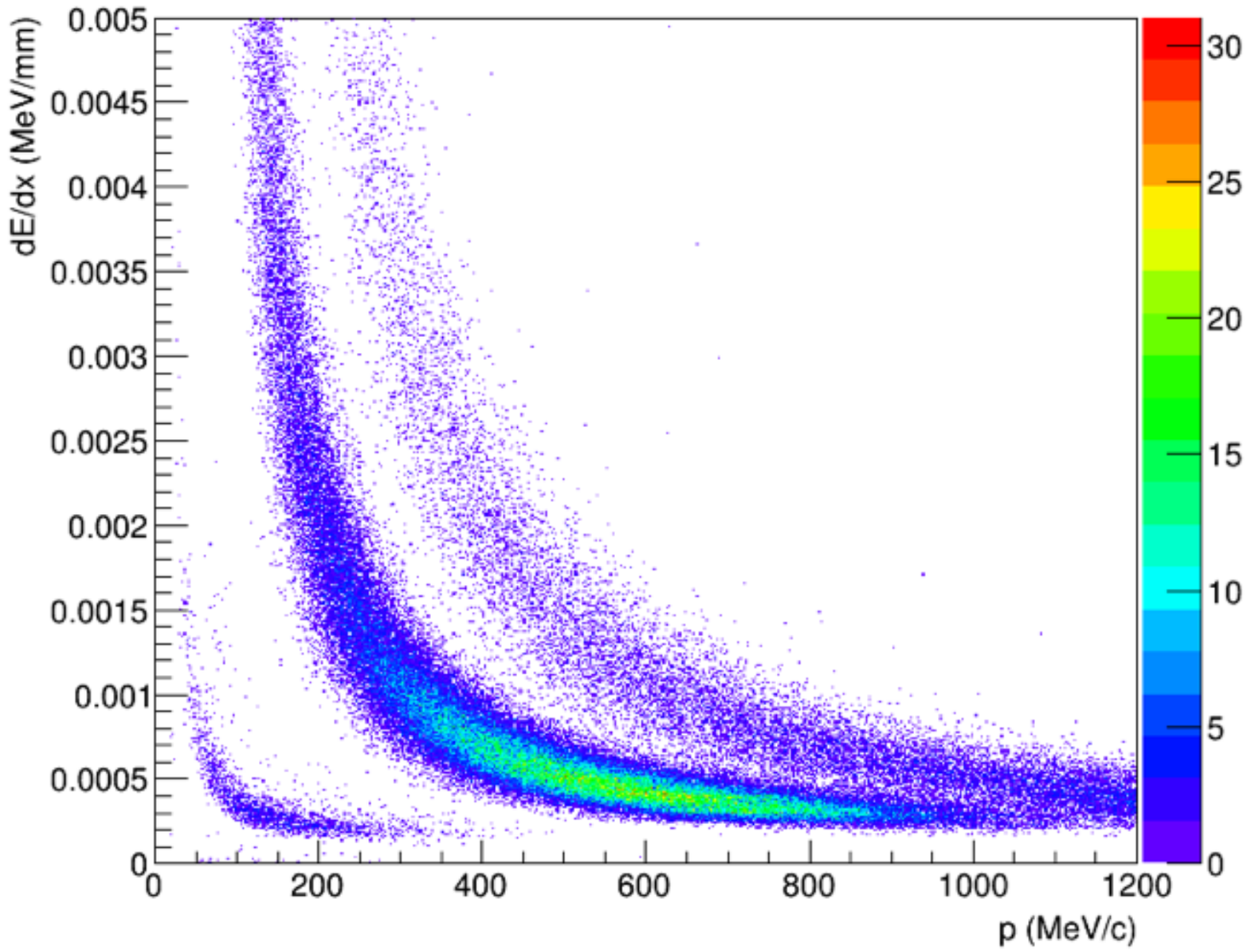
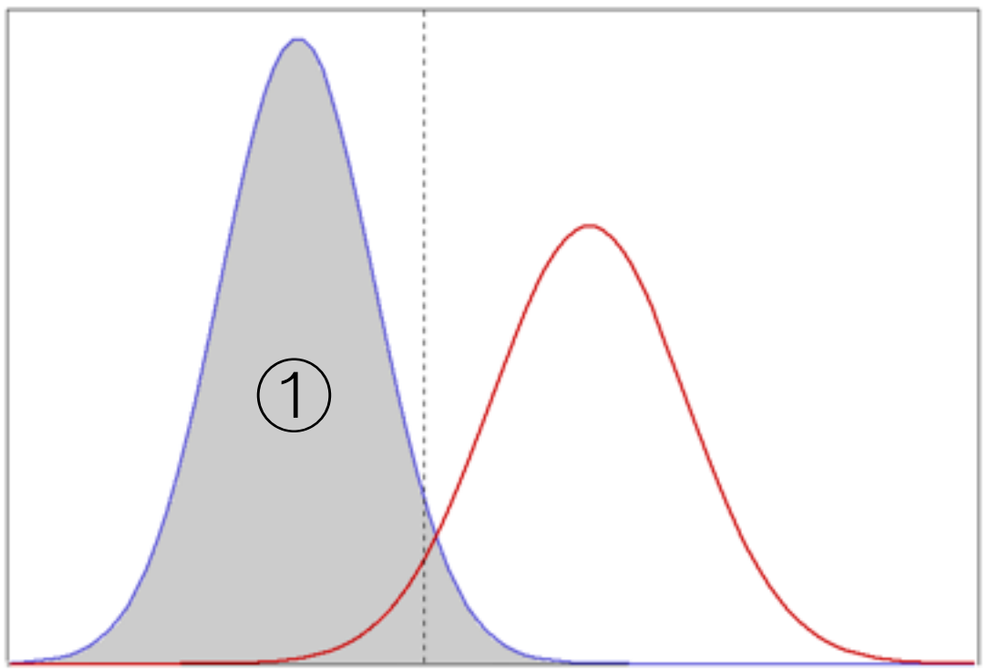
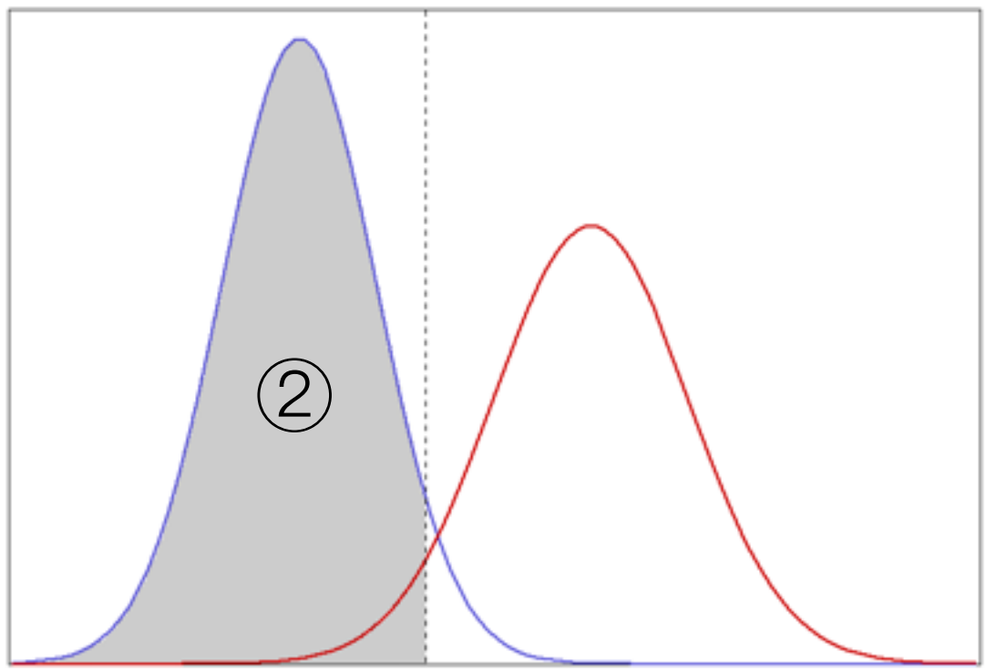
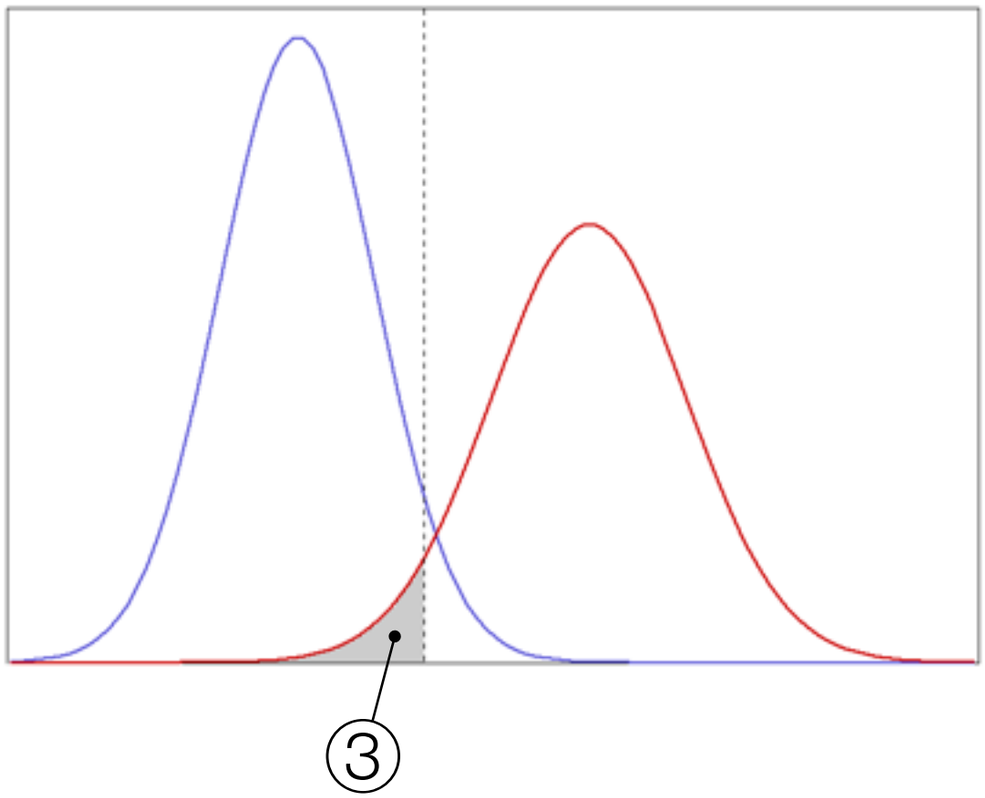
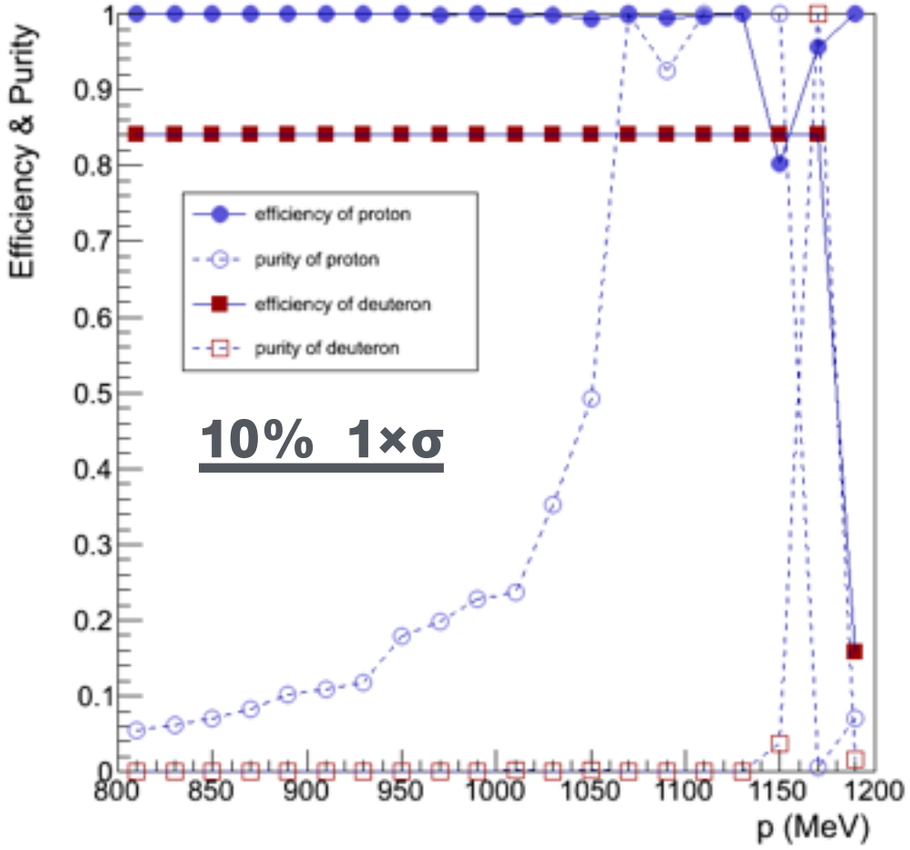

dE/dx (MeV/mm)
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
0
200
400
600
800
1000
1200
p (MeV/c)
30
25
20
15
10
5
0

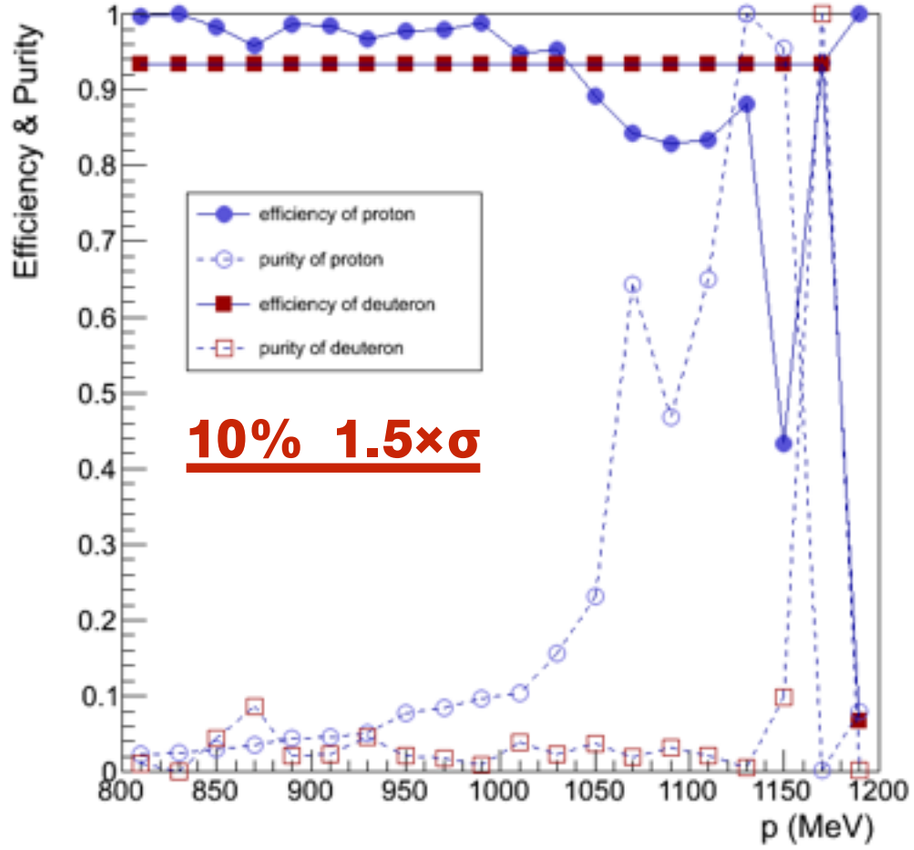


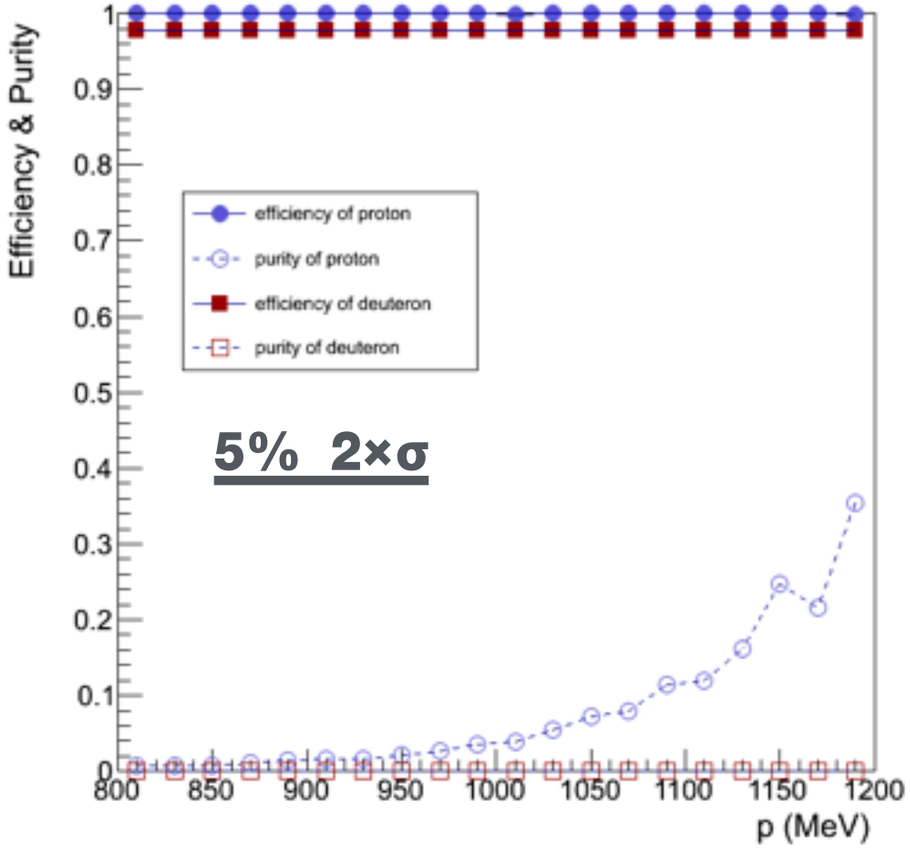


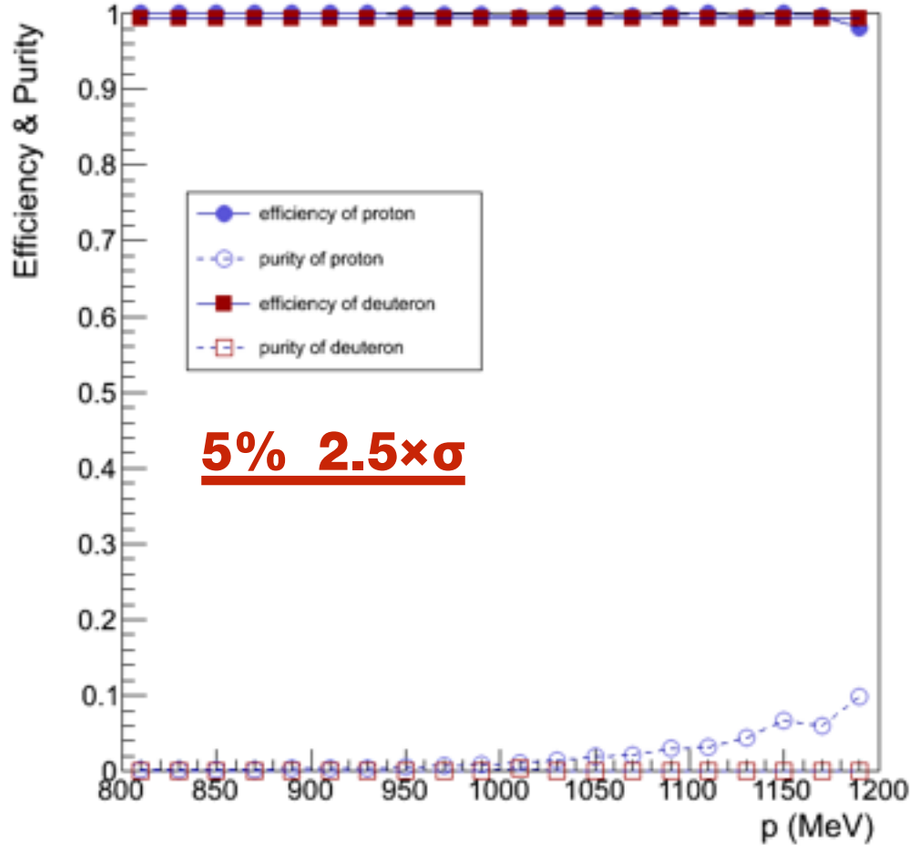


- Efficiency = ② / ①
- Purity = ③ / ②


Efficiency & Purity
p (MeV)
efficiency of proton
purity of proton
efficiency of deuteron
purity of deuteron
10% 1×σ

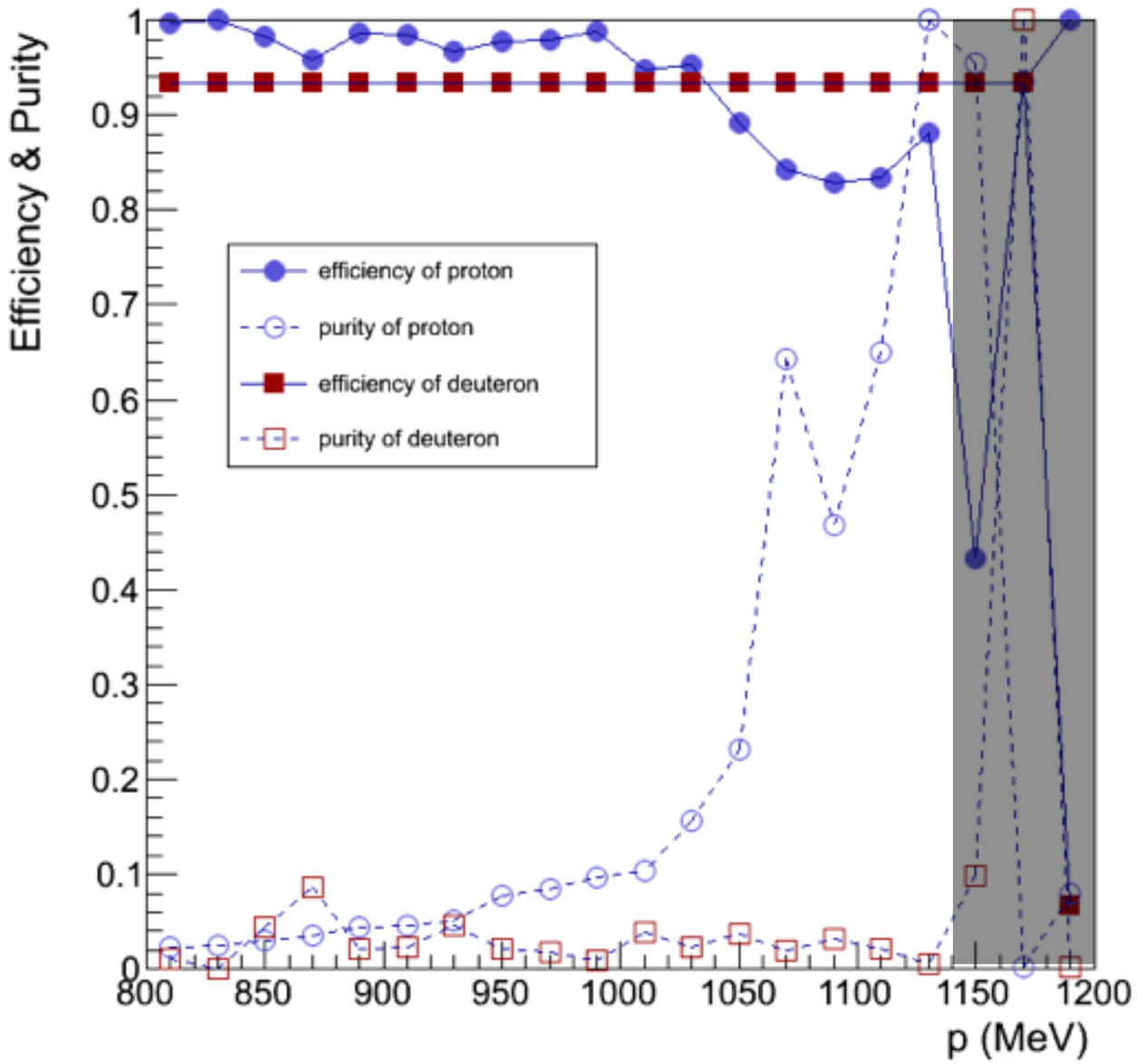

Efficiency & Purity
p (MeV)
efficiency of proton
purity of proton
efficiency of deuteron
purity of deuteron
10% 1.5×σ


Efficiency & Purity
p (MeV)
efficiency of proton
purity of proton
efficiency of deuteron
purity of deuteron
5% 2×σ


Efficiency & Purity
p (MeV)
efficiency of proton
purity of proton
efficiency of deuteron
purity of deuteron
5% 2.5×σ

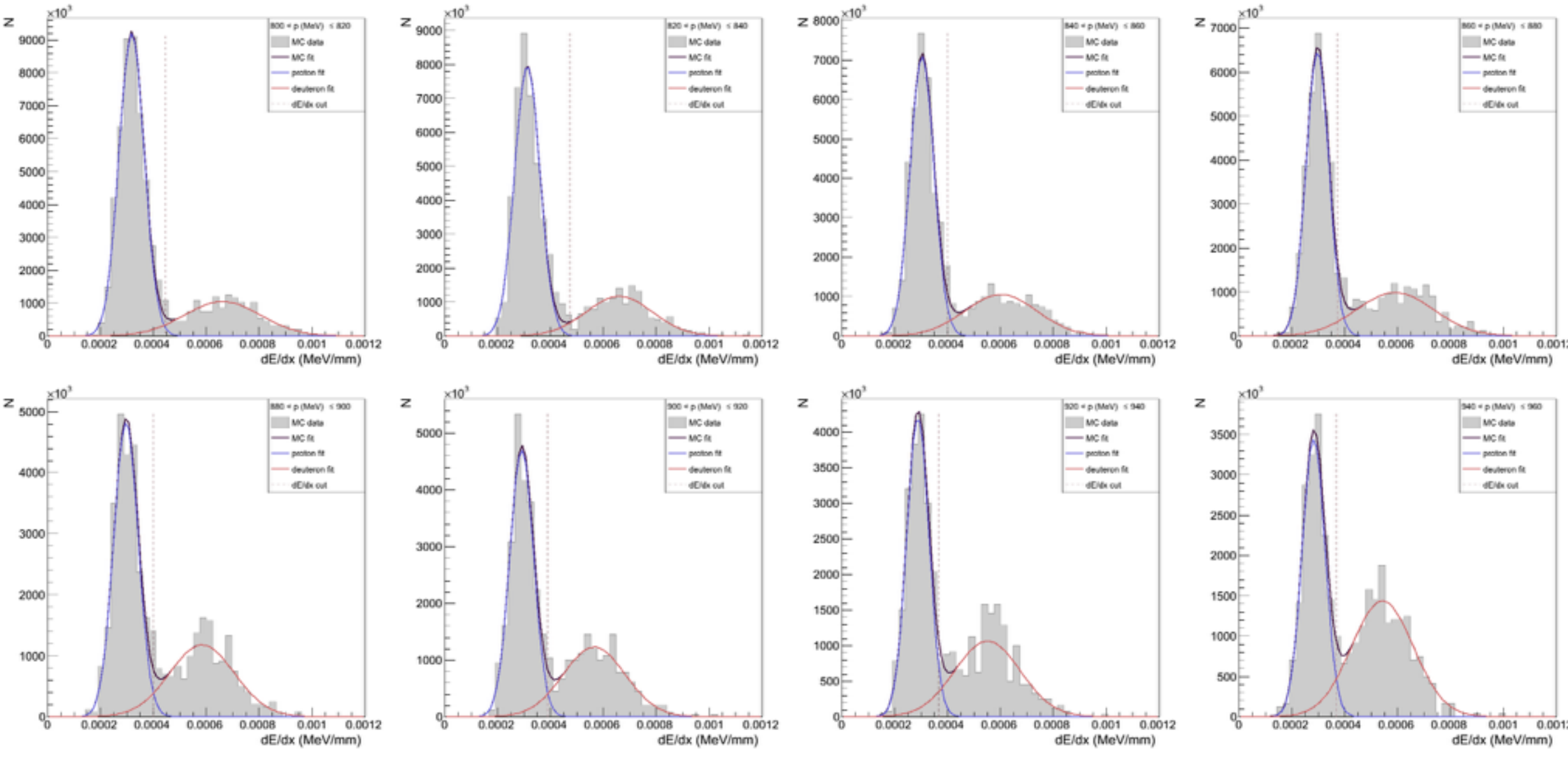
Efficiency and Purity

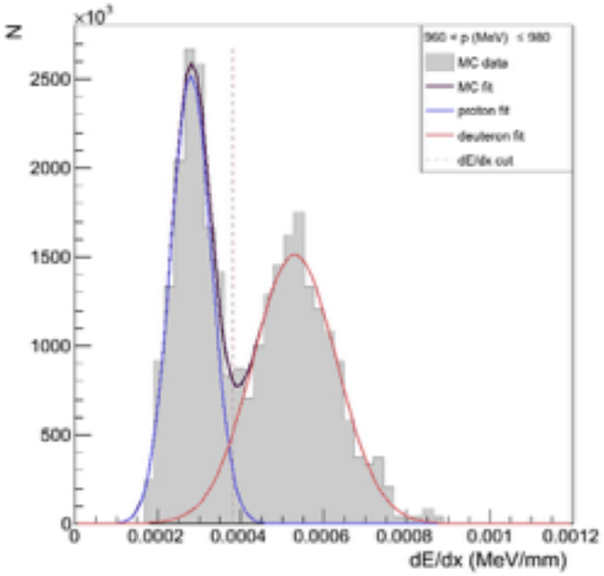
dE/dx resolution : 10 % | p resolution : 10 % | dE/dx cut : $mean_{deuteron}$ - 1.5×σ

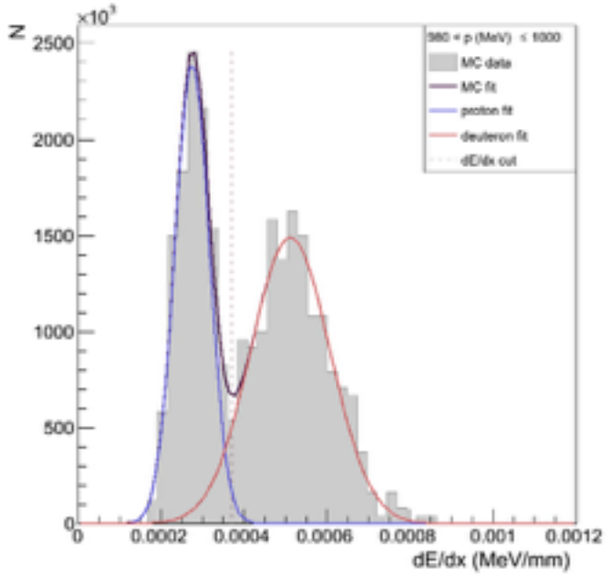


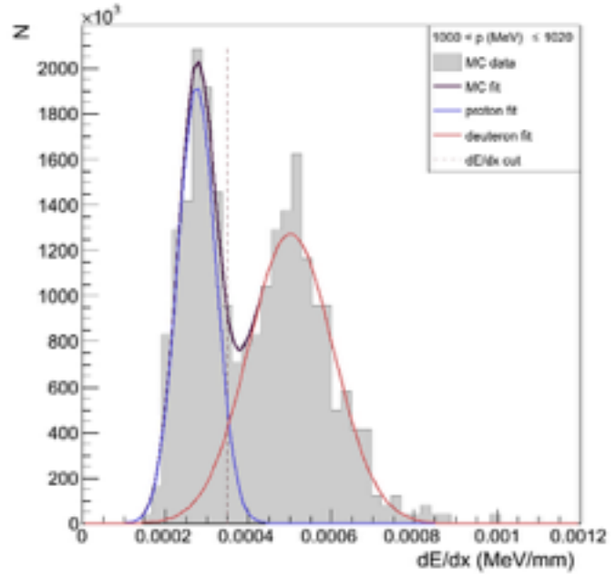
dE/dx Distribution

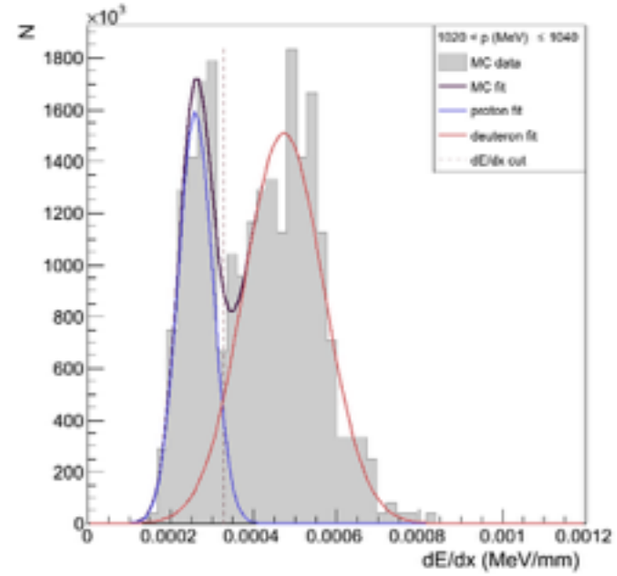
dE/dx resolution : 10 % | p resolution : 10 % | dE/dx cut : $mean_{deuteron}$ - 1.5×σ

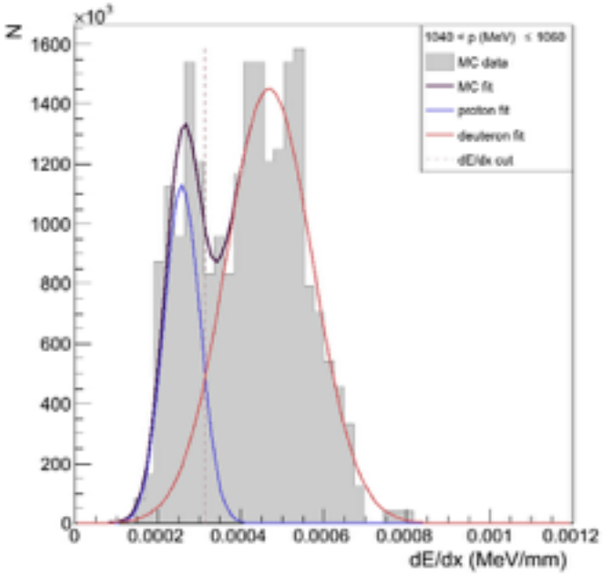


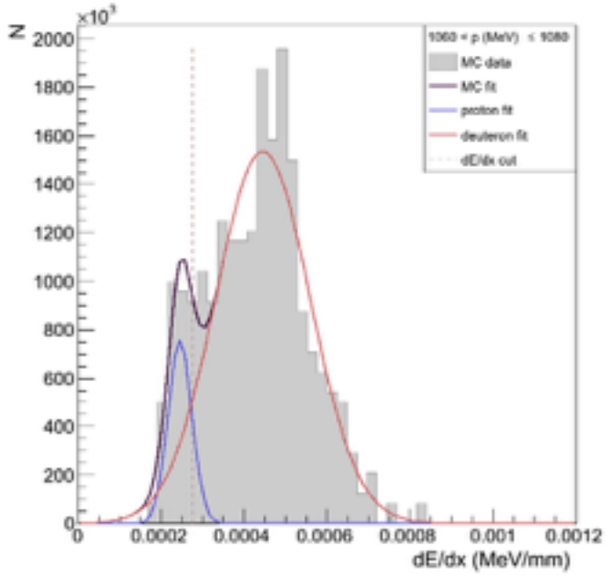

960 < p (MeV) ≤ 980
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

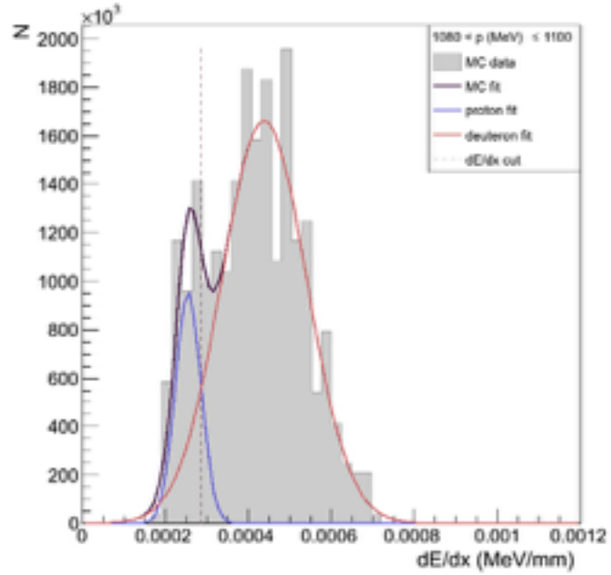

980 < p (MeV) ≤ 1000
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

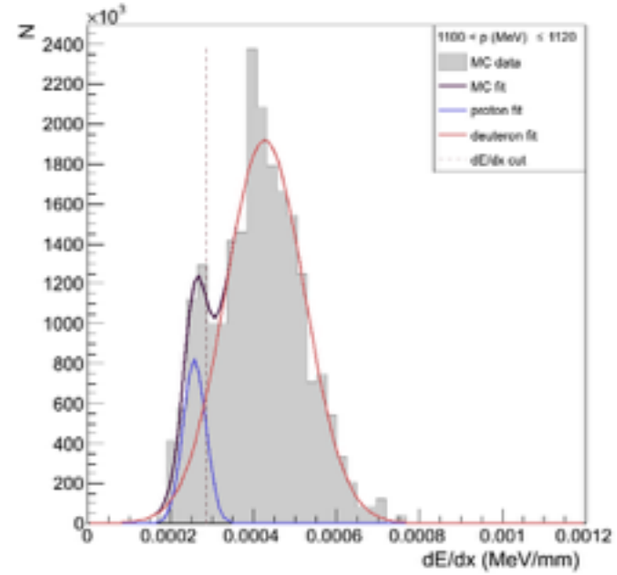

1000 < p (MeV) ≤ 1020
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

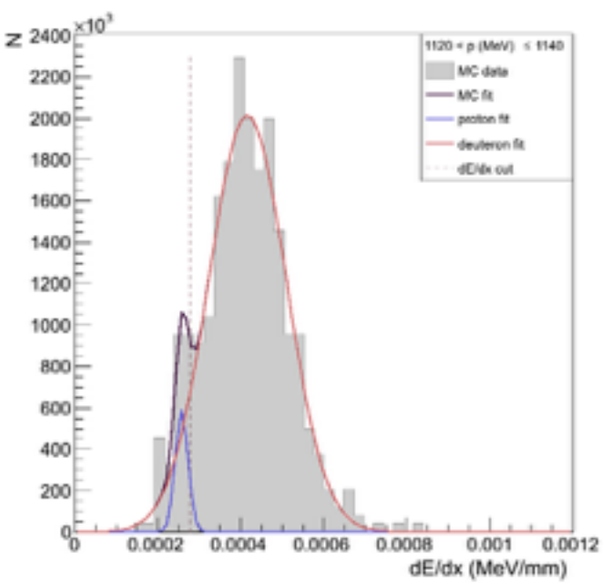

1020 < p (MeV) ≤ 1040
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

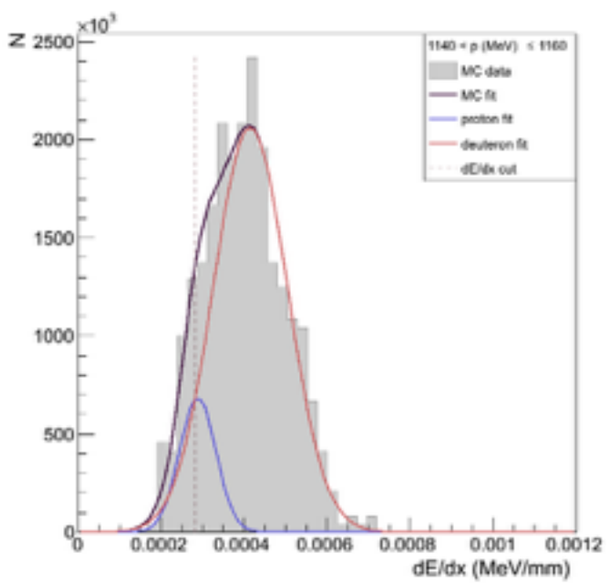

1040 < p (MeV) ≤ 1060
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

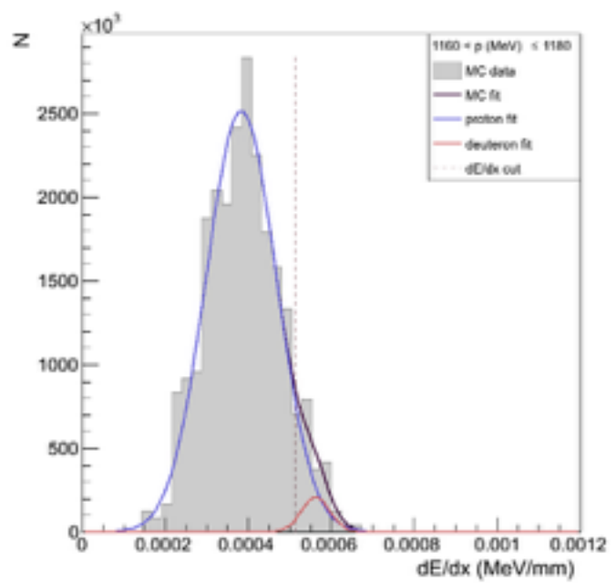

1060 < p (MeV) ≤ 1080
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

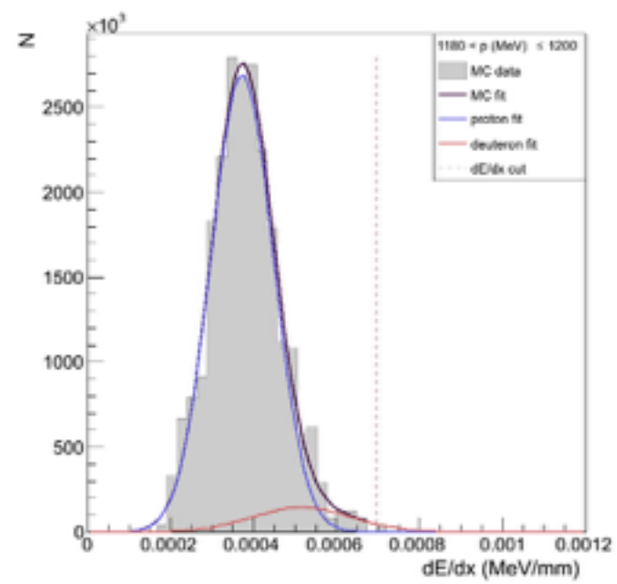

1080 < p (MeV) ≤ 1100
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1100 < p (MeV) ≤ 1120
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1120 < p (MeV) ≤ 1140
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

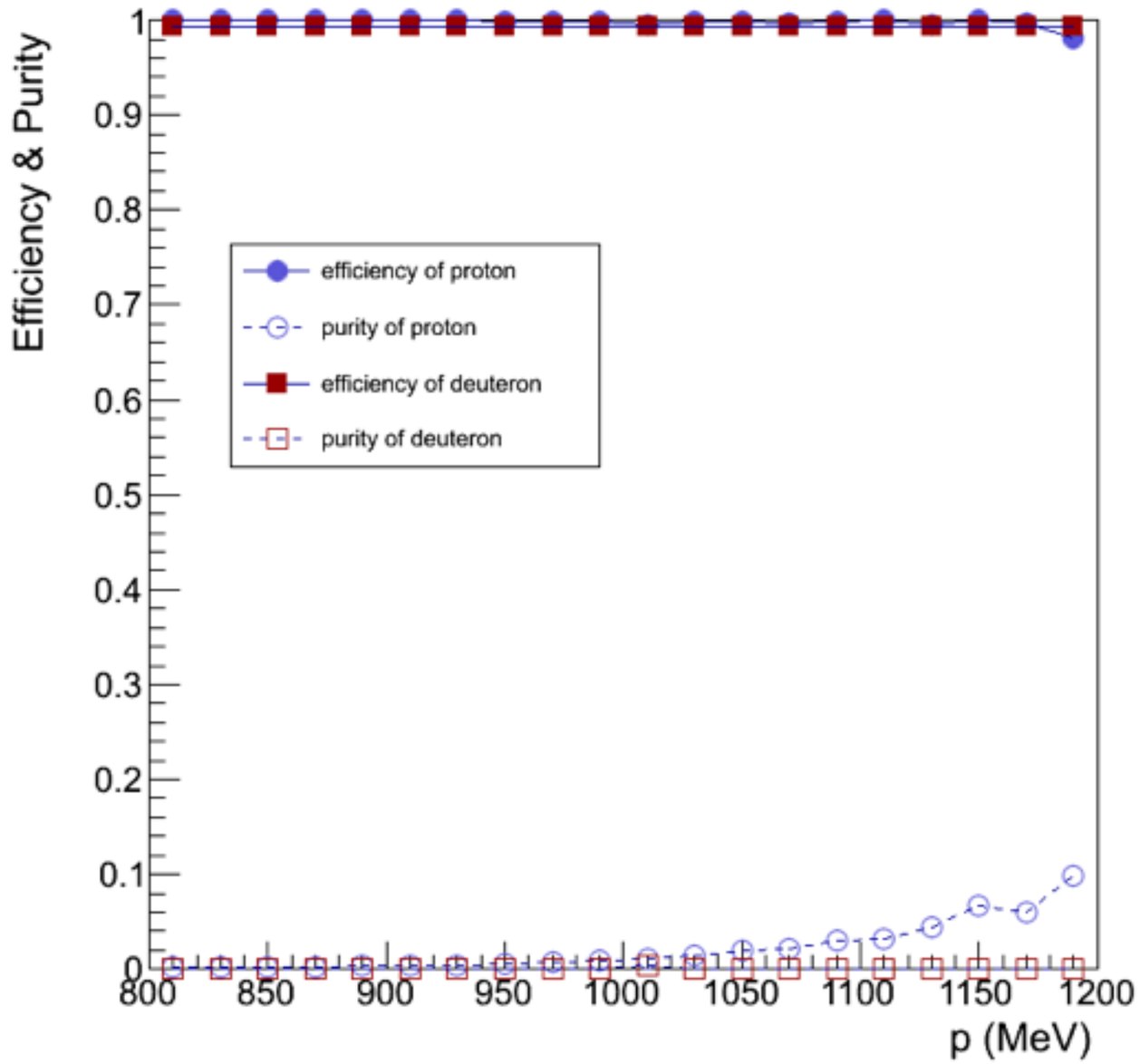

1140 < p (MeV) ≤ 1160
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1160 < p (MeV) ≤ 1180
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1180 < p (MeV) ≤ 1200
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

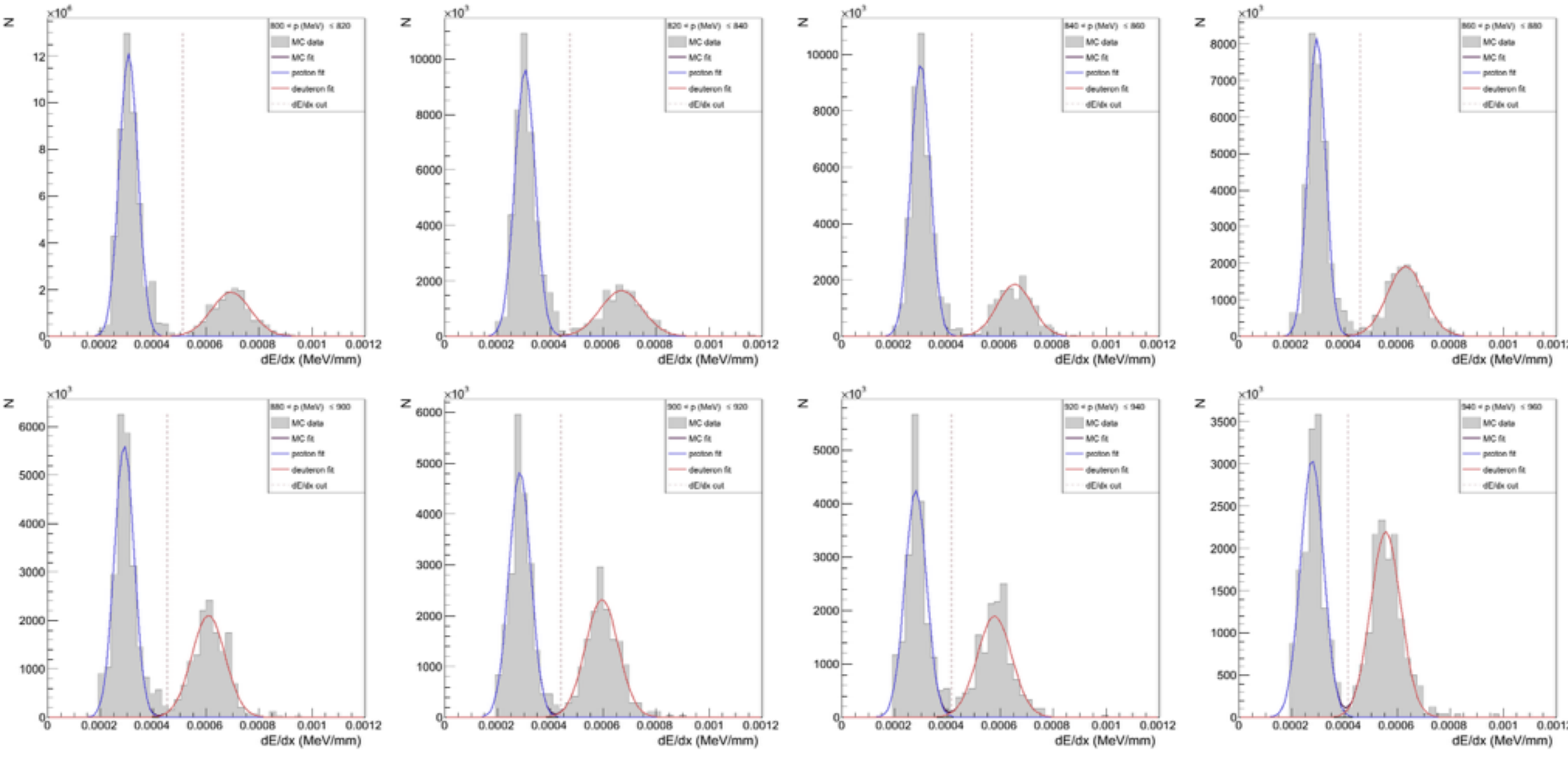
Efficiency and Purity

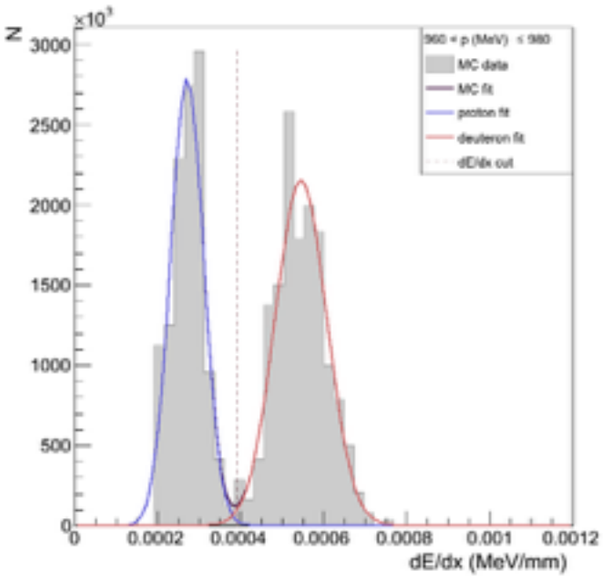
dE/dx resolution : 5 % | p resolution : 5 % | dE/dx cut : $mean_{deuteron}$ - 2.5×σ

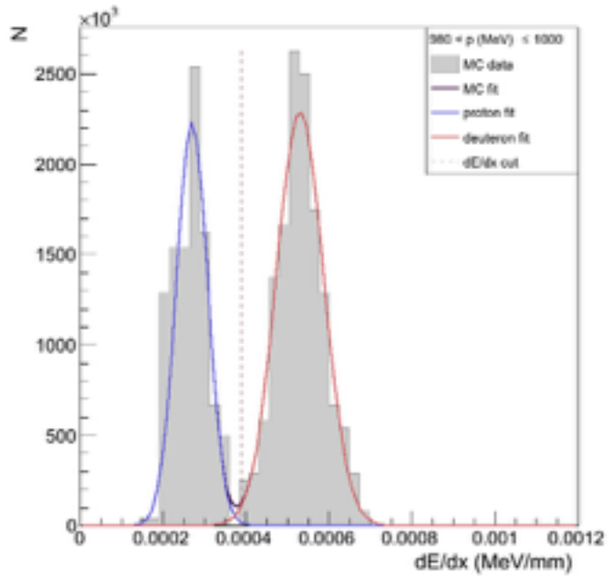


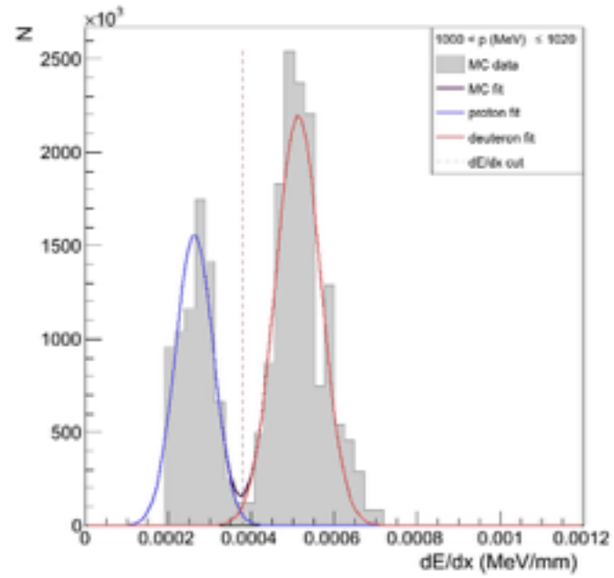
dE/dx Distribution

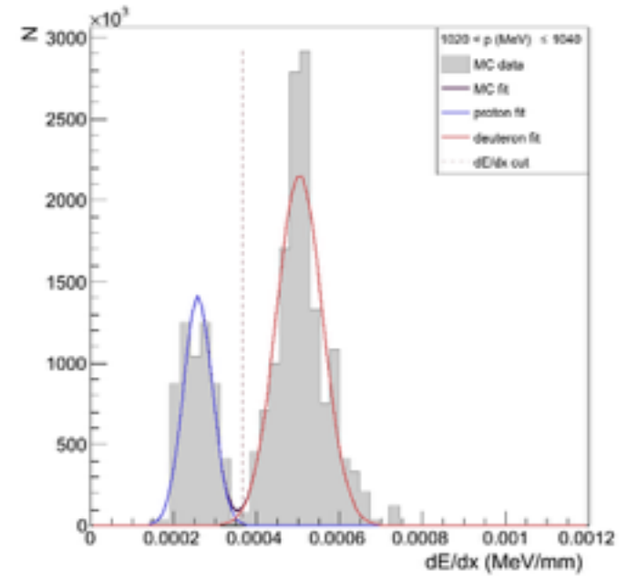
dE/dx resolution : 5 % | p resolution : 5 % | dE/dx cut : $mean_{deuteron}$ - 2.5×σ

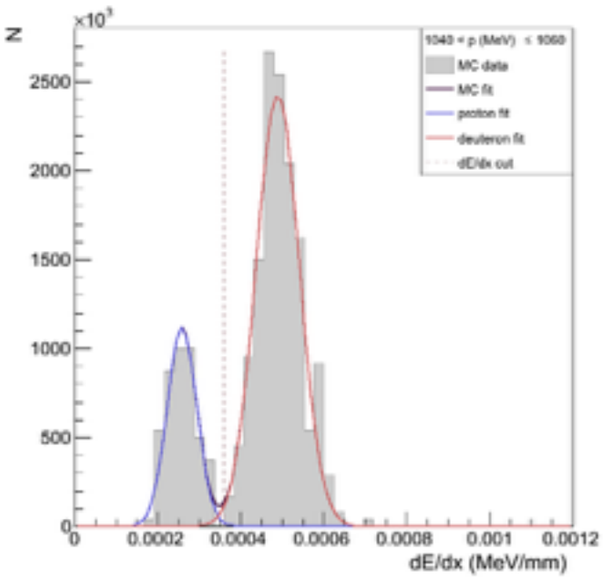


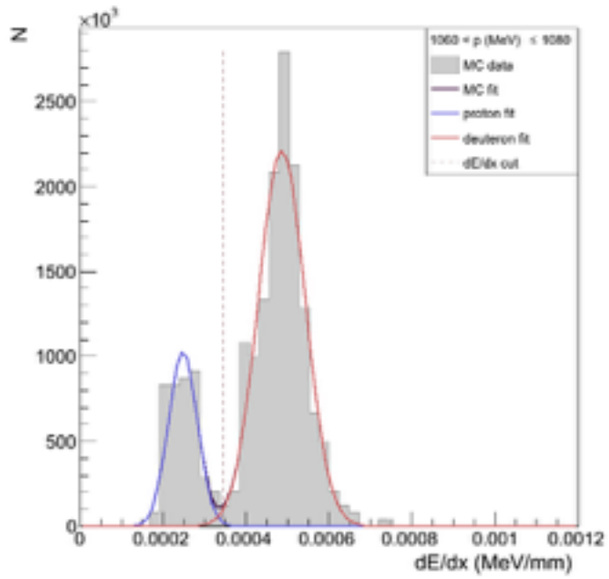

960 < p (MeV) ≤ 980
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

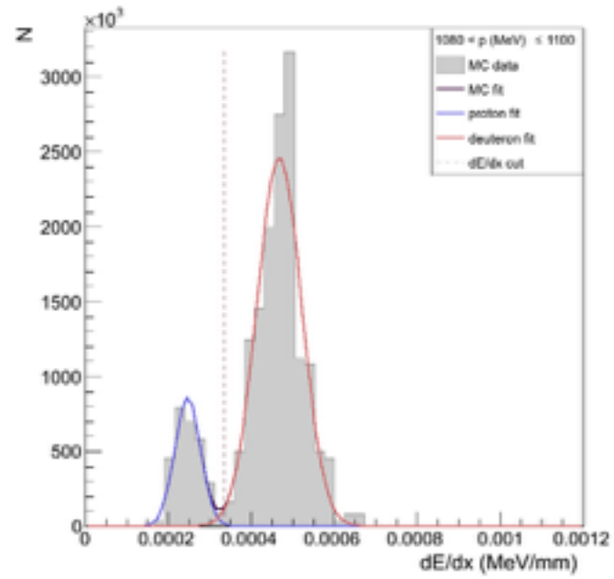

980 < p (MeV) ≤ 1000
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

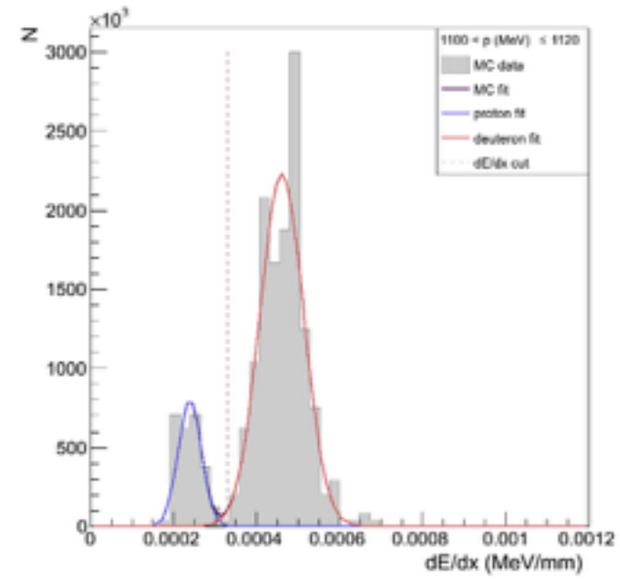

1000 < p (MeV) ≤ 1020
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

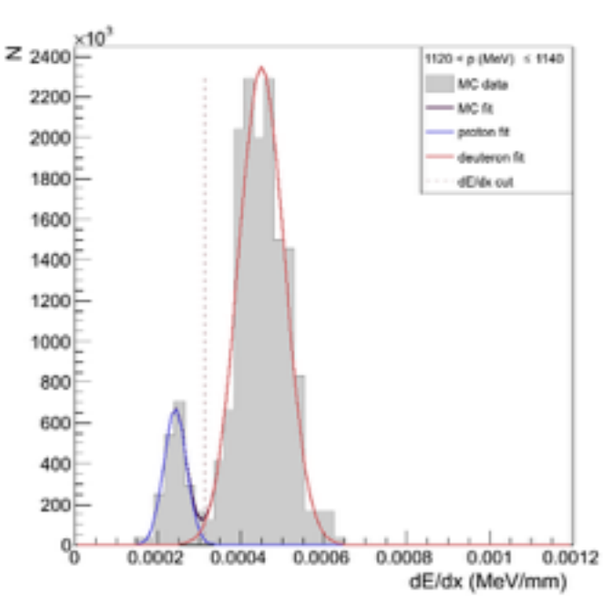

1020 < p (MeV) ≤ 1040
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

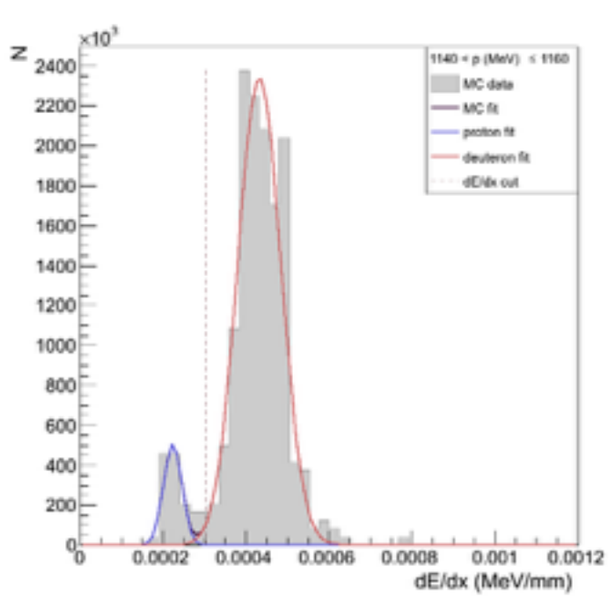

1040 < p (MeV) ≤ 1060
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

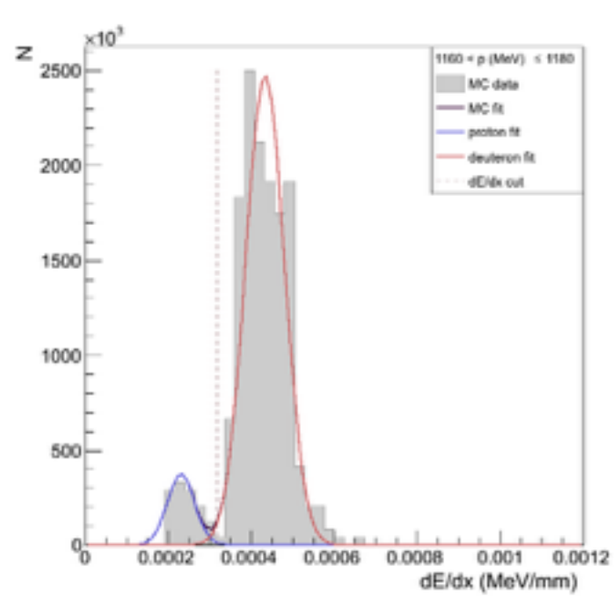

1060 < p (MeV) ≤ 1080
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

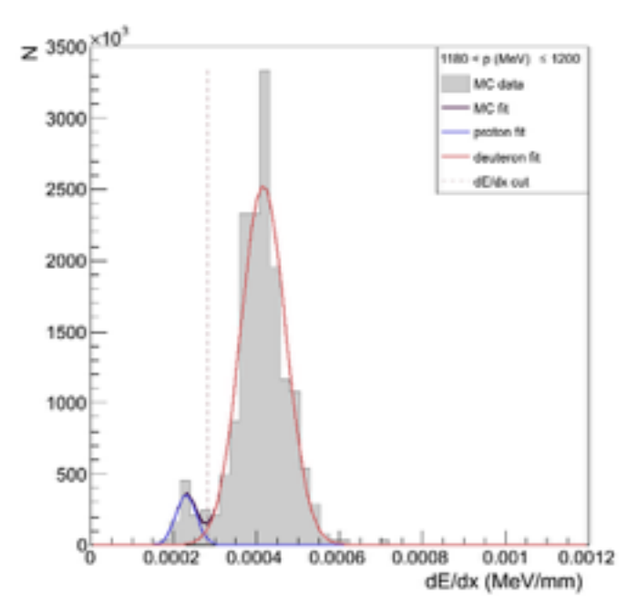

1080 < p (MeV) ≤ 1100
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1100 < p (MeV) ≤ 1120
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1120 < p (MeV) ≤ 1140
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1140 < p (MeV) ≤ 1160
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

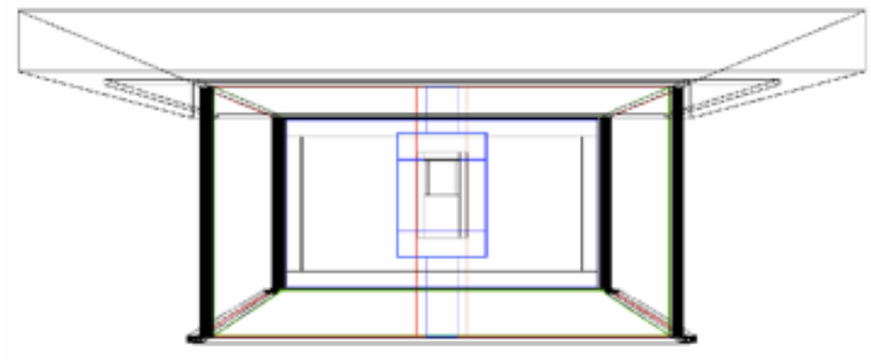

1160 < p (MeV) ≤ 1180
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

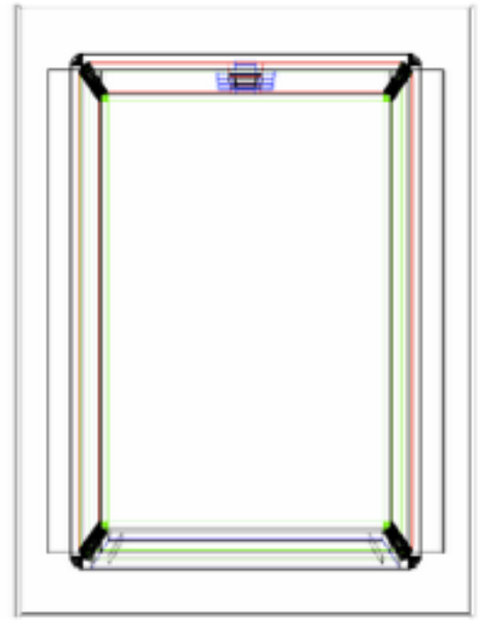

1180 < p (MeV) ≤ 1200
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

SPiRIT Software

Geometry

Mike





Digitization

Frobi (Me?)

Reconstruction

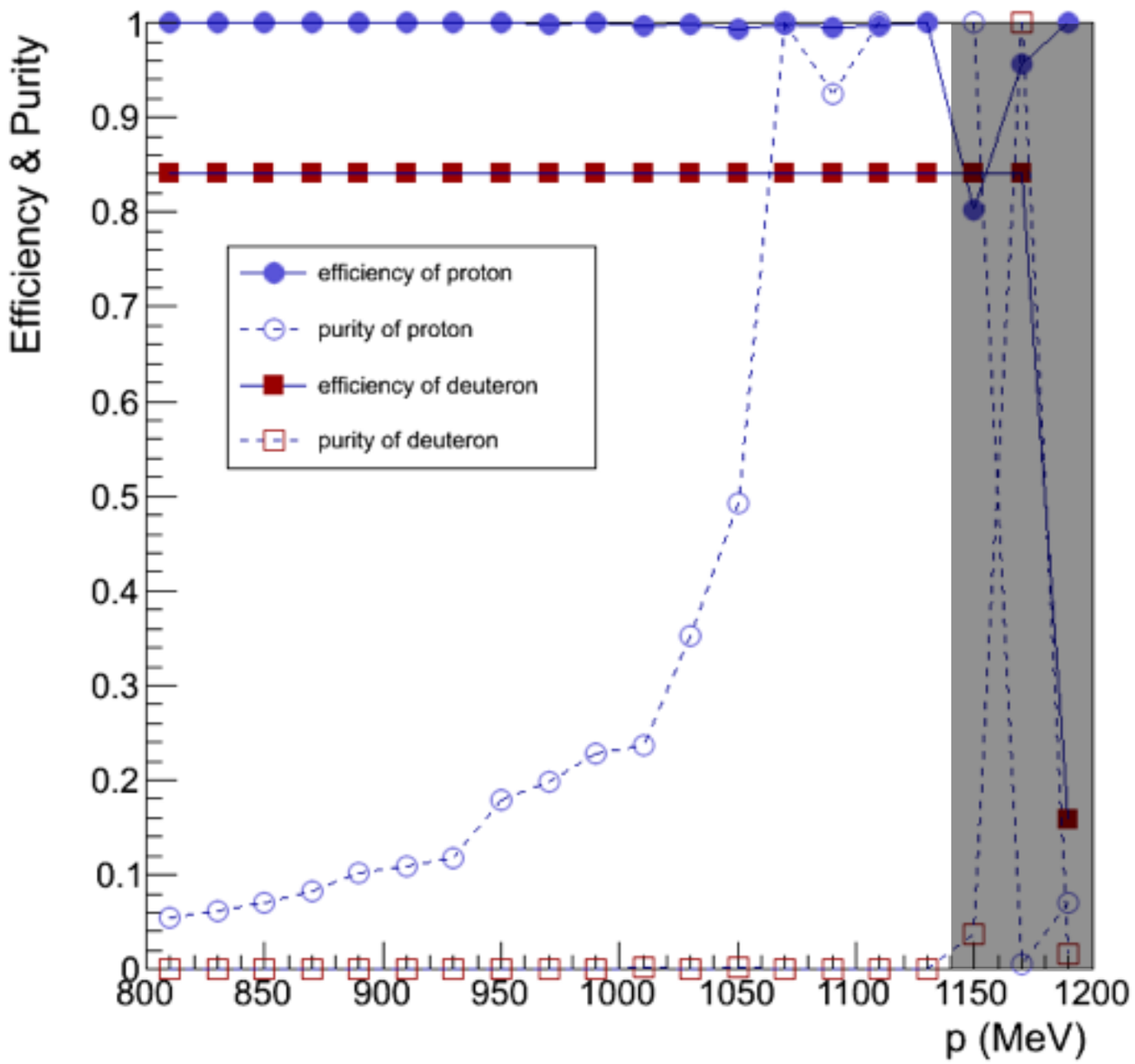
Genie

"Leave comments on code
and share with other members"

BACKUP

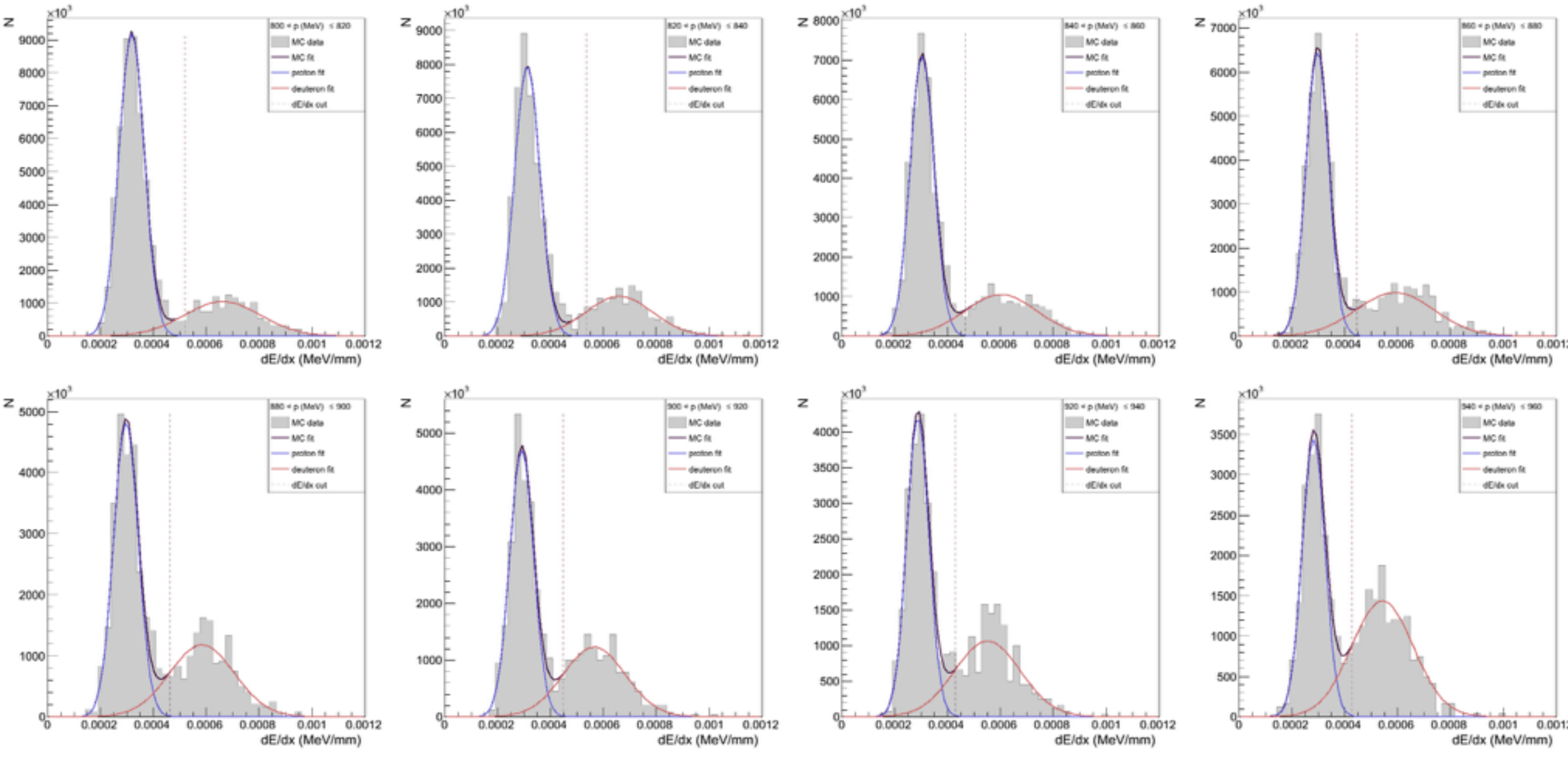
Efficiency and Purity

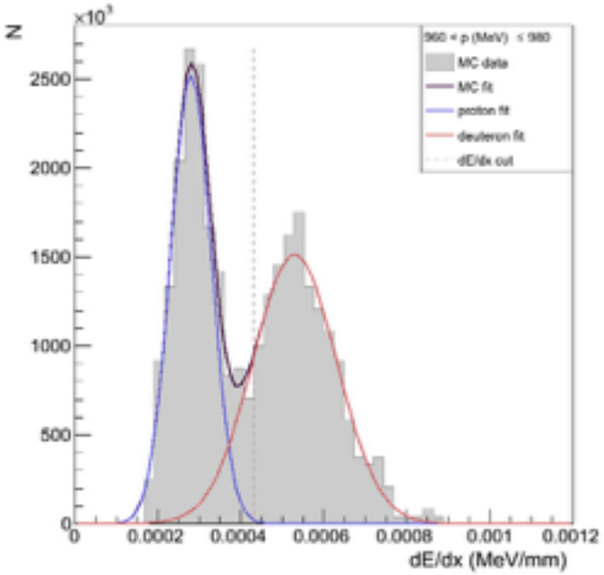
dE/dx resolution : 10 % | p resolution : 10 % | dE/dx cut : $mean_{deuteron}$ - 1×σ

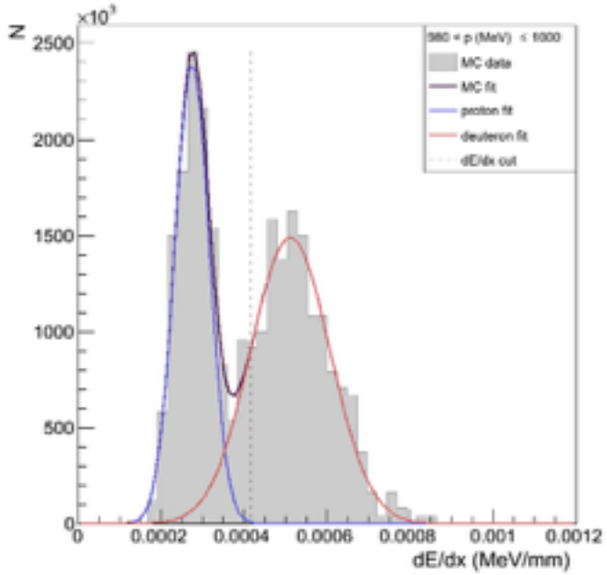


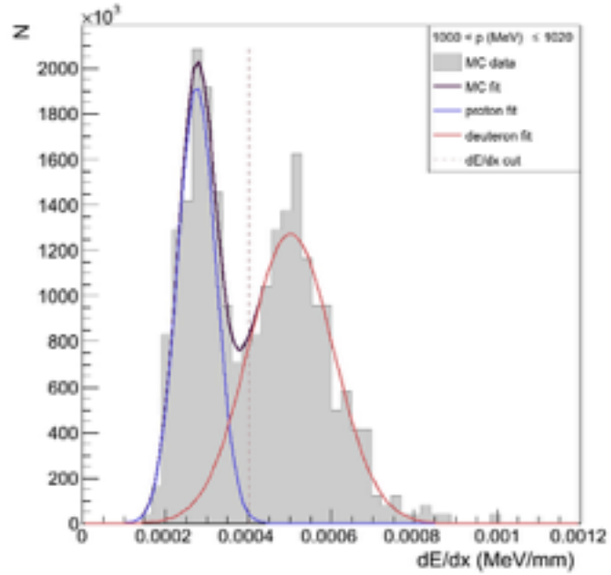
dE/dx Distribution

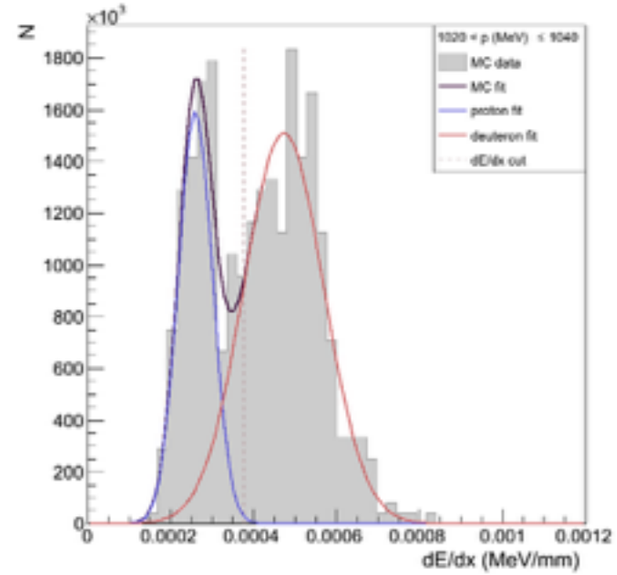
dE/dx resolution : 10 % | p resolution : 10 % | dE/dx cut : $mean_{deuteron}$ - 1×σ

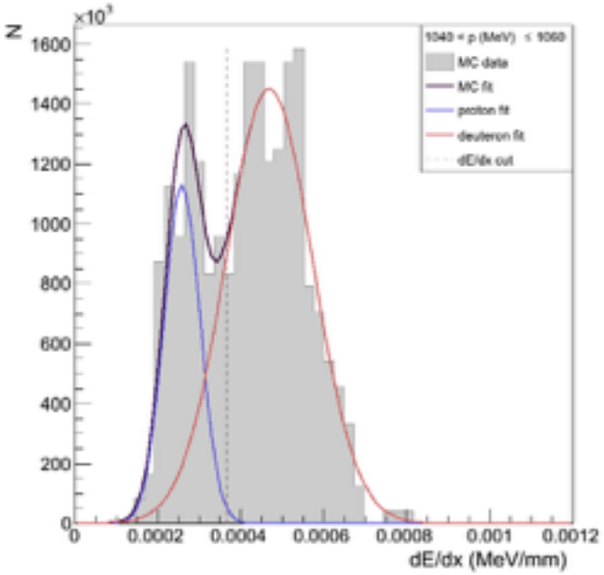


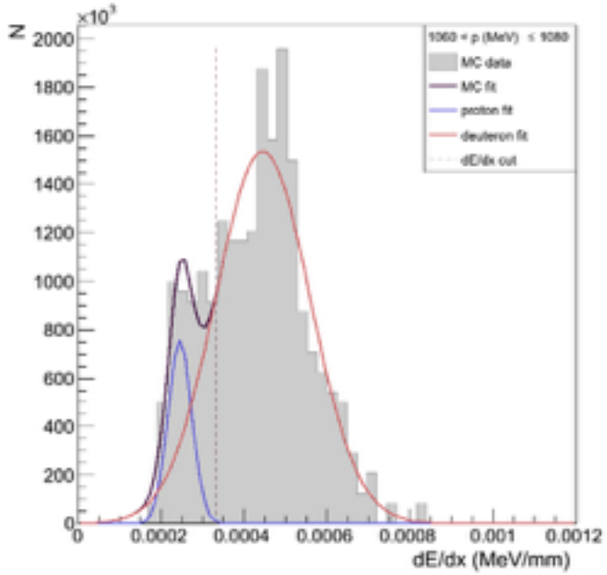

N
×10³
960 < p (MeV) ≤ 980
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

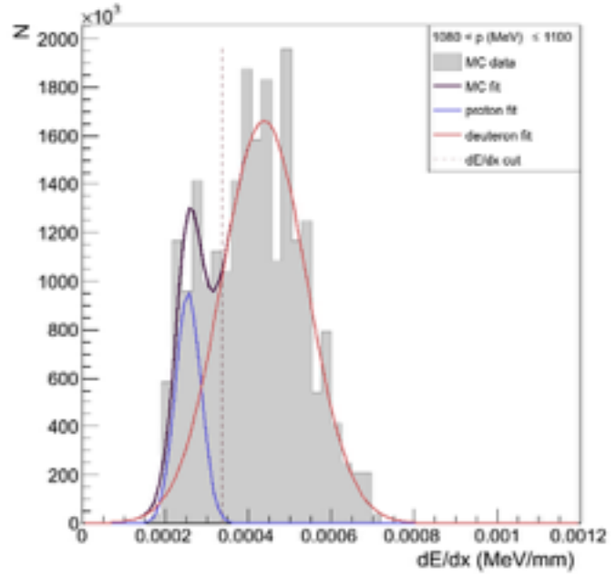

N
×10³
980 < p (MeV) ≤ 1000
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

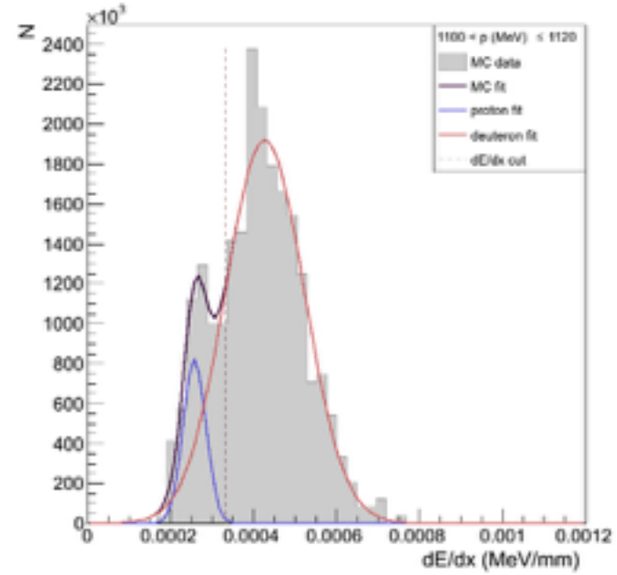

N
×10³
1000 < p (MeV) ≤ 1020
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

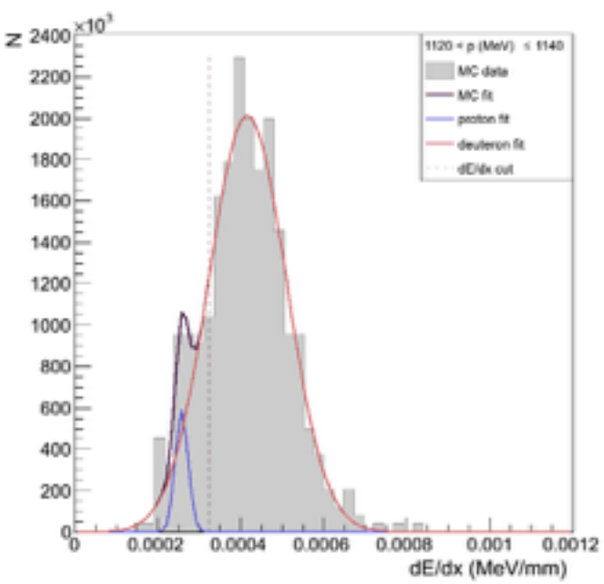

N
×10³
1020 < p (MeV) ≤ 1040
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

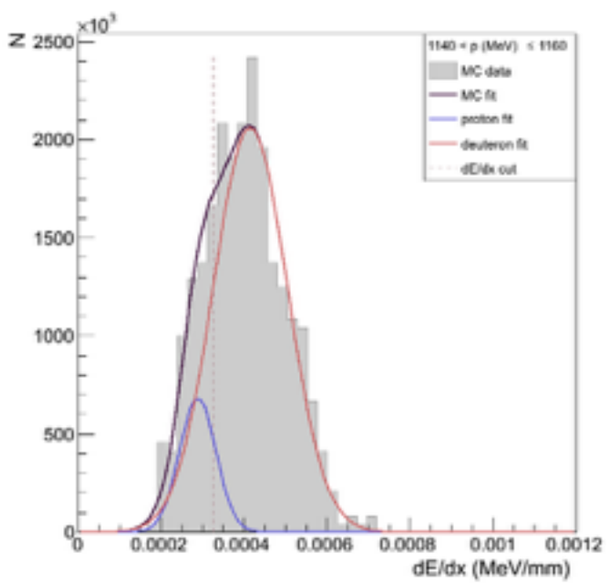

N
×10³
1040 < p (MeV) ≤ 1060
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

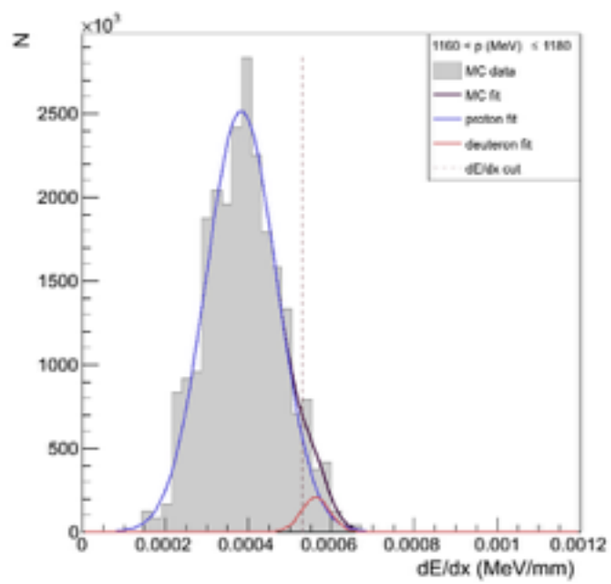

N
×10³
1060 < p (MeV) ≤ 1080
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

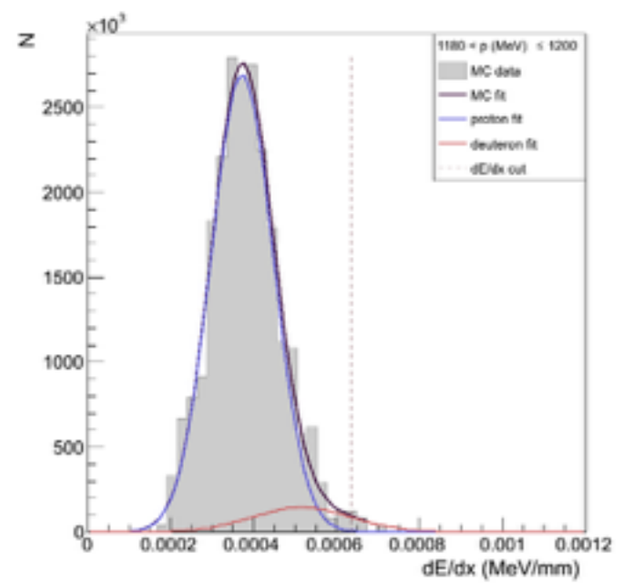

N
×10³
1080 < p (MeV) ≤ 1100
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)


N
×10³
1100 < p (MeV) ≤ 1120
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)


N
×10³
1120 < p (MeV) ≤ 1140
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

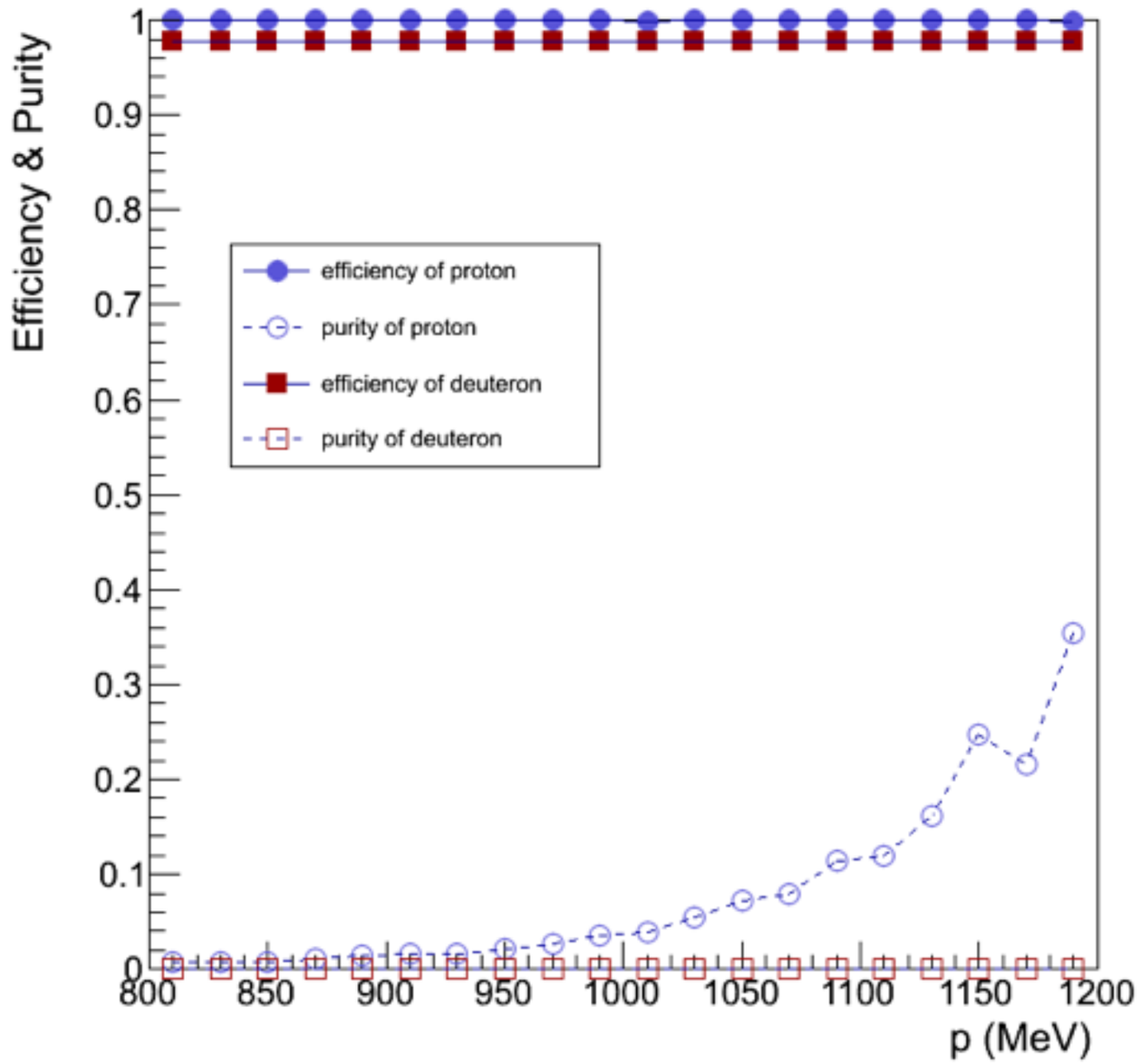

N
×10³
1140 < p (MeV) ≤ 1160
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)


N
×10³
1160 < p (MeV) ≤ 1180
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)


N
×10³
1180 < p (MeV) ≤ 1200
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
dE/dx (MeV/mm)

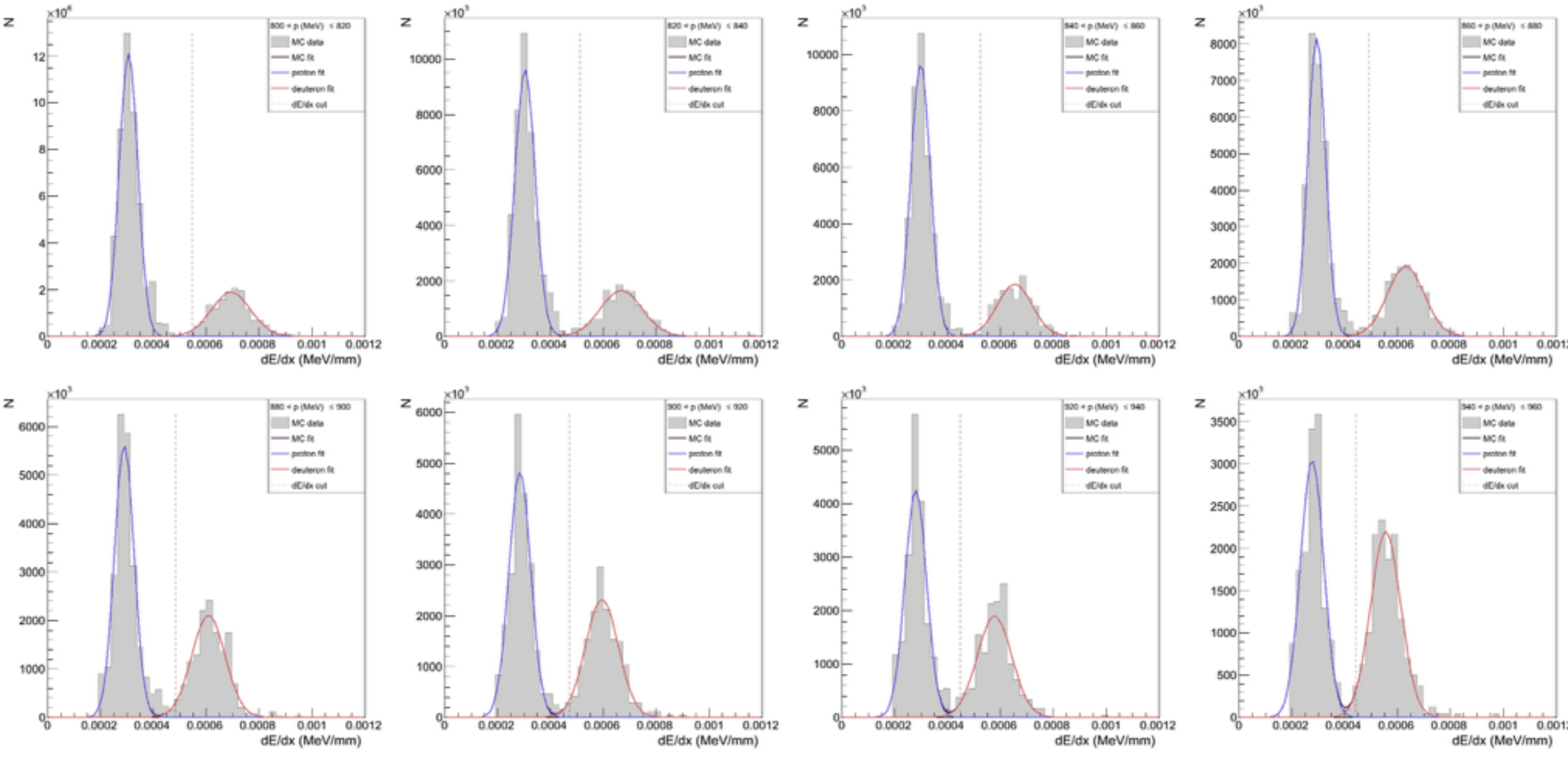
Efficiency and Purity

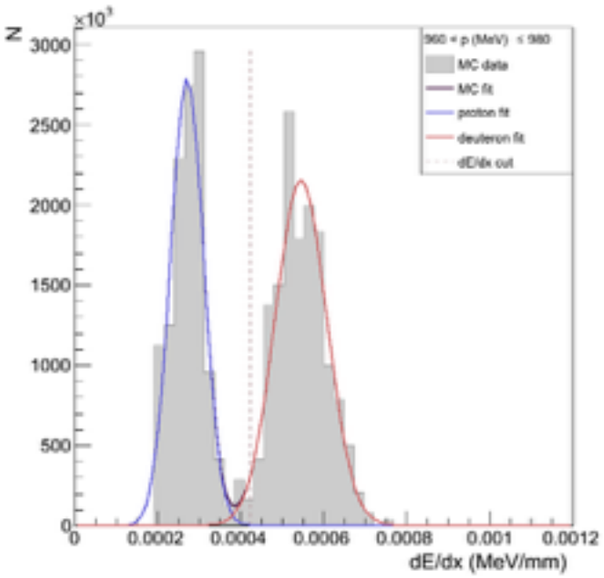
dE/dx resolution : 5 % | p resolution : 5 % | dE/dx cut : $mean_{deuteron}$ - 2×σ

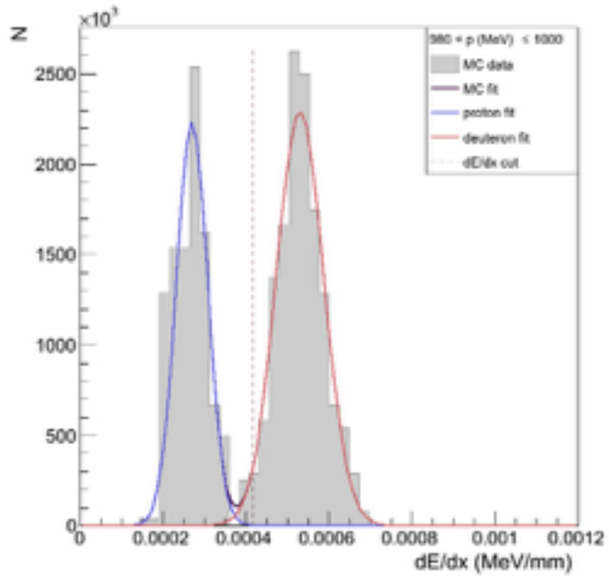


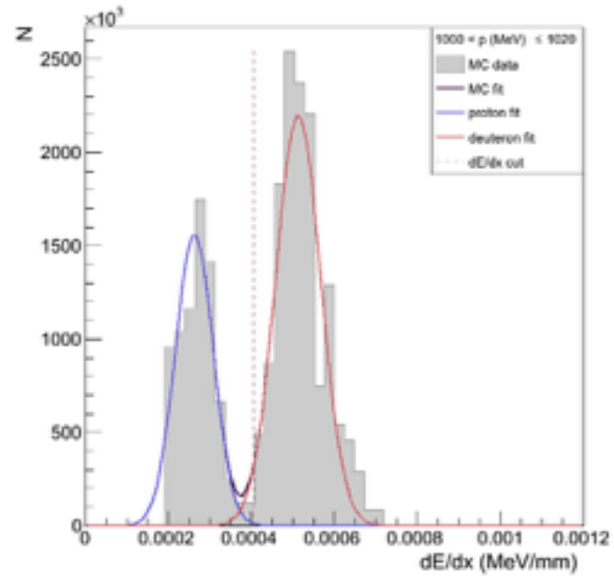
dE/dx Distribution

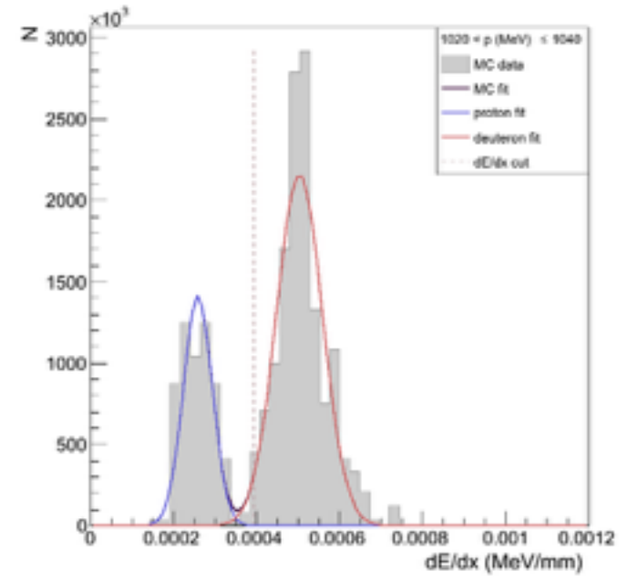
dE/dx resolution : 5 % | p resolution : 5 % | dE/dx cut : $mean_{deuteron}$ - 2×σ

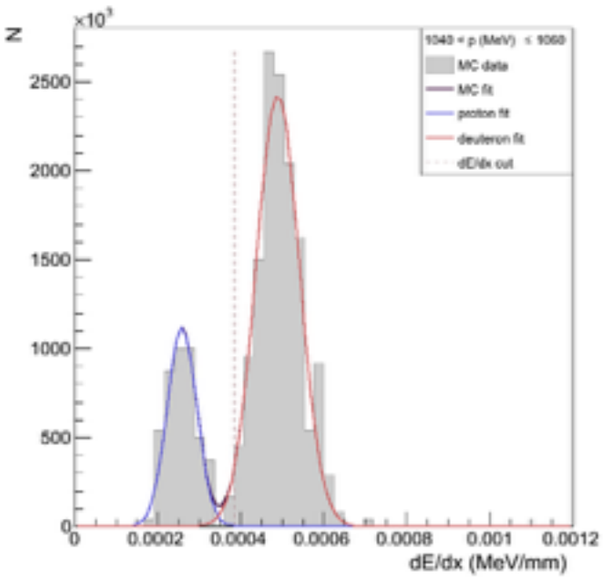


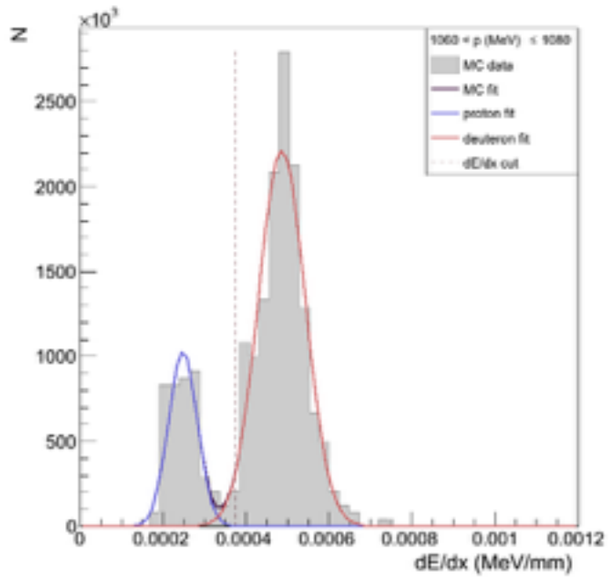

960 < p (MeV) ≤ 980
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

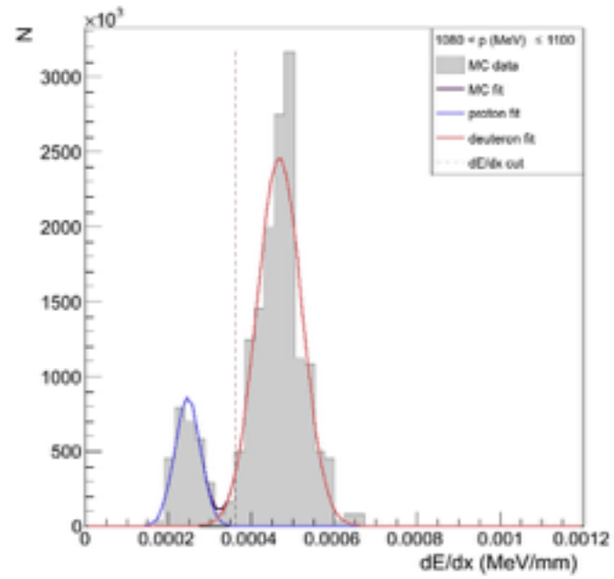

980 < p (MeV) ≤ 1000
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

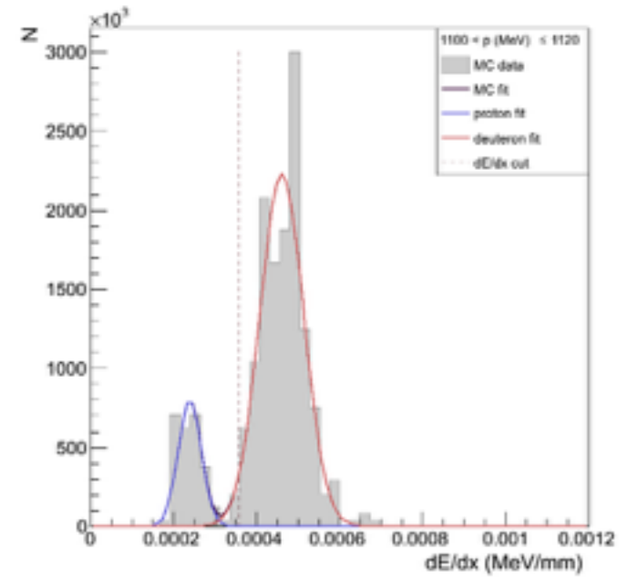

1000 < p (MeV) ≤ 1020
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

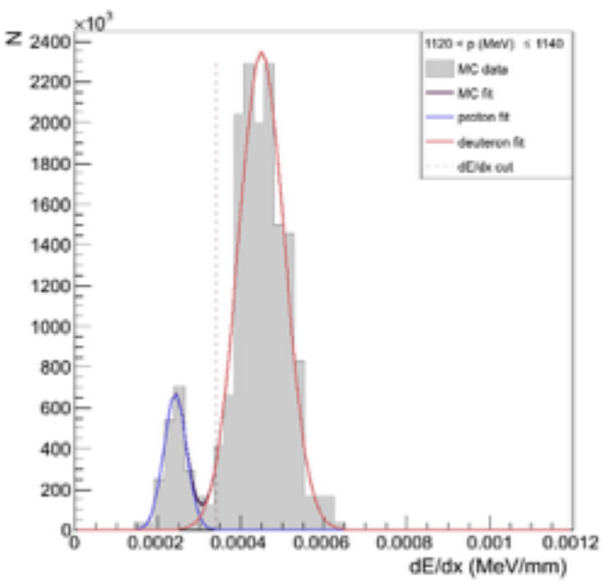

1020 < p (MeV) ≤ 1040
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

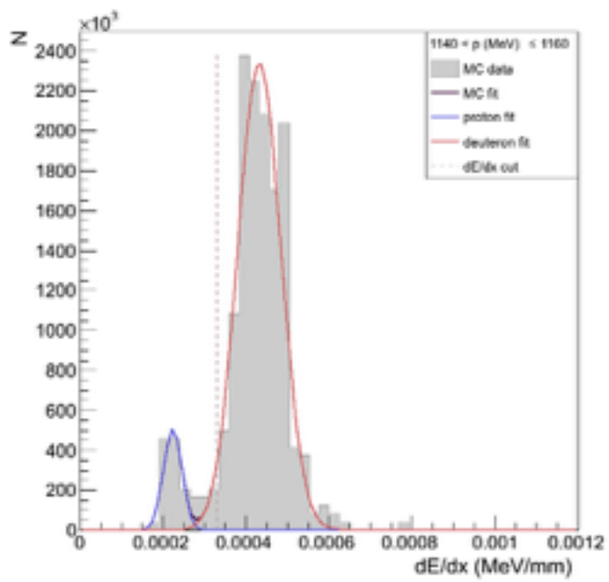

1040 < p (MeV) ≤ 1060
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

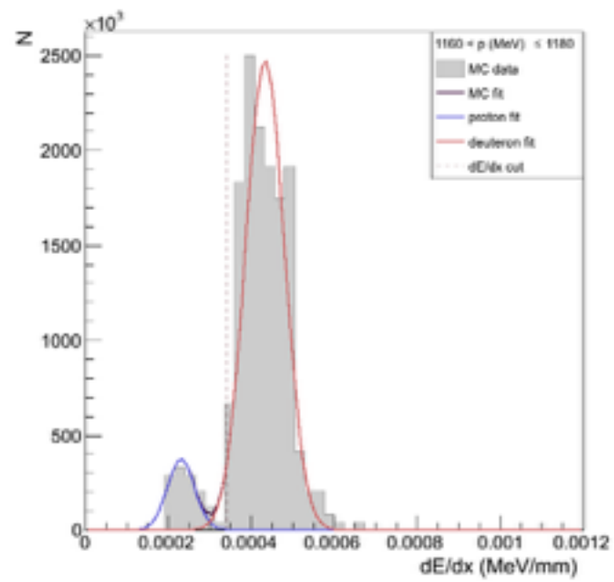

1060 < p (MeV) ≤ 1080
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)

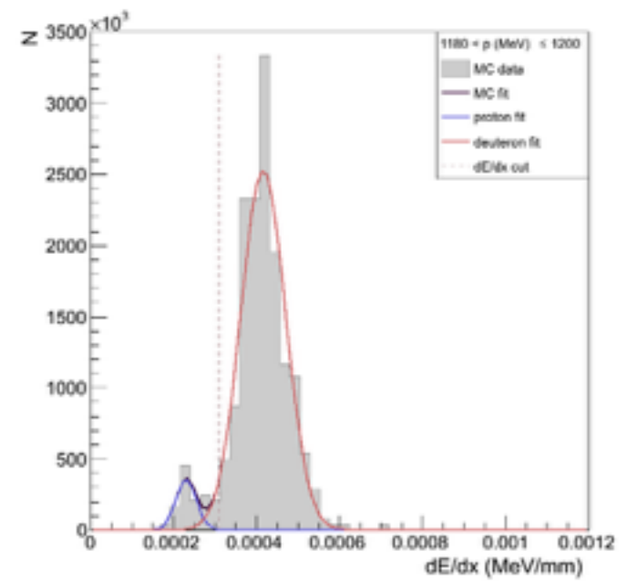

1080 < p (MeV) ≤ 1100
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1100 < p (MeV) ≤ 1120
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1120 < p (MeV) ≤ 1140
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1140 < p (MeV) ≤ 1160
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1160 < p (MeV) ≤ 1180
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)


1180 < p (MeV) ≤ 1200
MC data
MC fit
proton fit
deuteron fit
dE/dx cut
N
×10³
dE/dx (MeV/mm)