

Belle data check

All experiments of Belle

14 Dec. 2023

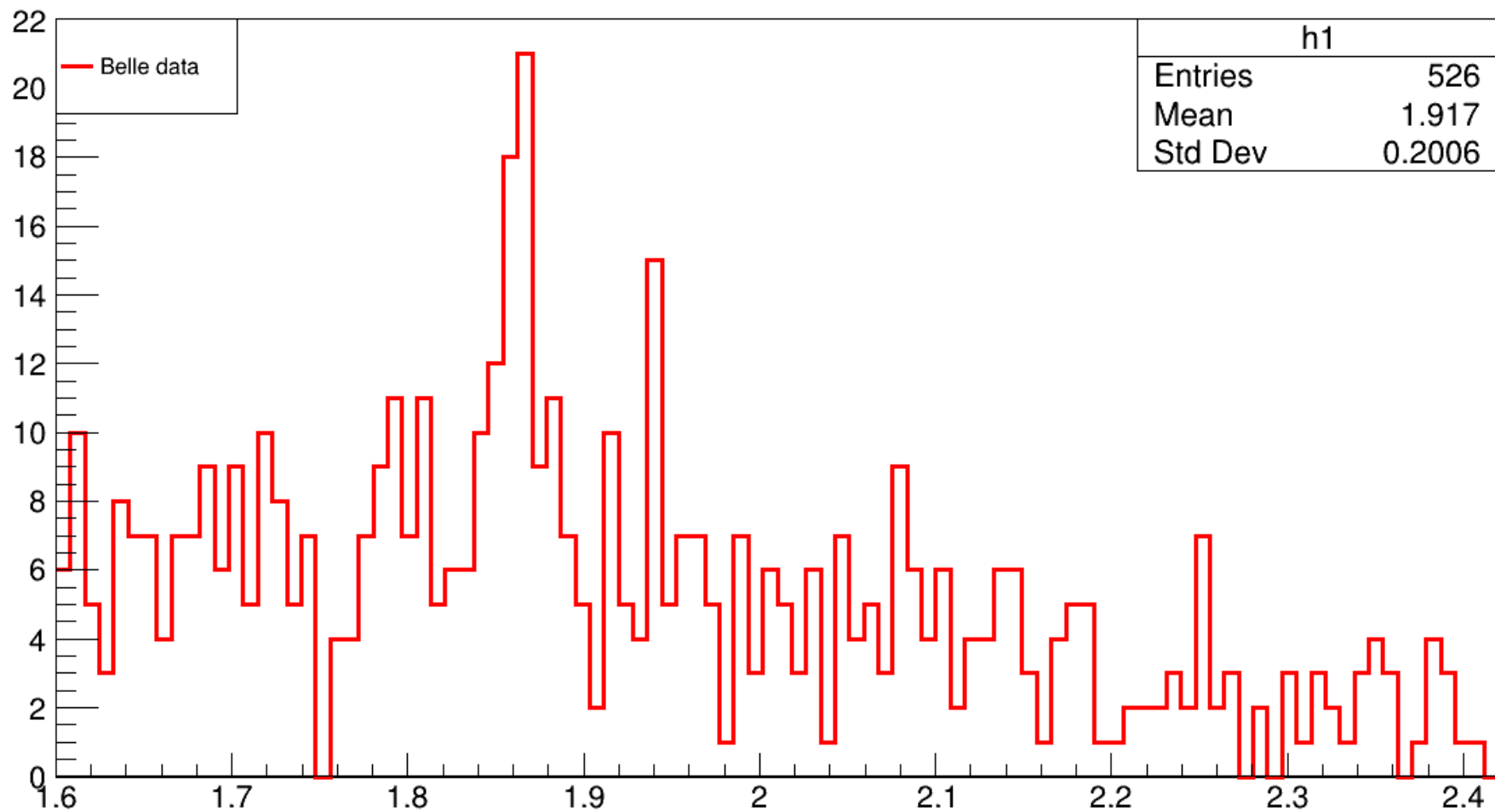
Cuts in the reconstruction program

- MVA photon cuts
- $1.6 < m_{\text{hadROE}} < 2.4 \text{ GeV}$

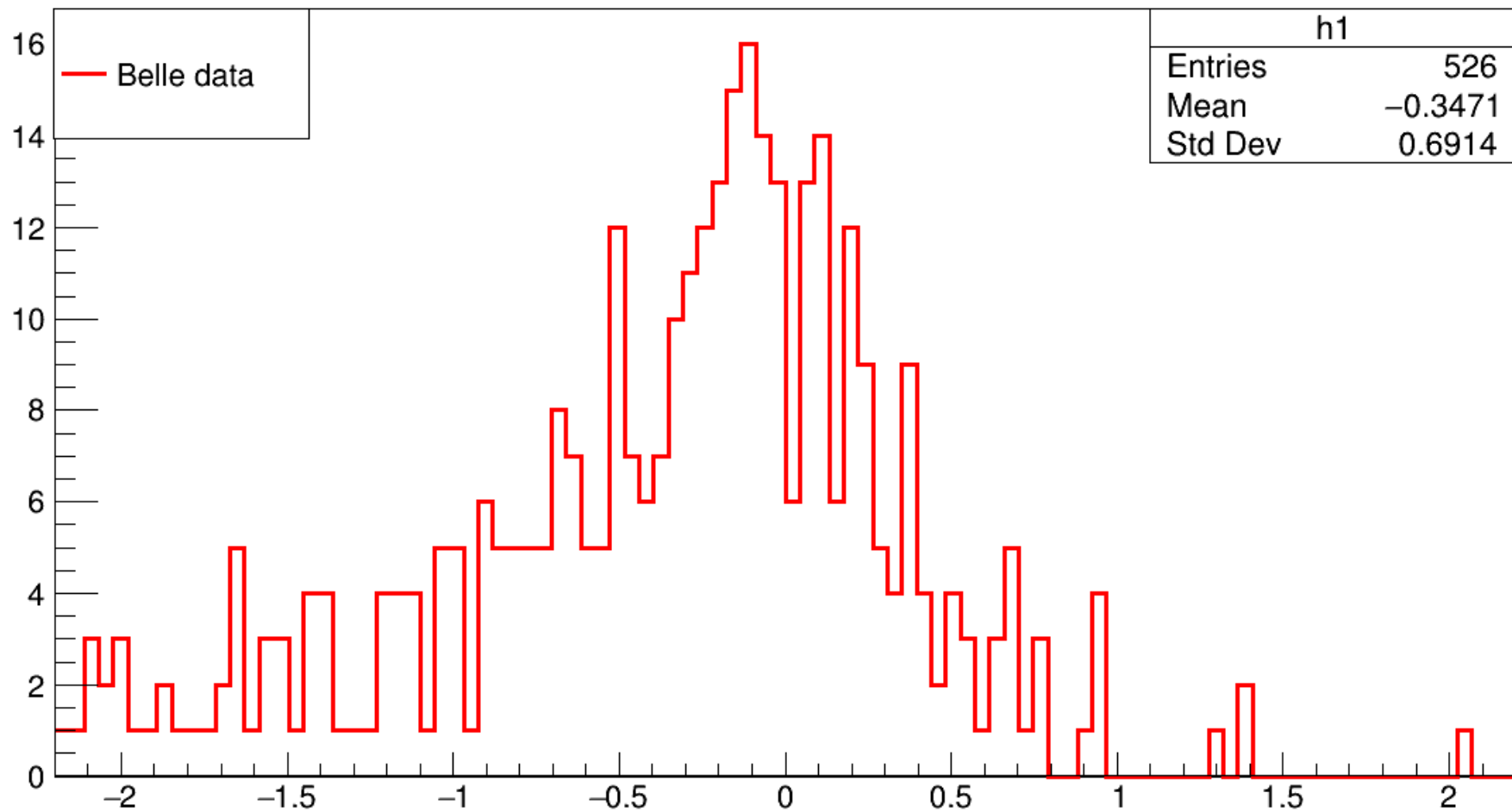
Signal side cuts (root level)

- $\text{abs}(m_{\text{Jpsi}} - 3.1) < 0.02 \text{ GeV}$
- $M_{\text{bc_Bsig}} > 5.2 \text{ GeV}$
- $-0.15 < \text{deltaE_Bsig} < 0.40 \text{ GeV}$
- $Y_{\text{incl_rank_all}} = 1$
- $\text{abs}(\sin_{\text{phi}}) < 1$

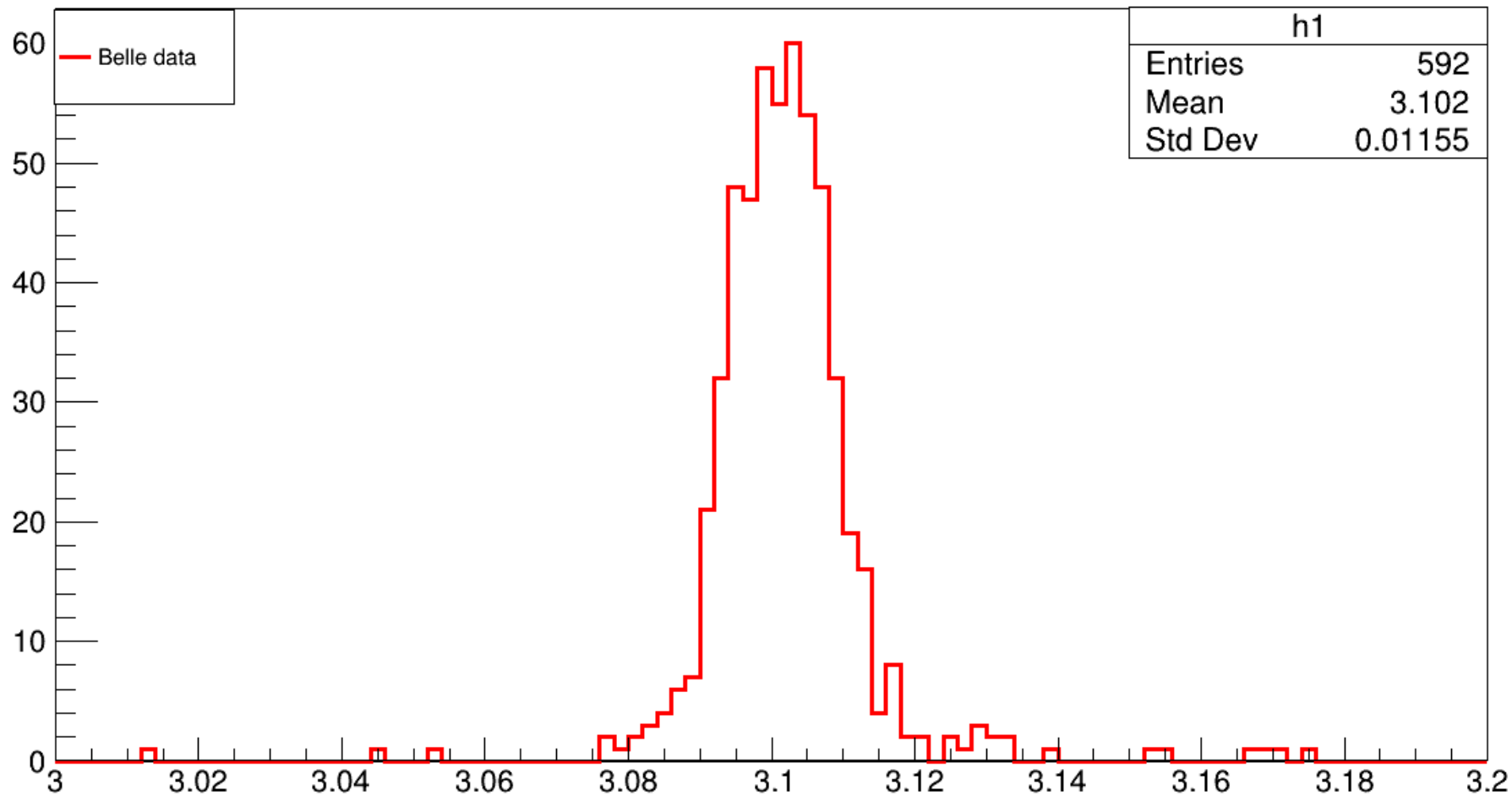
m_hadROE for belle data



Best sum of cosine angles for belle data

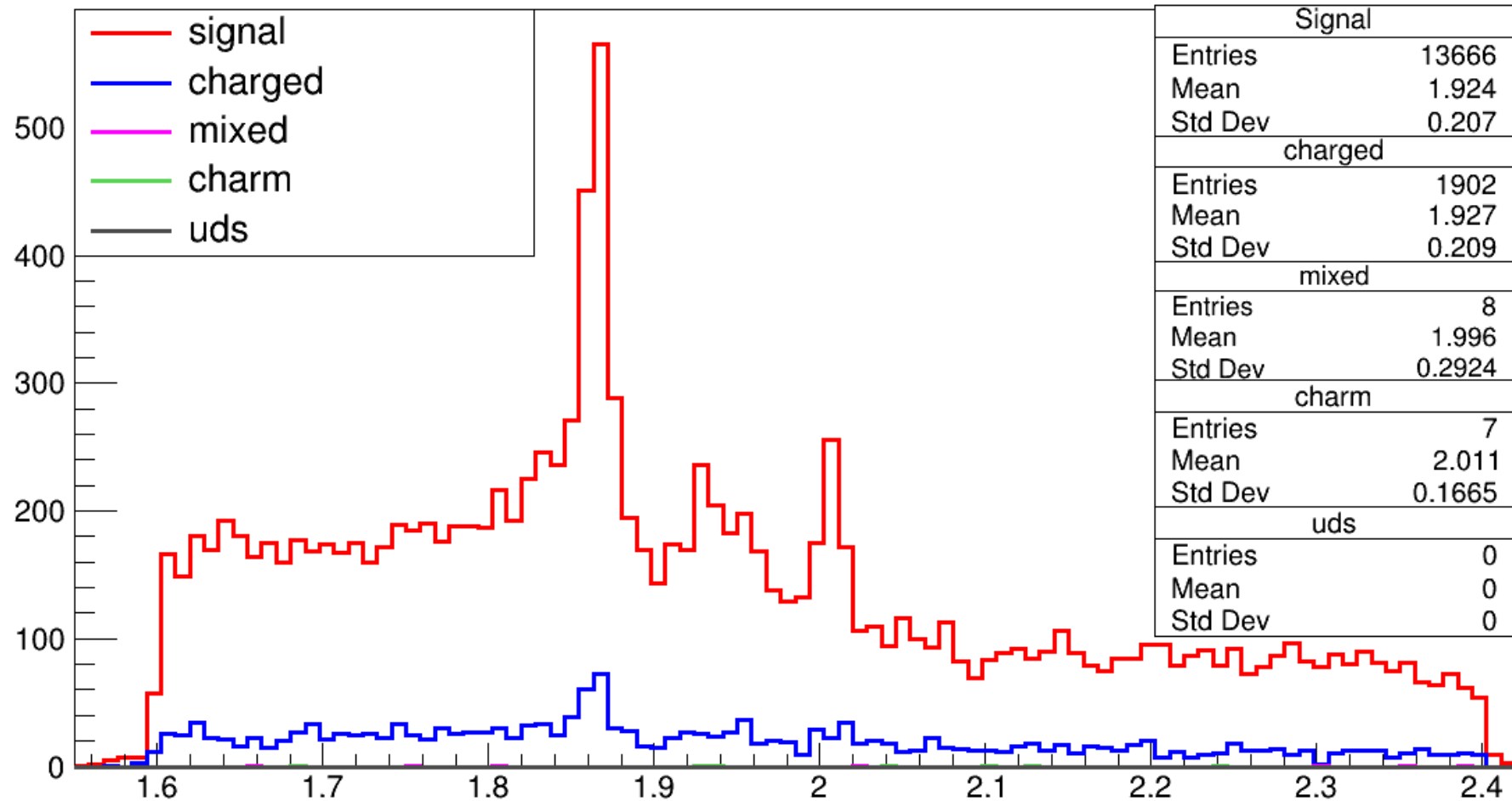


m_Jpsi for belle data(without Jpsi cut)

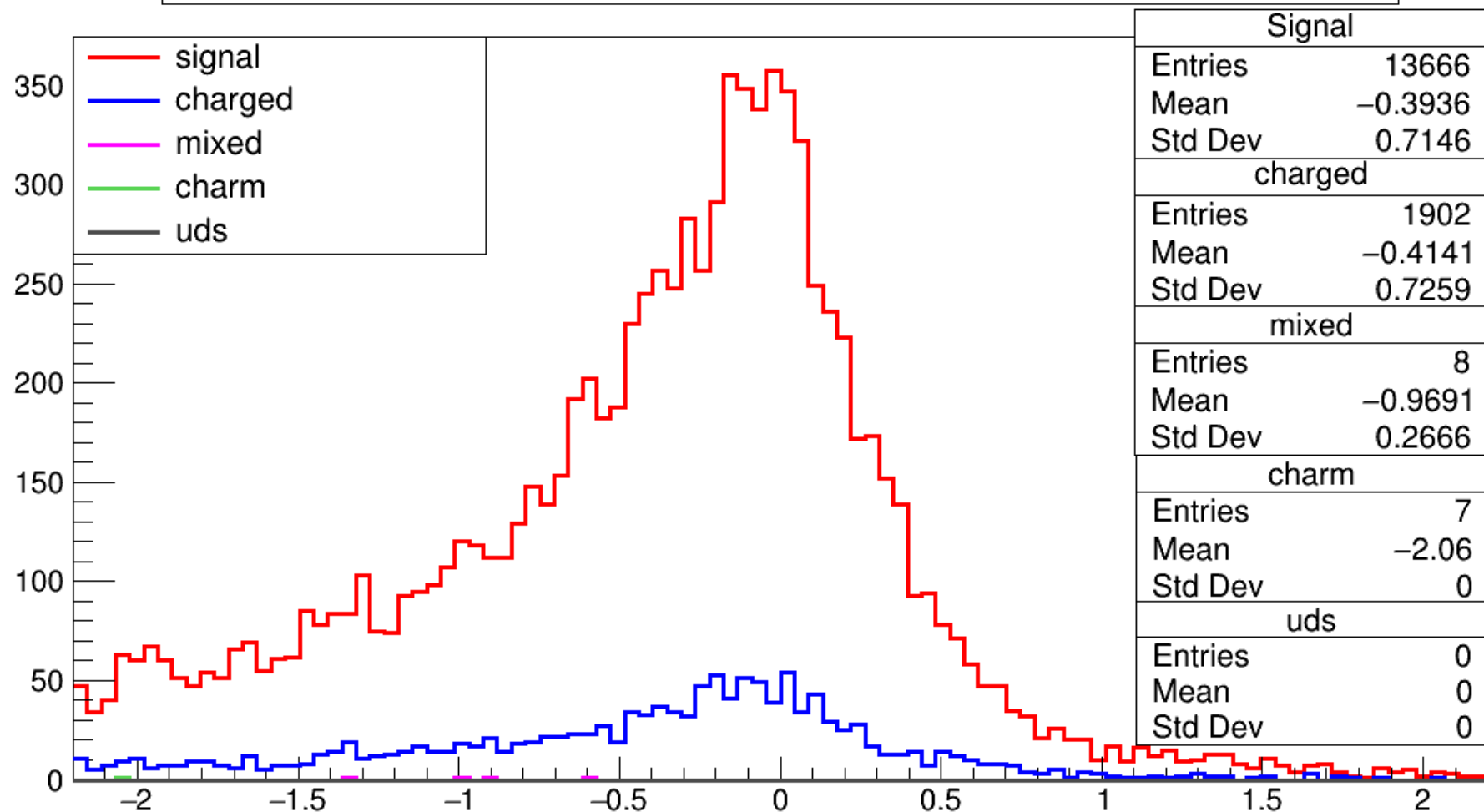


Back up
(plots from previous presentation)

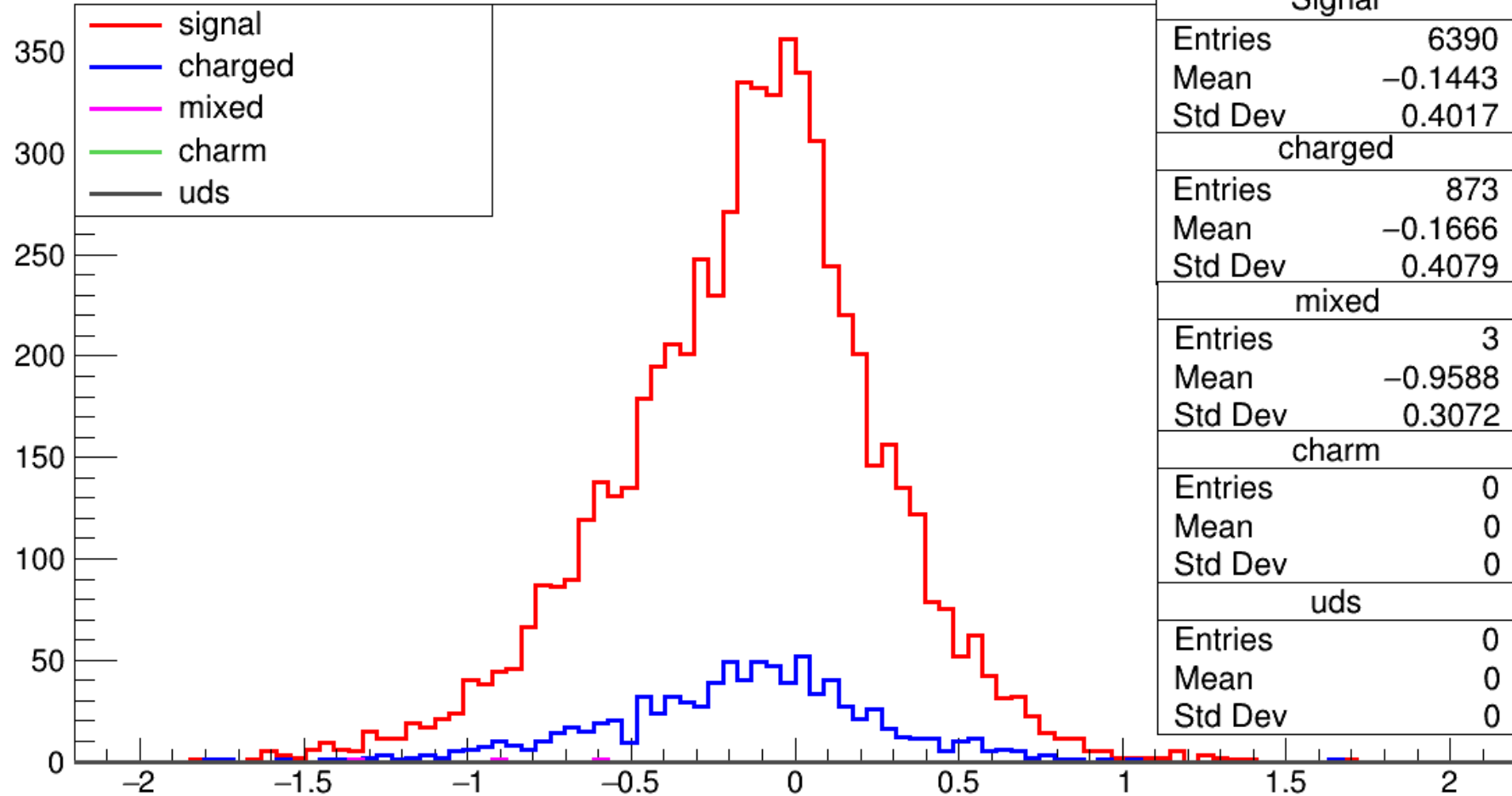
m_hadROE for control channel and generic MC



Best sum of cosine angles for control channel and generic MC

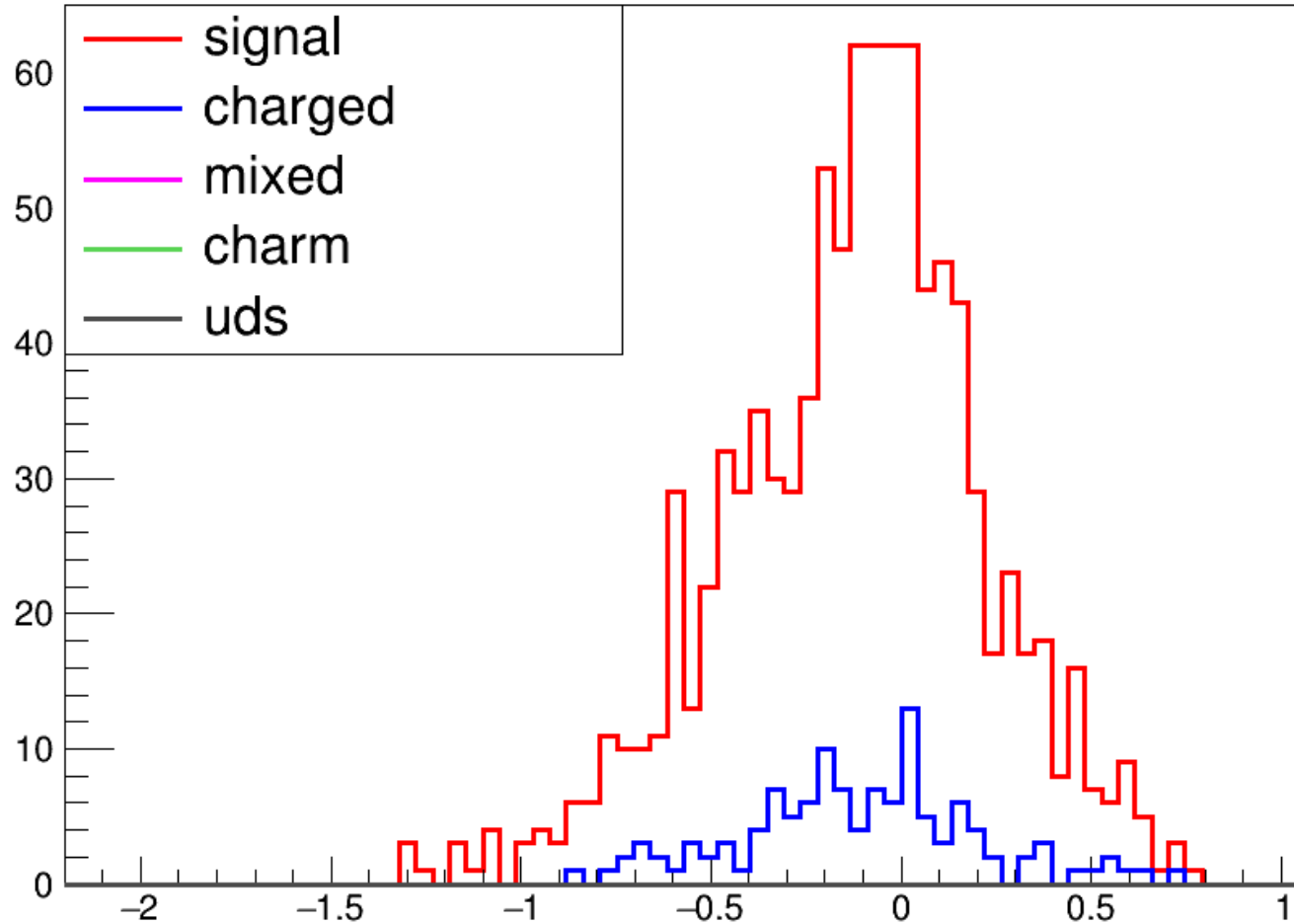


Best sum of cosine angles for control channel and generic MC(additional $\cos(\text{PBtag}, \text{Pvis}) < 1$ cut)



Best sum of cosine angles for control channel and generic MC(additional $\cos(\text{P}B\text{tag}, \text{P}v\text{is}) < 1, \text{abs}(m_{\text{hadROE}} - 1.86) < 0.015$ cuts)

— signal
— charged
— mixed
— charm
— uds



Signal	
Entries	973
Mean	-0.1235
Std Dev	0.3455
charged	
Entries	120
Mean	-0.1119
Std Dev	0.3155
mixed	
Entries	0
Mean	0
Std Dev	0
charm	
Entries	0
Mean	0
Std Dev	0
uds	
Entries	0
Mean	0
Std Dev	0