Status Report: META Efficiencies

Steffen Maurus

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Procedure META Efficiencies

Expected:

- matching particle PID (9, 14) (leading particle)
- matching missing mass (leading particle)
- metacluster $>= 2$ (leading particle)
- cut on $\Delta\Phi_{MDC} = \Phi_{EXPECTED} - \Phi_{CANDMDC}$

Measured:

- cut on $\Delta\Phi_{META} = \Phi_{EXPECTED} - \Phi_{CANDMETA}$ (1D, 2D)

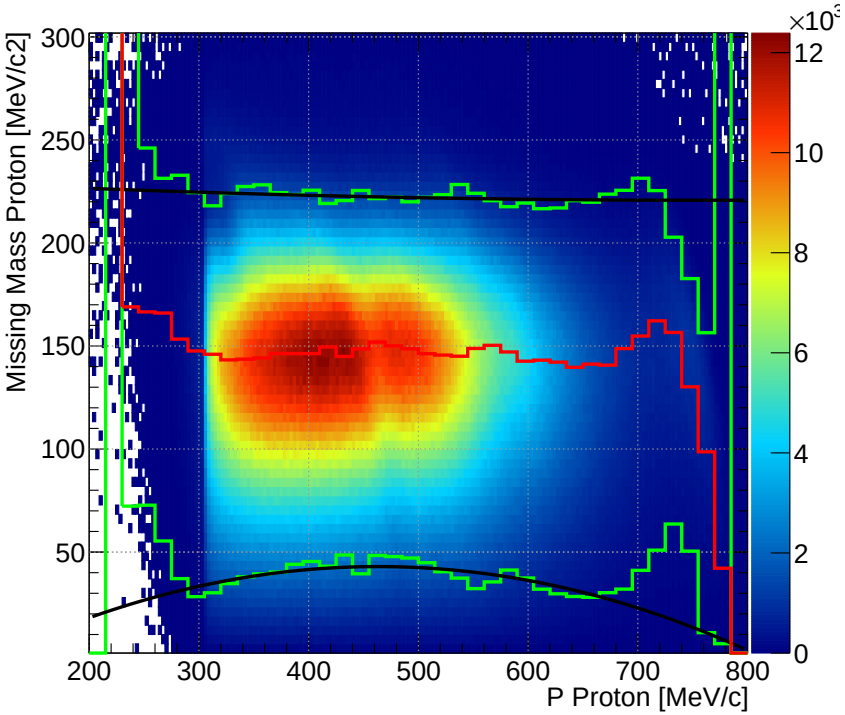
Single Track Efficiency (only kine!!!)
Expected:

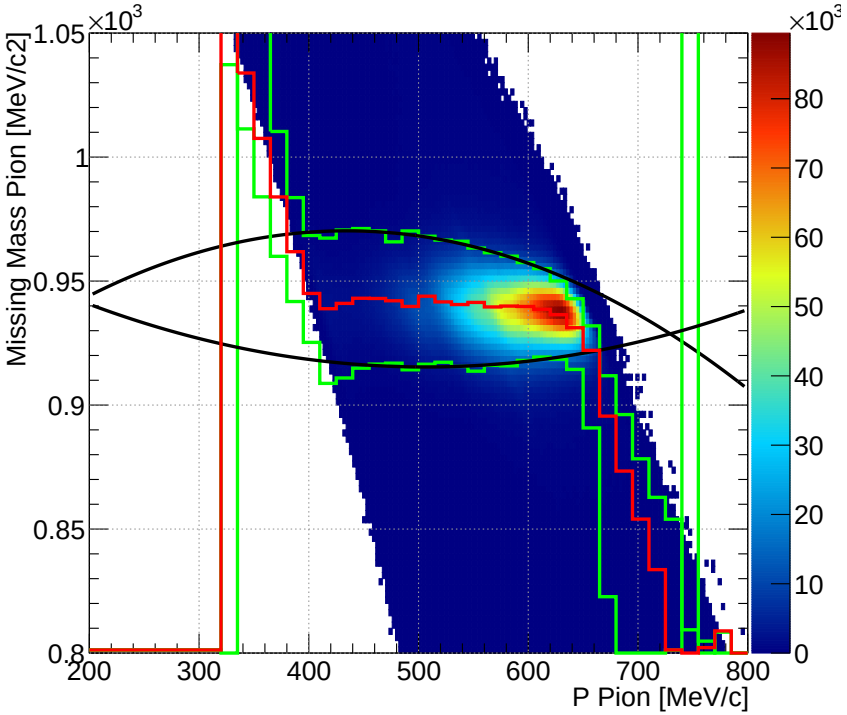
- isPrimary
- isInAcceptance (4,4,4,4,0,0) or isInAcceptanceDecay (4,4,4,4,0,0)

Measured:

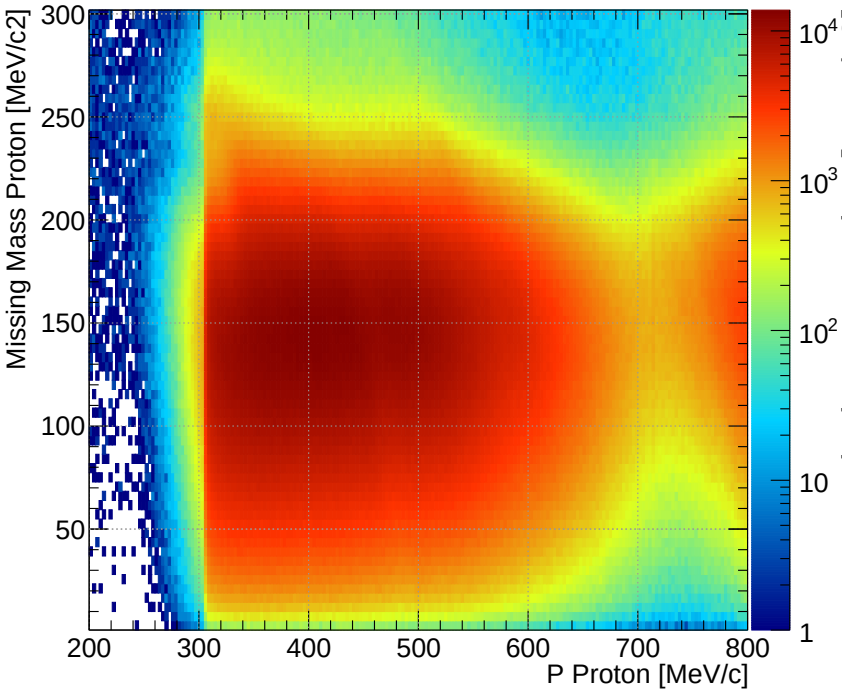
- isPrimary
- isInAcceptance (4,4,4,4,1,1) or isInAcceptanceDecay (4,4,4,4,1,1)

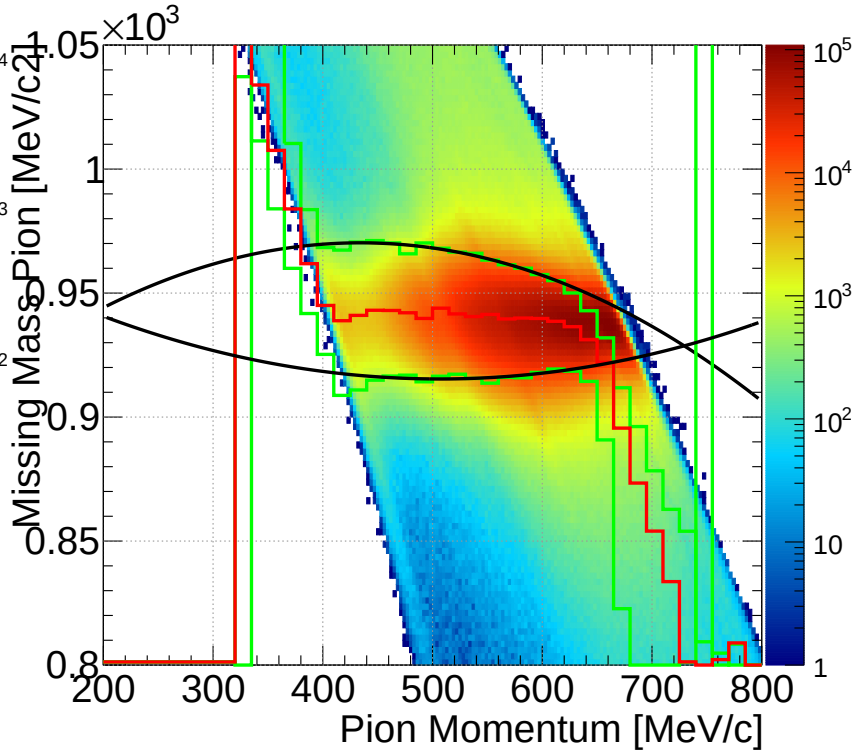
Missing Mass, leading: Proton, Pion



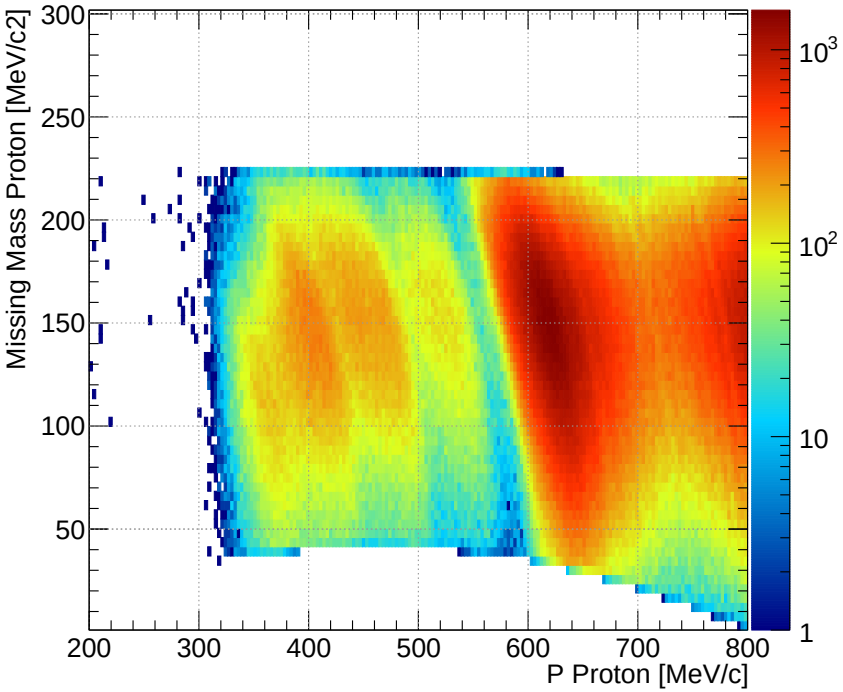


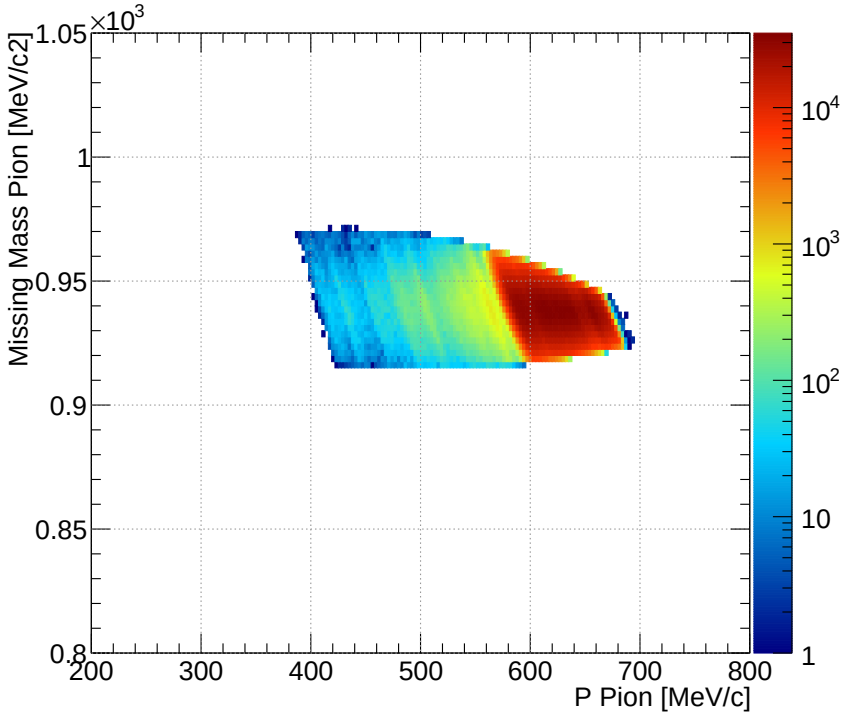
Missing Mass Log, leading: Proton, Pion



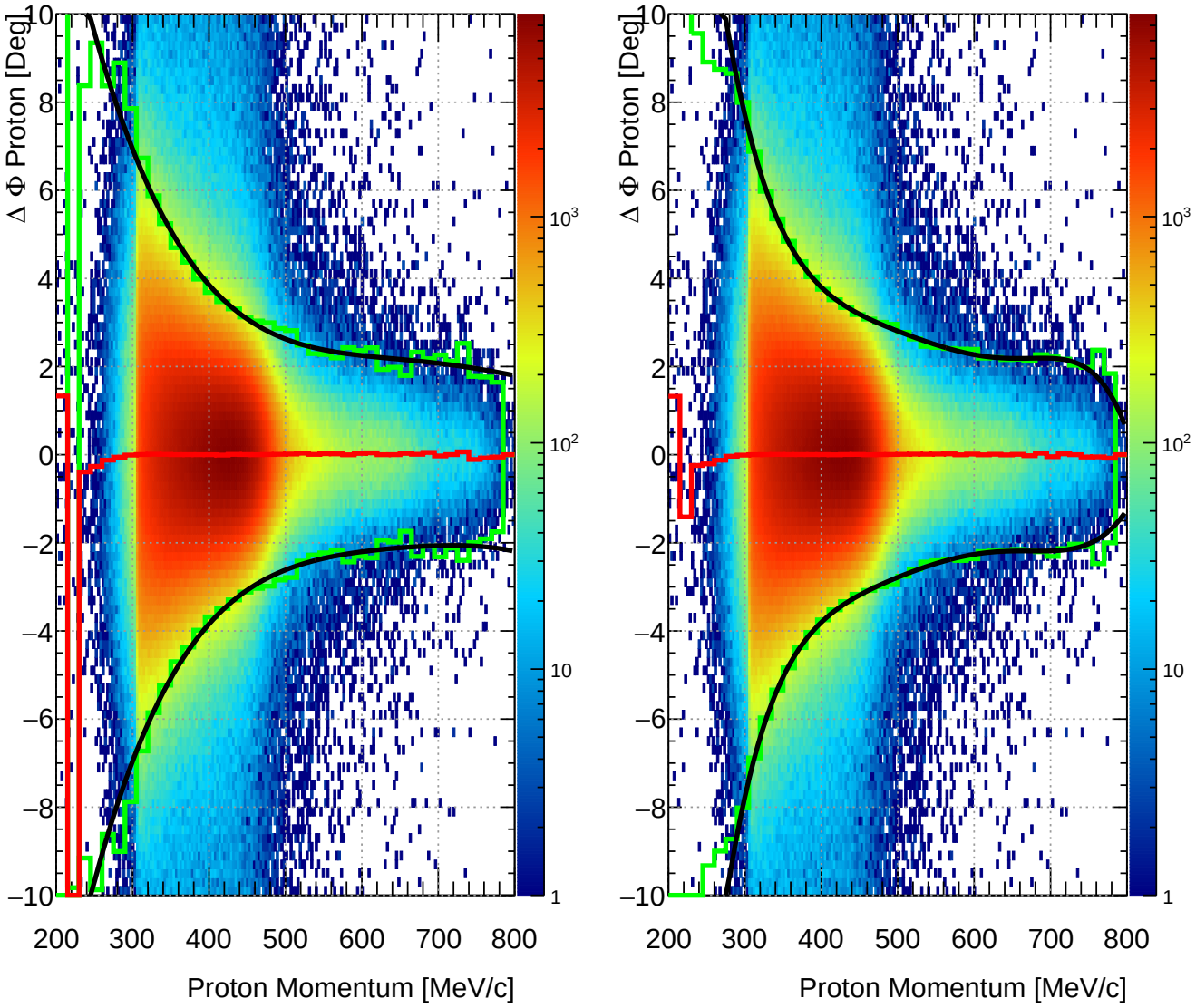


Missing Mass After M2, leading: Proton, Pion

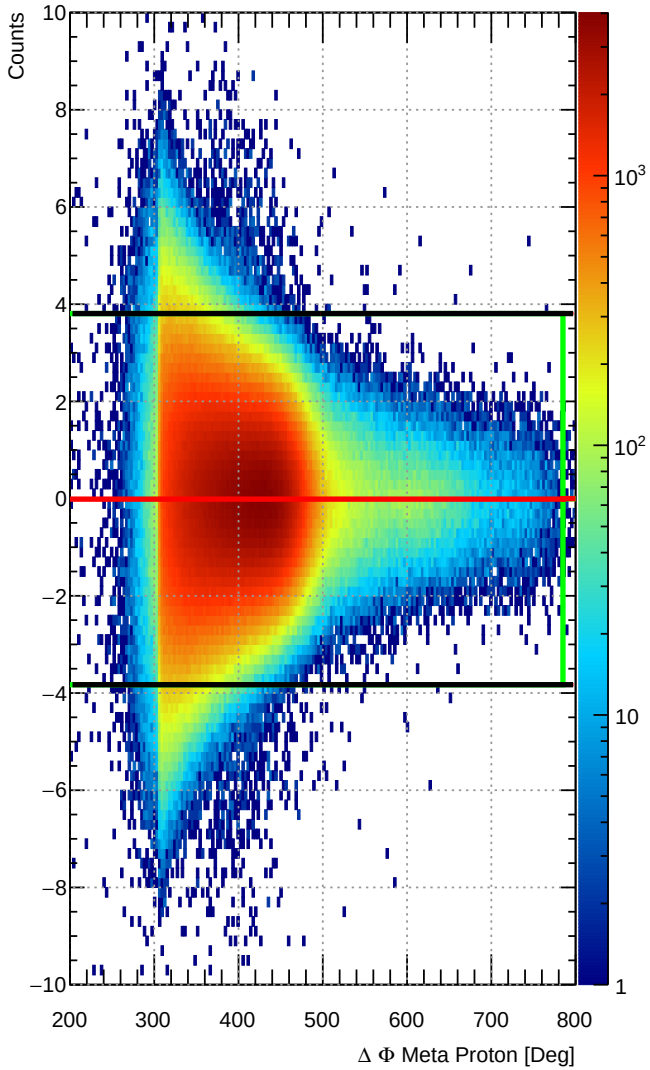


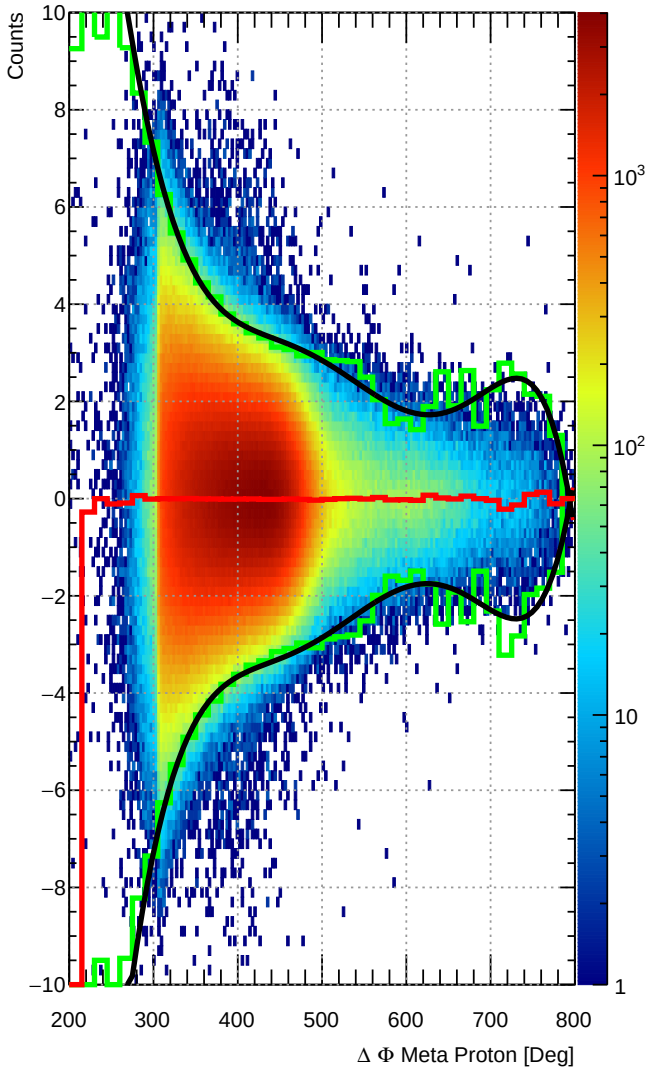


ΔΦ Proton MDC, leading: Pion

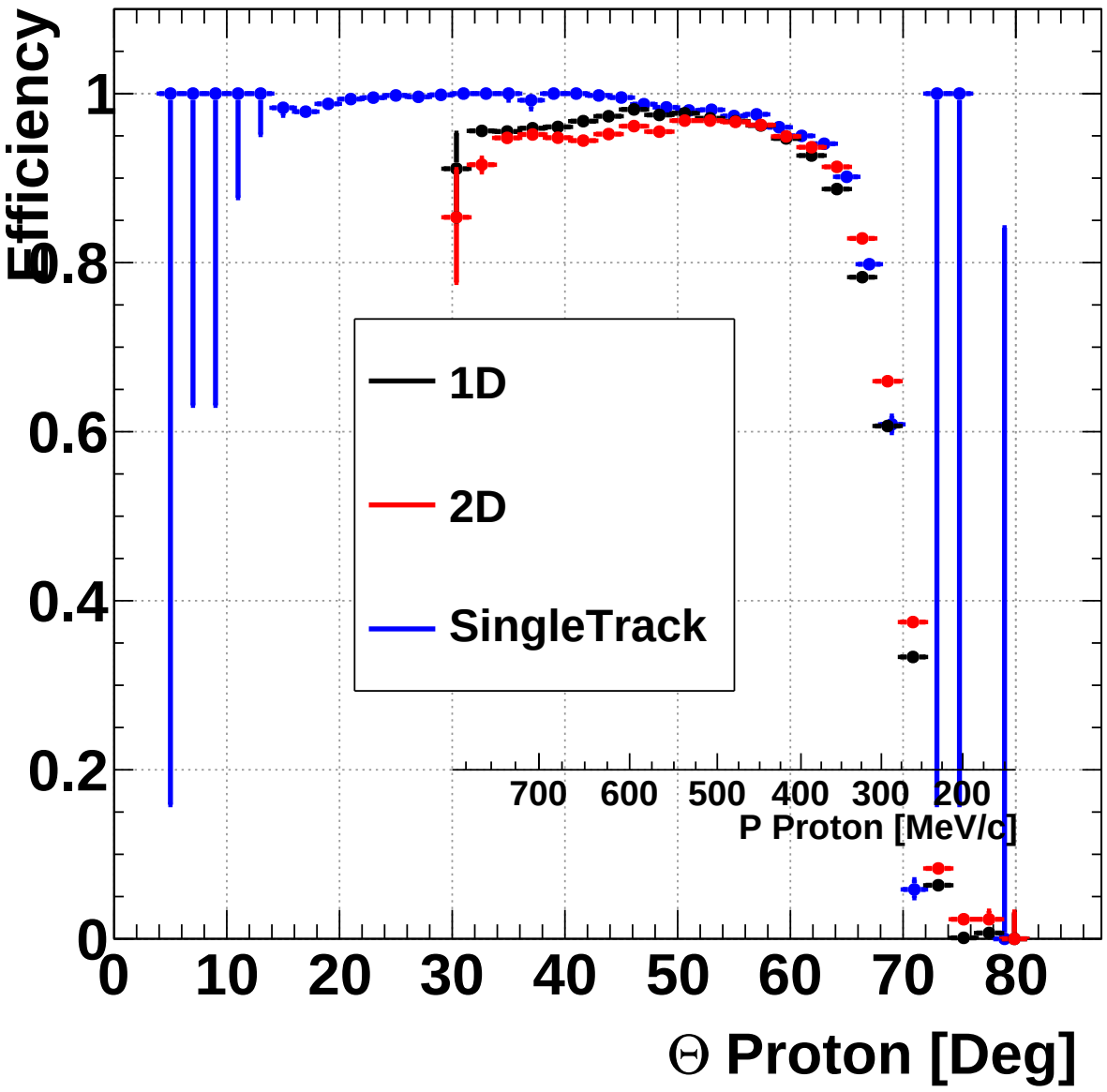


ΔΦ Proton META 1D, 2D, leading: Pion

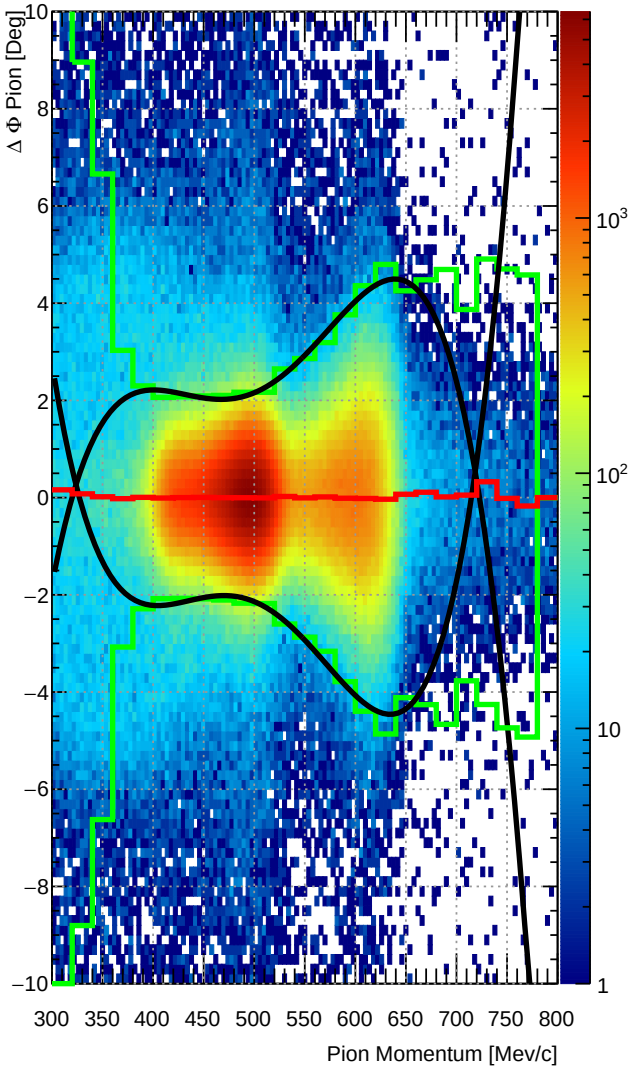


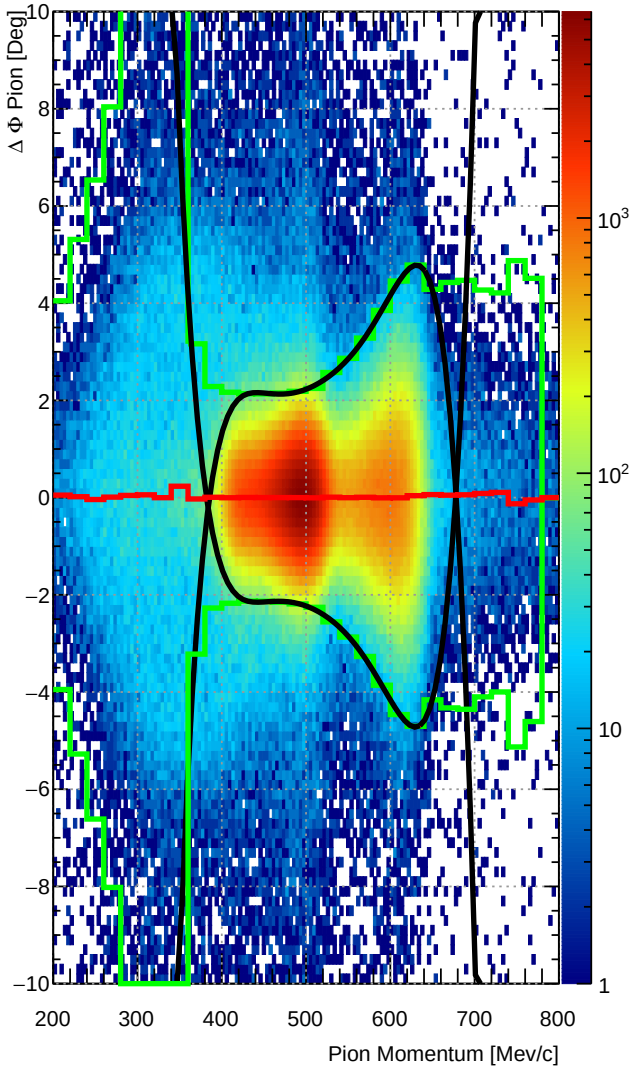


1D Efficiencies Proton

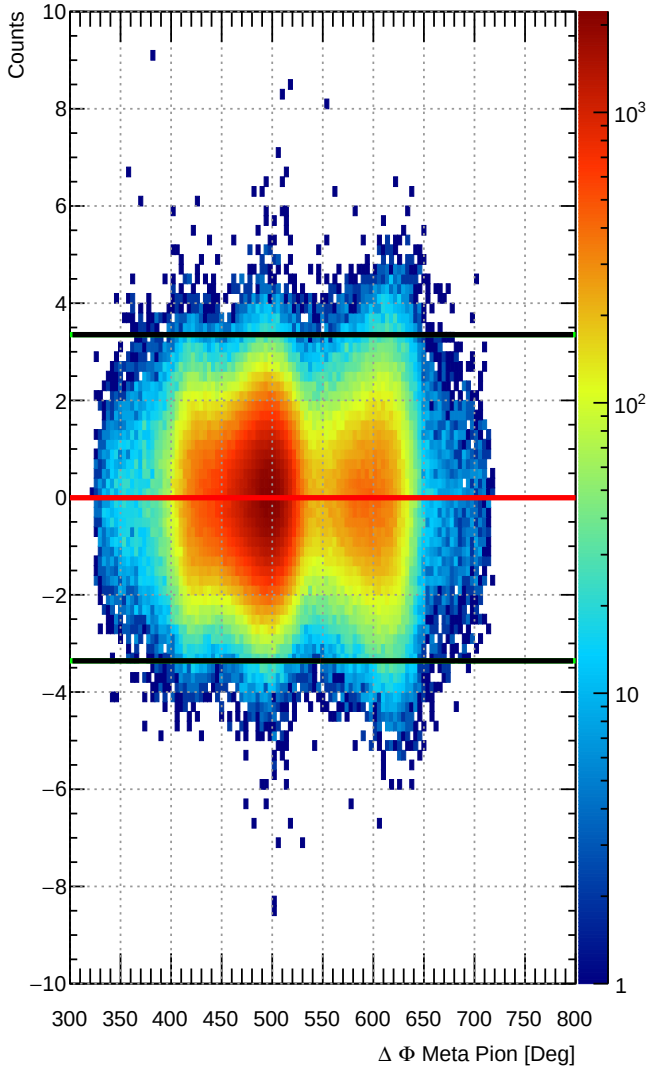


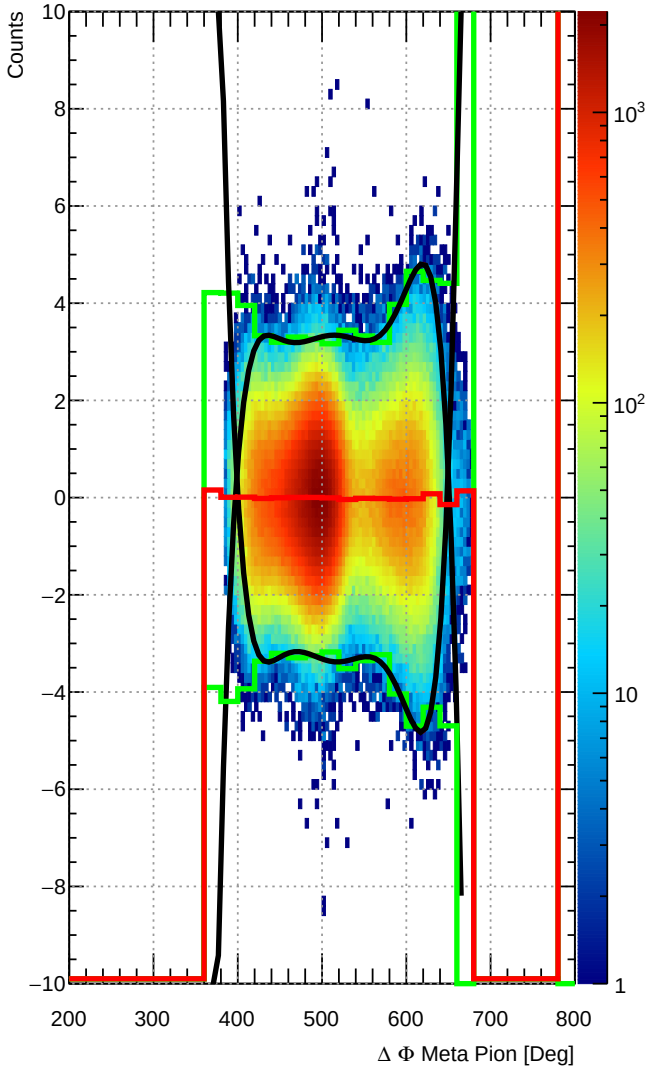
ΔΦ Pion MDC, leading: Proton



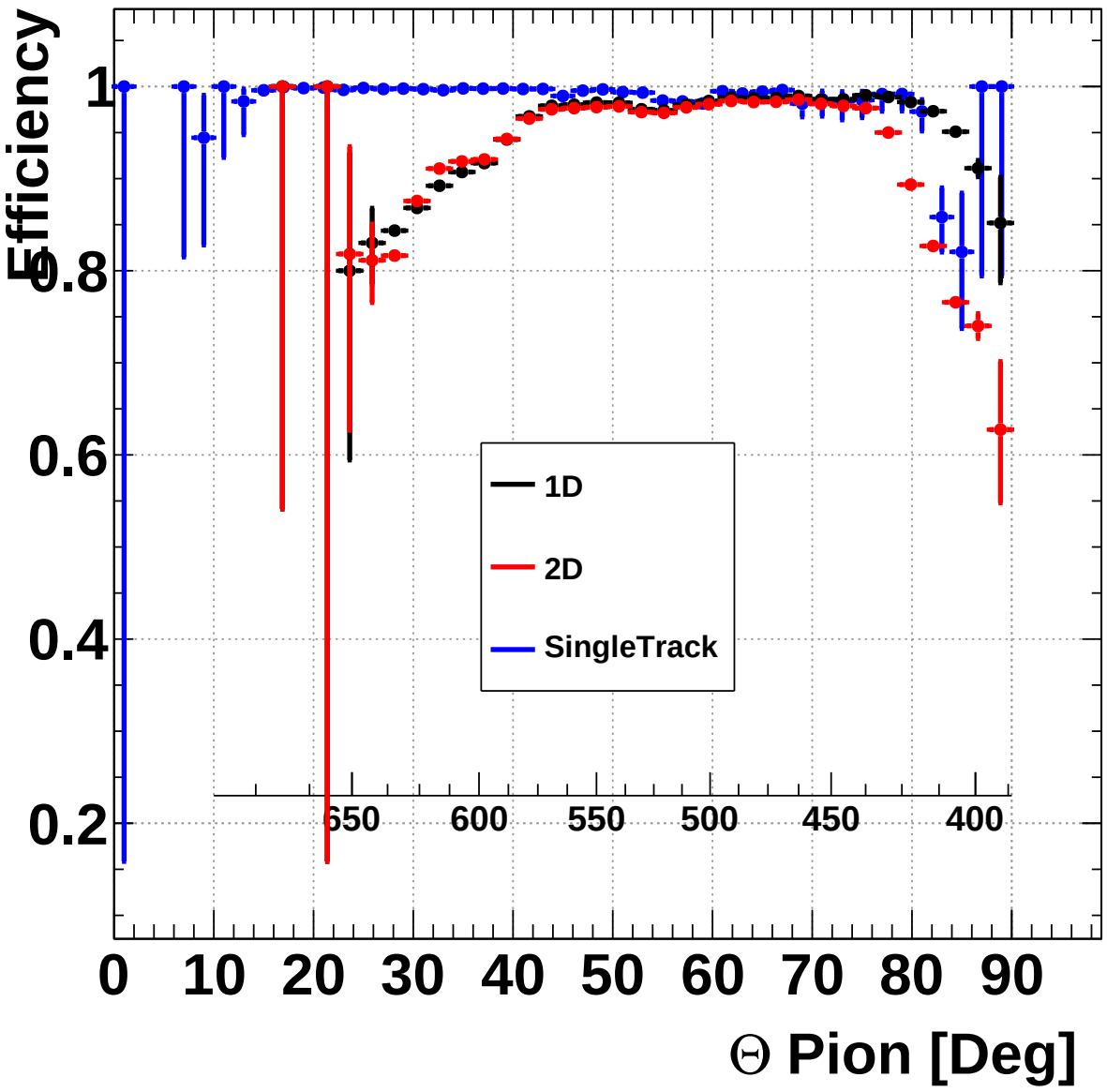


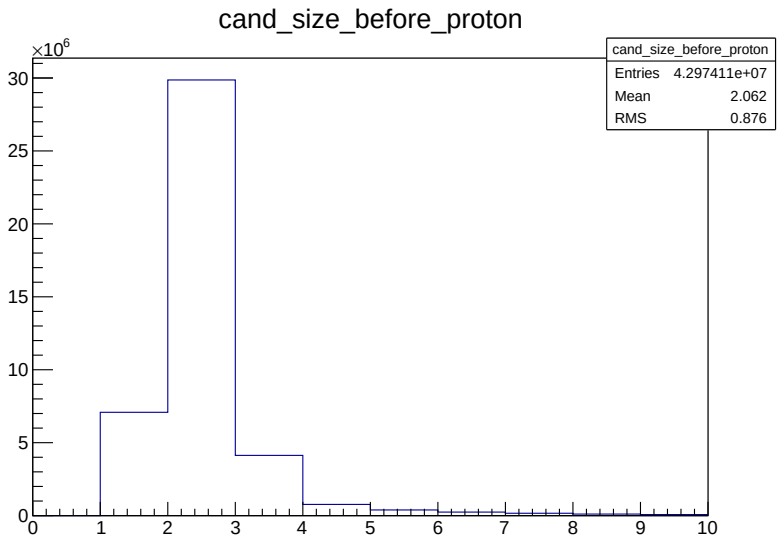
ΔΦ Pion META 1D, 2D, leading: Proton





1D Efficiencies Pion

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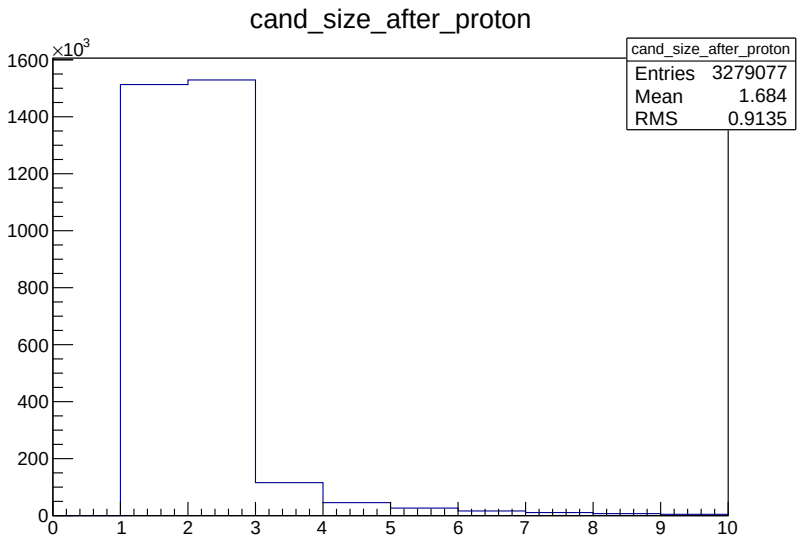
×10^6
cand_size_before_proton
Entries 4.297411e+07
Mean 2.062
RMS 0.876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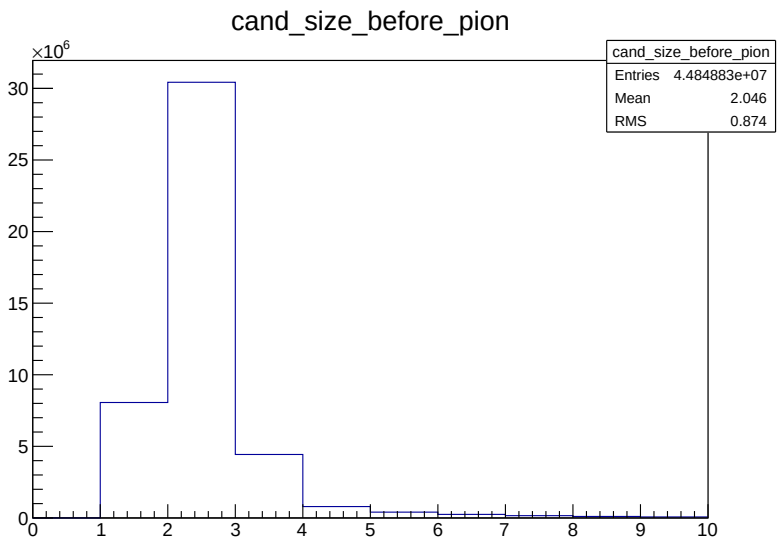
×10^3
cand_size_after_proton
Entries 3279077
Mean 1.684
RMS 0.9135

//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×10^6
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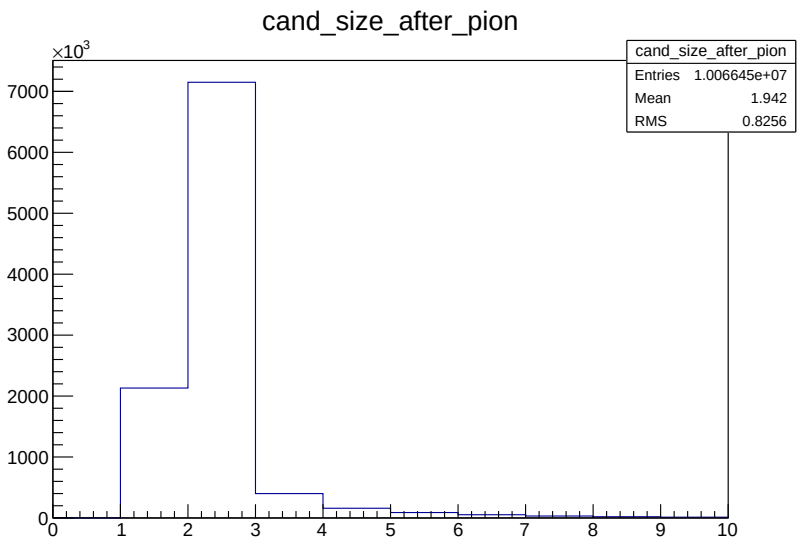
Entries 4.484883e+07
Mean 2.046
RMS 0.874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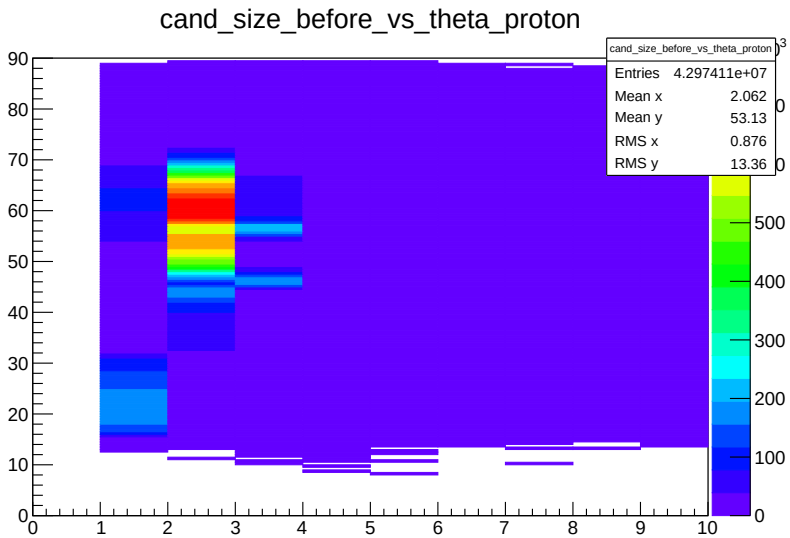
×10^3
cand_size_after_pion
Entries 1.006645e+07
Mean 1.942
RMS 0.8256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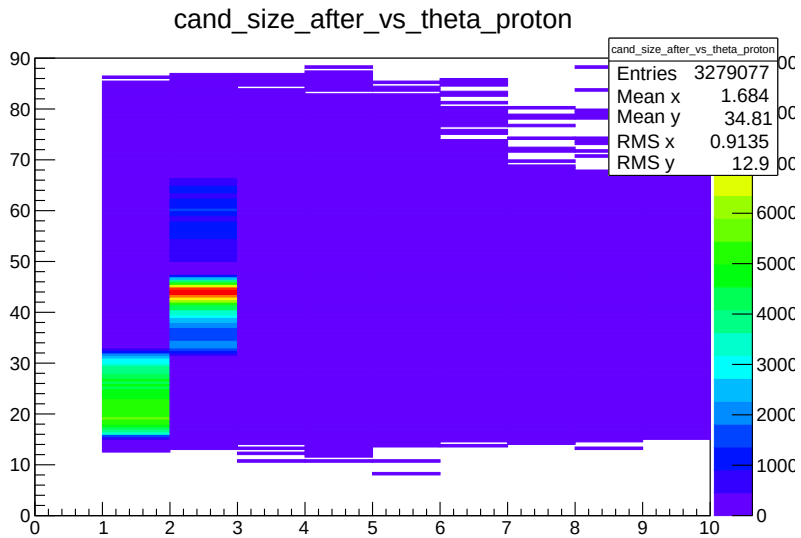
Mean x 2.062
Mean y 53.13
RMS x 0.876
RMS y 13.36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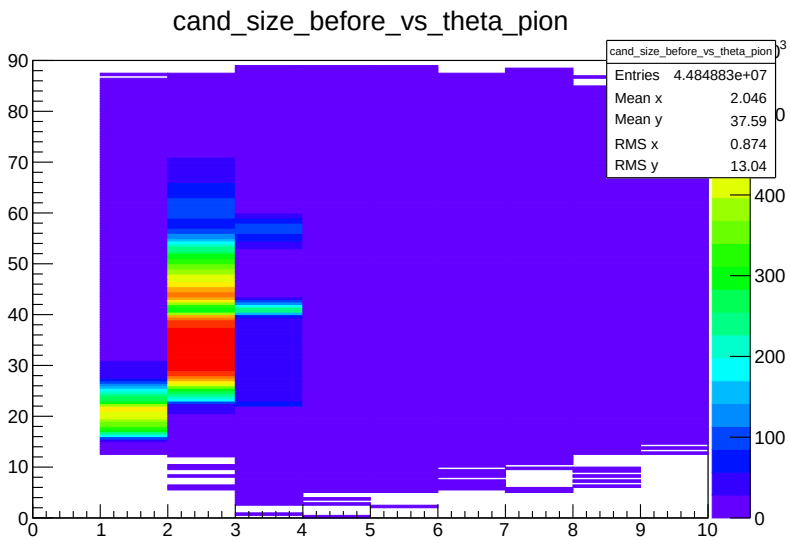
Entries 3279077
Mean x 1.684
Mean y 34.81
RMS x 0.9135
RMS y 12.9


cand_size_before_vs_theta_pion
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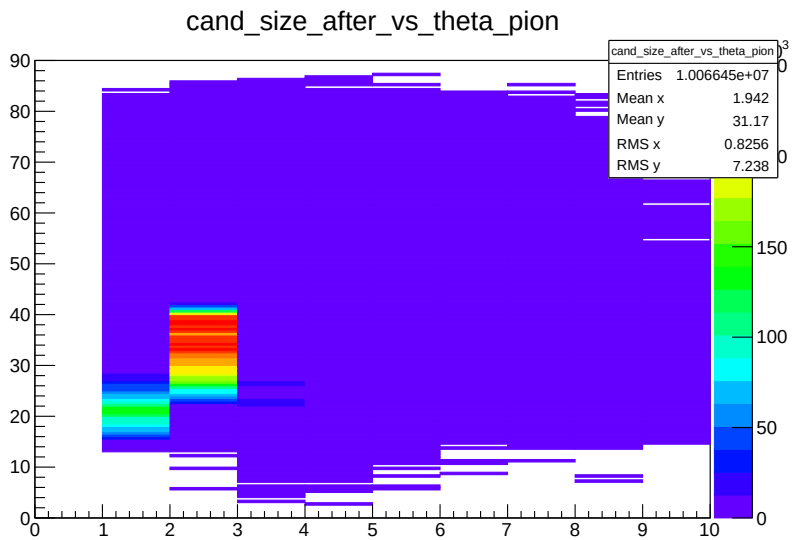
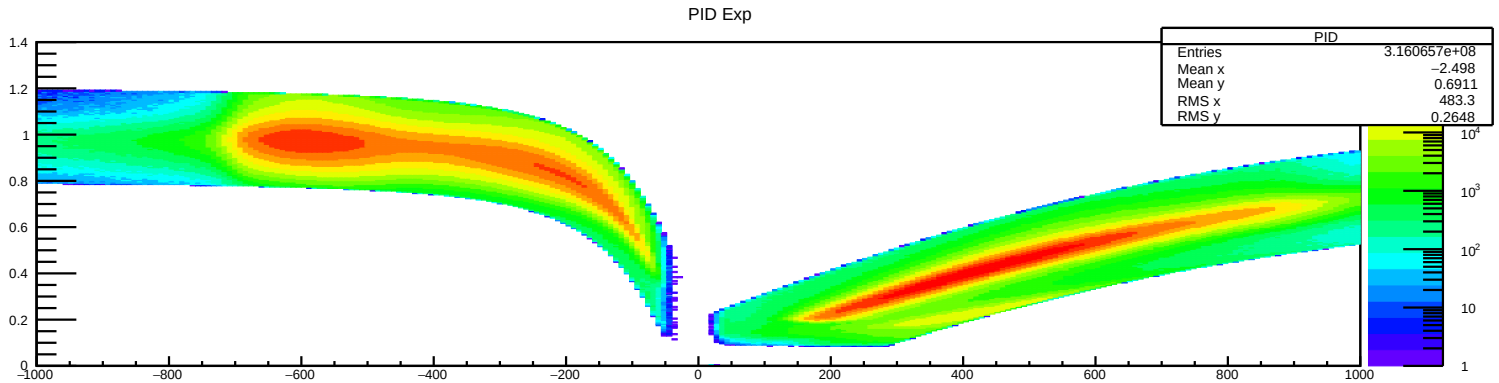
Entries 4.484883e+07
Mean x 2.046
Mean y 37.59
RMS x 0.874
RMS y 13.04


cand_size_after_vs_theta_pion
cand_size_after_vs_theta_pion
Entries 1.006645e+07
Mean x 1.942
Mean y 31.17
RMS x 0.8256
RMS y 7.238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Mean y 0.6911
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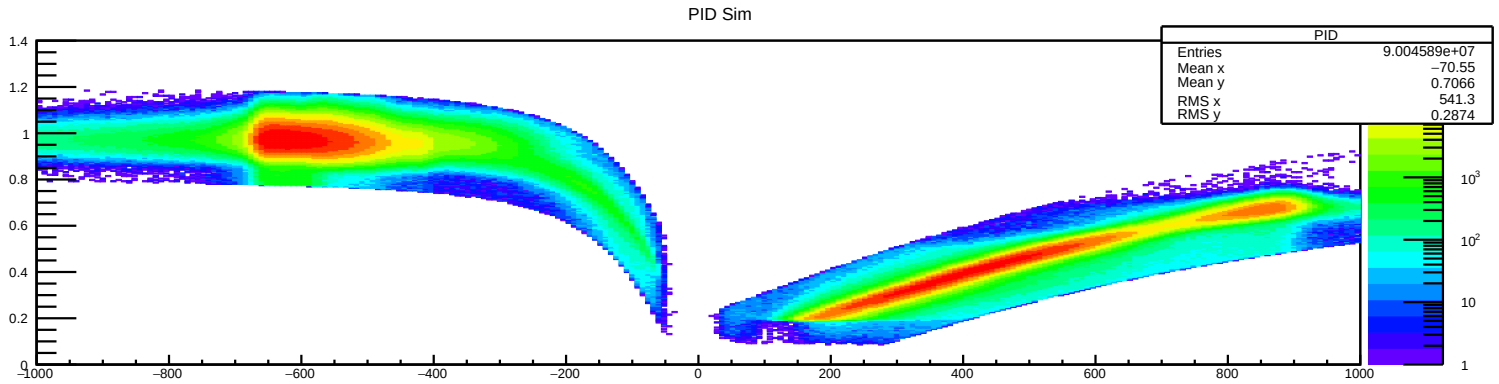
RMS y 0.2648


PID Sim
PID
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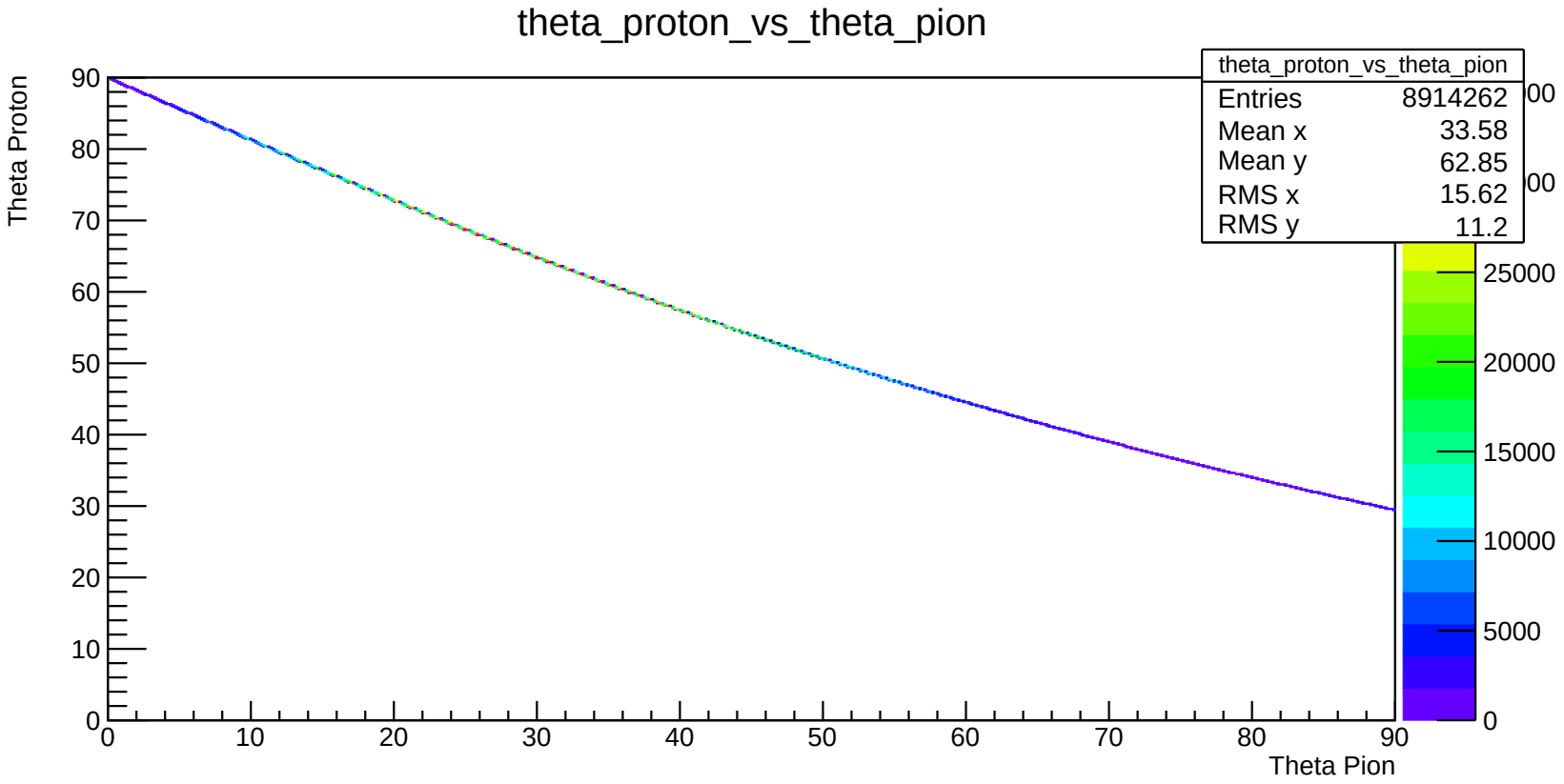
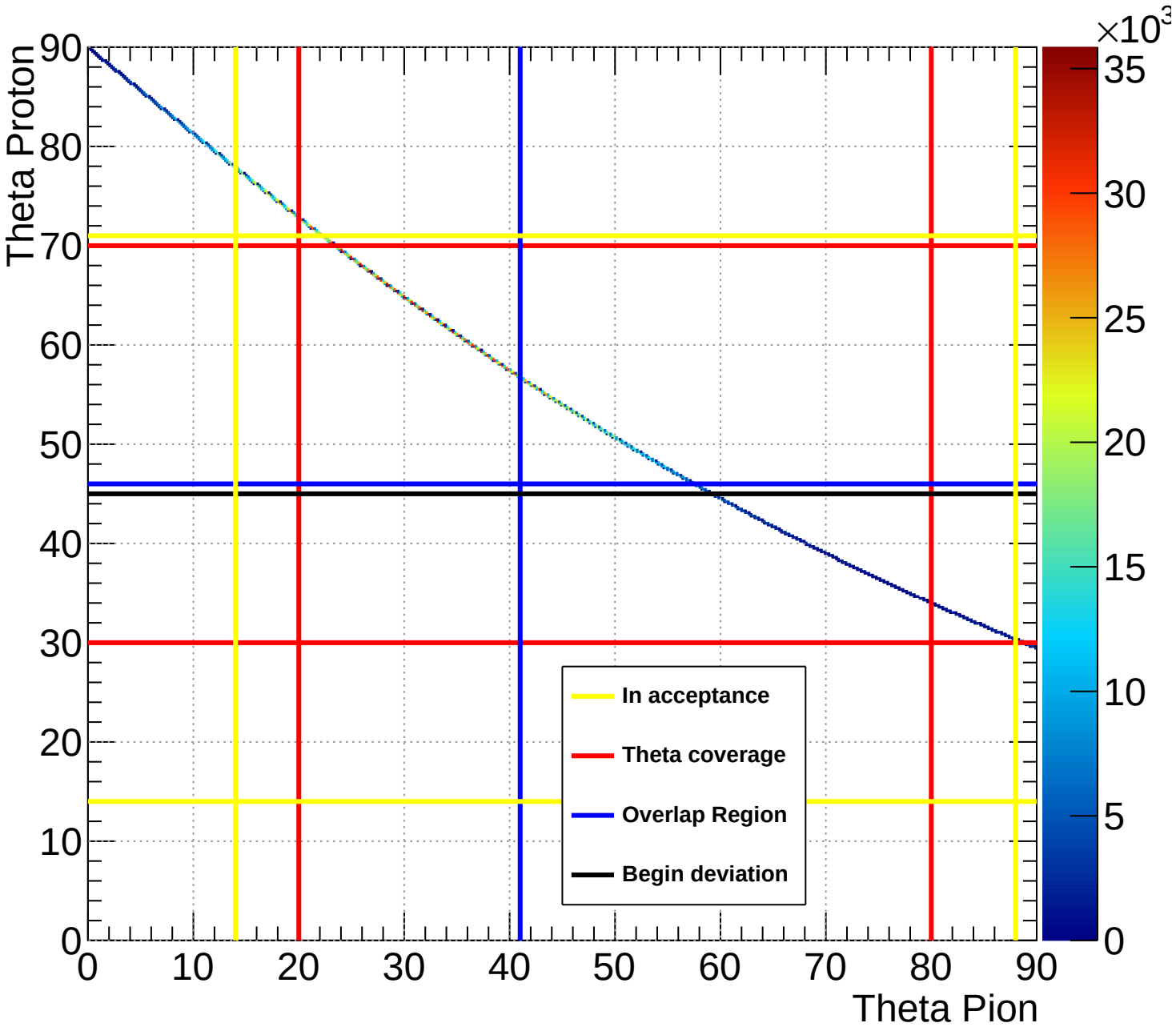
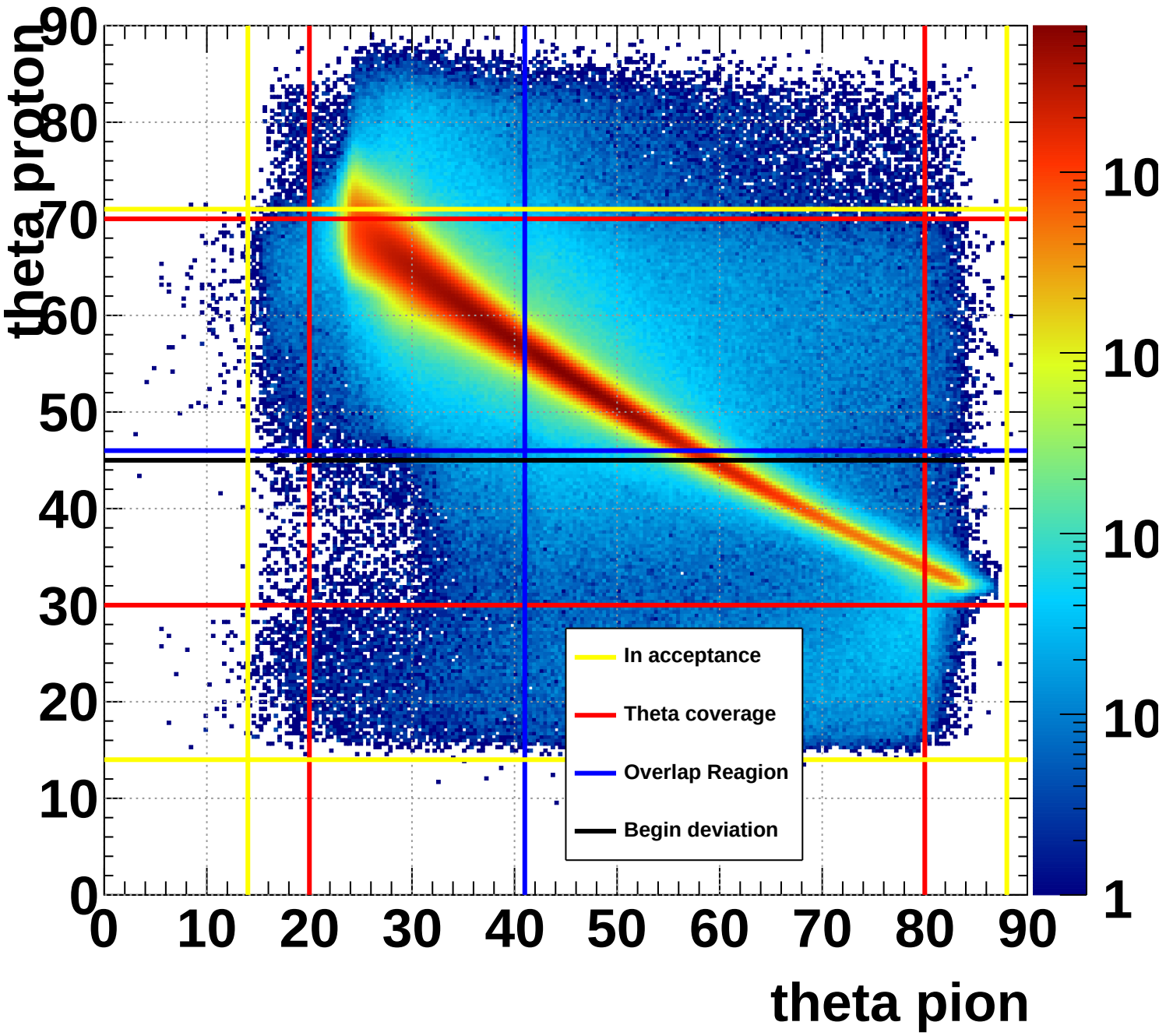
Mean x −70.55
Mean y 0.7066
RMS x 541.3
RMS y 0.2874


theta_proton_vs_theta_pion
theta_proton_vs_theta_pion
Entries 8914262
Mean x 33.58
Mean y 62.85
RMS x 15.62
RMS y 11.2
Theta Proton
Theta Pion
0
10
20
30
40
50
60
70
80
90
5000
10000
15000
20000
25000

Coverage for MDC!



Coverage for MDC!