Signal and generic MC update

$B^+ \rightarrow \overline{D}^0 \, pi^+$ 4.61×10^{-3}

$\overline{D}^0 \rightarrow K^+ \, pi^-$ 3.947 %

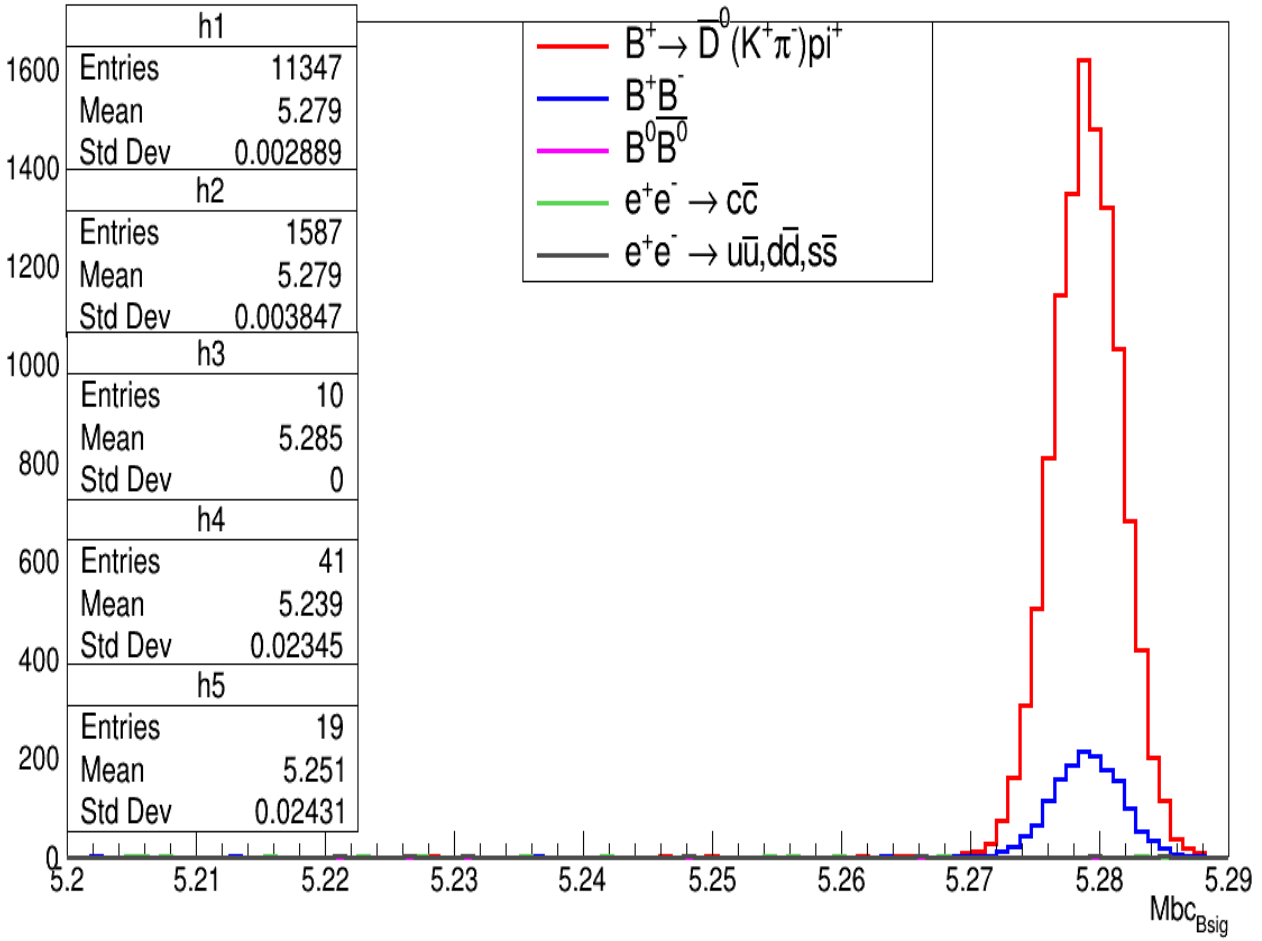
1.0 M dedicated signal and 1.0 stream of generic MC

10 May 2024

M_{bc}

Cuts applied

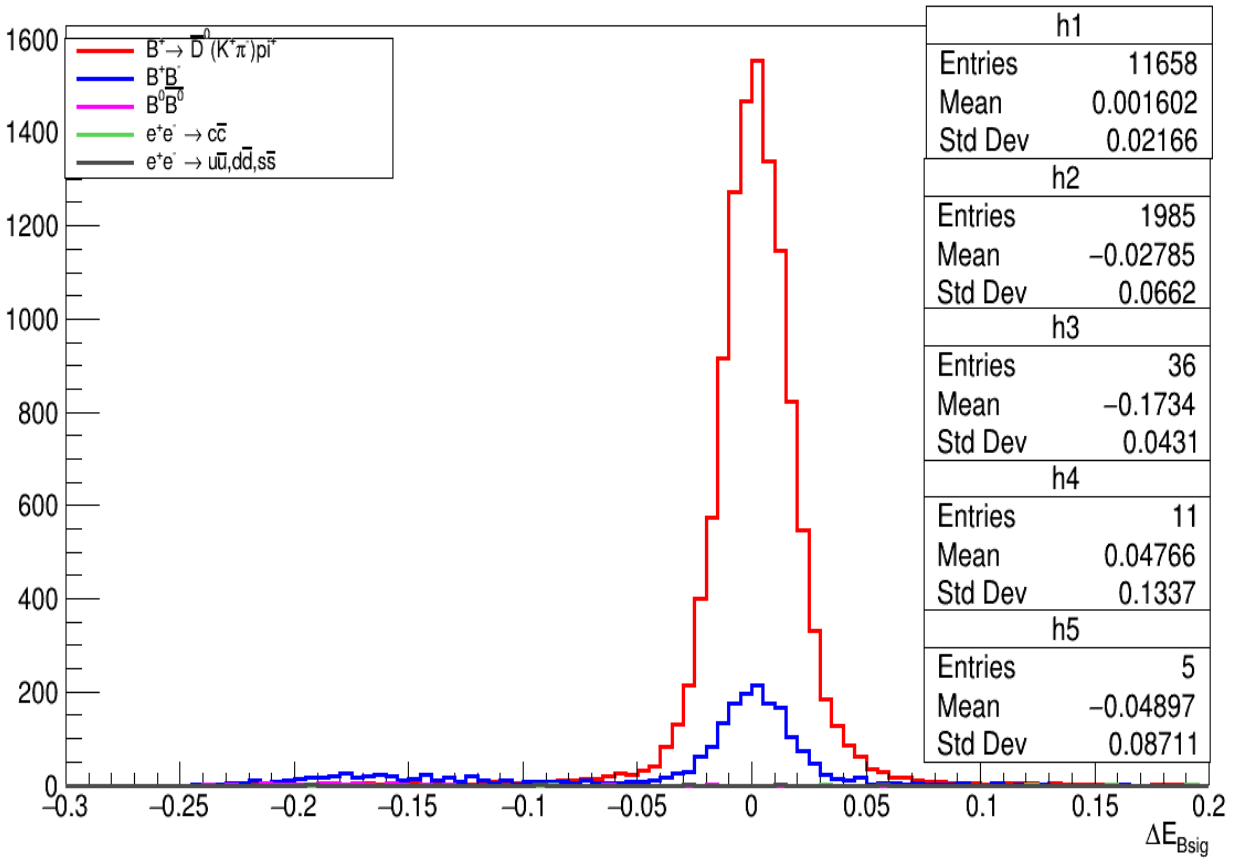
- Rank 1
- $-0.050 < \Delta E < 0.050$ GeV
- abs(sin_phi) < 1.25
- $abs(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV



ΔE

Cuts applied

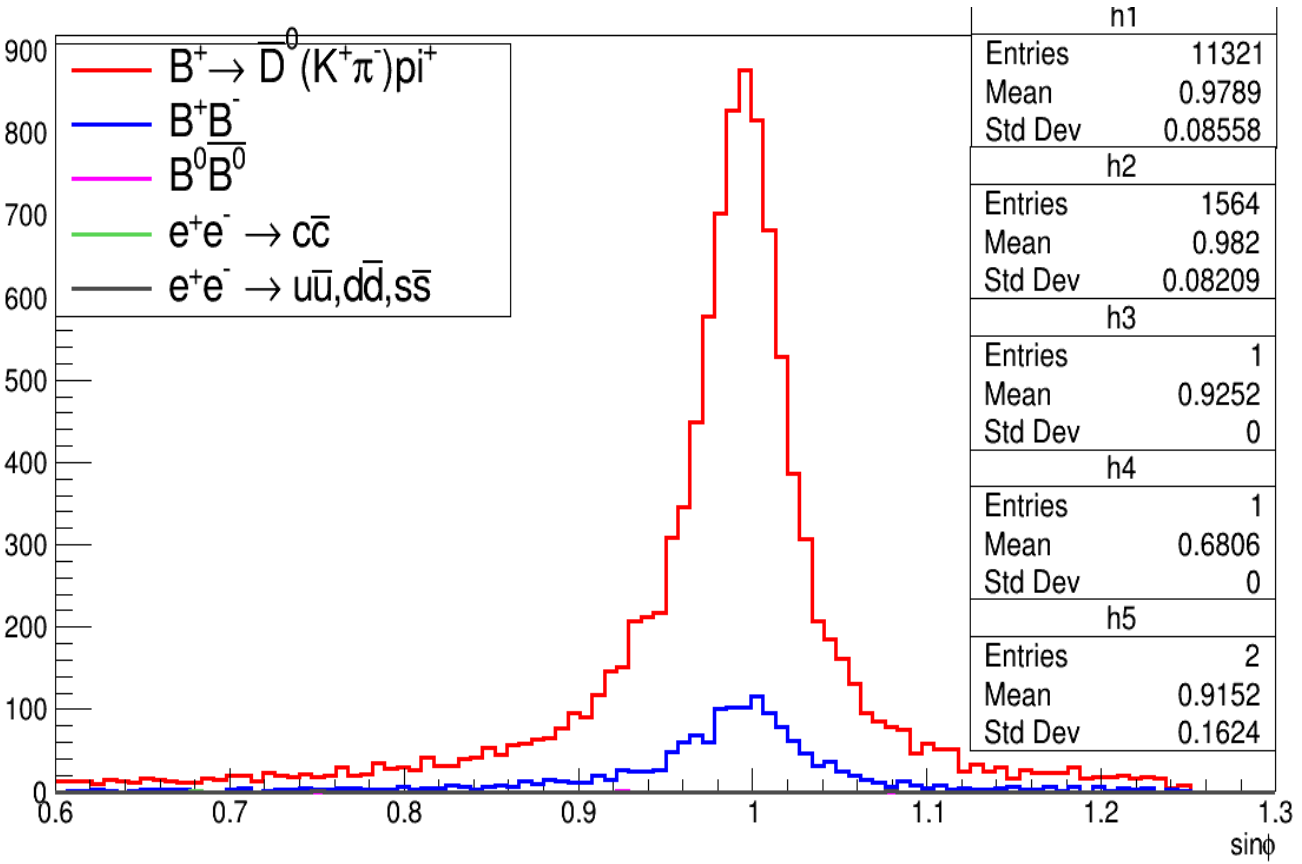
- Rank 1
- M_{bc} > 5.27 GeV
- abs(sin_phi) < 1.25
- abs(cos(p_{Btag},p_{vistag})) < 1.2
- 1.83 < m_D < 1.89 GeV
- 1.7 < m_{hadROE} < 2.2 GeV



Sin_phi

Cuts applied

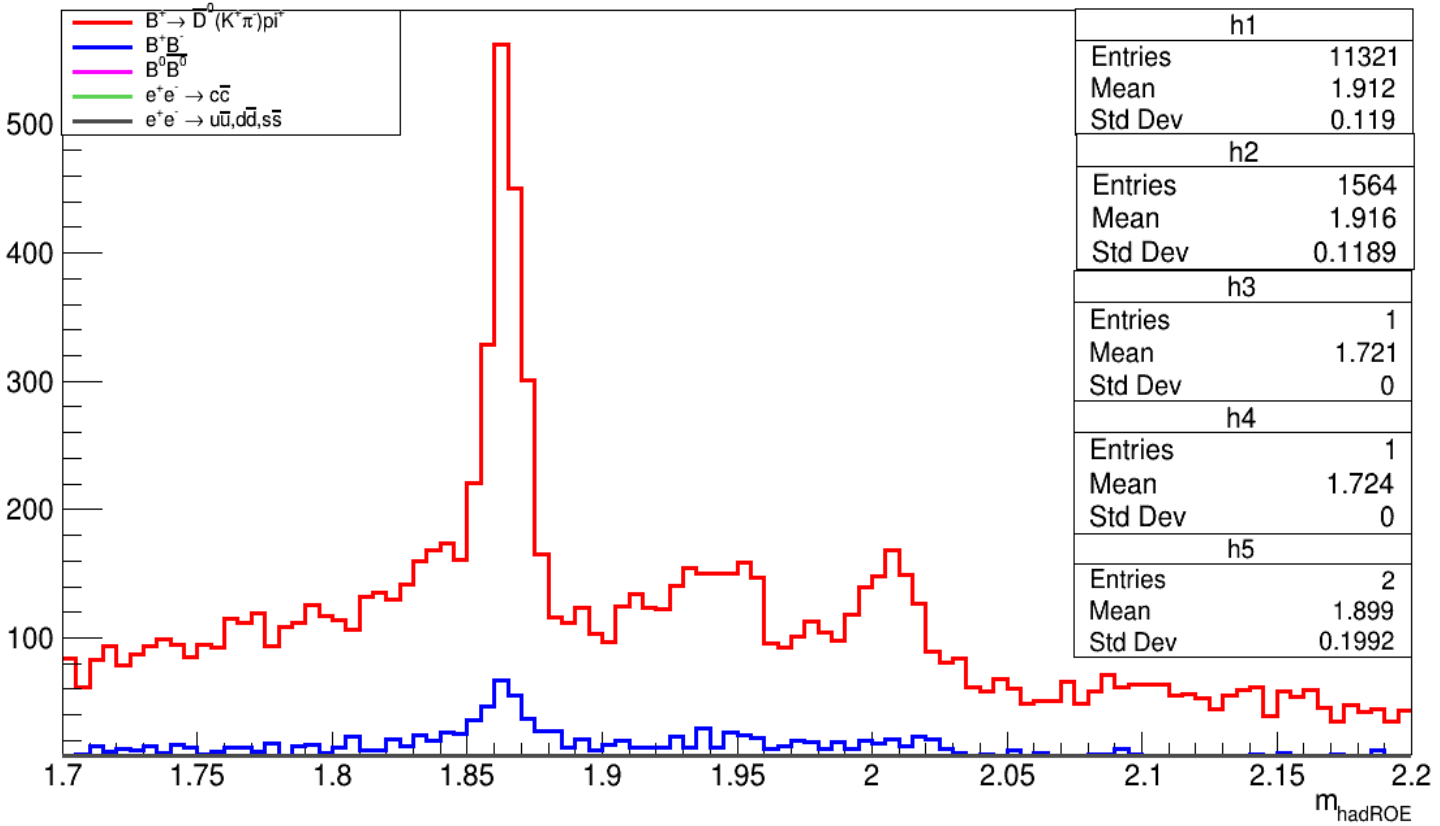
- Rank 1
- M_{bc} > 5.27 GeV
- -0.050 < ΔE < 0.050 GeV
- abs(cos(p_{Btag},p_{vistag})) < 1.2
- 1.83 < m_D < 1.89 GeV
- 1.7 <m_{hadROE}< 2.2 GeV



m_hadROE

Cuts applied

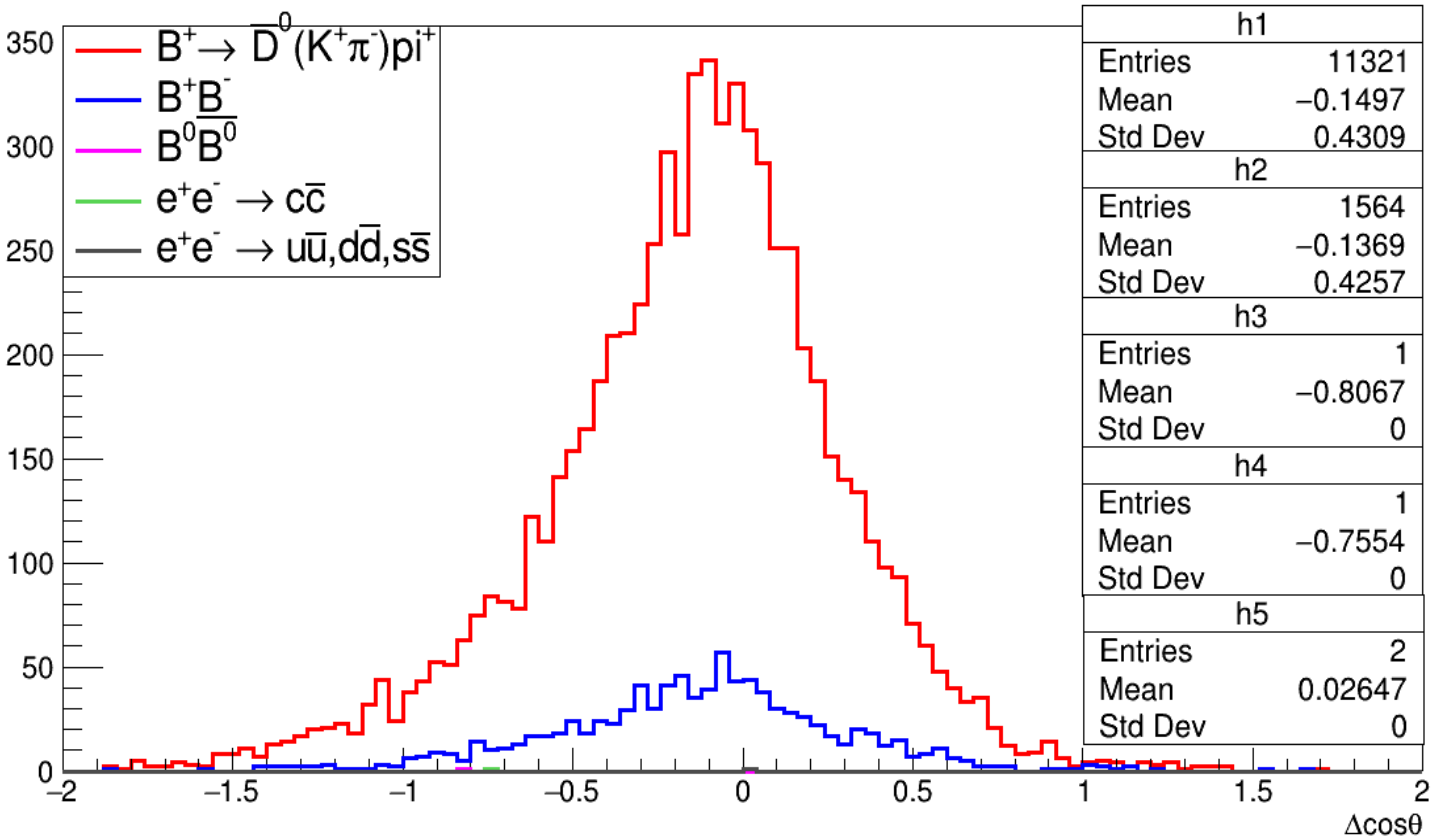
- Rank 1
- M_{bc} > 5.27 GeV
- -0.050 < ΔE < 0.050 GeV
- abs(sin_phi) < 1.25
- abs(cos(p_{Btag},p_{vistag})) < 1.2
- 1.83 < m_D < 1.89 GeV
- 1.7 <m_{hadROE}< 2.2 GeV



Best sum of cosine angles

Cuts applied

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

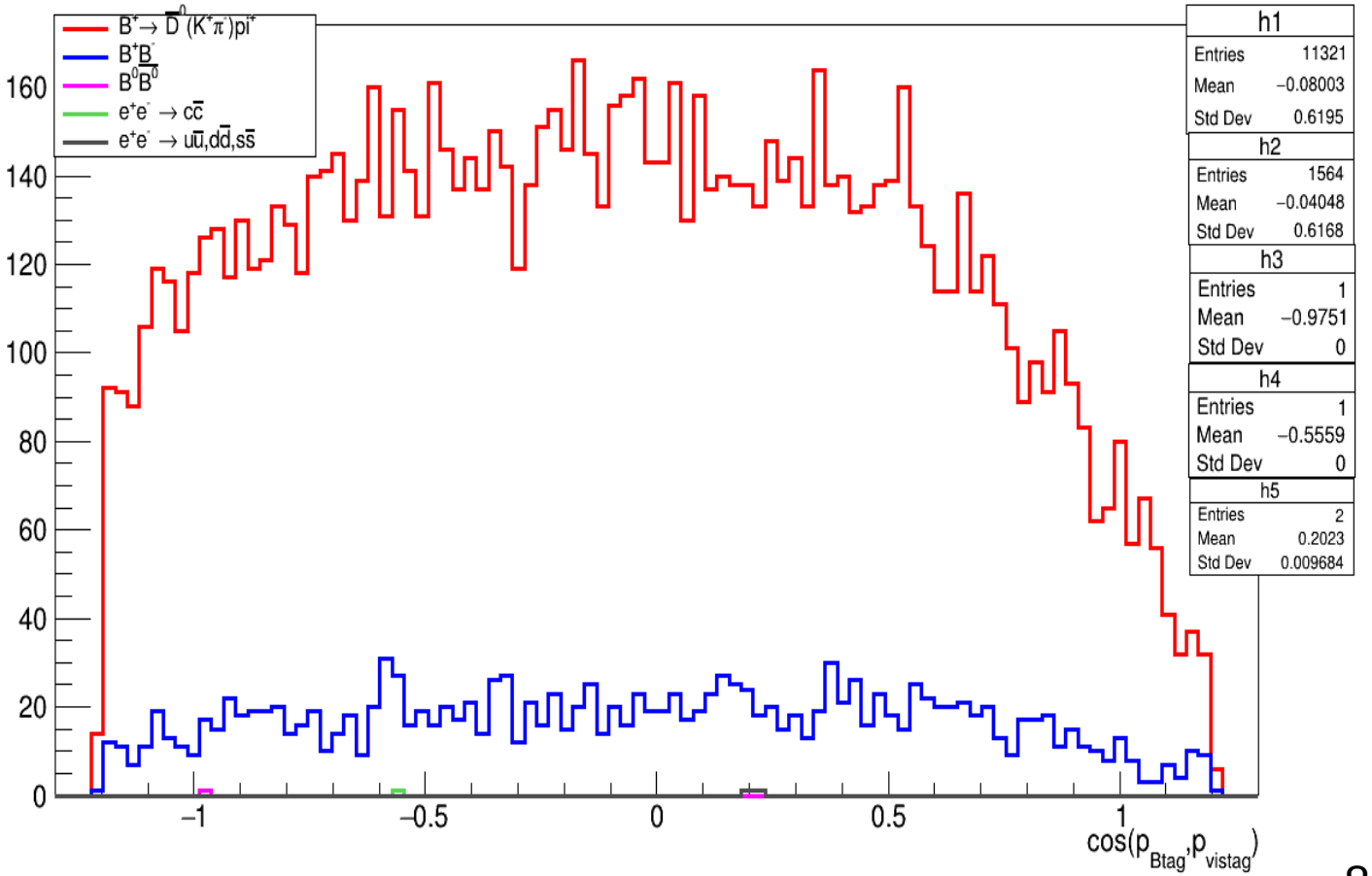


Back up

$\cos(p_{Btag}, p_{vistag})$

Cuts applied

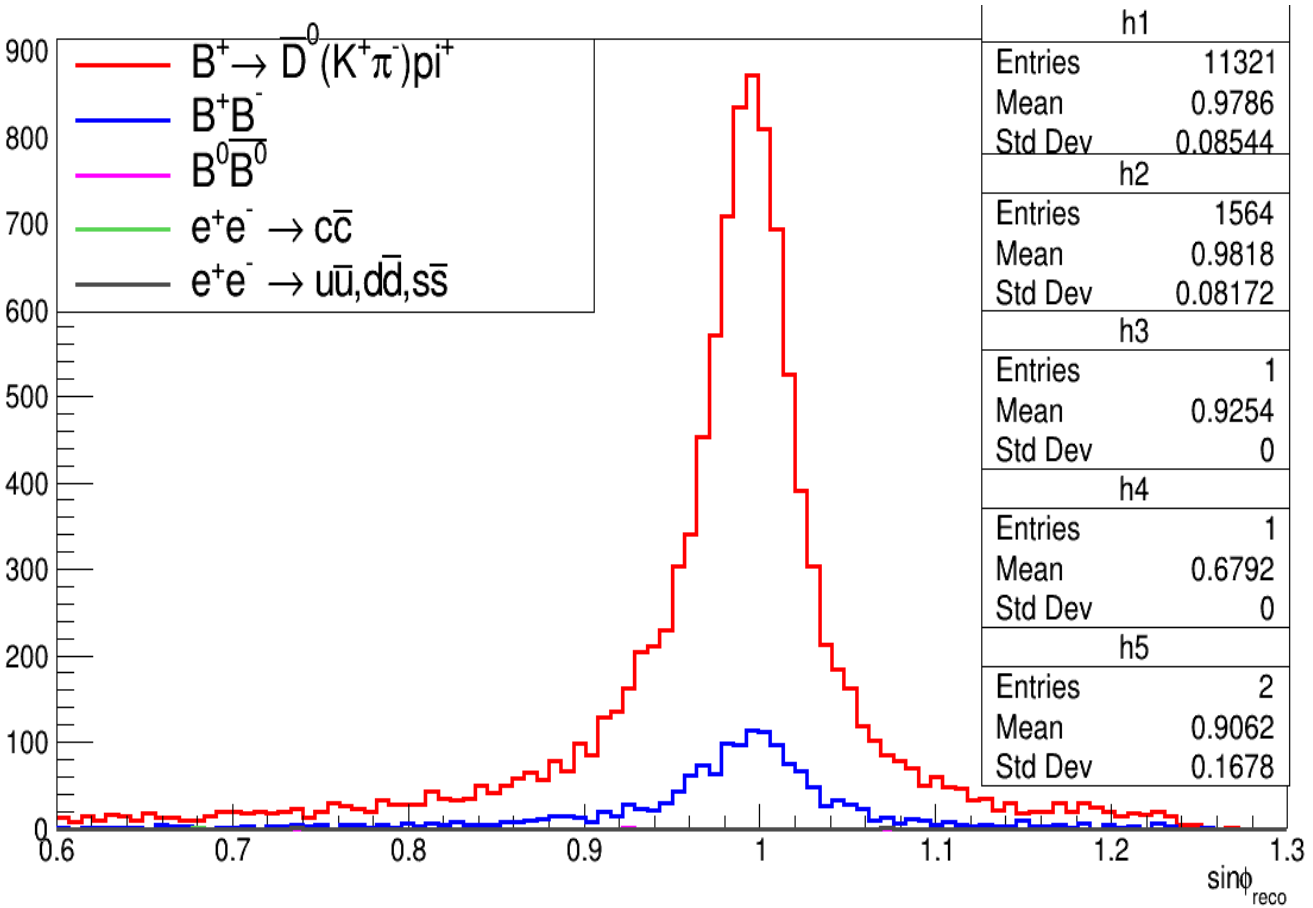
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- abs(sin_phi) < 1.25
- $\text{abs}(\cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV



Sin_phi_reco

Cuts applied

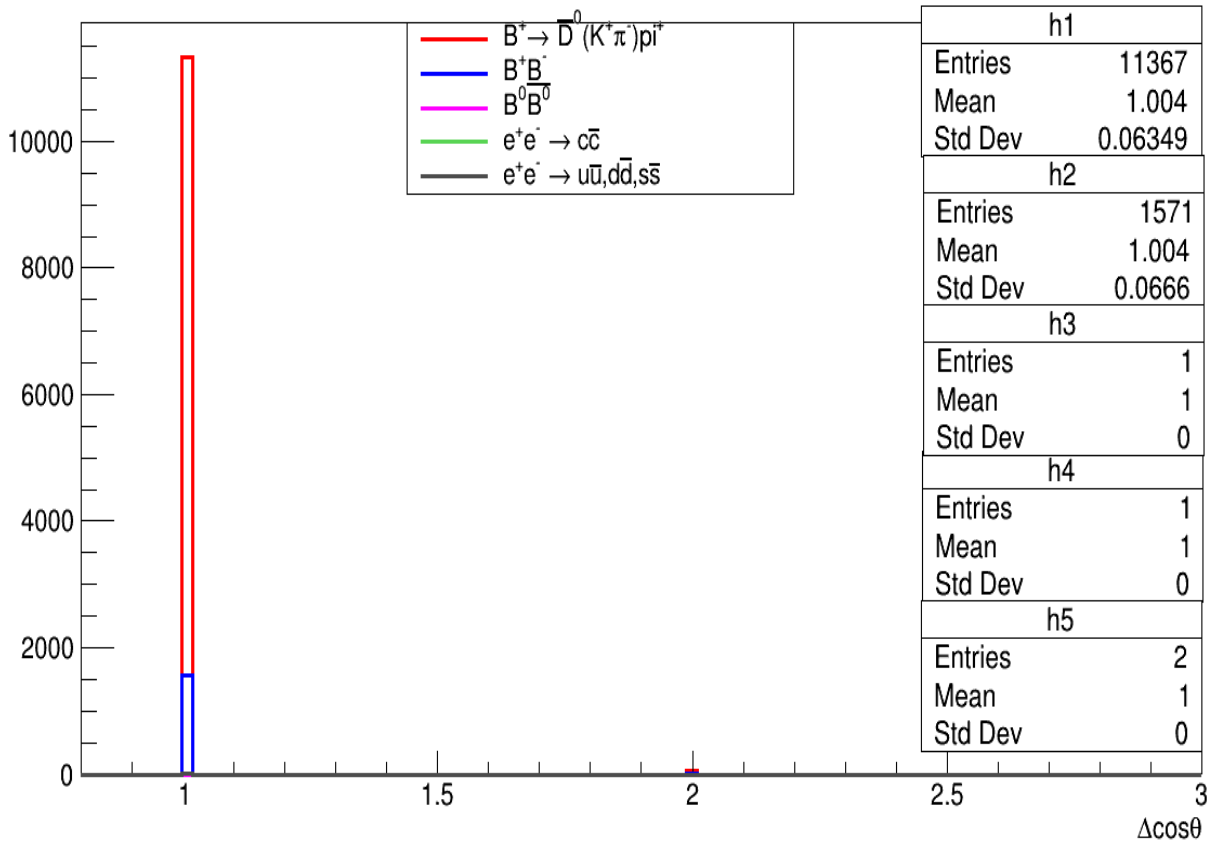
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $abs(cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV



Number of candidates

Cuts applied

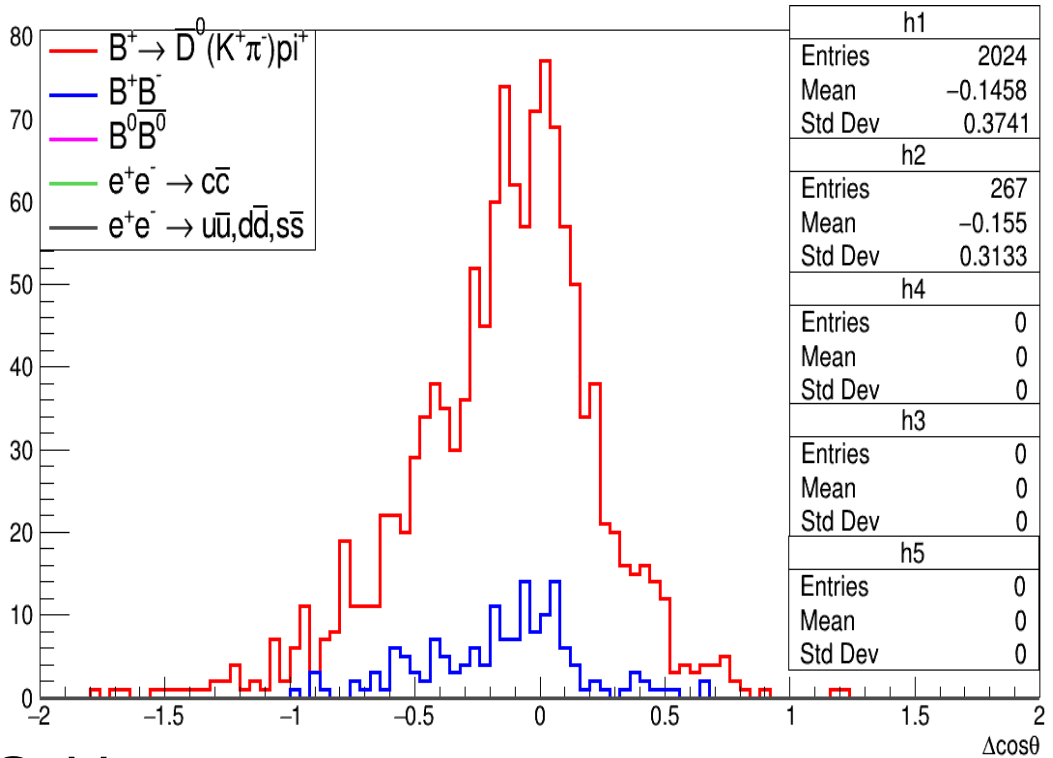
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- $abs(cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV



Best sum around D0

Cuts applied

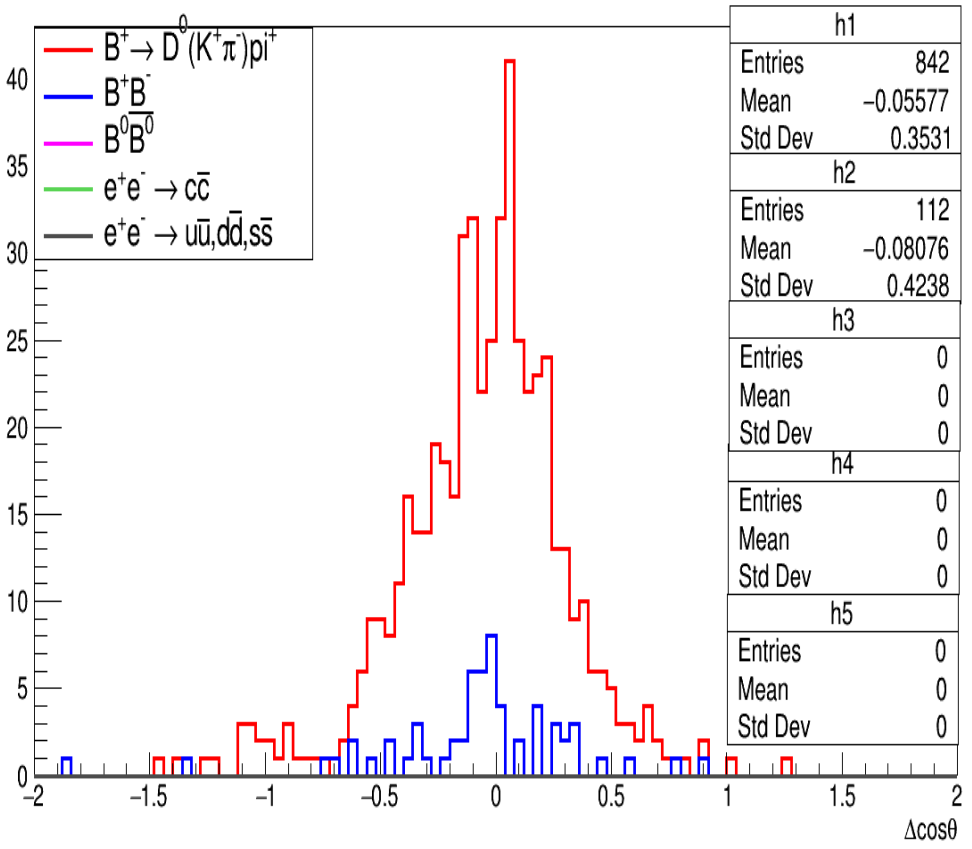
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- abs(sin_phi) < 1.25
- $abs(cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $abs(m_{hadROE} - 1.86) < 0.015$ GeV



Best sum around D*

Cuts applied

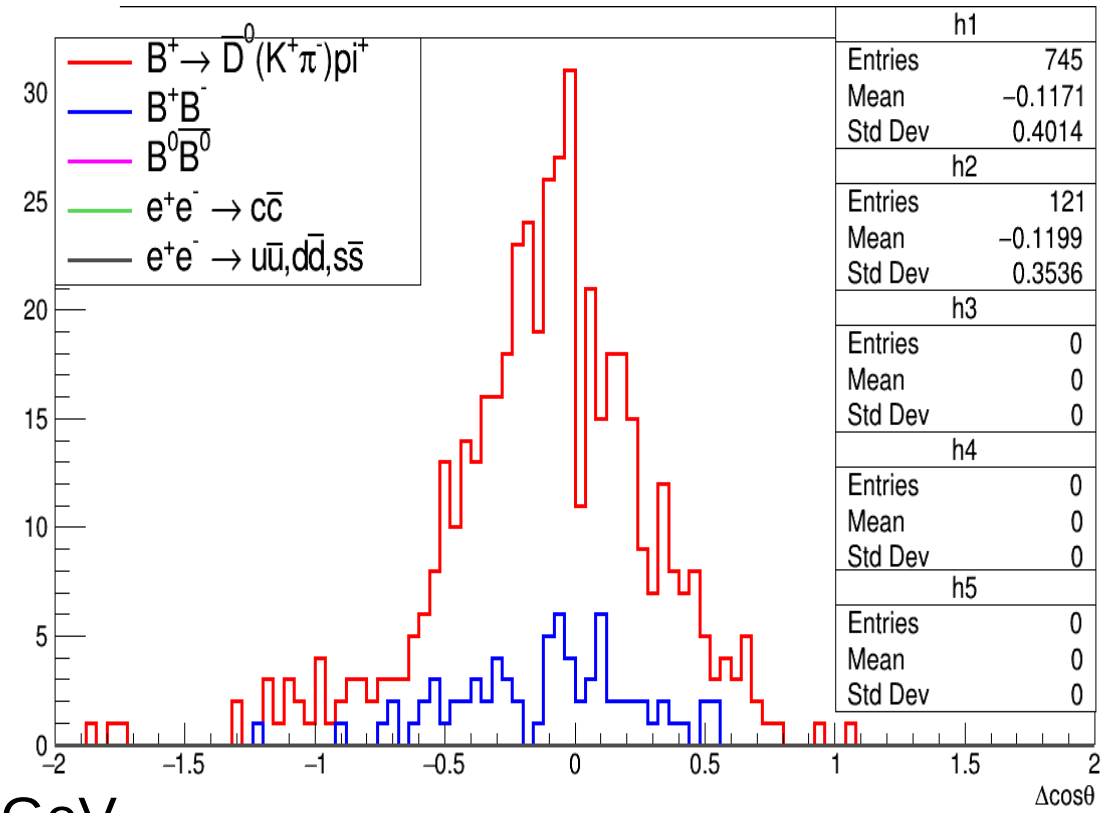
- Rank 1
- $M_{bc} > 5.27$ GeV
- $-0.050 < \Delta E < 0.050$ GeV
- abs(sin_phi) < 1.25
- $abs(cos(p_{Btag}, p_{vistag})) < 1.2$
- $1.83 < m_D < 1.89$ GeV
- $1.7 < m_{hadROE} < 2.2$ GeV
- $abs(m_{hadROE} - 2.006) < 0.015$ GeV



Best sum b/w D and D*

Cuts applied

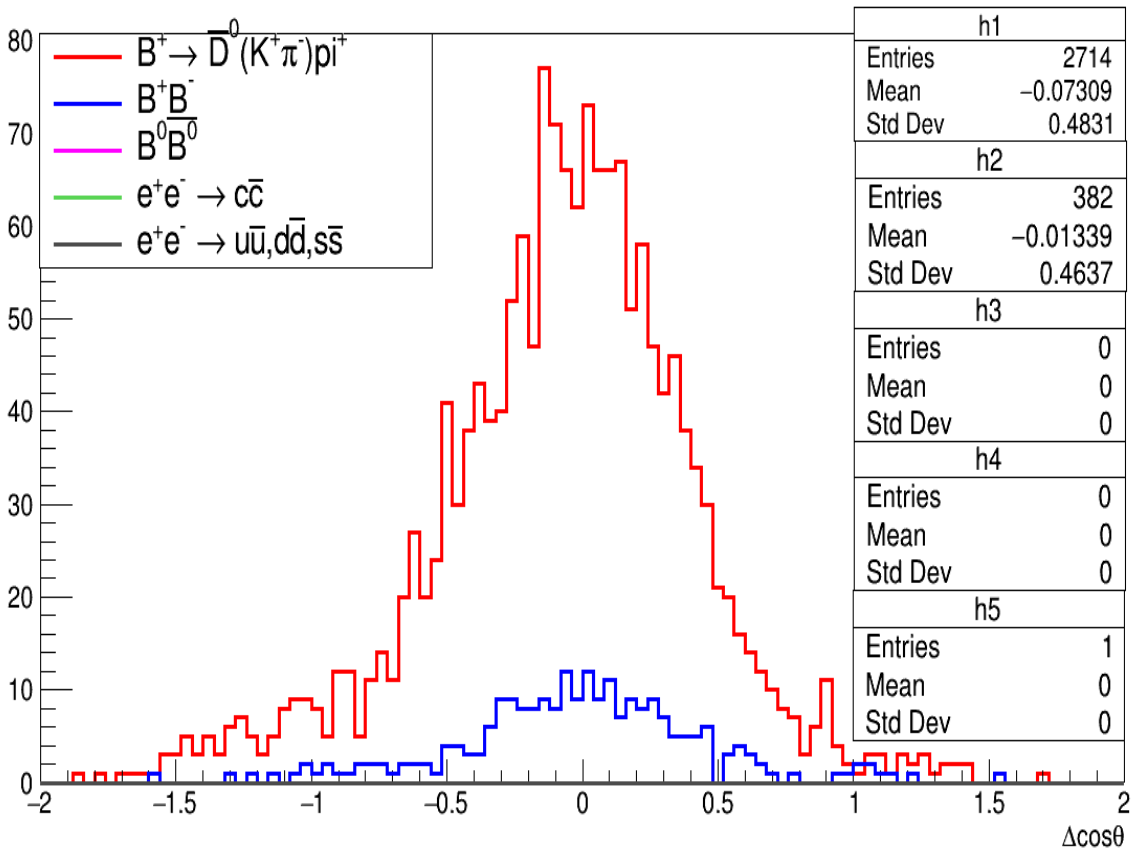
- Rank 1
- M_{bc} > 5.27 GeV
- -0.050 < ΔE < 0.050 GeV
- abs(sin_phi) < 1.25
- abs(cos(p_{Btag},p_{vistag})) < 1.2
- 1.83 < m_D < 1.89 GeV
- 1.7 <m_{hadROE}< 2.2 GeV
- abs(m_{hadROE} – 1.96) < 0.015 GeV



Best sum greater than D*

Cuts applied

- Rank 1
- M_{bc} > 5.27 GeV
- -0.050 < ΔE < 0.050 GeV
- abs(sin_phi) < 1.25
- 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 < ΔE < 0.050 GeV
- abs(sin_phi) < 1.25
- 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