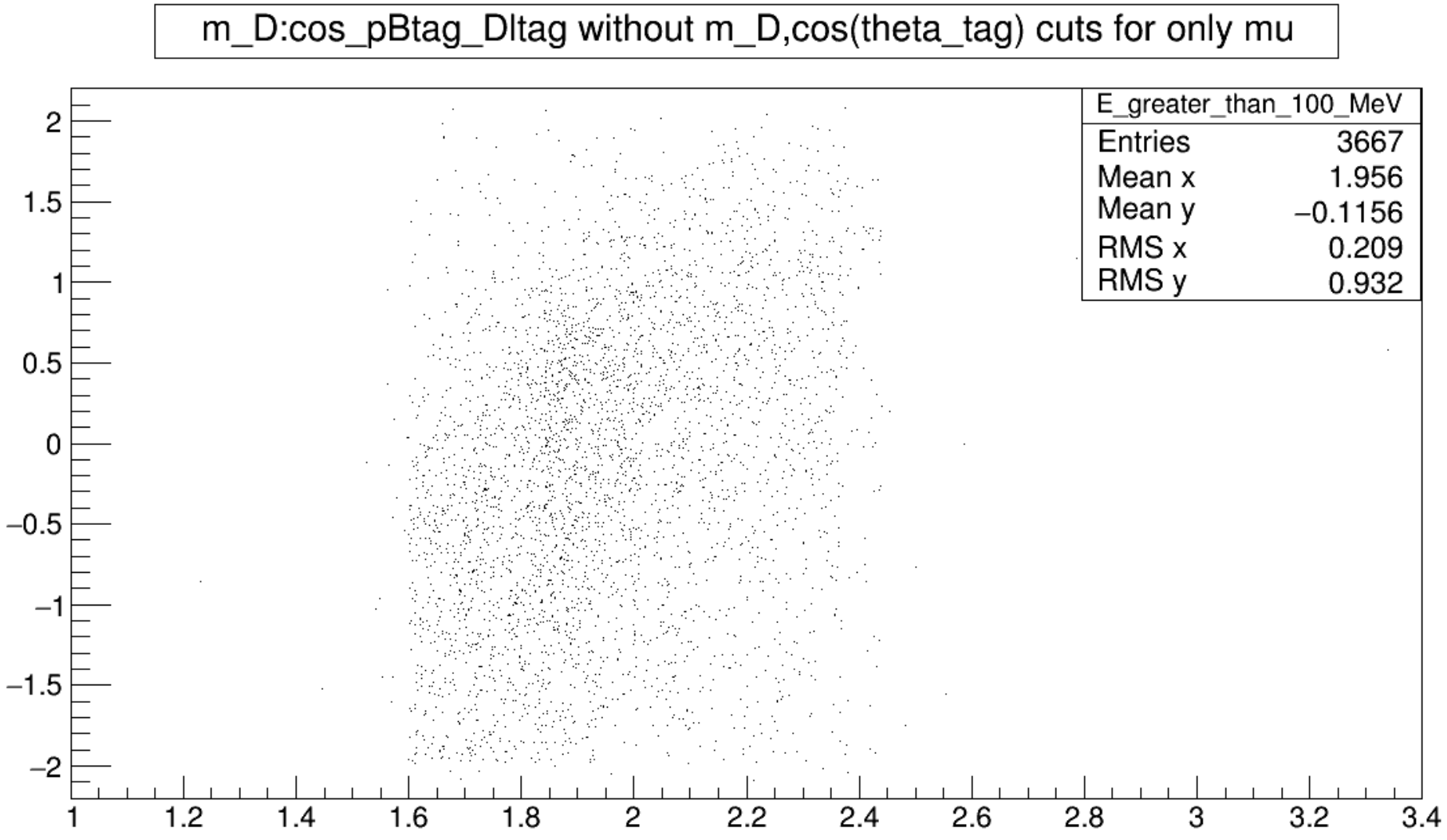
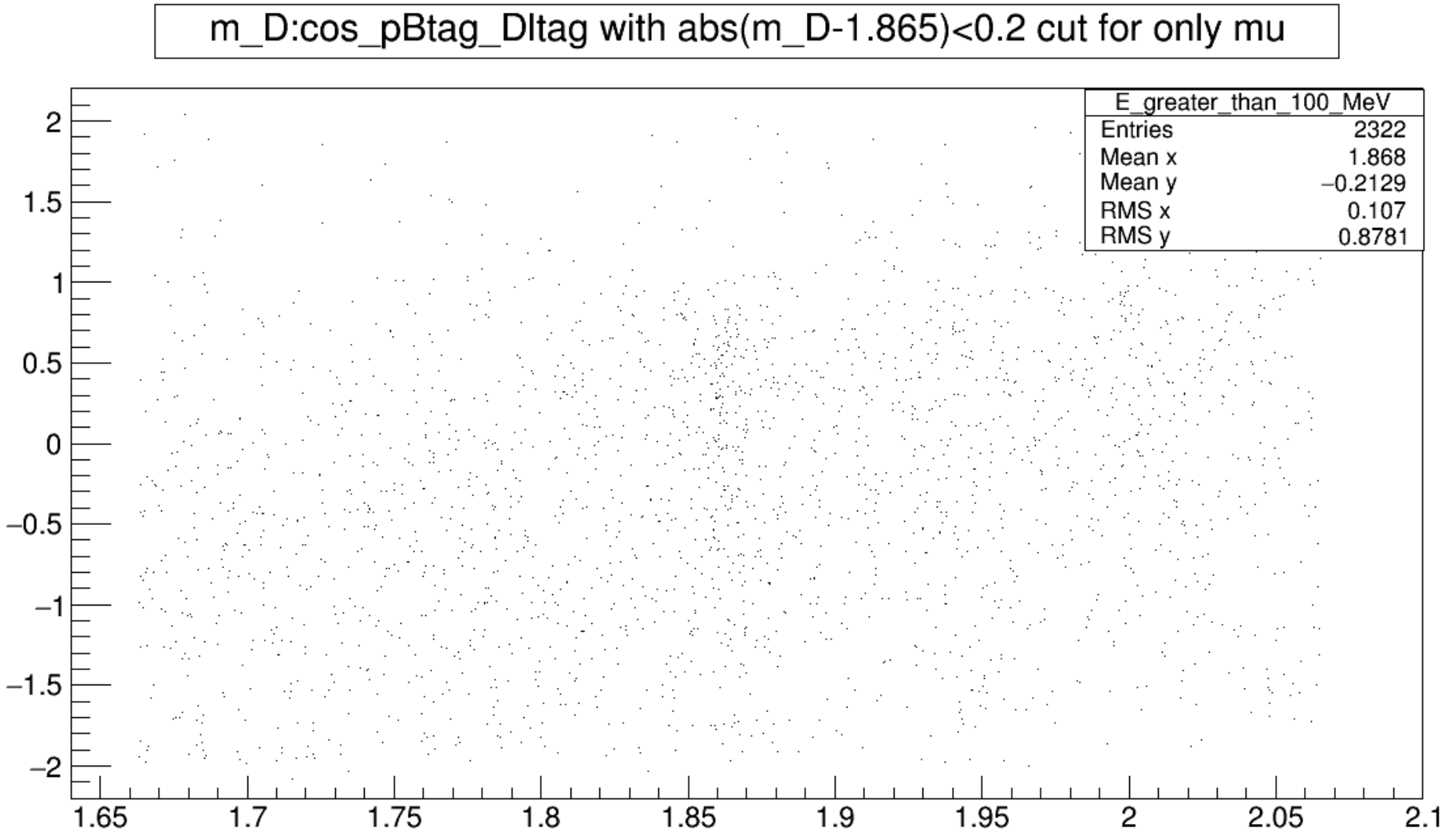
Update

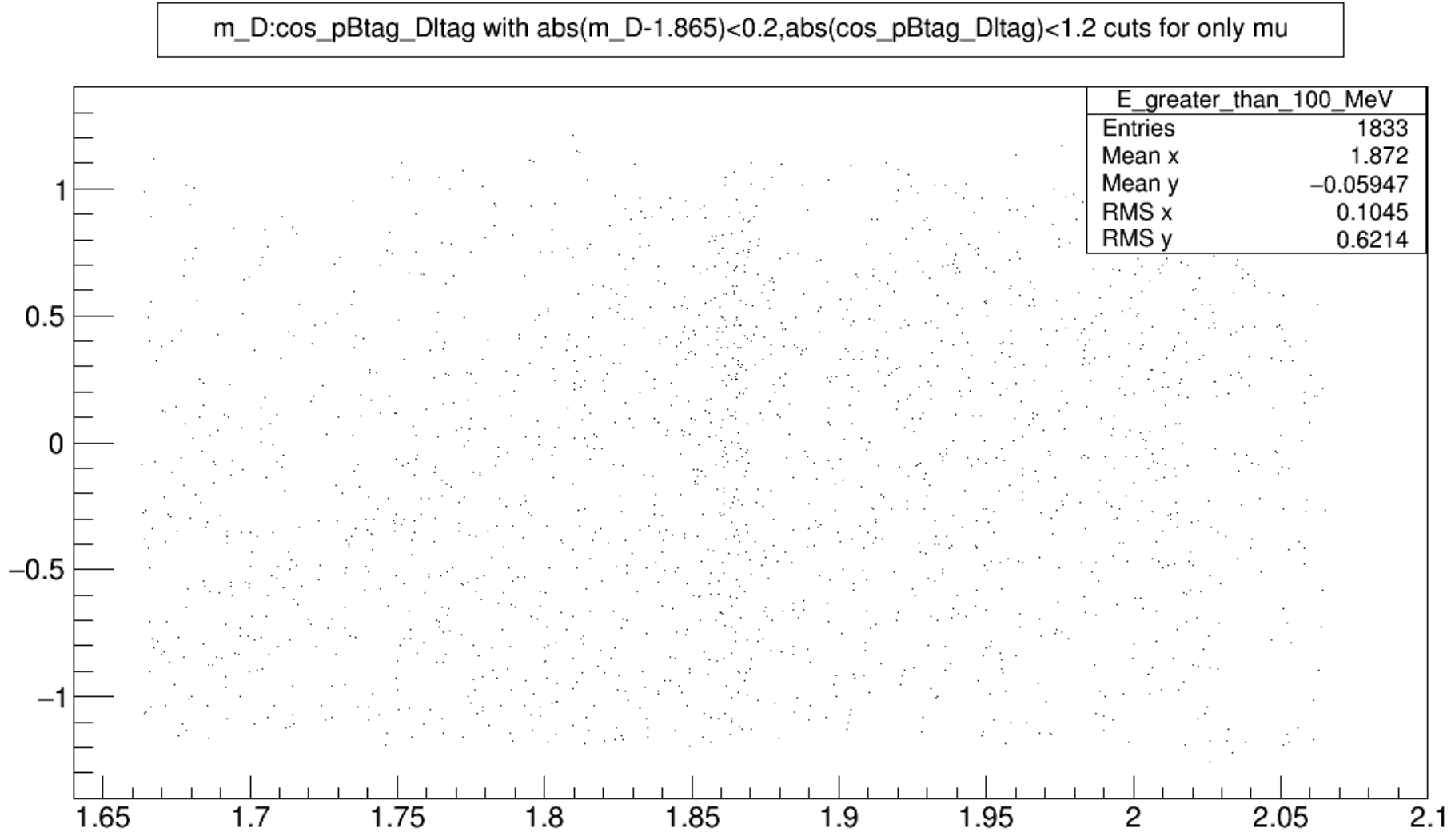
1M signal events with incl. tag side
B+ → K+ tau- mu+

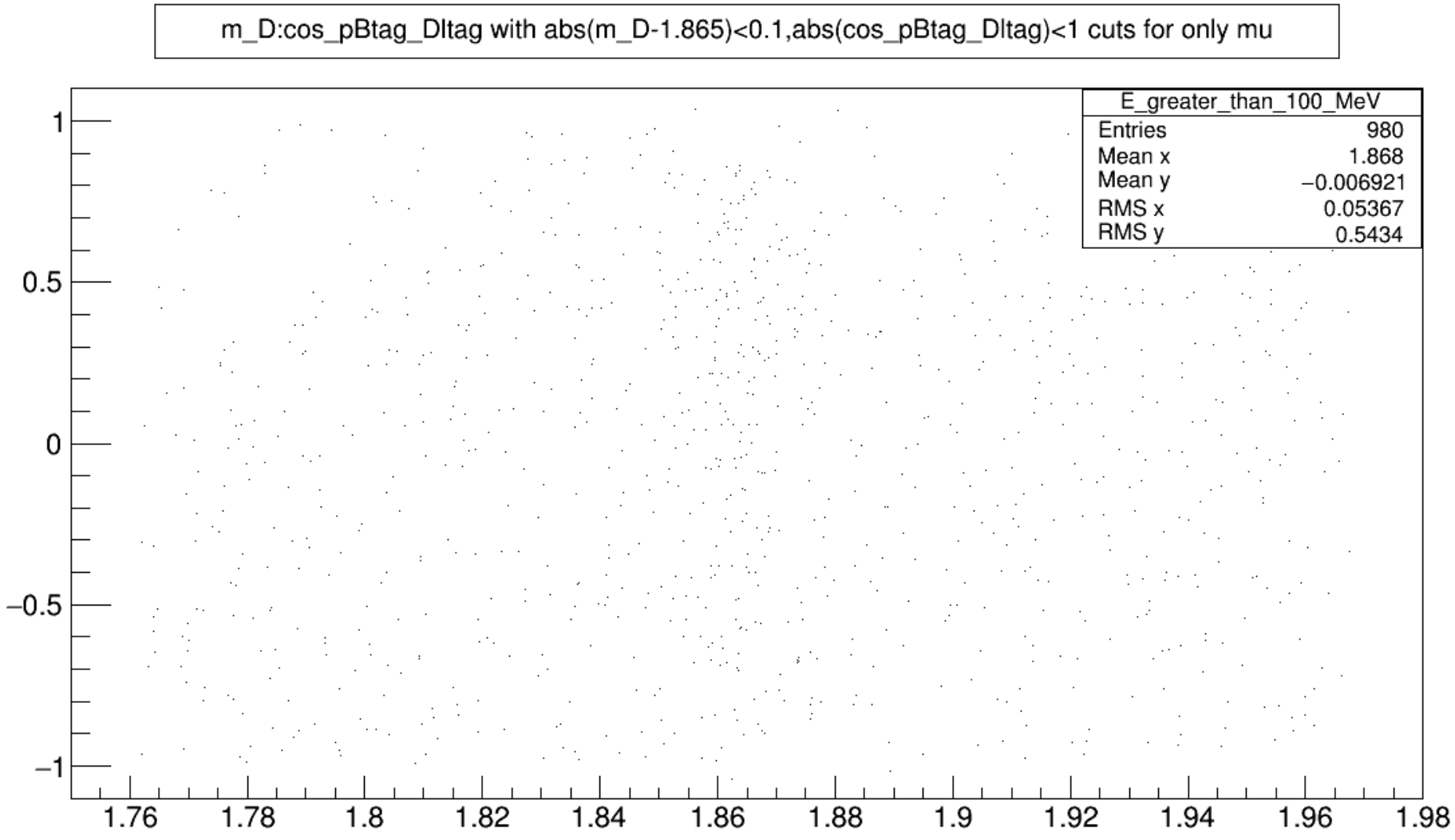
E_photon > 100 MeV

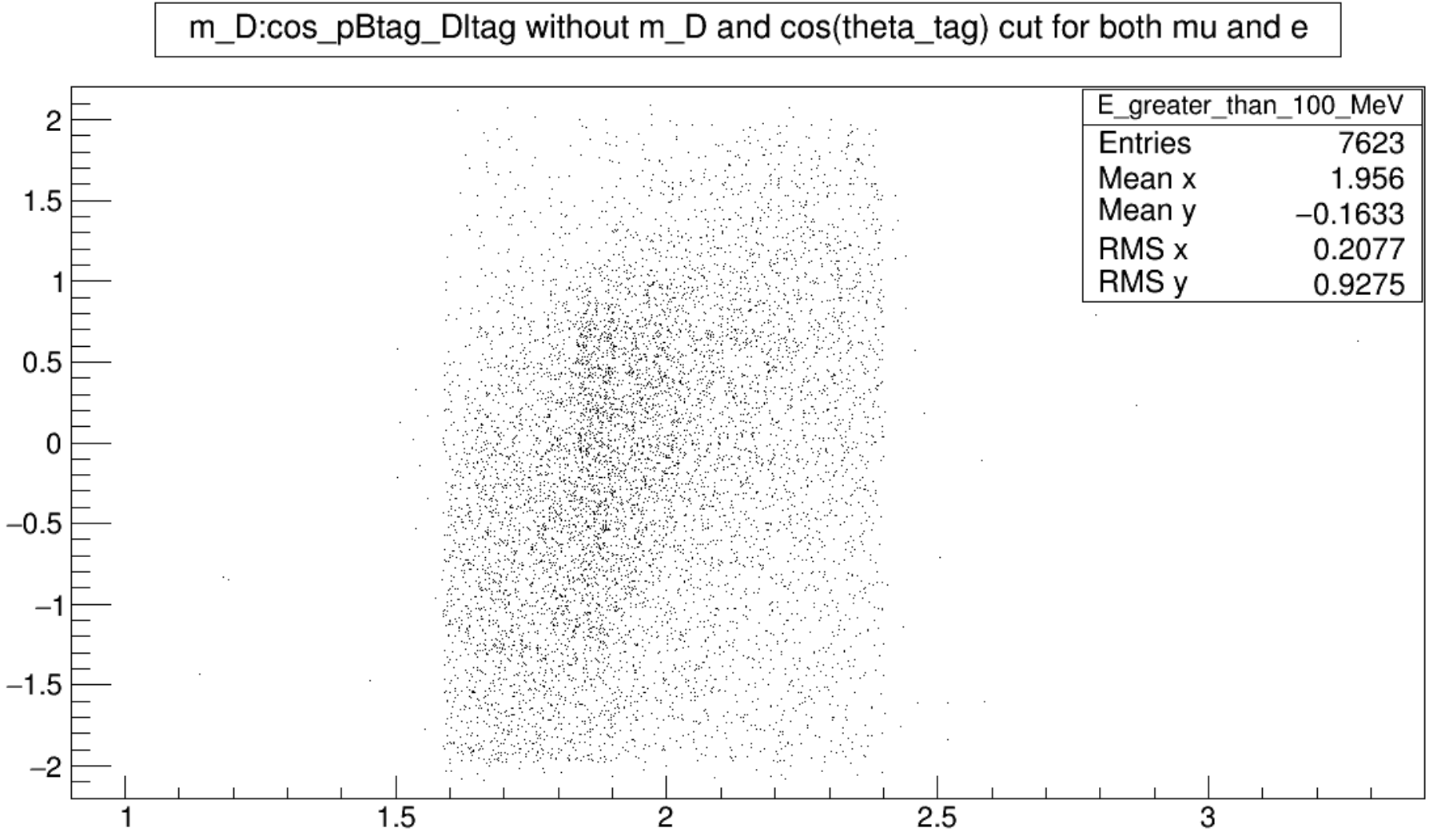
12 Oct. 2023

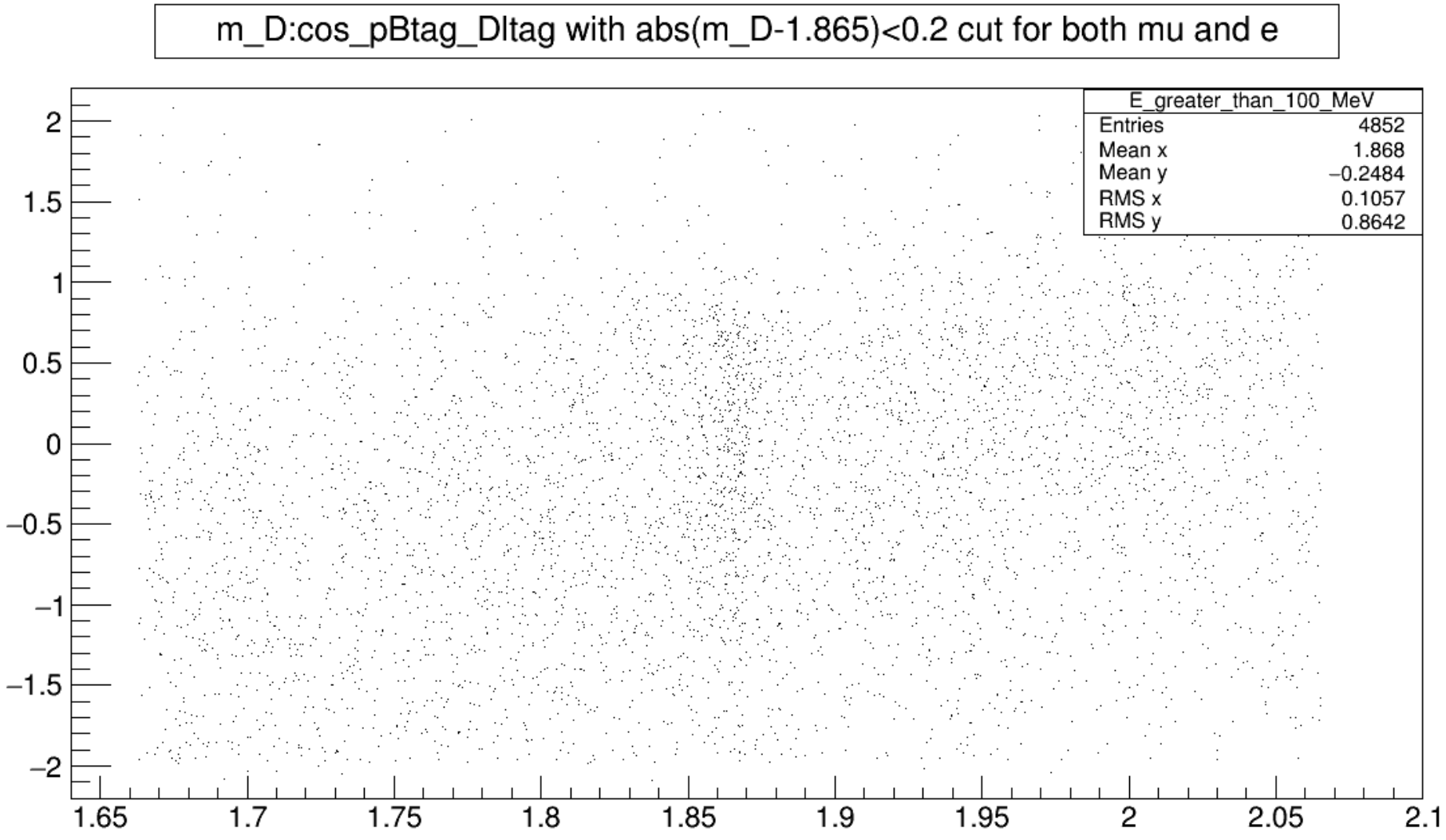

m_D:cos_pBtag_Dltag without m_D,cos(theta_tag) cuts for only mu
E_greater_than_100_MeV
Entries 3667
Mean x 1.956
Mean y −0.1156
RMS x 0.209
RMS y 0.932
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
1
1.2
1.4
1.6
1.8
2
2.2
2.4
2.6
2.8
3
3.2
3.4

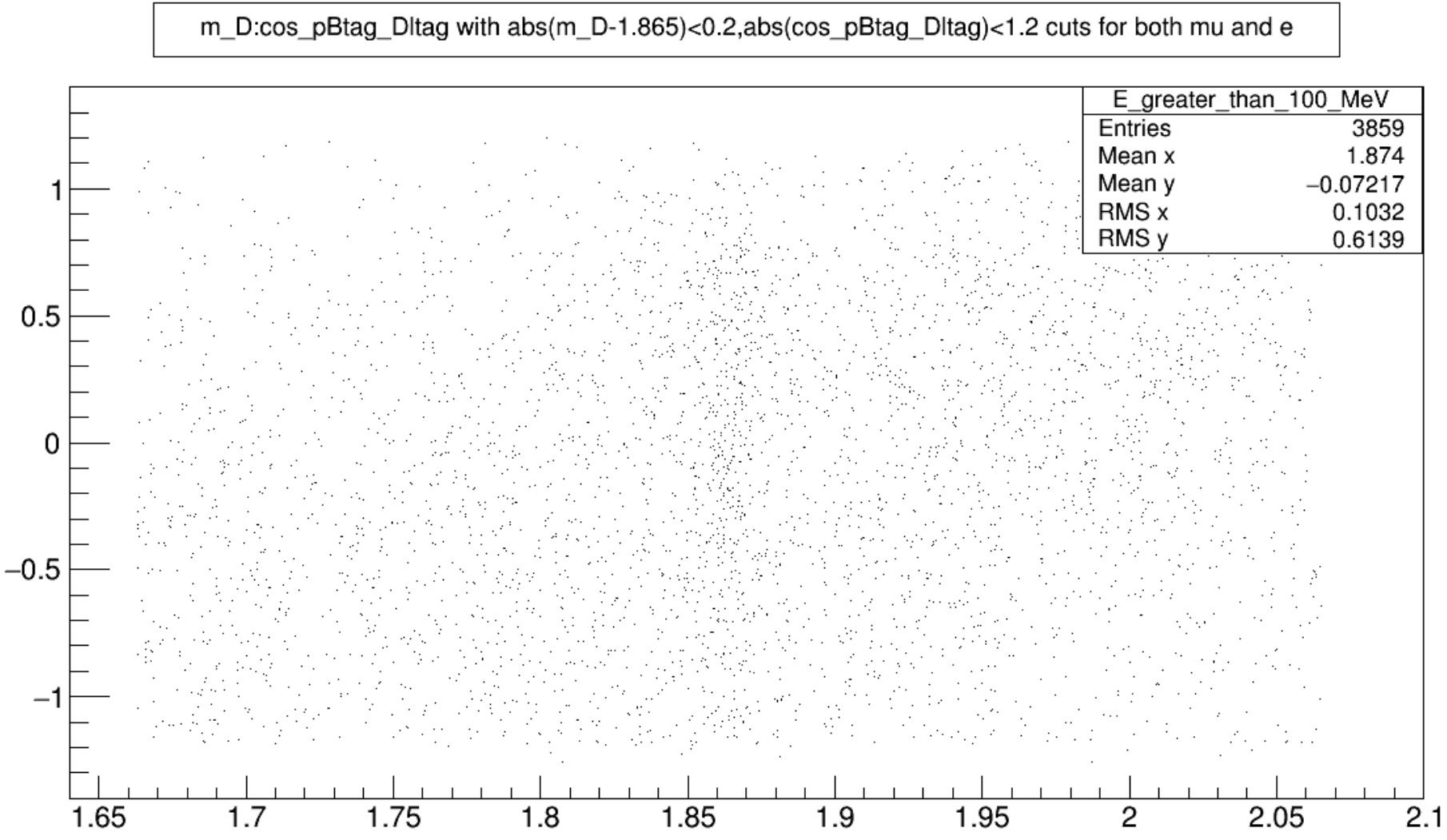

m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.2 cut for only mu
E_greater_than_100_MeV
Entries 2322
Mean x 1.868
Mean y −0.2129
RMS x 0.107
RMS y 0.8781
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
1.65
1.7
1.75
1.8
1.85
1.9
1.95
2
2.05
2.1

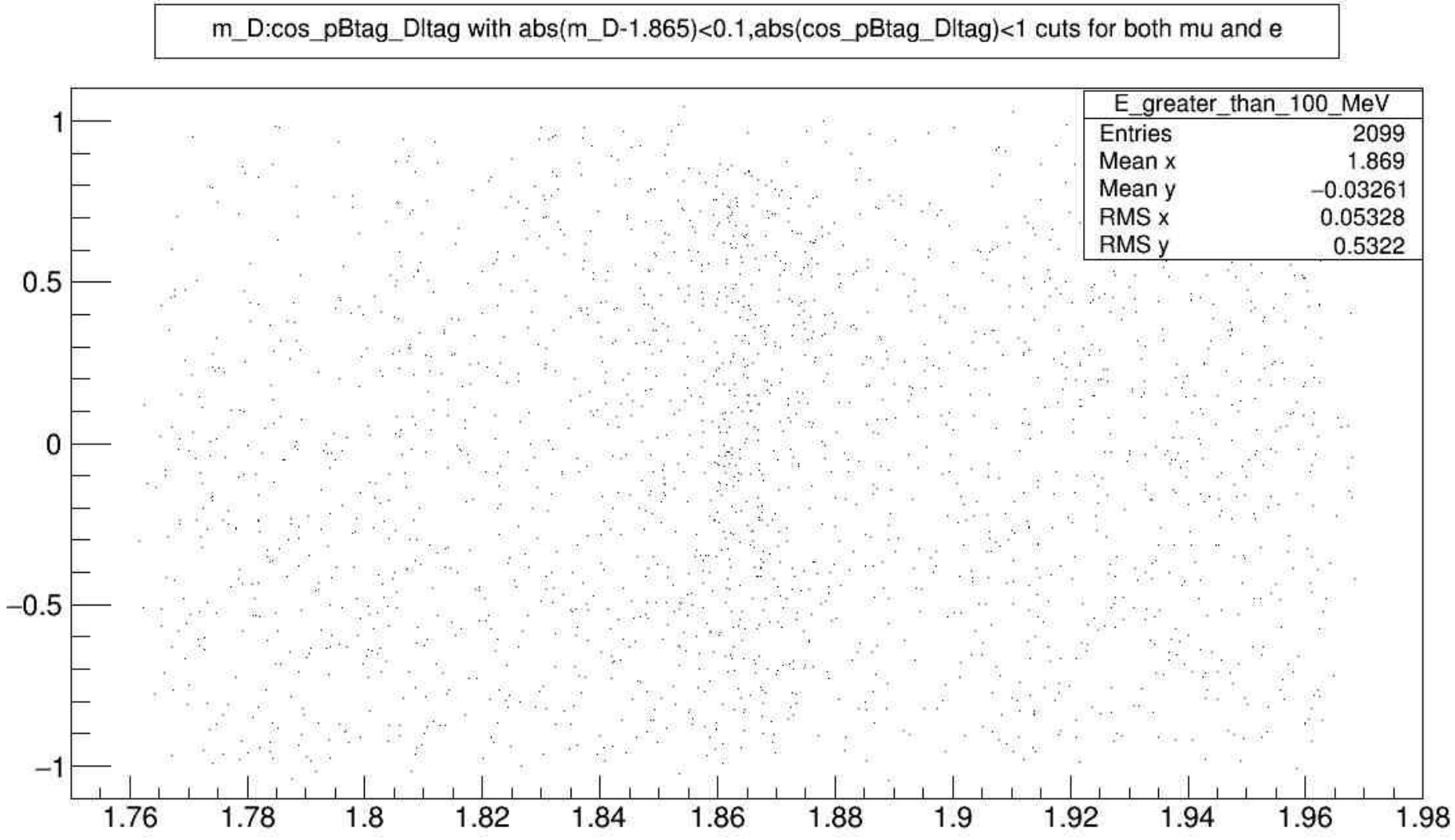

m_D:cos_pBtag_DItag with abs(m_D-1.865)<0.2,abs(cos_pBtag_DItag)<1.2 cuts for only mu
E_greater_than_100_MeV
Entries 1833
Mean x 1.872
Mean y −0.05947
RMS x 0.1045
RMS y 0.6214
1
0.5
0
−0.5
−1
1.65
1.7
1.75
1.8
1.85
1.9
1.95
2
2.05
2.1


m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.1,abs(cos_pBtag_Dltag)<1 cuts for only mu
E_greater_than_100_MeV
Entries 980
Mean x 1.868
Mean y −0.006921
RMS x 0.05367
RMS y 0.5434
1
0.5
0
−0.5
−1
1.76
1.78
1.8
1.82
1.84
1.86
1.88
1.9
1.92
1.94
1.96
1.98

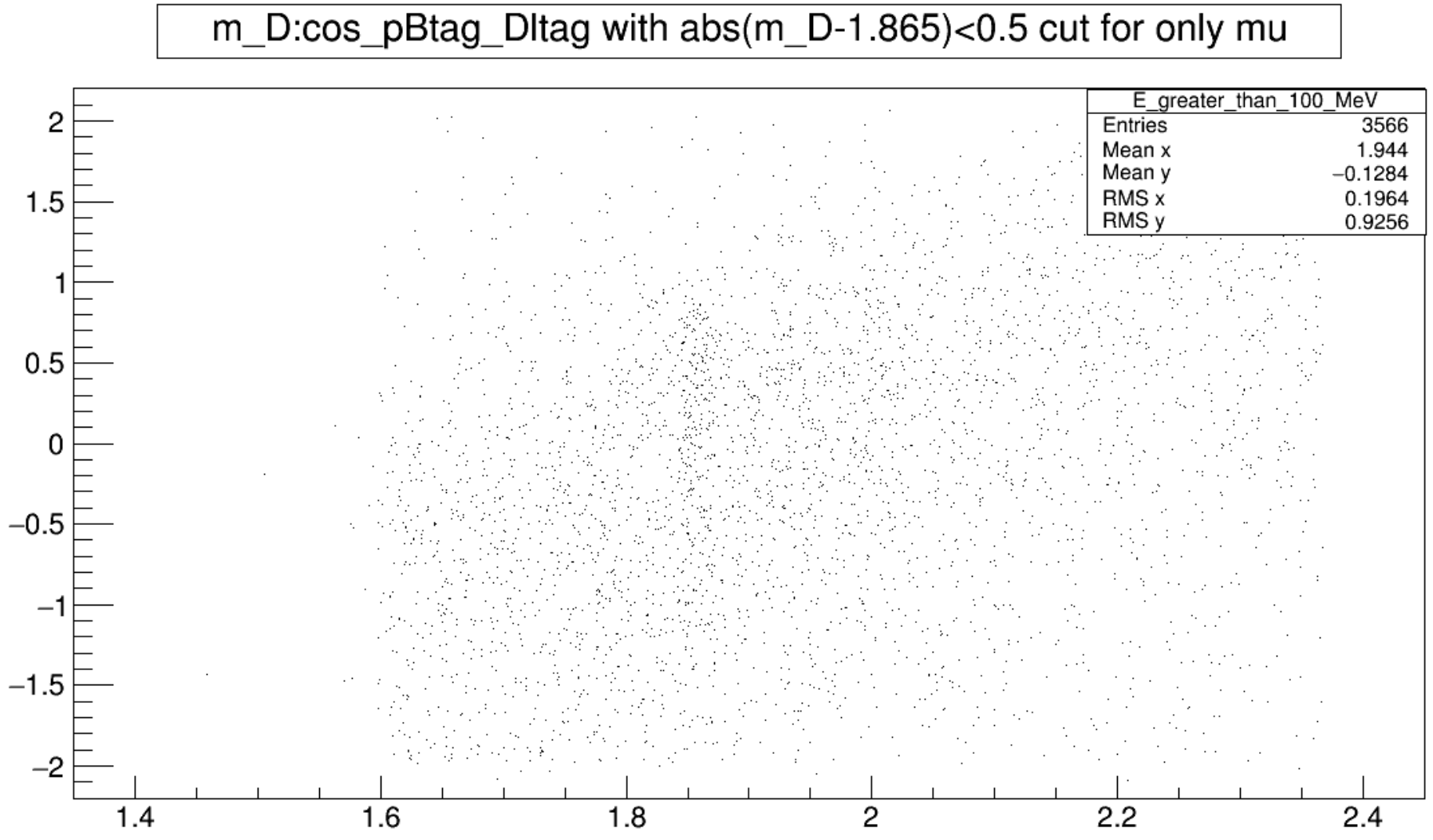

m_D:cos_pBtag_Dltag without m_D and cos(theta_tag) cut for both mu and e
E_greater_than_100_MeV
Entries 7623
Mean x 1.956
Mean y −0.1633
RMS x 0.2077
RMS y 0.9275
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
1
1.5
2
2.5
3

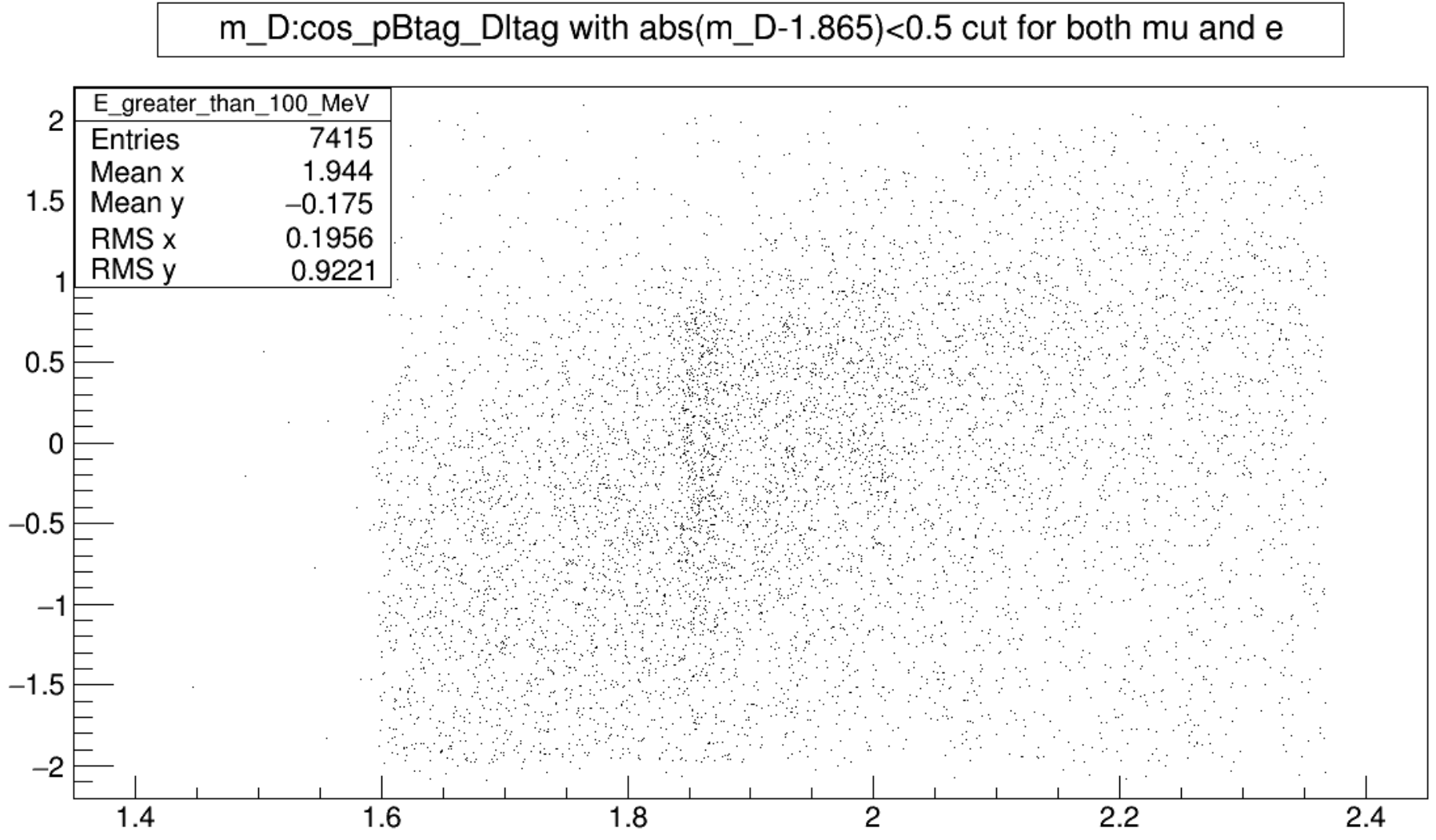

m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.2 cut for both mu and e
E_greater_than_100_MeV
Entries 4852
Mean x 1.868
Mean y −0.2484
RMS x 0.1057
RMS y 0.8642
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
1.65
1.7
1.75
1.8
1.85
1.9
1.95
2
2.05
2.1


m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.2,abs(cos_pBtag_Dltag)<1.2 cuts for both mu and e
E_greater_than_100_MeV
Entries 3859
Mean x 1.874
Mean y −0.07217
RMS x 0.1032
RMS y 0.6139
1
0.5
0
−0.5
−1
1.65
1.7
1.75
1.8
1.85
1.9
1.95
2
2.05
2.1


m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.1,abs(cos_pBtag_Dltag)<1 cuts for both mu and e
E_greater_than_100_MeV
Entries 2099
Mean x 1.869
Mean y −0.03261
RMS x 0.05328
RMS y 0.5322
1
0.5
0
−0.5
−1
1.76
1.78
1.8
1.82
1.84
1.86
1.88
1.9
1.92
1.94
1.96
1.98

Back up


m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.5 cut for only mu
E_greater_than_100_MeV
Entries 3566
Mean x 1.944
Mean y −0.1284
RMS x 0.1964
RMS y 0.9256
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
1.4
1.6
1.8
2
2.2
2.4


m_D:cos_pBtag_Dltag with abs(m_D-1.865)<0.5 cut for both mu and e
E_greater_than_100_MeV
Entries 7415
Mean x 1.944
Mean y −0.175
RMS x 0.1956
RMS y 0.9221
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2
1.4
1.6
1.8
2
2.2
2.4

```
cut m_Dcut abs(m_D-1.865)<0.5
cut Ycut Yincl_rank_all==1
cut best_cut isSignalAcceptMissingNeutrino_Bsig==1
cut lep_cut  nLepton==2
cut mkpi_cut m_Kpi>2
cut cos_cut abs(cos_pBtag_Dltag)<1.2
#cut total_cut m_Dcut&&Ycut&&best_cut&&lep_cut&&mkpi_cut
cut total_cut Ycut&&lep_cut&&mkpi_cut&&m_Dcut
```