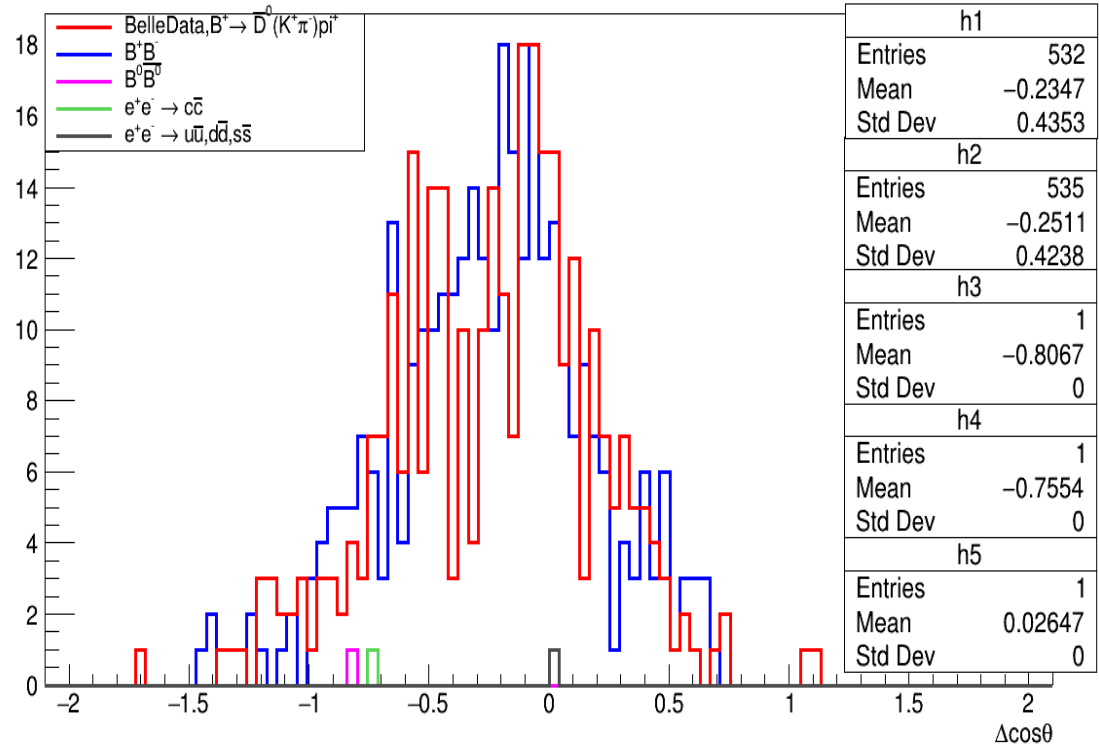
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $M_{hadROE} > 2.006$ GeV



Best sum less than D

Cuts applied

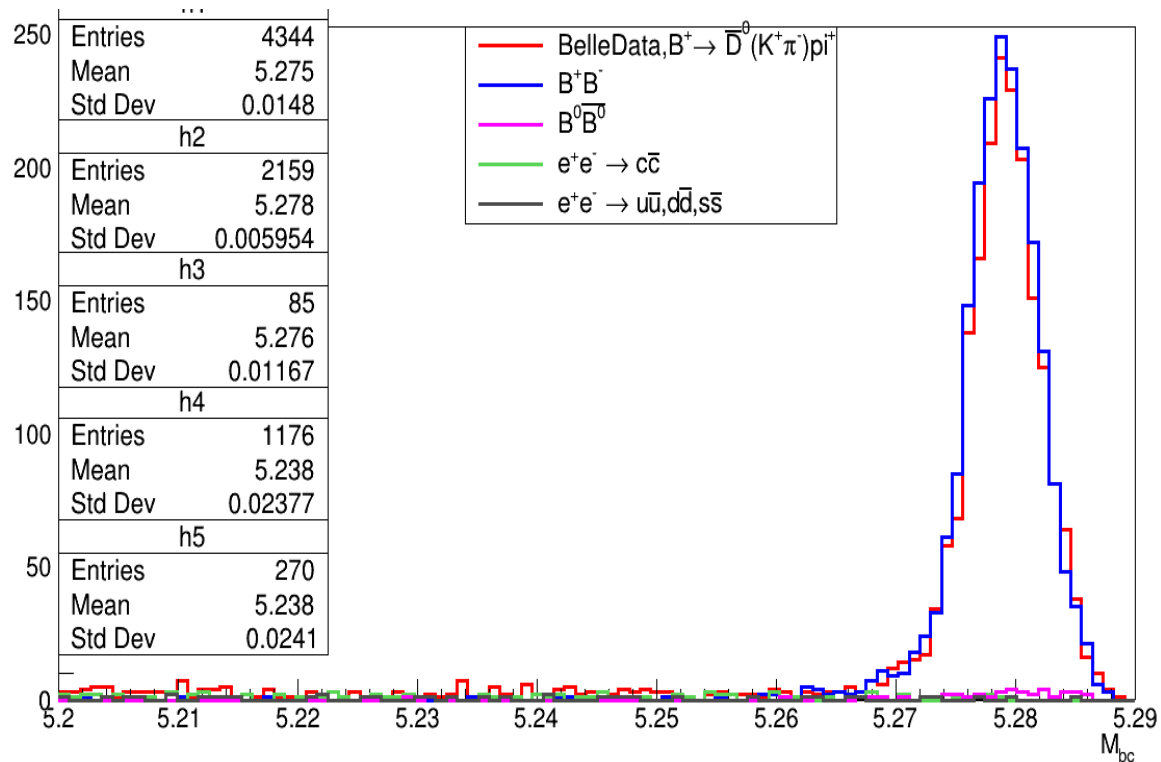
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $M_{hadROE} < 1.86$ GeV



M_{bc}

Cuts applied

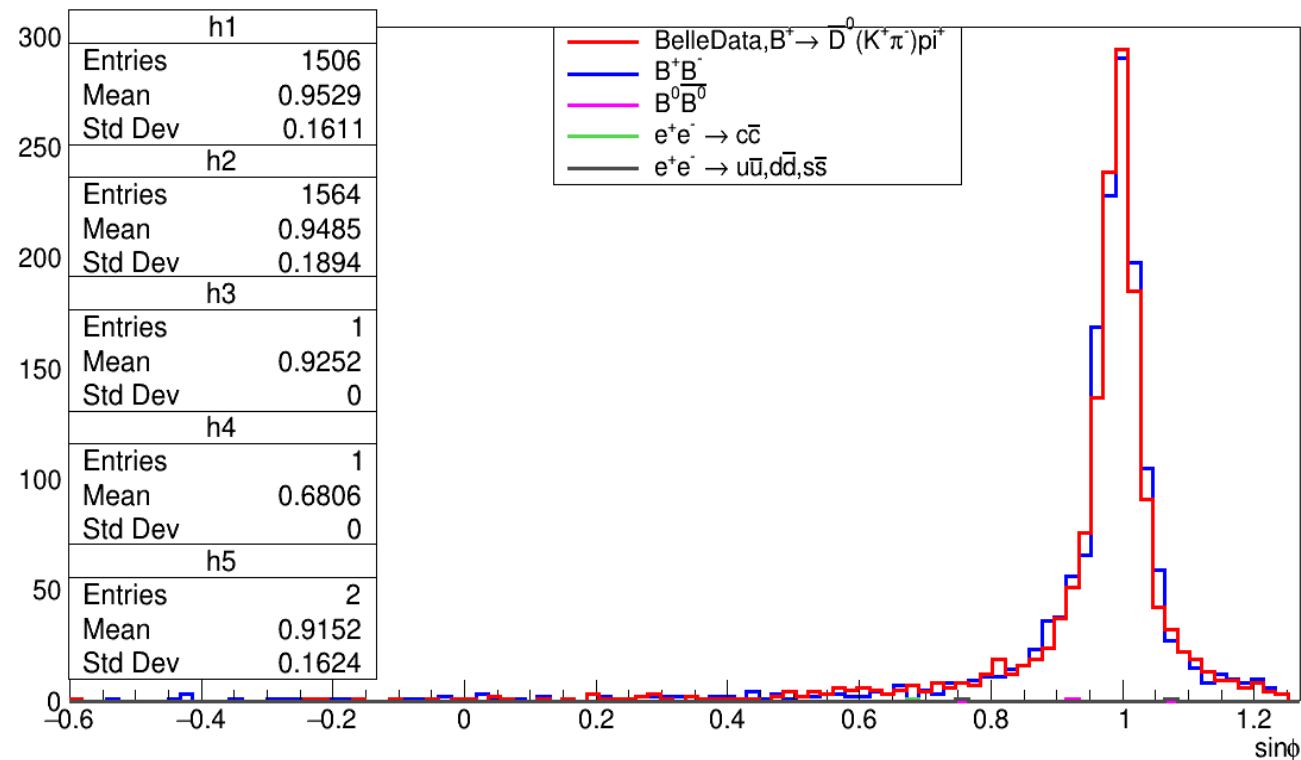
- $\text{abs}(\sin_phi) < 1.25$
- $\text{abs}(\cos(p_{\text{Btag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89 \text{ GeV}$
- $1.7 < m_{\text{hadROE}} < 2.2 \text{ GeV}$



Sin_phi

Cuts applied

- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\cos(p_{B\text{tag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV



m_{D^0}

Cuts applied

- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $\text{abs}(\cos(p_{B\text{tag}}, p_{\text{vistag}})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{\text{hadROE}} < 2.2$ GeV

