

Update (MVA photon cuts)

$B^+ \rightarrow K^+ \tau^- \mu^+$

$B^- \rightarrow \text{generic}$

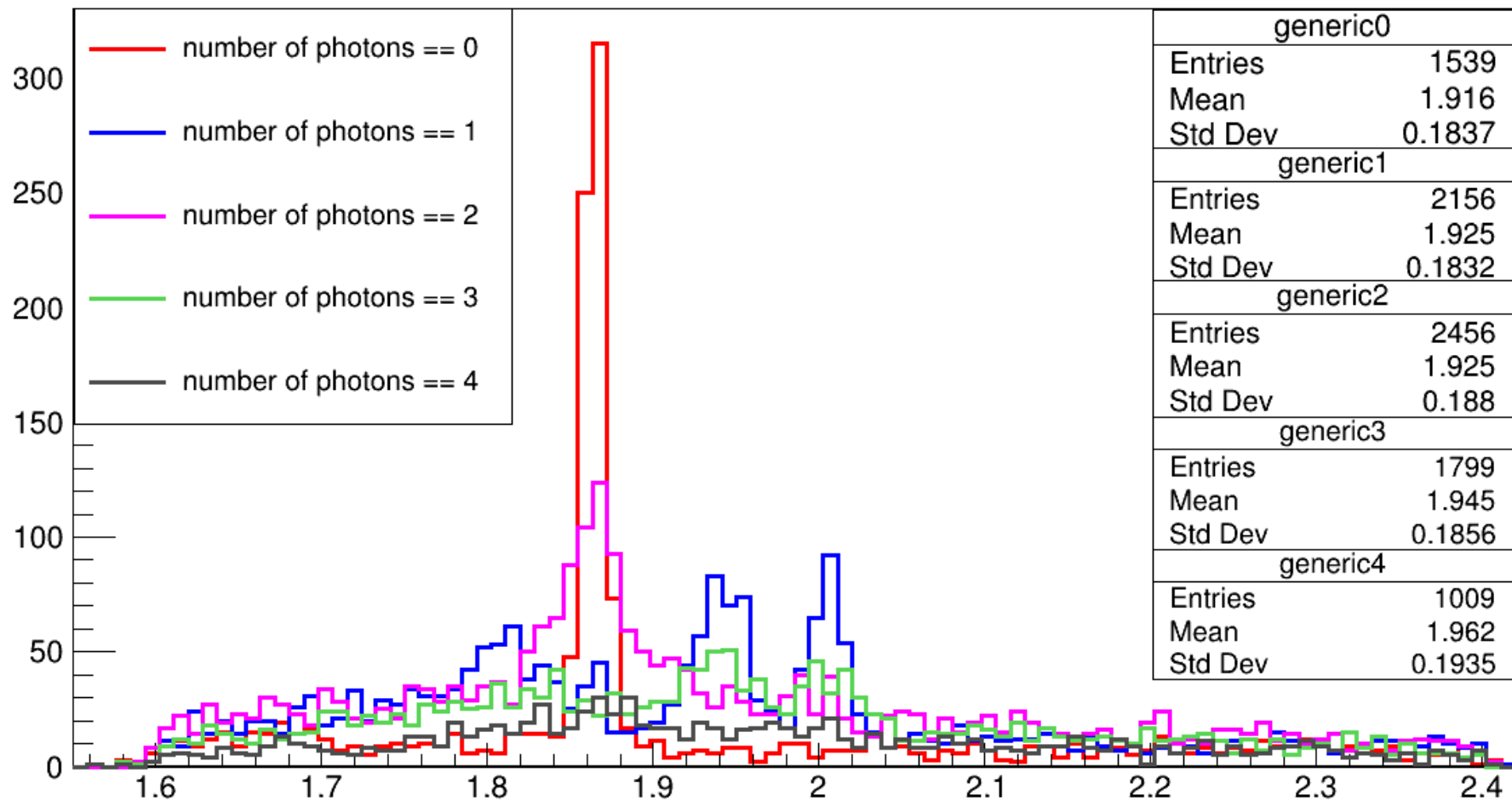
1.0 M events

17 Nov. 2023

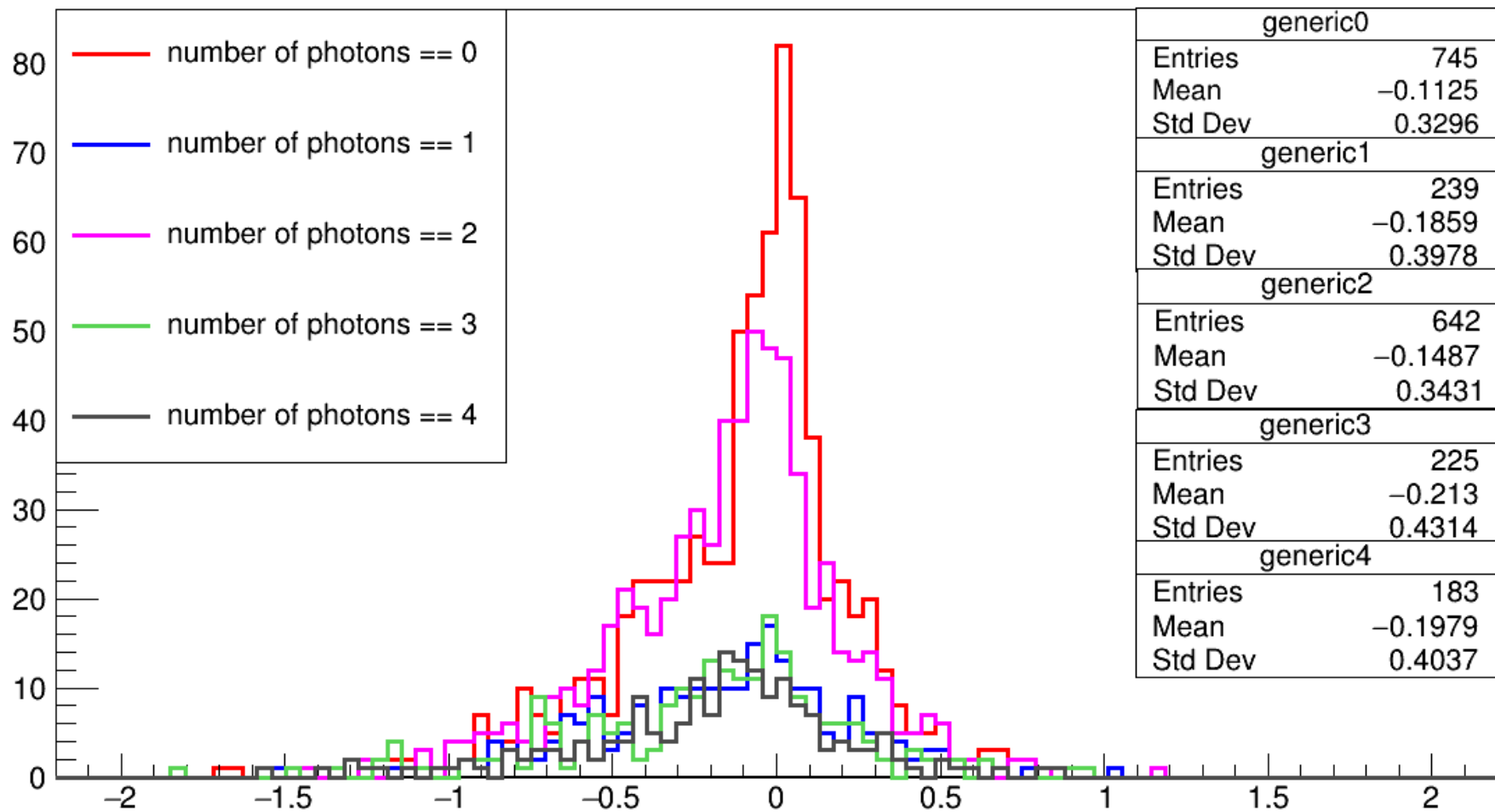
Cuts in the reconstruction program

- $m_{k\pi} > 0.7$
- $\text{abs}(m_{l\pi} - 3.1) > 0.015$
- $1.6 < m_{\text{hadronROE}} < 2.4$
- $\text{abs}(\cos(P_{\text{Btag}}, P_{\text{tag,vis}})) < 2$
- $\text{abs}(\sin(\text{Phi})) < 1.5$

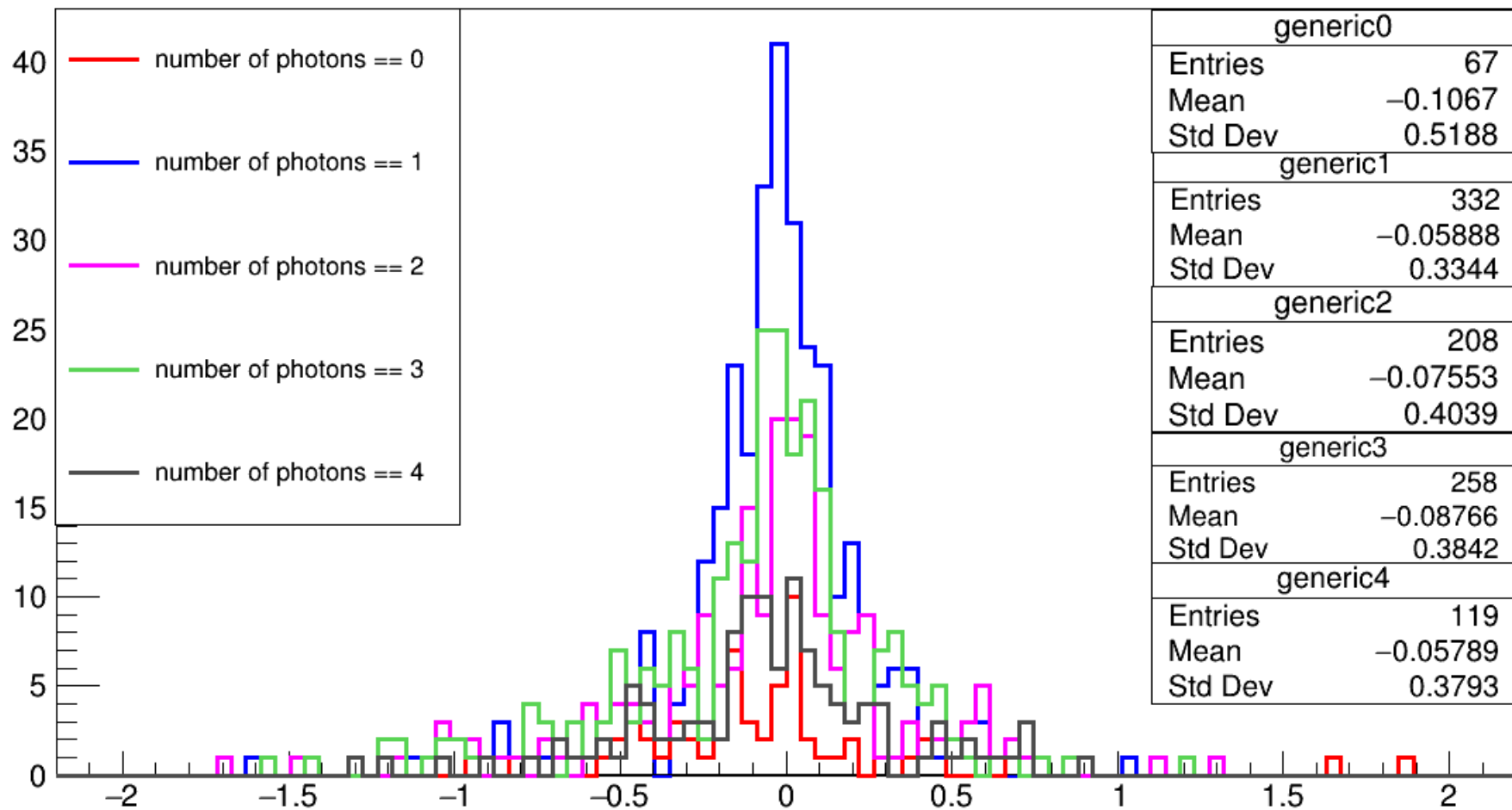
m_hadROE with $\cos(\text{PBtag}, \text{Pvis}) < 1$, $|\sin(\phi)| < 1$, rank1 and different number of photon cuts



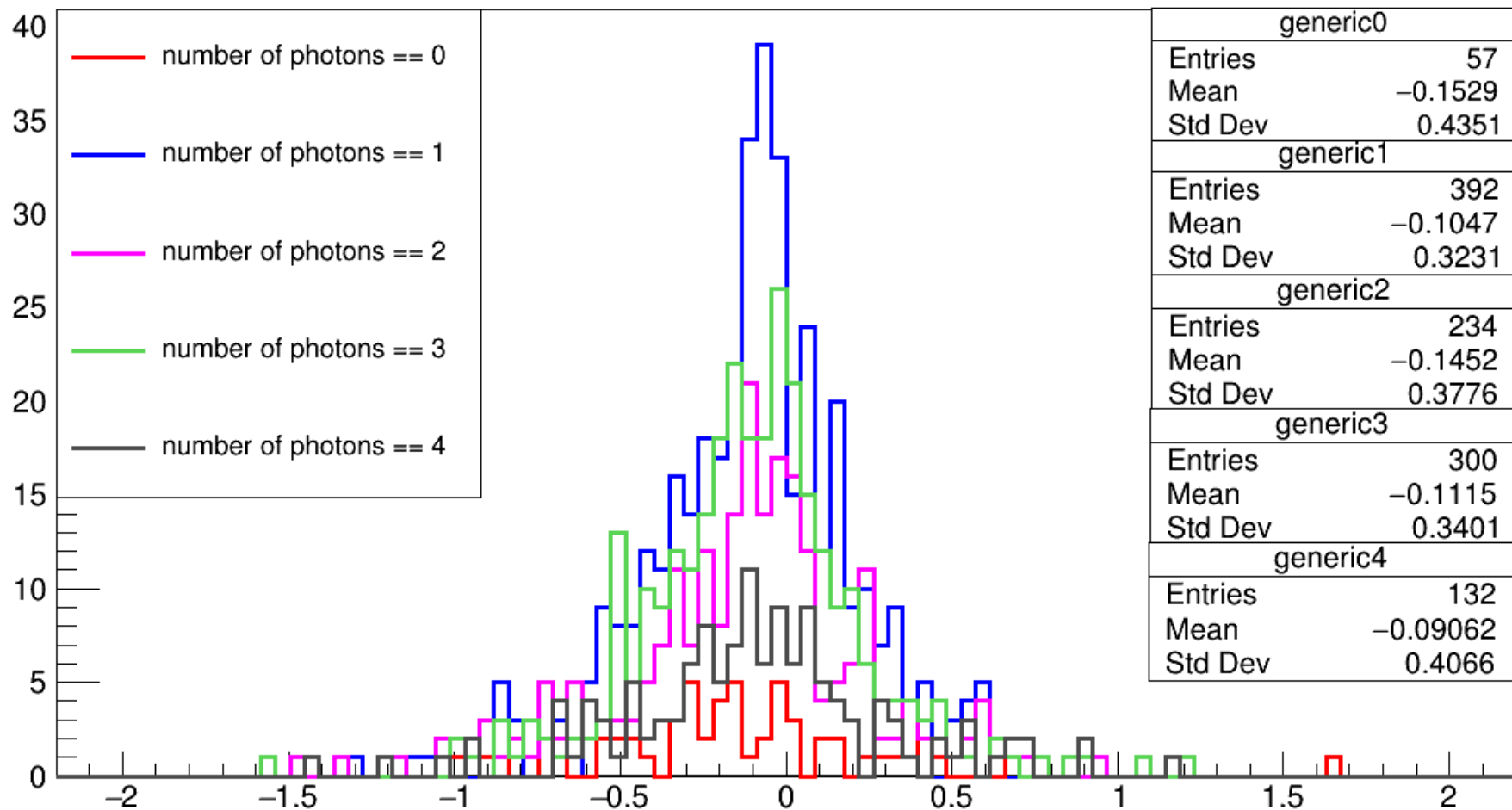
Best sum of cosine angles with $\cos(\text{PBtag}, \text{Pvis}) < 1$, $\text{abs}(\sin_\phi) < 1$, rank1 , $\text{abs}(m_{\text{hadROE}} - 1.86) < 0.035$ and dif. photon cuts



Best sum of cosine angles with $\cos(\text{PBtag}, \text{Pvis}) < 1$, $|\sin(\phi)| < 1$, rank1 , $|\text{m_hadROE} - 2.006| < 0.035$ and dif. photon cuts

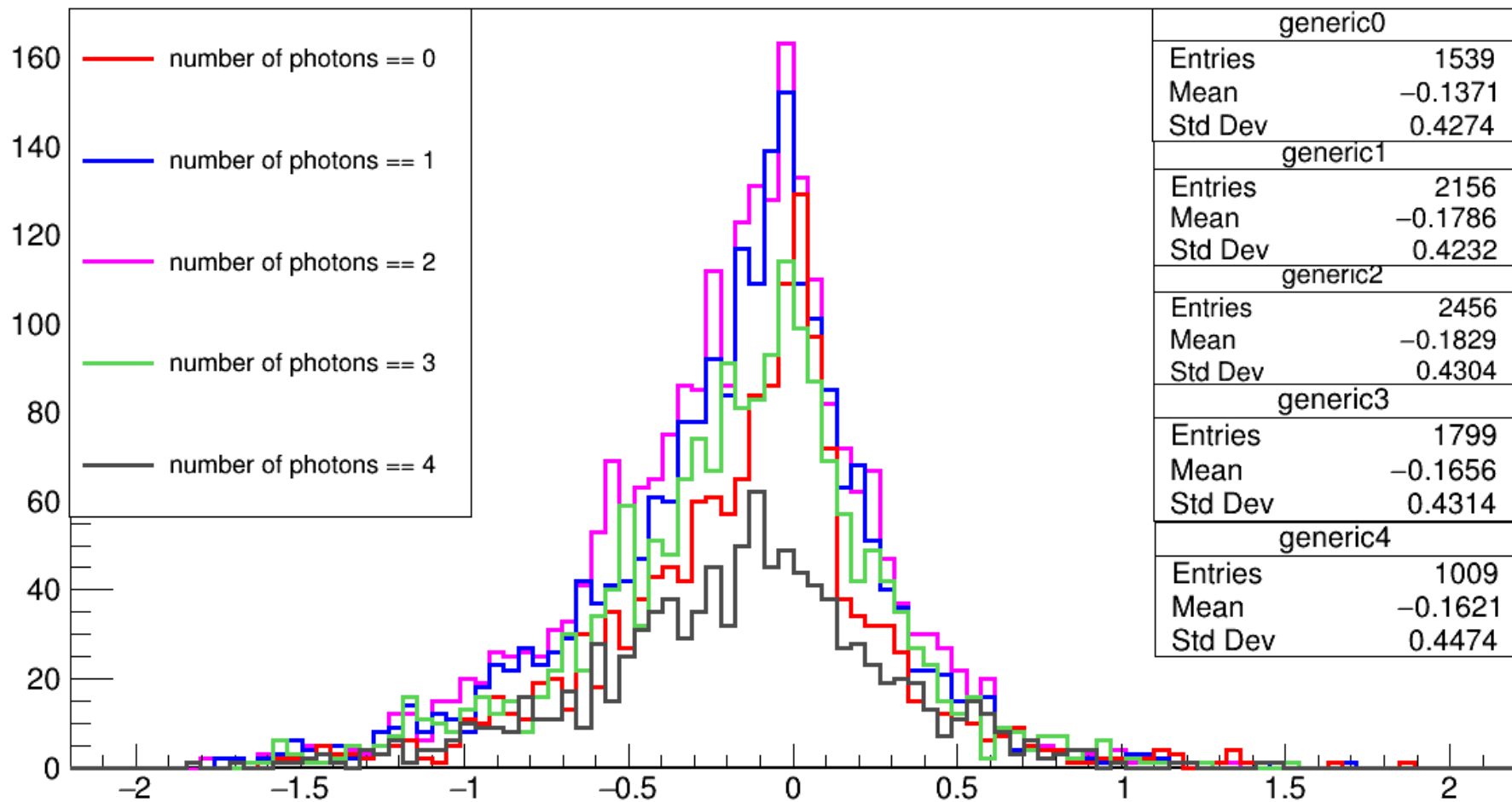


Best sum of cosine angles with $\cos(\text{PBtag}, \text{Pvis}) < 1$, $|\sin(\phi)| < 1$, rank1 , $|\text{m_hadROE} - 1.96| < 0.035$ and dif. photon cuts

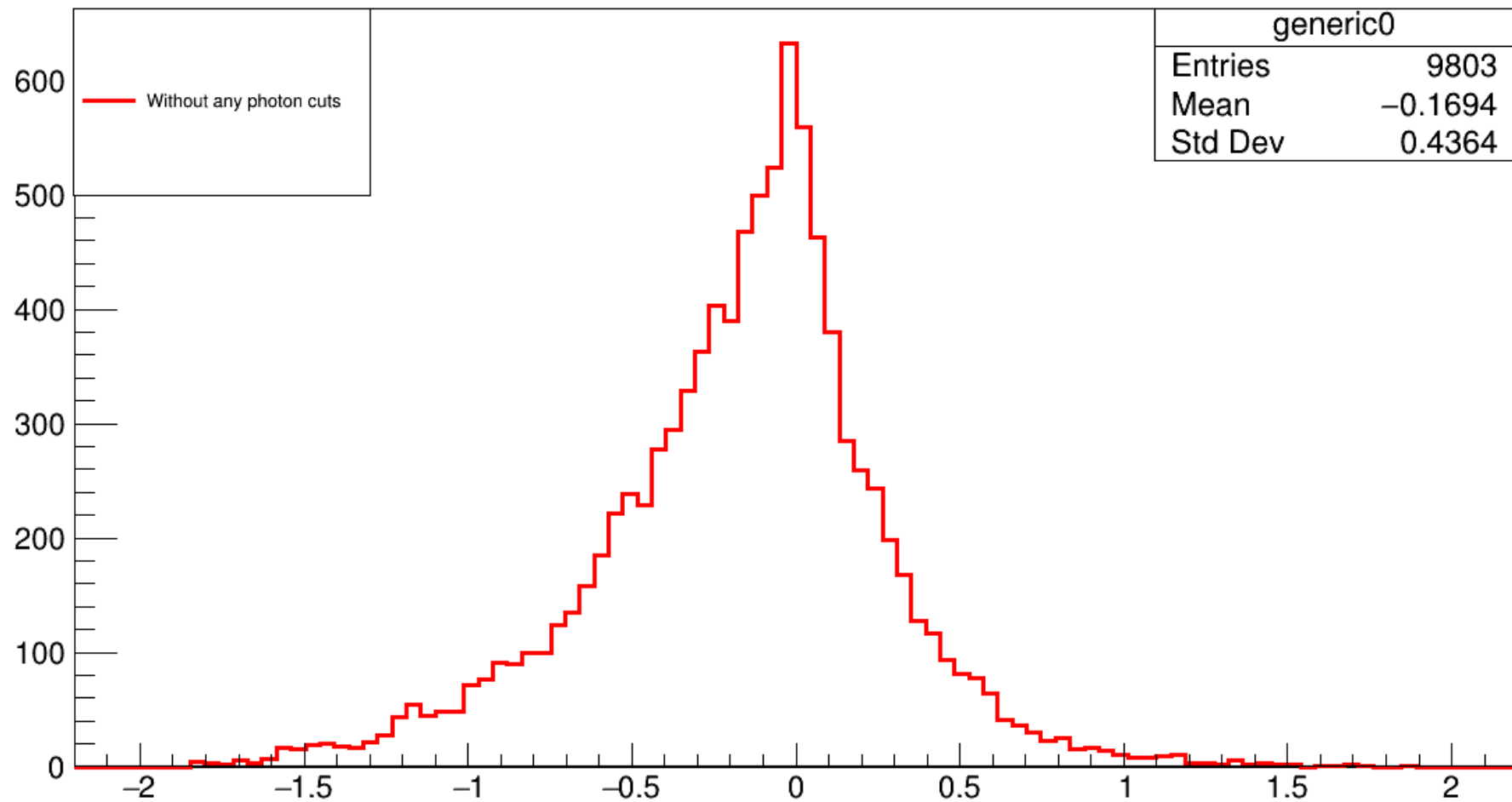


Backup

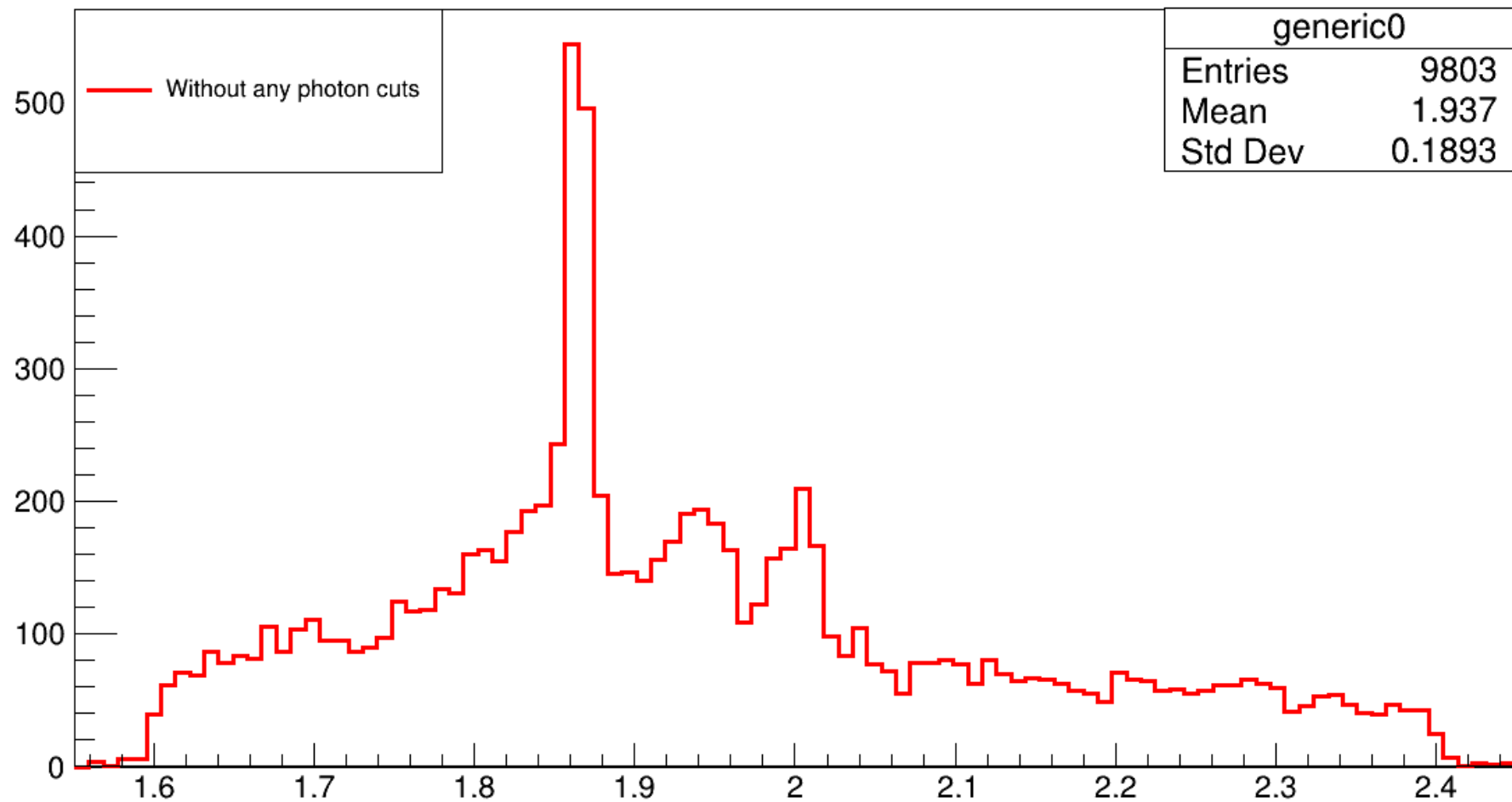
Best sum of cosine angles with $\cos(P_{\text{Btag}}, P_{\text{vis}}) < 1$, rank 1 $|\sin(\phi)| < 1$ and dif. photon cuts



Best sum of cosine angles with $\cos(\text{PBtag}, \text{Pvis}) < 1$, rank 1 $|\sin(\text{phi})| < 1$



m_hadROE with $\cos(PB_{tag}, P_{vis}) < 1$, rank 1 $abs(\sin_phi) < 1$



Rank with $\cos(P_{\text{Btag}}, P_{\text{vis}}) < 1$, $\text{abs}(\sin_{\text{phi}}) < 1$ and dif. photon cuts

