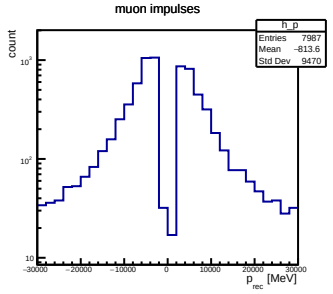
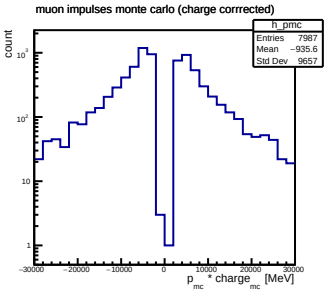
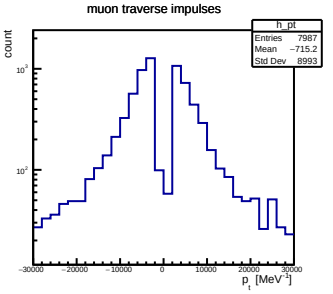
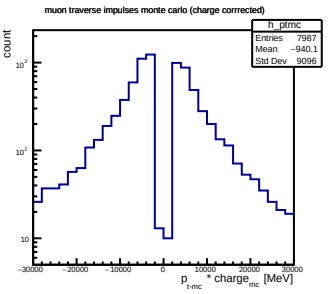
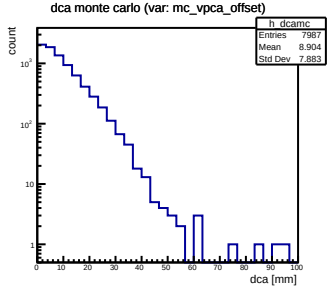
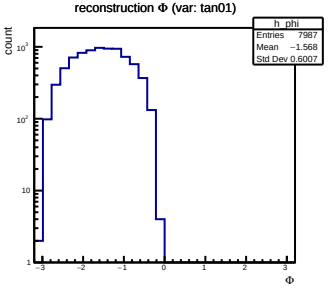

muon impulses
h_p
Entries 7987
Mean −813.6
Std Dev 9470
count
p_rec [MeV]

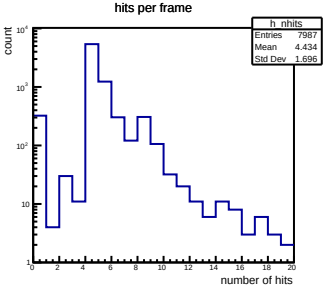

muon impulses monte carlo (charge corrrected)
h_pmc
Entries 7987
Mean −935.6
Std Dev 9657
count
p_mc * charge_mc [MeV]

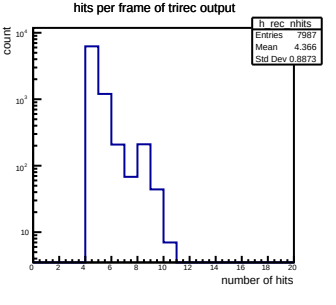

muon traverse impulses
h_pt
Entries 7987
Mean −715.2
Std Dev 8993
count
p_t [MeV^-1]

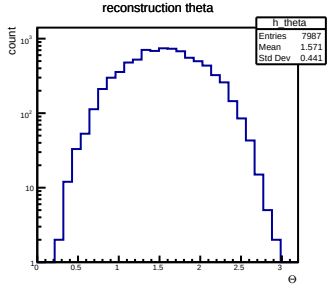

muon traverse impulses monte carlo (charge corrrected)
h_ptmc
Entries 7987
Mean −940.1
Std Dev 9096
count
p_t-mc * charge_mc [MeV]

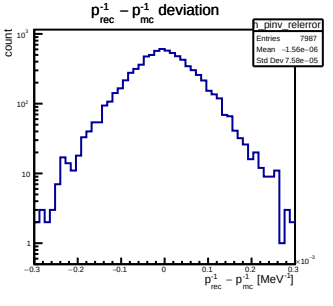

dca monte carlo (var: mc_vpca_offset)
h_dcamc
Entries 7987
Mean 8.904
Std Dev 7.883
count
dca [mm]

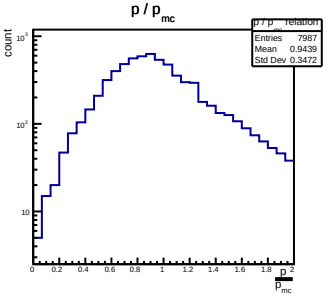

reconstruction Φ (var: tan01)
h_phi
Entries 7987
Mean −1.568
Std Dev 0.6007
count
Φ

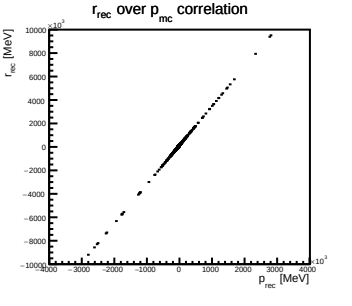

hits per frame
h_nhits
Entries 7987
Mean 4.434
Std Dev 1.696
count
number of hits

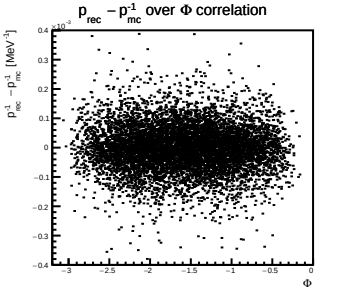

hits per frame of trirec output
h_rec_nhits
Entries 7987
Mean 4.366
Std Dev 0.8873
count
number of hits

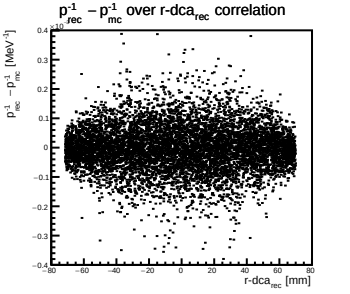

reconstruction theta
h_theta
Entries 7987
Mean 1.571
Std Dev 0.441
count
Θ

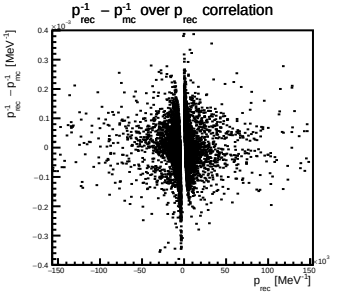

p^-1_rec − p^-1_mc deviation
h_pinv_relerror
Entries 7987
Mean −1.56e−06
Std Dev 7.58e−05
count
p^-1_rec − p^-1_mc [MeV^-1]

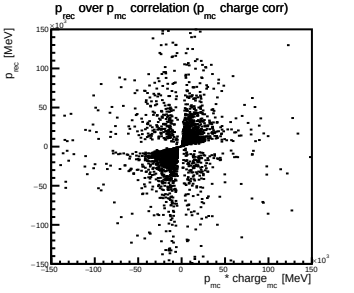

p / p_mc
p / p_mc relation
Entries 7987
Mean 0.9439
Std Dev 0.3472
count
p / p_mc

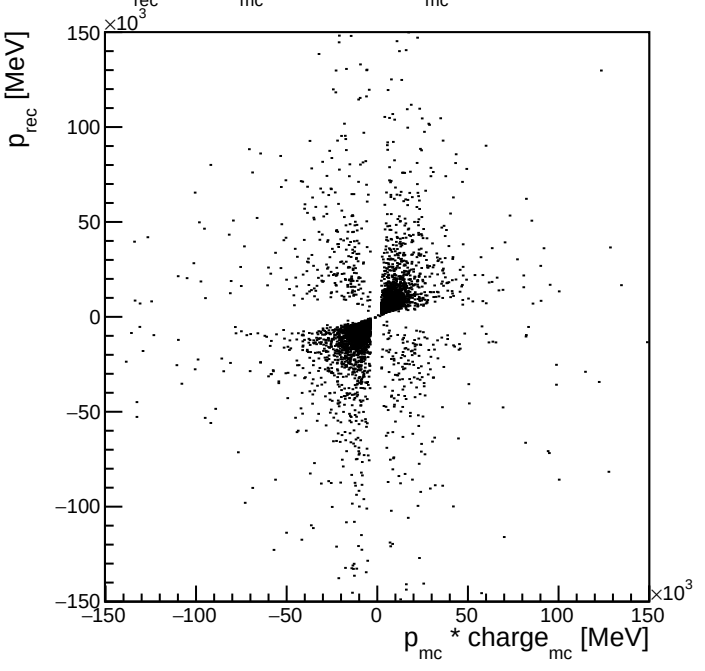

r_rec over p_mc correlation
r_rec [MeV]
p_rec [MeV]

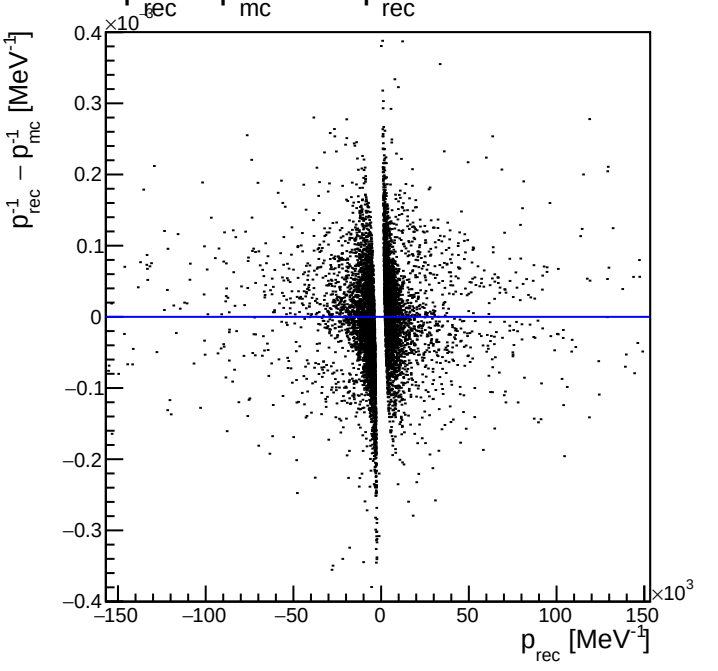

p_rec − p^-1_mc over Φ correlation
p^-1_rec − p^-1_mc [MeV^-1]
Φ

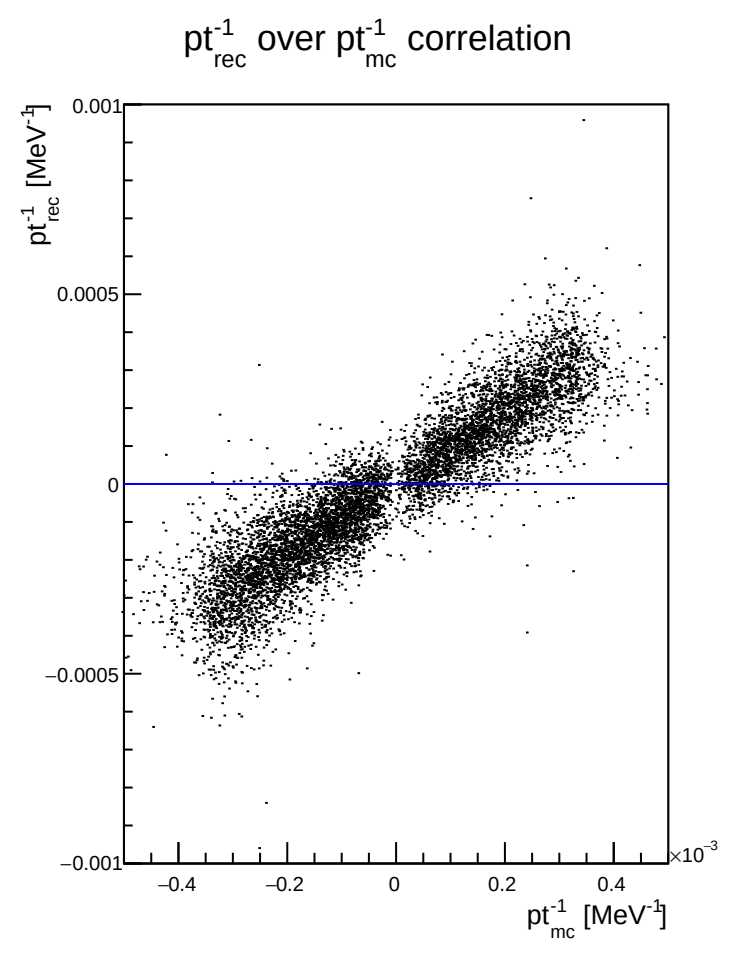

p^-1_rec − p^-1_mc over r-dca_rec correlation
p^-1_rec − p^-1_mc [MeV^-1]
r-dca_rec [mm]

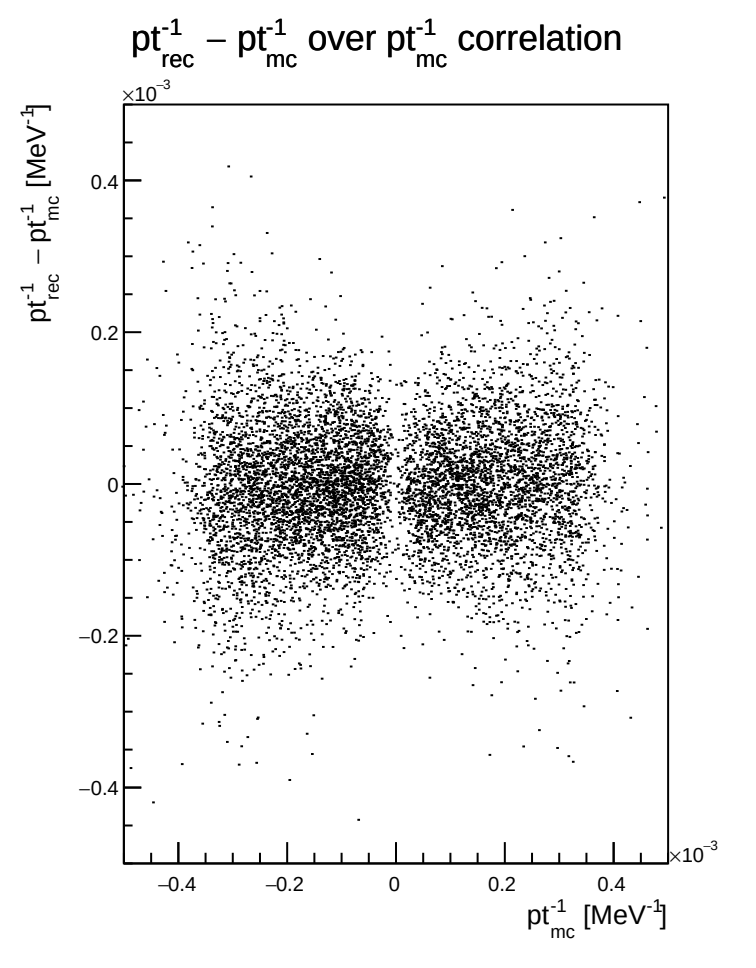

p^-1_rec − p^-1_mc over p_rec correlation
p^-1_rec − p^-1_mc [MeV^-1]
p_rec [MeV^-1]

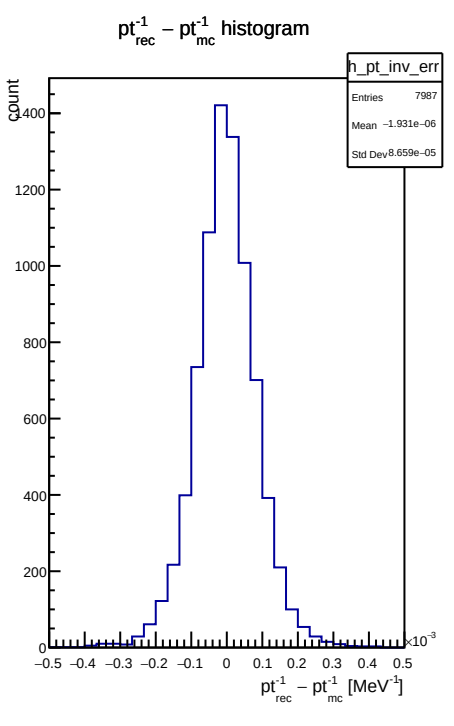

p_rec over p_mc correlation (p_mc charge corr)
p_rec [MeV]
p_mc * charge_mc [MeV]

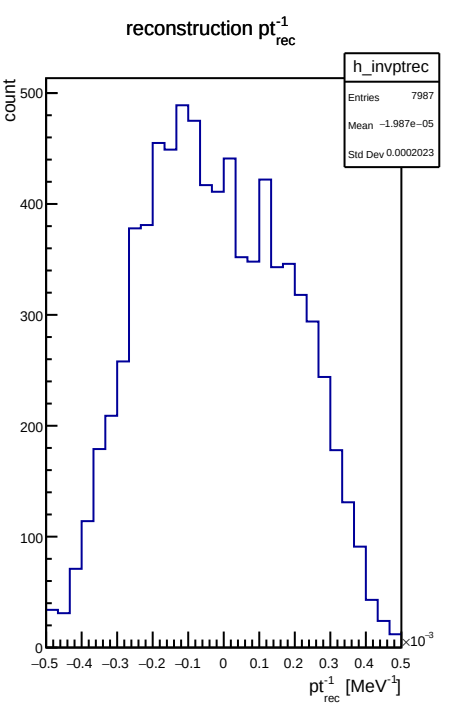

p_rec over p_mc correlation (p_mc charge corr)
p_rec [MeV]
×10^3
150
100
50
0
−50
−100
−150
−150
−100
−50
0
50
100
150
×10^3
p_mc * charge_mc [MeV]

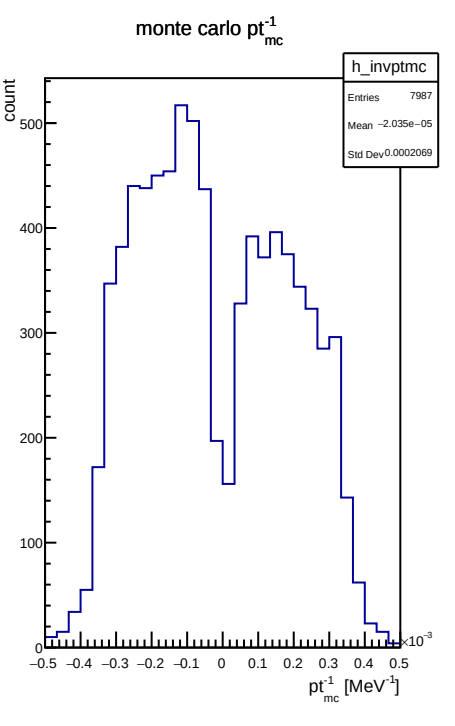

p^-1_rec − p^-1_mc over p_rec correlation
p^-1_rec − p^-1_mc [MeV^-1]
×10^-3
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−150
−100
−50
0
50
100
150
×10^3
p_rec [MeV^-1]

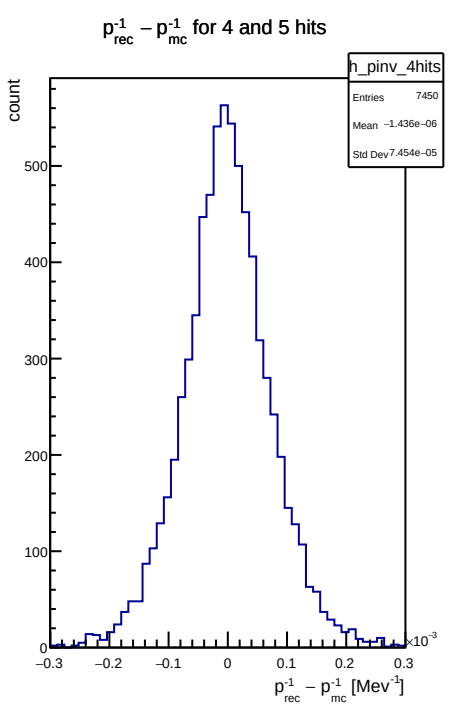

pt^{-1}_{rec} over pt^{-1}_{mc} correlation
pt^{-1}_{rec} [MeV^{-1}]
0.001
0.0005
0
−0.0005
−0.001
−0.4
−0.2
0
0.2
0.4
×10^{-3}
pt^{-1}_{mc} [MeV^{-1}]

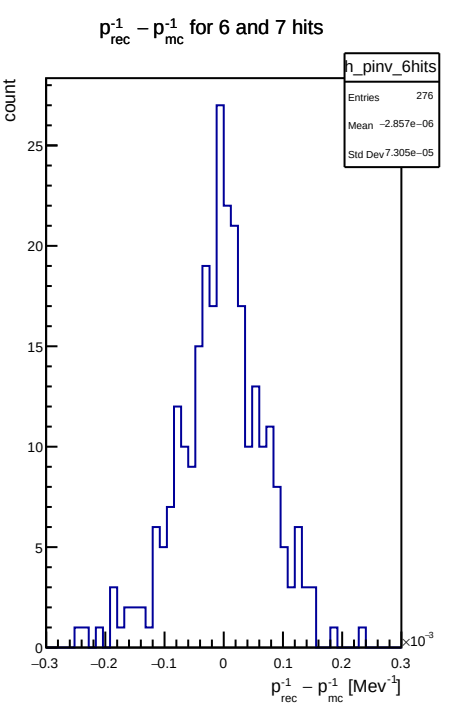

pt^{-1}_{rec} – pt^{-1}_{mc} over pt^{-1}_{mc} correlation
×10^{-3}
$pt^{-1}_{rec} - pt^{-1}_{mc}$ [MeV^{-1}]
0.4
0.2
0
−0.2
−0.4
−0.4
−0.2
0
0.2
0.4
×10^{-3}
pt^{-1}_{mc} [MeV^{-1}]

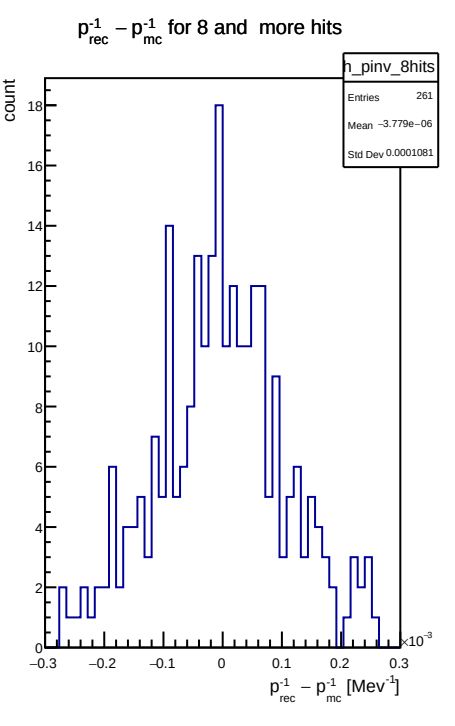

$pt^{-1}_{rec} - pt^{-1}_{mc}$ histogram
h_pt_inv_err
Entries 7987
Mean −1.931e−06
Std Dev 8.659e−05
count
$pt^{-1}_{rec} - pt^{-1}_{mc}$ [MeV^{-1}]
×10^{-3}

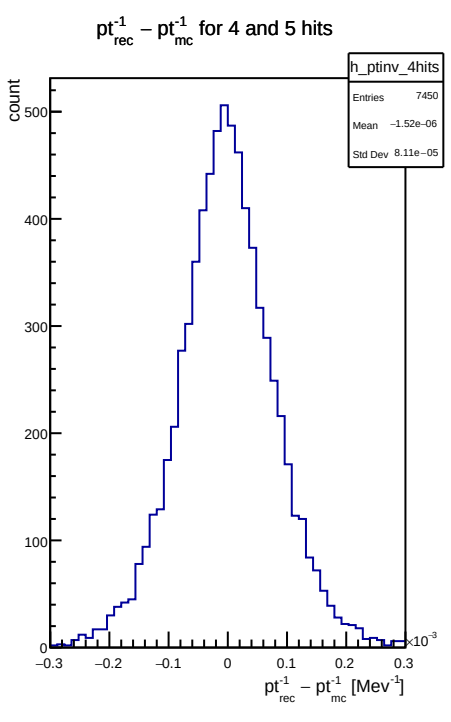

reconstruction pt^{-1}_{rec}
h_invptrec
Entries 7987
Mean −1.987e−05
Std Dev 0.0002023
count
pt^{-1}_{rec} [MeV^{-1}]
×10^{-3}

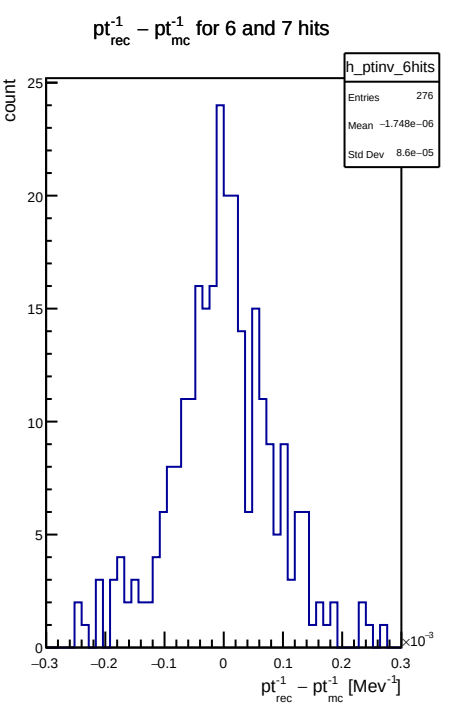

monte carlo pt^{-1}_{mc}
h_invptmc
Entries 7987
Mean −2.035e−05
Std Dev 0.0002069
count
pt^{-1}_{mc} [MeV^{-1}]
×10^{-3}

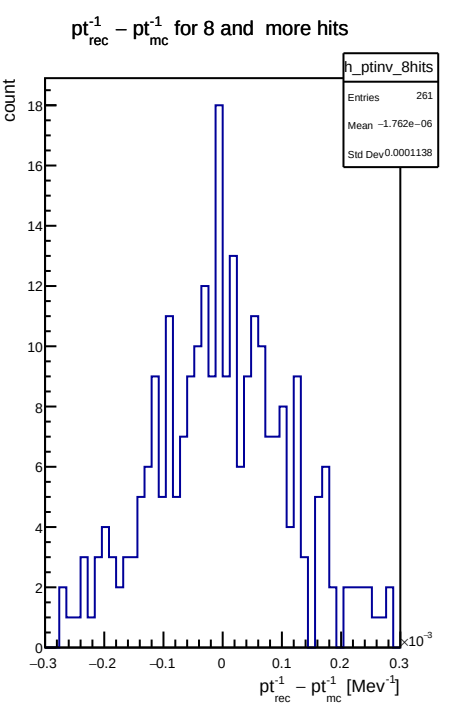

$p^{-1}_{rec} - p^{-1}_{mc}$ for 4 and 5 hits
h_pinv_4hits
Entries 7450
Mean −1.436e−06
Std Dev 7.454e−05
count
$p^{-1}_{rec} - p^{-1}_{mc}$ [Mev^{-1}]
×10^{-3}

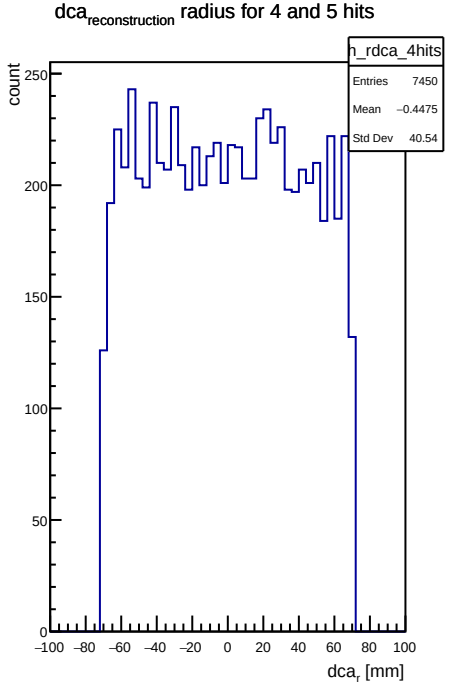

$p^{-1}_{rec} - p^{-1}_{mc}$ for 6 and 7 hits
h_pinv_6hits
Entries 276
Mean −2.857e−06
Std Dev 7.305e−05
count
$p^{-1}_{rec} - p^{-1}_{mc}$ [Mev^{-1}]
×10^{-3}

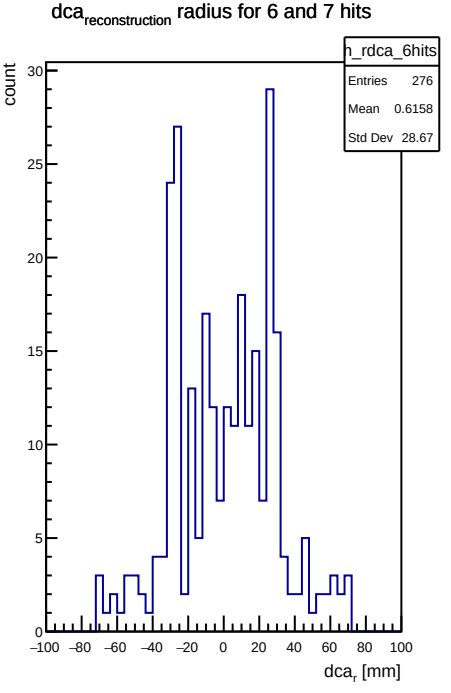

$p^{-1}_{rec} - p^{-1}_{mc}$ for 8 and more hits
h_pinv_8hits
Entries 261
Mean −3.779e−06
Std Dev 0.0001081
count
$p^{-1}_{rec} - p^{-1}_{mc}$ [Mev^{-1}]
×10^{-3}

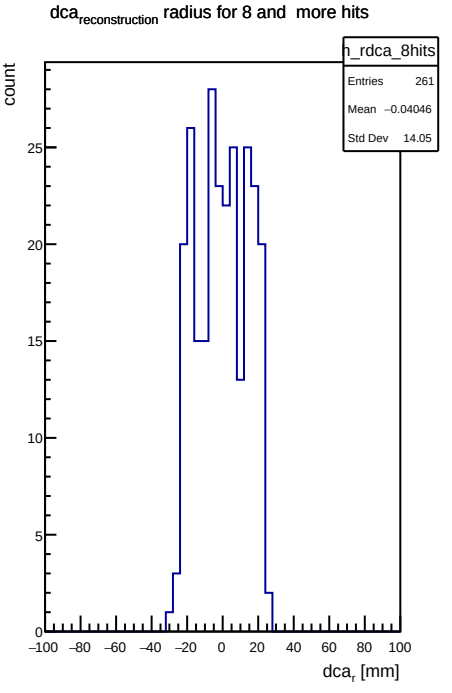

$pt^{-1}_{rec} - pt^{-1}_{mc}$ for 4 and 5 hits
h_ptinv_4hits
Entries 7450
Mean −1.52e−06
Std Dev 8.11e−05
count
$pt^{-1}_{rec} - pt^{-1}_{mc}$ [Mev^{-1}]
×10^{-3}

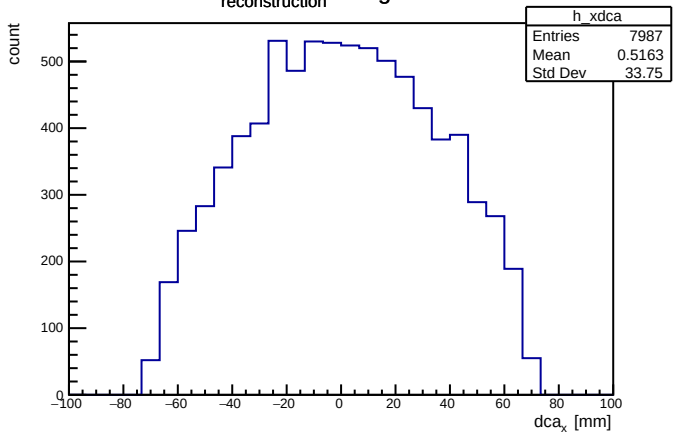

$pt^{-1}_{rec} - pt^{-1}_{mc}$ for 6 and 7 hits
h_ptinv_6hits
Entries 276
Mean −1.748e−06
Std Dev 8.6e−05
count
$pt^{-1}_{rec} - pt^{-1}_{mc}$ [Mev^{-1}]
×10^{-3}

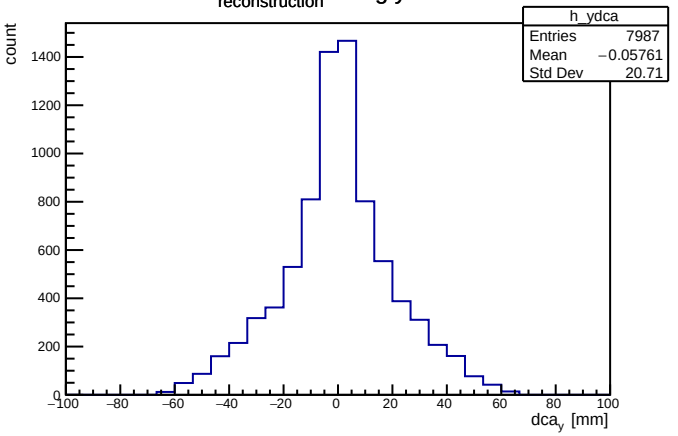

$pt^{-1}_{rec} - pt^{-1}_{mc}$ for 8 and more hits
h_ptinv_8hits
Entries 261
Mean −1.762e−06
Std Dev 0.0001138
count
$pt^{-1}_{rec} - pt^{-1}_{mc}$ [Mev^{-1}]
×10^{-3}

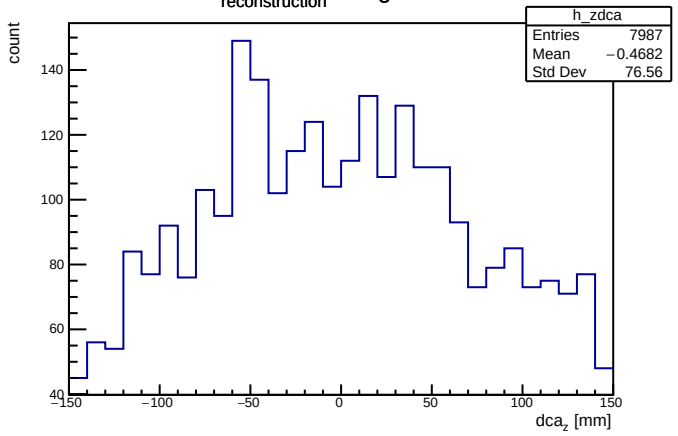

dca reconstruction radius for 4 and 5 hits
h_rdca_4hits
Entries 7450
Mean −0.4475
Std Dev 40.54
count
dca r [mm]

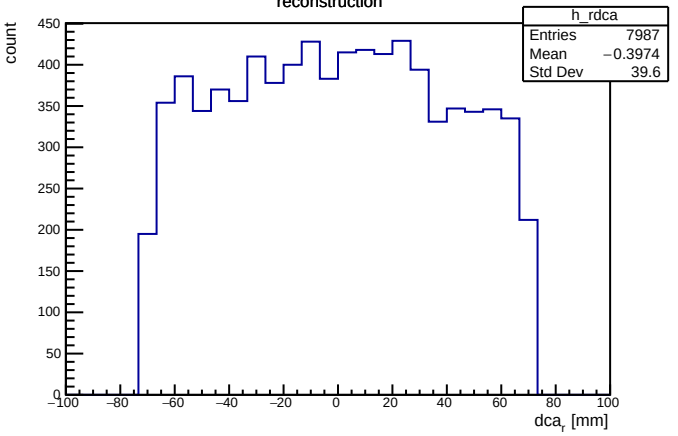

dca reconstruction radius for 6 and 7 hits
h_rdca_6hits
Entries 276
Mean 0.6158
Std Dev 28.67
count
dca r [mm]

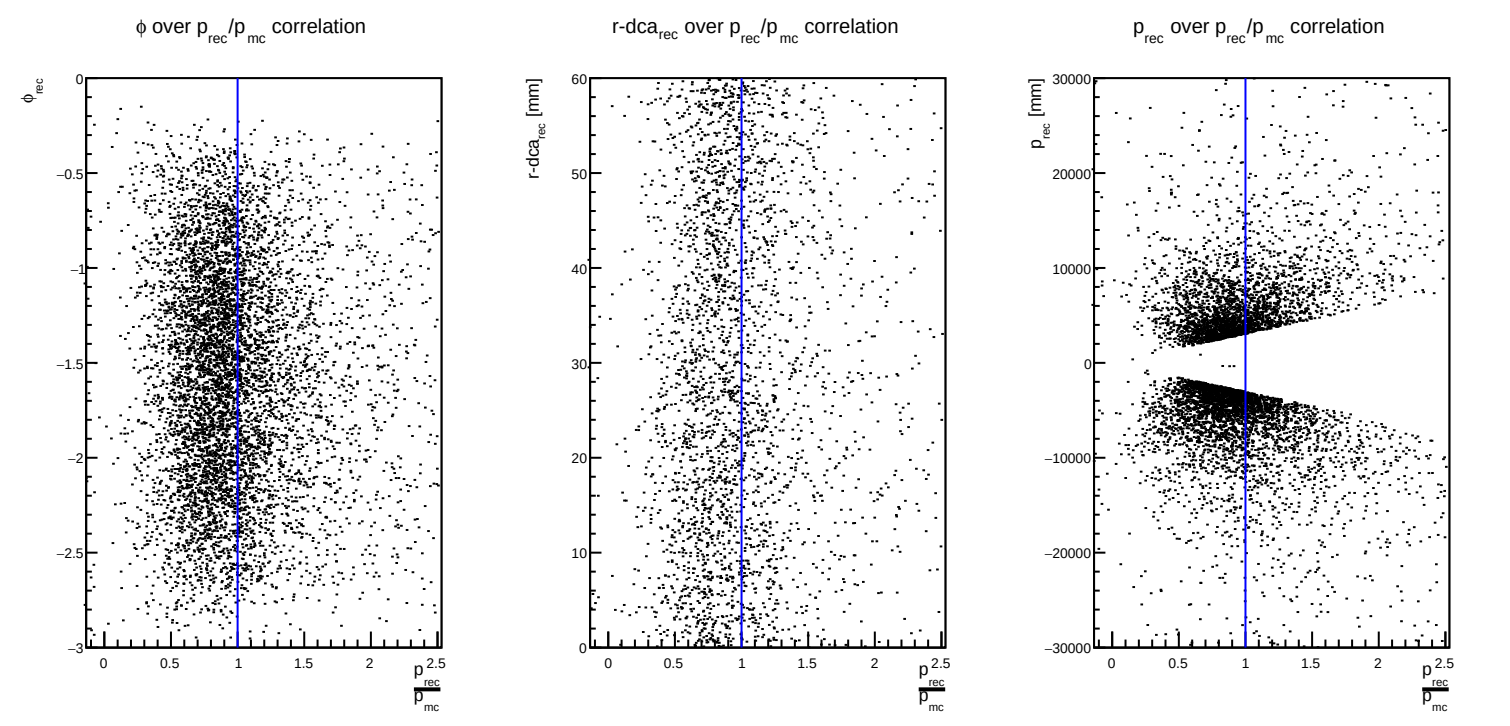

dca reconstruction radius for 8 and more hits
h_rdca_8hits
Entries 261
Mean −0.04046
Std Dev 14.05
count
dca r [mm]

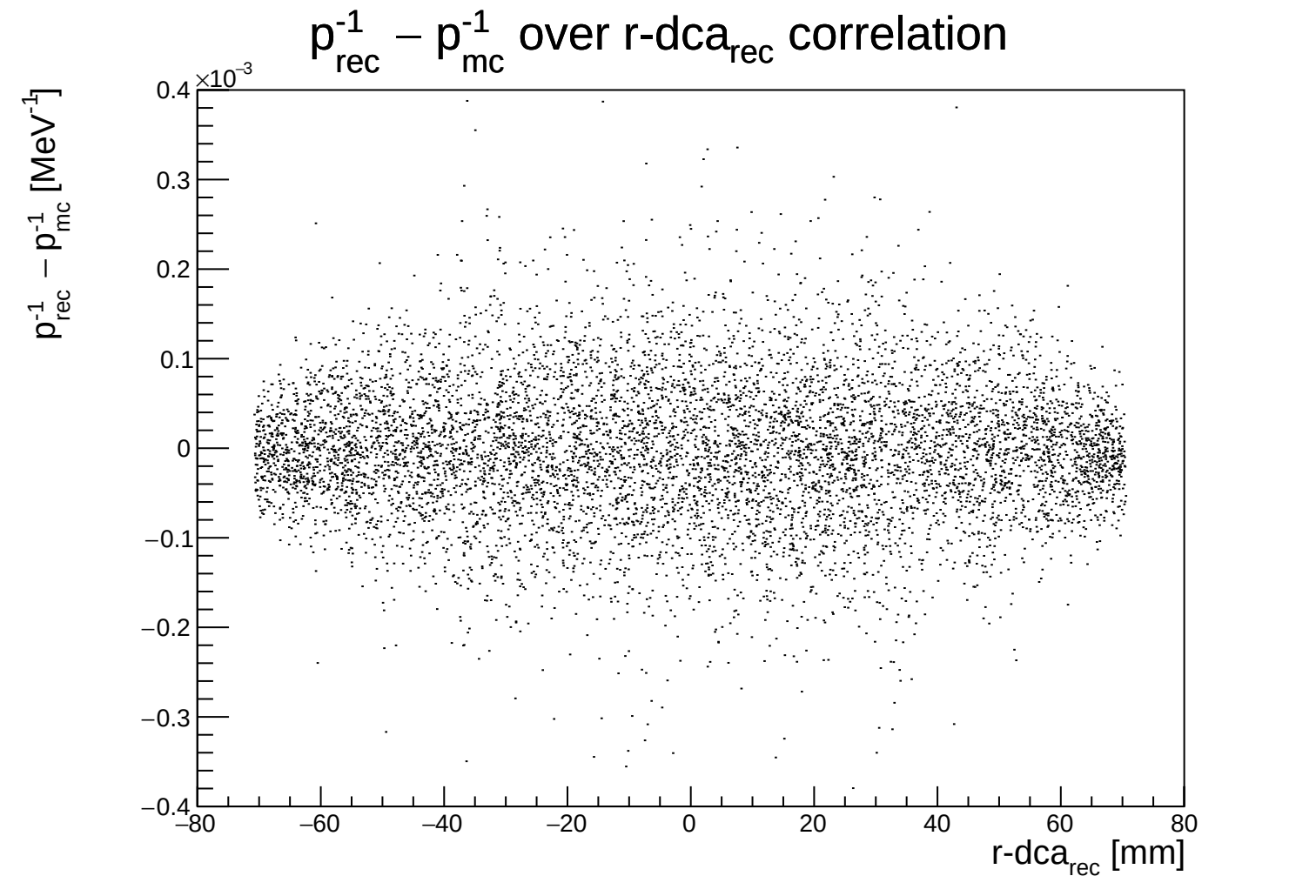

dca reconstruction along x-axis
h_xdca
Entries 7987
Mean 0.5163
Std Dev 33.75
count
dca_x [mm]

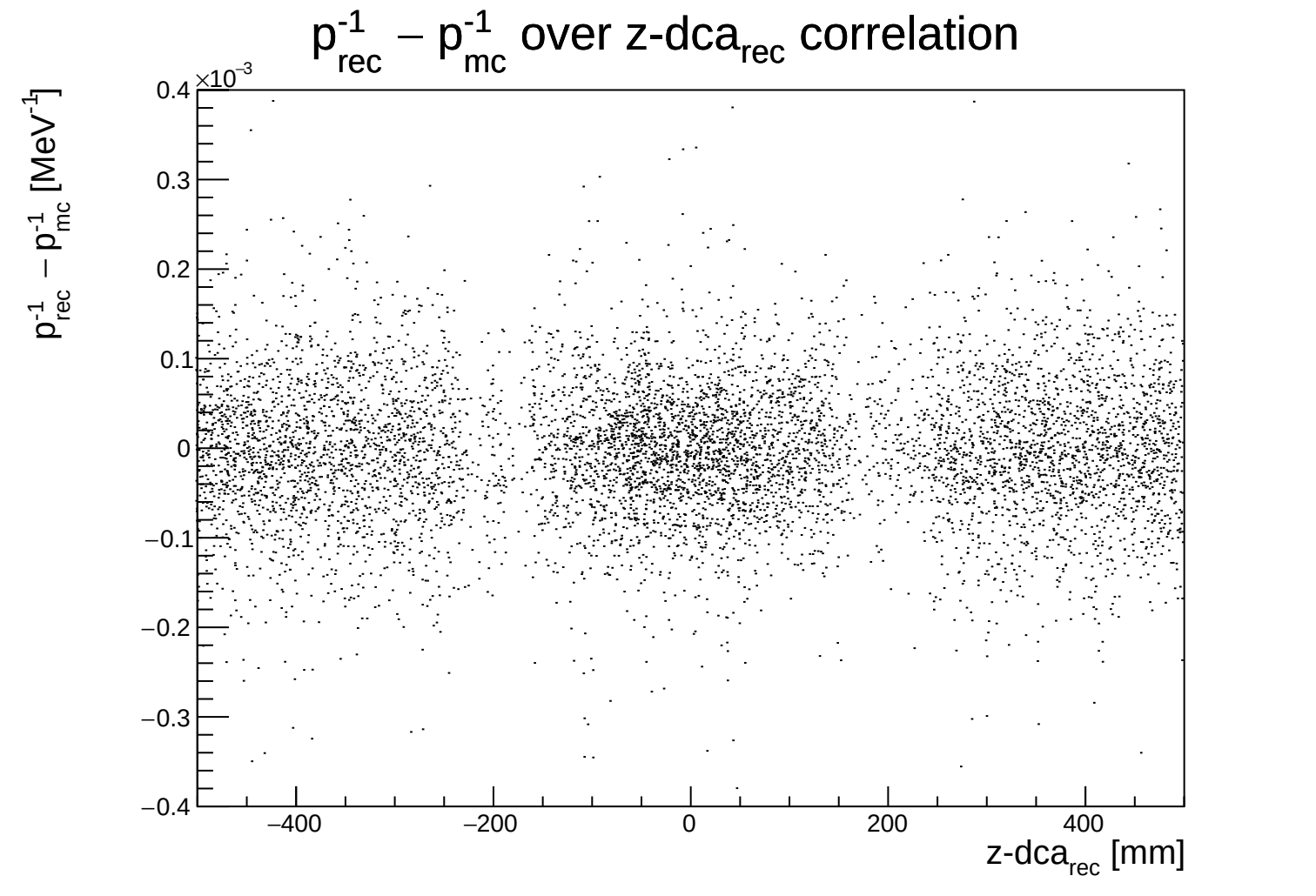

dca reconstruction along y-axis
h_ydca
Entries 7987
Mean −0.05761
Std Dev 20.71
count
dca_y [mm]

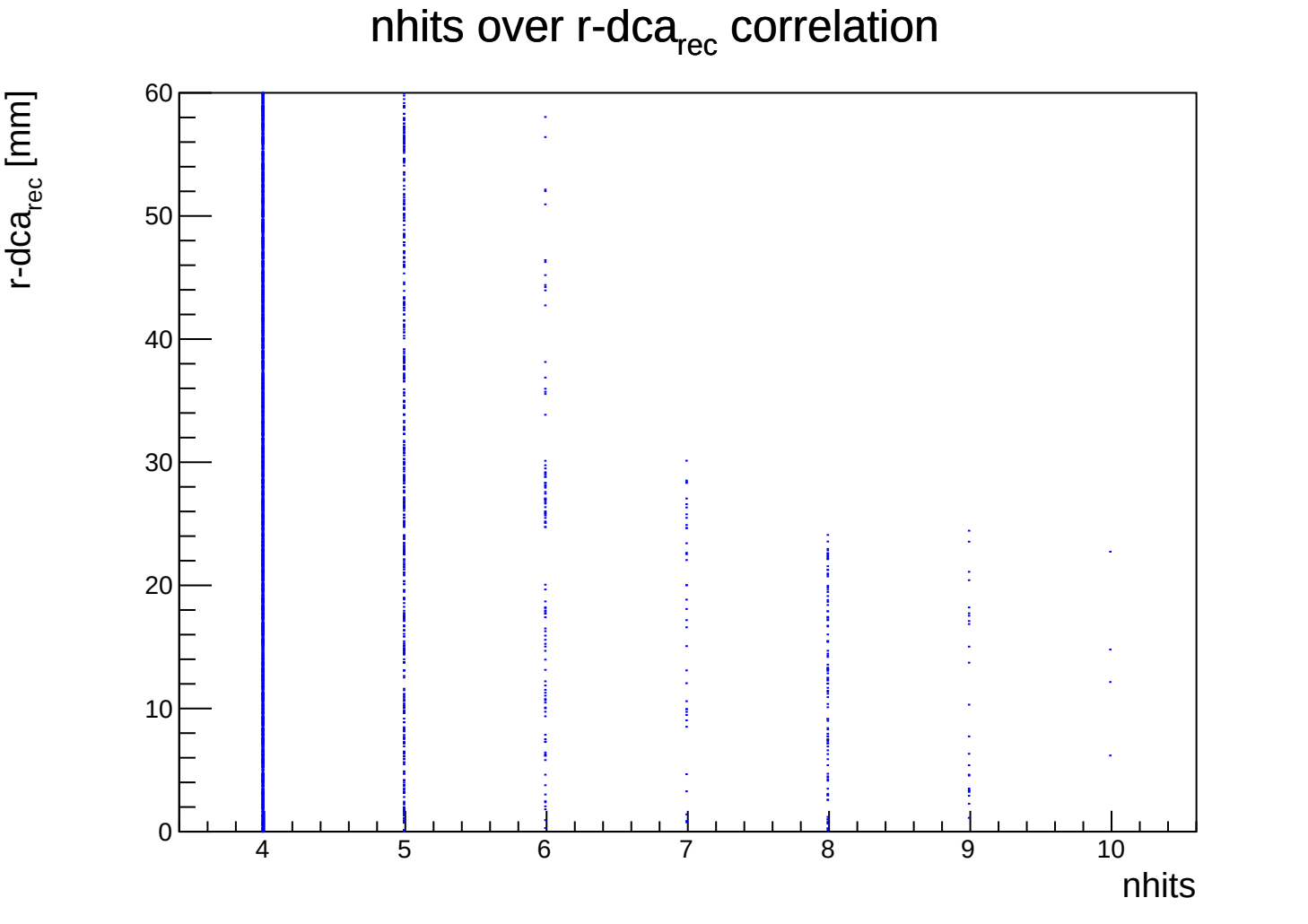

dca reconstruction along z-axis
h_zdca
Entries 7987
Mean −0.4682
Std Dev 76.56
count
dca_z [mm]

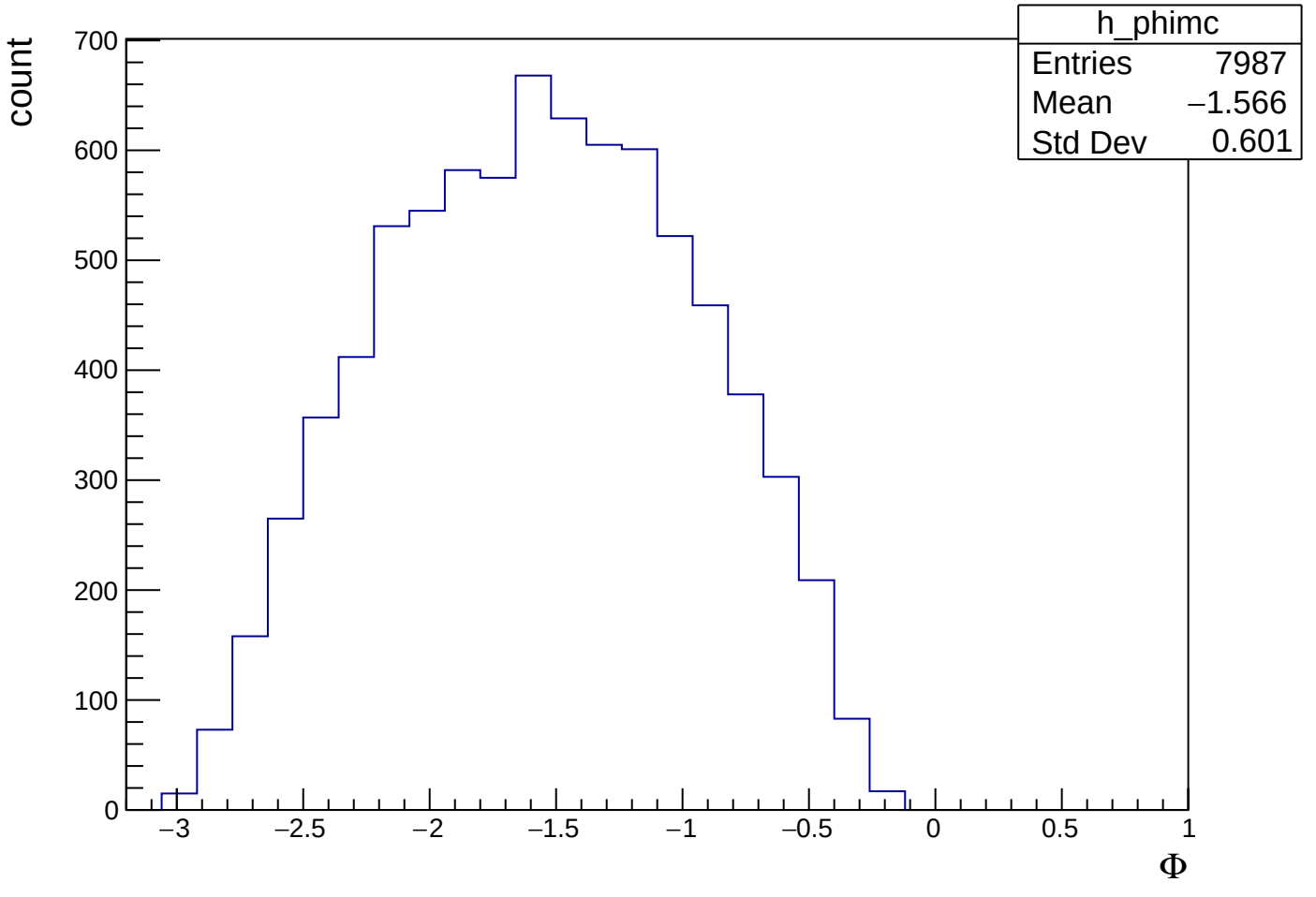

dca reconstruction r
h_rdca
Entries 7987
Mean −0.3974
Std Dev 39.6
count
dca_r [mm]

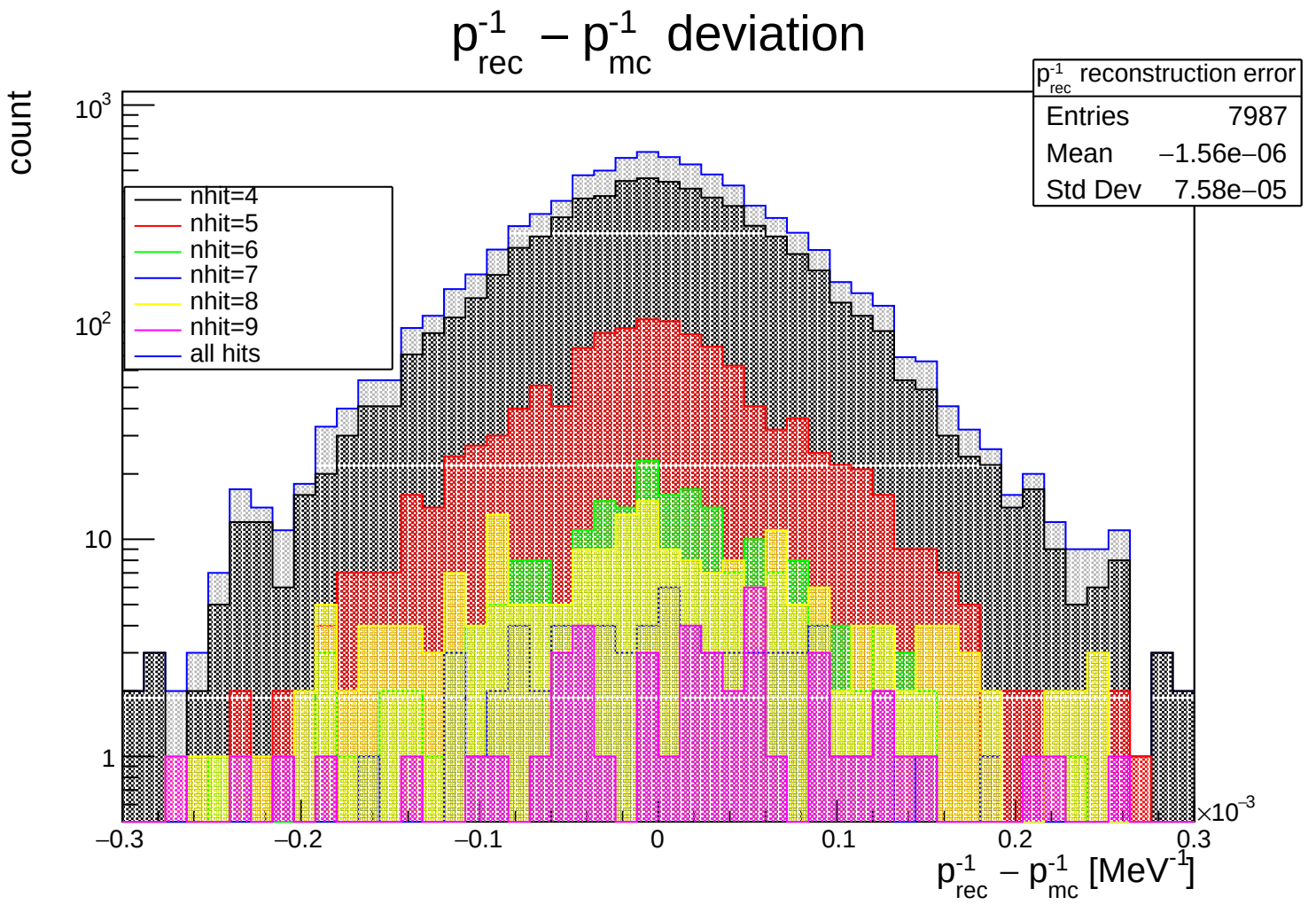

ϕ over p_{rec}/p_{mc} correlation
ϕ_{rec}
$\frac{p_{rec}}{p_{mc}}$
r-dca$_{rec}$ over p_{rec}/p_{mc} correlation
r-dca$_{rec}$ [mm]
$\frac{p_{rec}}{p_{mc}}$
p_{rec} over p_{rec}/p_{mc} correlation
p_{rec} [mm]
$\frac{p_{rec}}{p_{mc}}$


$p^{-1}_{rec} - p^{-1}_{mc}$ over r-dca$_{rec}$ correlation
$\times 10^{-3}$
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
$p^{-1}_{rec} - p^{-1}_{mc}$ [MeV^{-1}]
−80
−60
−40
−20
0
20
40
60
80
r-dca$_{rec}$ [mm]


$p^{-1}_{rec} - p^{-1}_{mc}$ over z-dca$_{rec}$ correlation
$p^{-1}_{rec} - p^{-1}_{mc}$ [MeV^{-1}]
×10^{-3}
0.4
0.3
0.2
0.1
0
−0.1
−0.2
−0.3
−0.4
−400
−200
0
200
400
z-dca$_{rec}$ [mm]


nhits over r-dca$_{rec}$ correlation
r-dca$_{rec}$ [mm]
60
50
40
30
20
10
0
4
5
6
7
8
9
10
nhits


Φ monte carlo (charge corrrected)
h_phimc
Entries 7987
Mean −1.566
Std Dev 0.601
count
700
600
500
400
300
200
100
0
−3
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
Φ


$p^{-1}_{rec} - p^{-1}_{mc}$ deviation
count
10^3
10^2
10
1
nhit=4
nhit=5
nhit=6
nhit=7
nhit=8
nhit=9
all hits
p^{-1}_{rec} reconstruction error
Entries 7987
Mean −1.56e−06
Std Dev 7.58e−05
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
$\times 10^{-3}$
$p^{-1}_{rec} - p^{-1}_{mc}$ [MeV^{-1}]