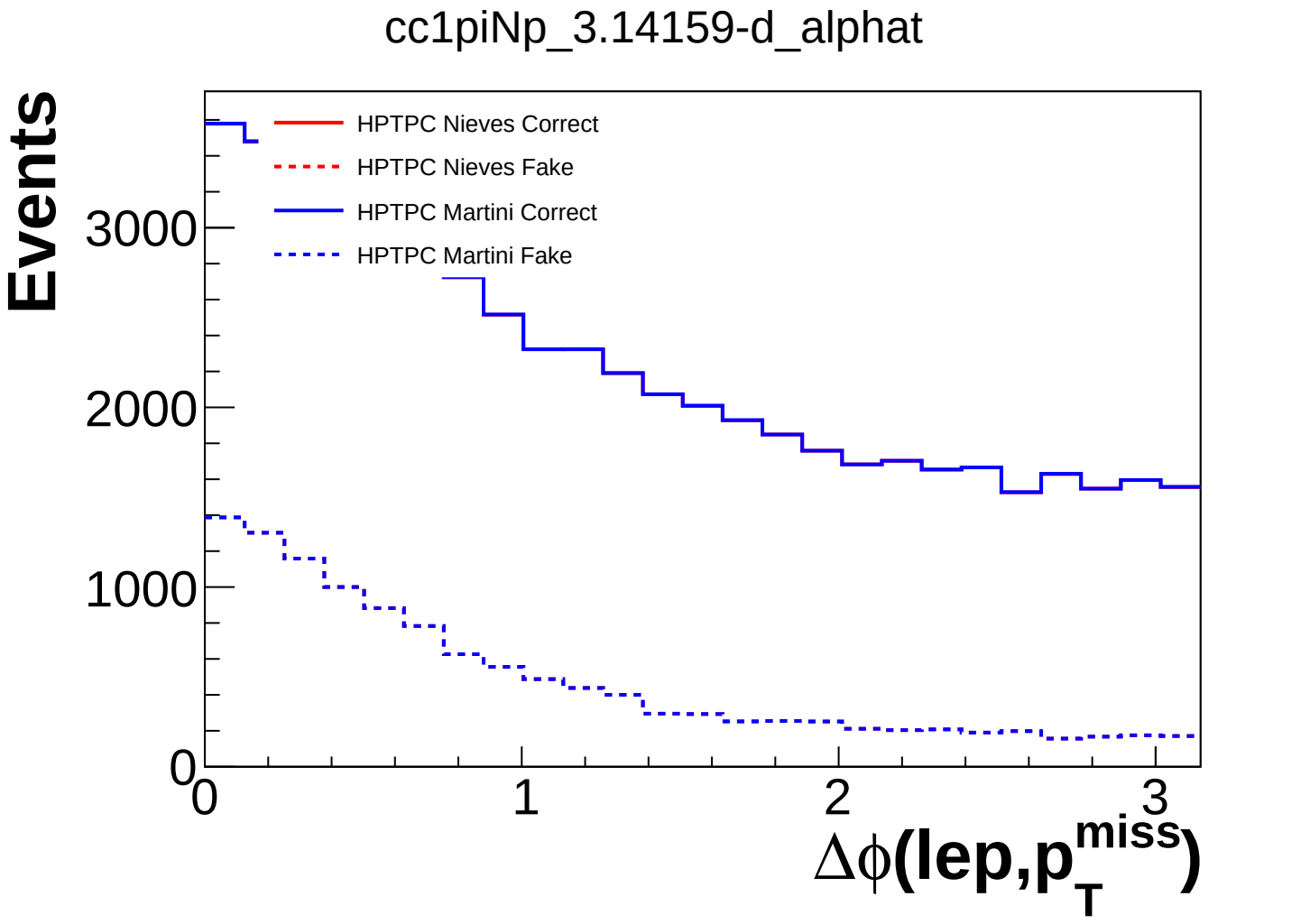
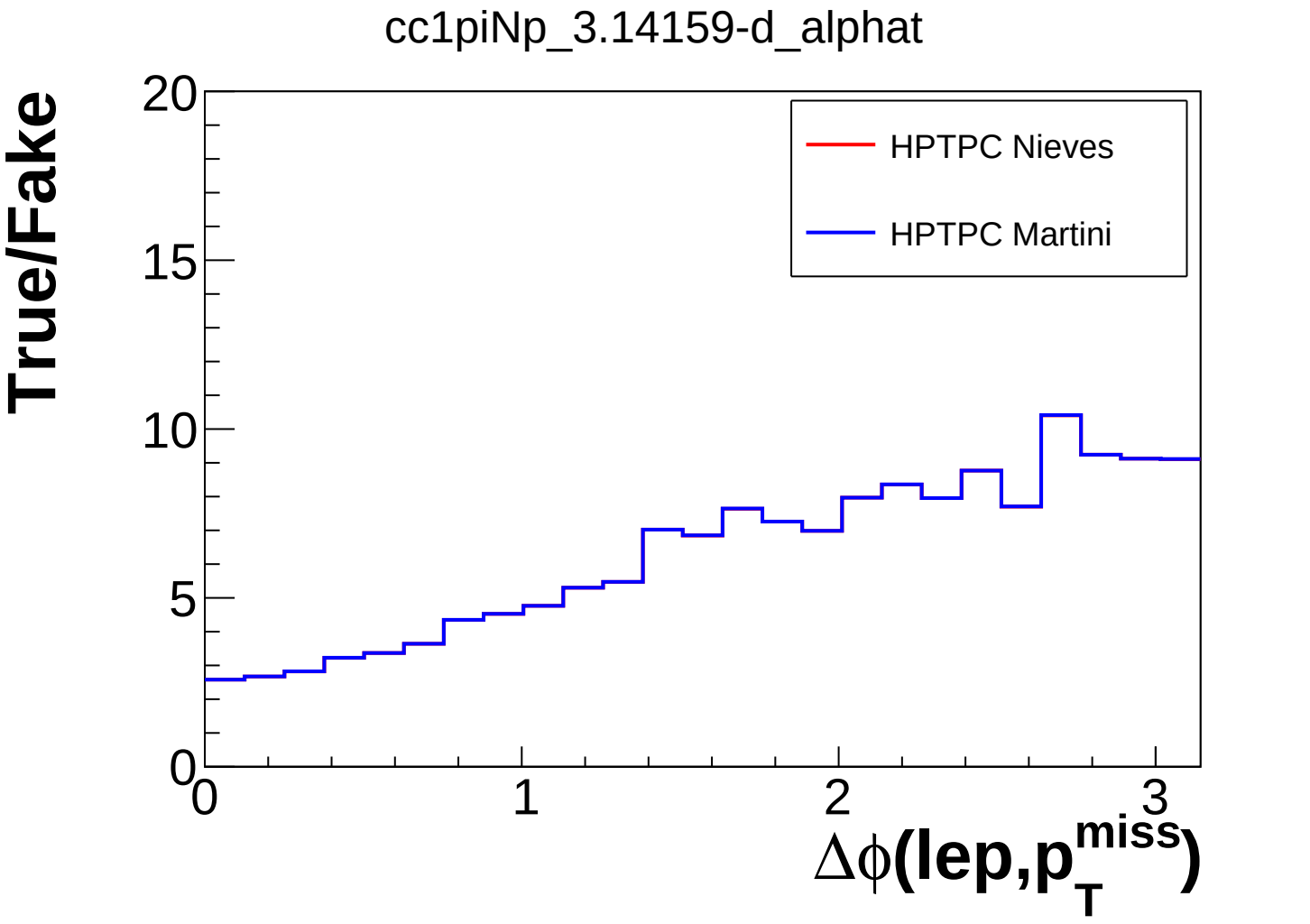
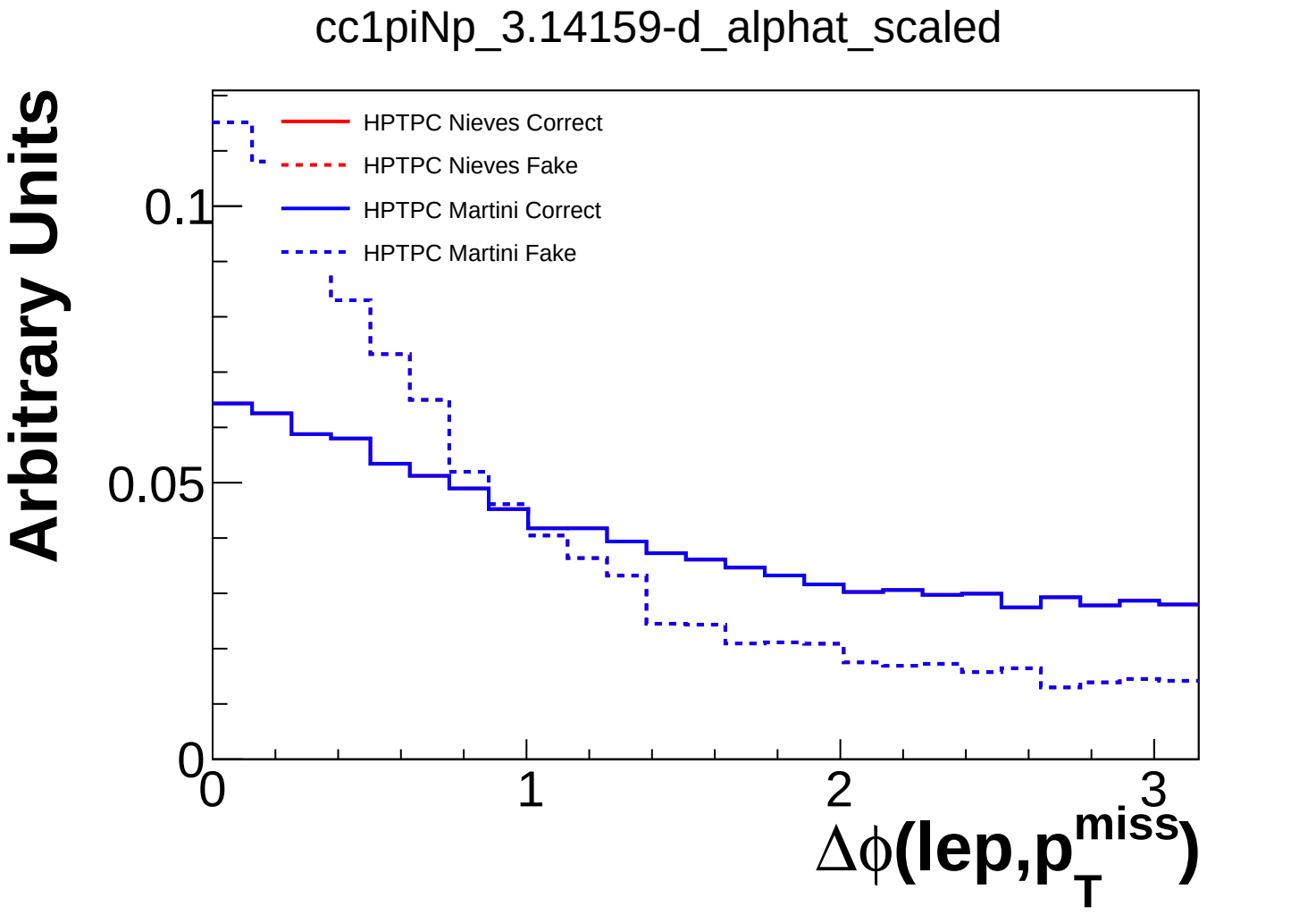
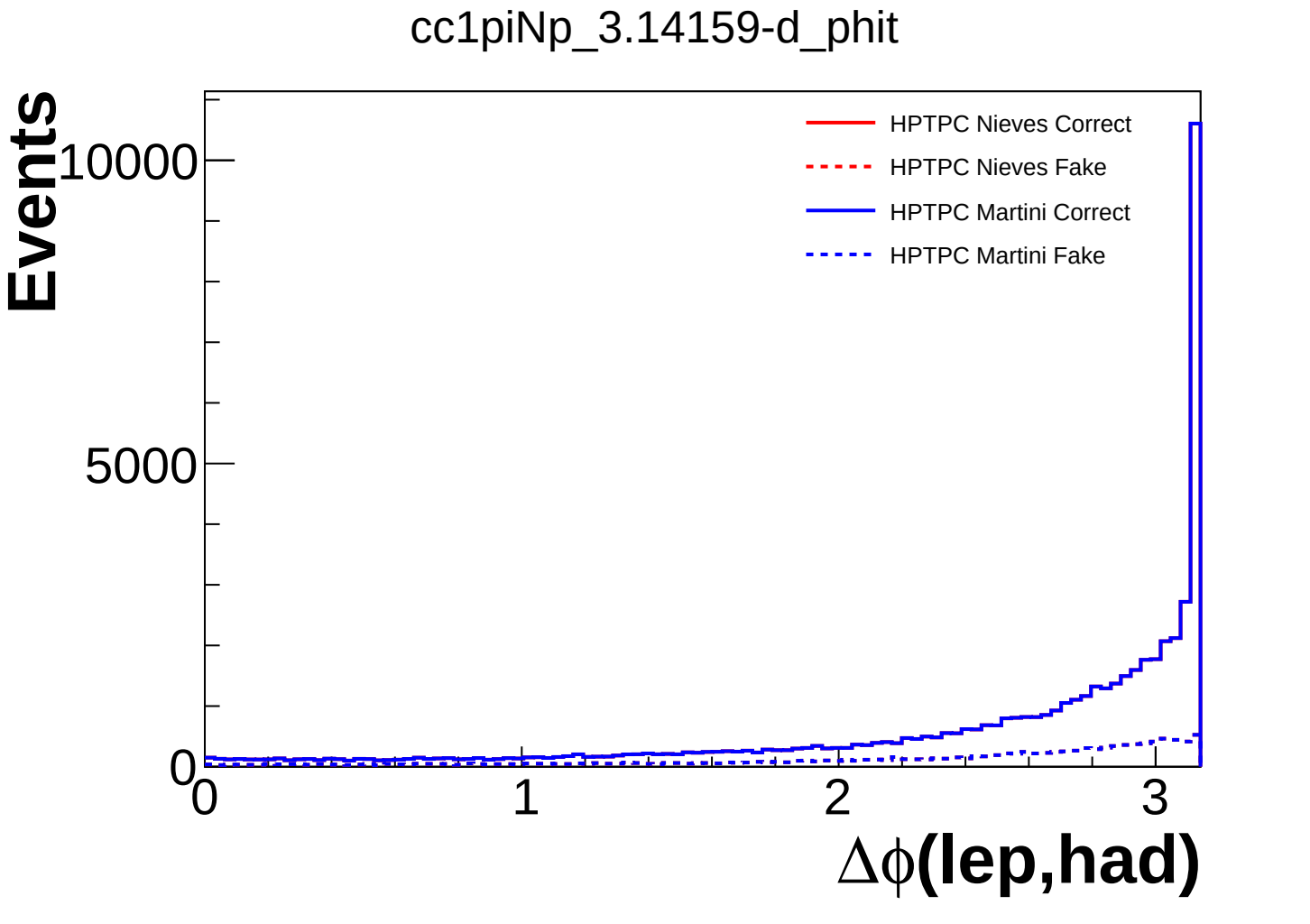
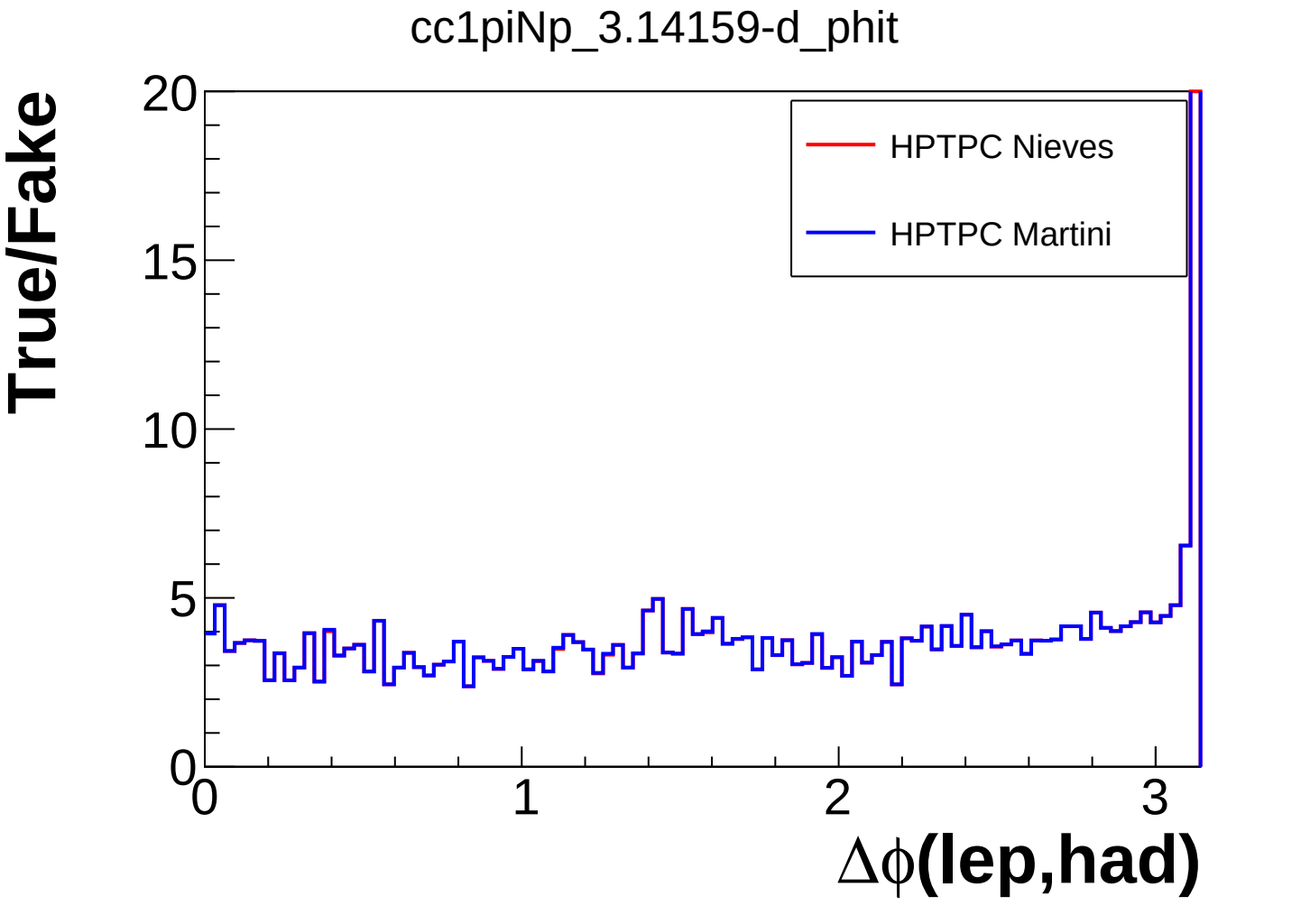
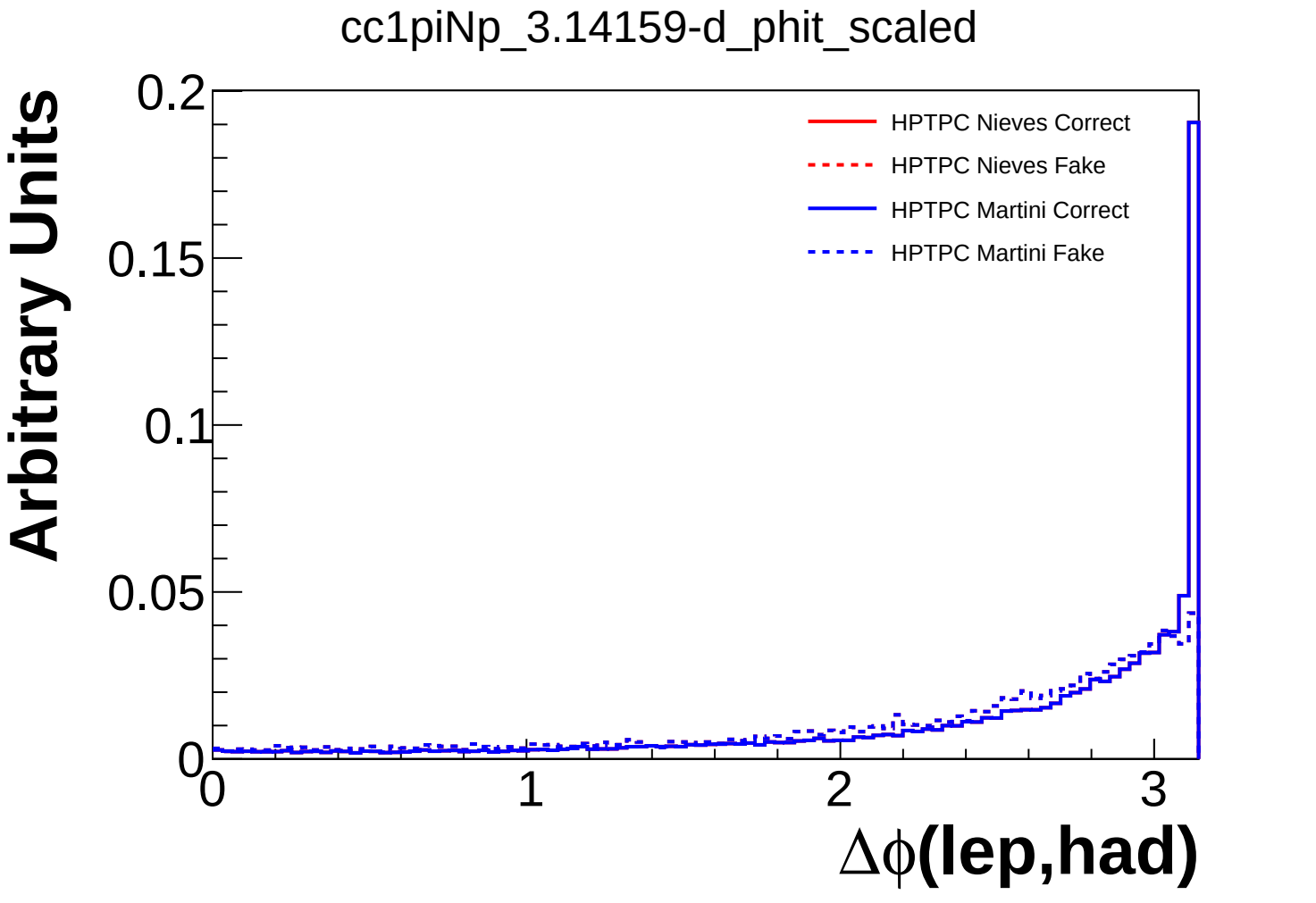

cc1piNp_3.14159-d_alphat
Events
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake
3000
2000
1000
0
0
1
2
3
Δϕ(lep,p_T^miss)

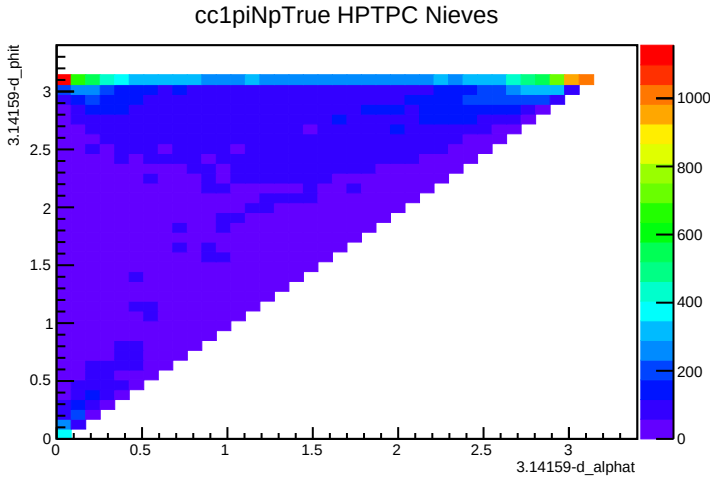

cc1piNp_3.14159-d_alphat
True/Fake
20
15
10
5
0
0
1
2
3
HPTPC Nieves
HPTPC Martini
Δϕ(lep,p_T^miss)

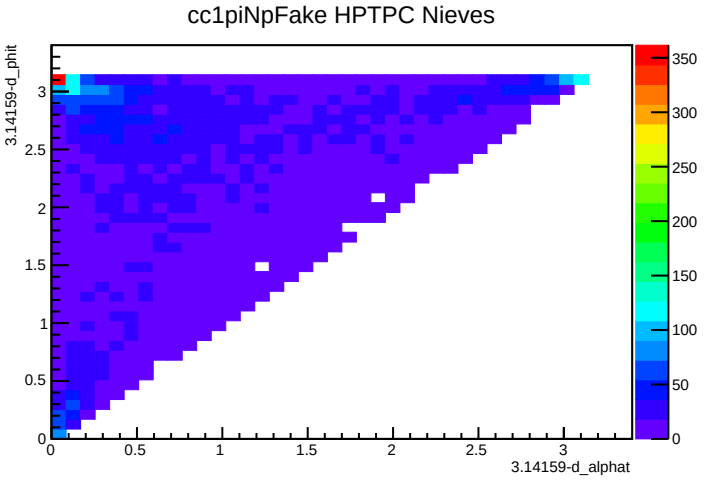

cc1piNp_3.14159-d_alphat_scaled
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake
Arbitrary Units
0.1
0.05
0
0
1
2
3
Δϕ(lep,p_T^miss)

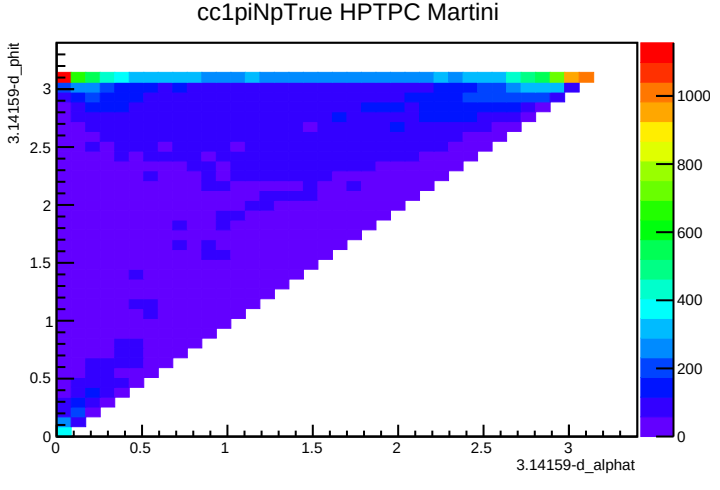

cc1piNp_3.14159-d_phit
Events
10000
5000
0
0
1
2
3
Δϕ(lep,had)
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

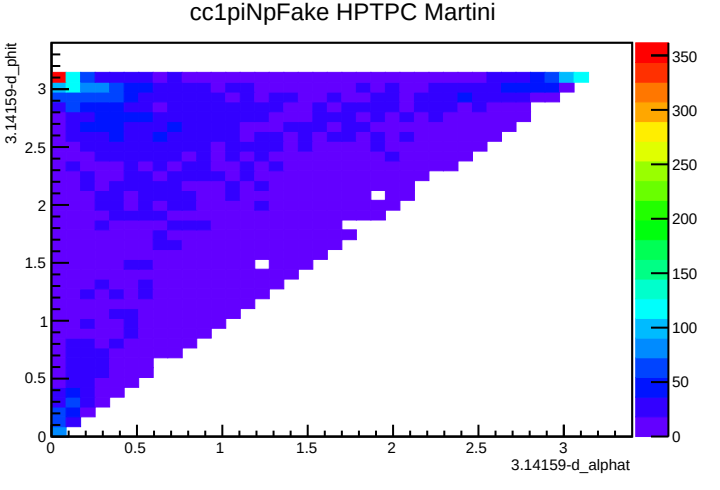

cc1piNp_3.14159-d_phit
True/Fake
20
15
10
5
0
0
1
2
3
Δϕ(lep,had)
HPTPC Nieves
HPTPC Martini

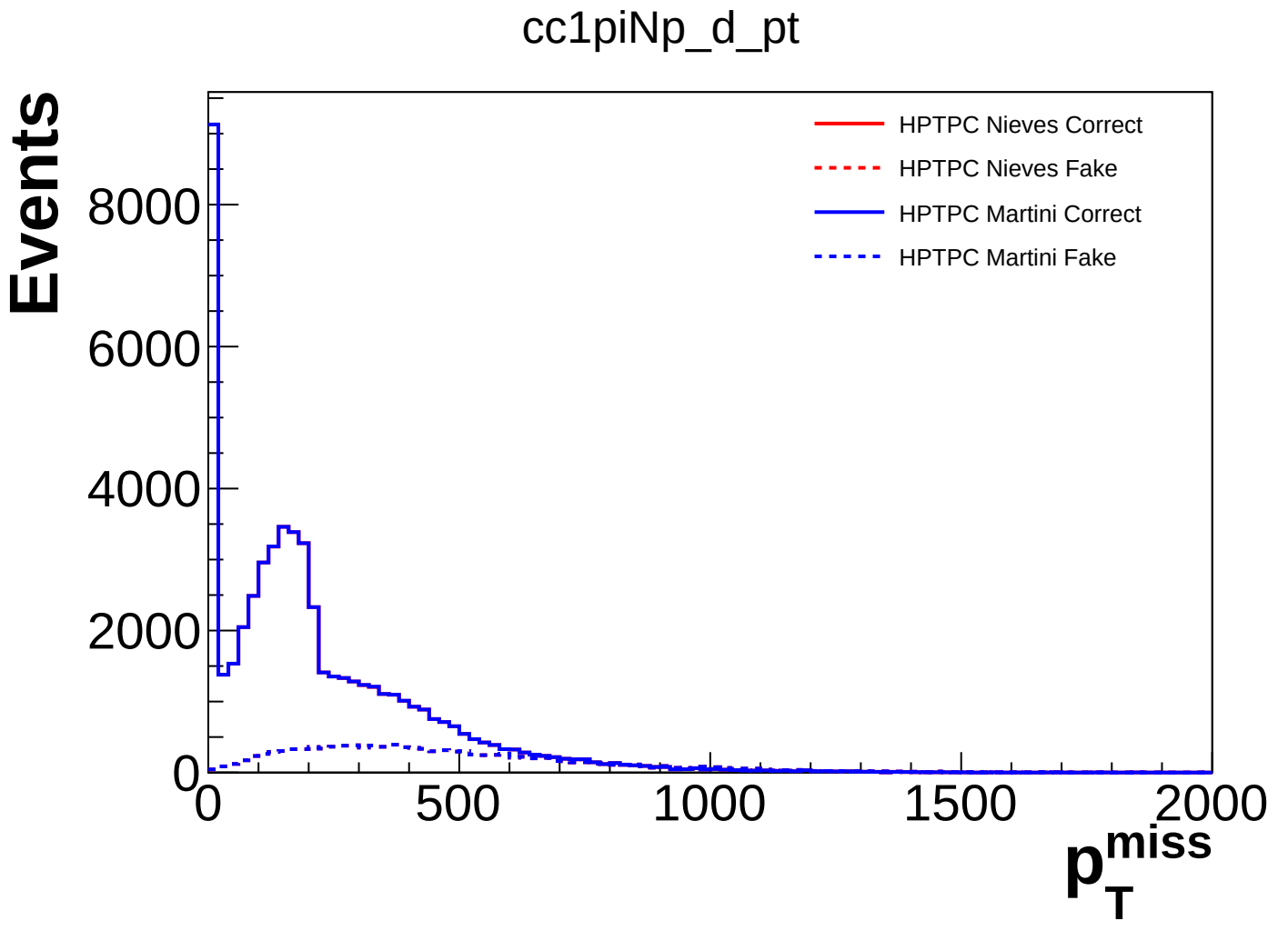

cc1piNp_3.14159-d_phit_scaled
Arbitrary Units
0.2
0.15
0.1
0.05
0
0
1
2
3
Δϕ(lep,had)
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

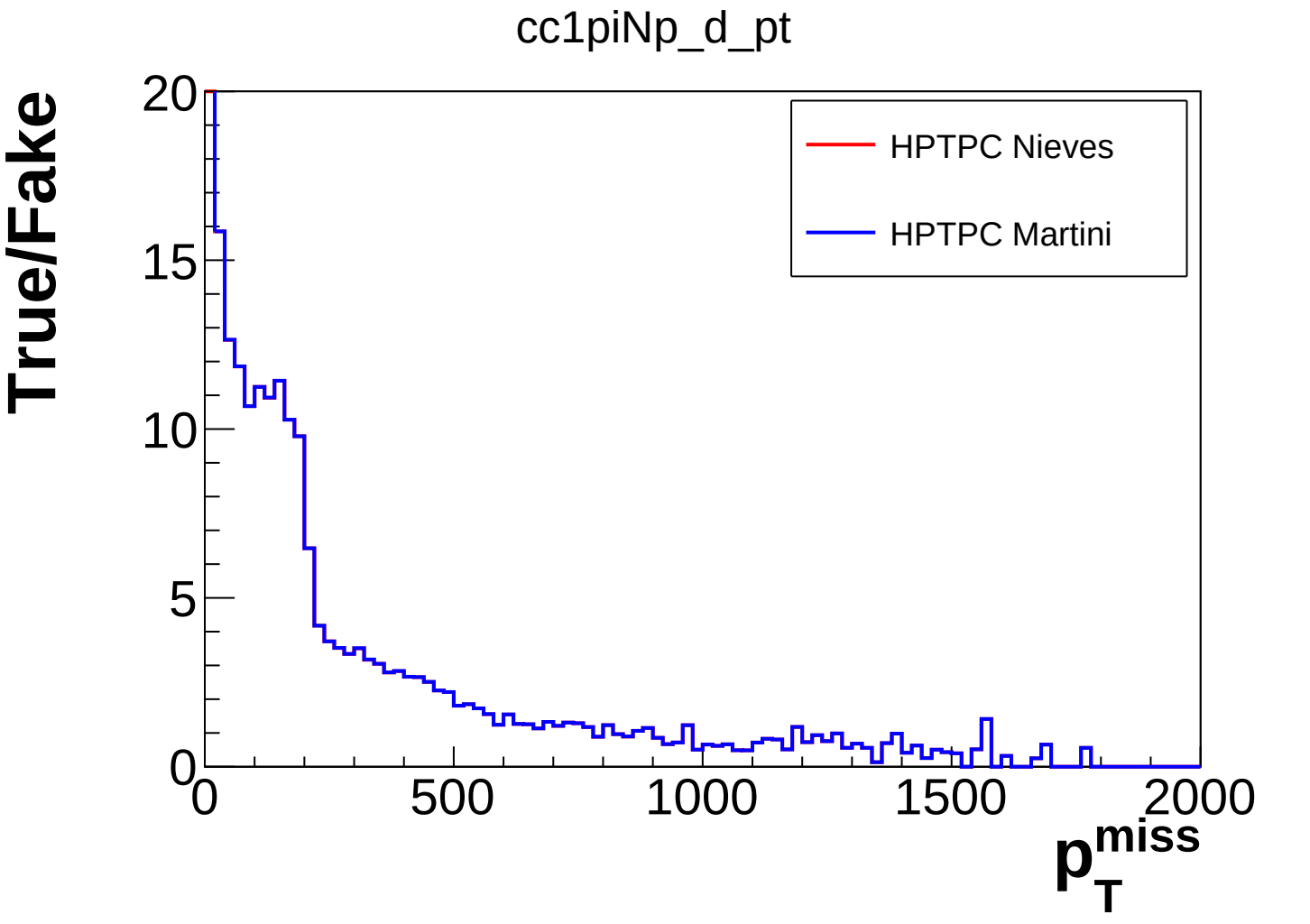

cc1piNpTrue HPTPC Nieves
3.14159-d_phit
3.14159-d_alphat
0
0.5
1
1.5
2
2.5
3
0
200
400
600
800
1000

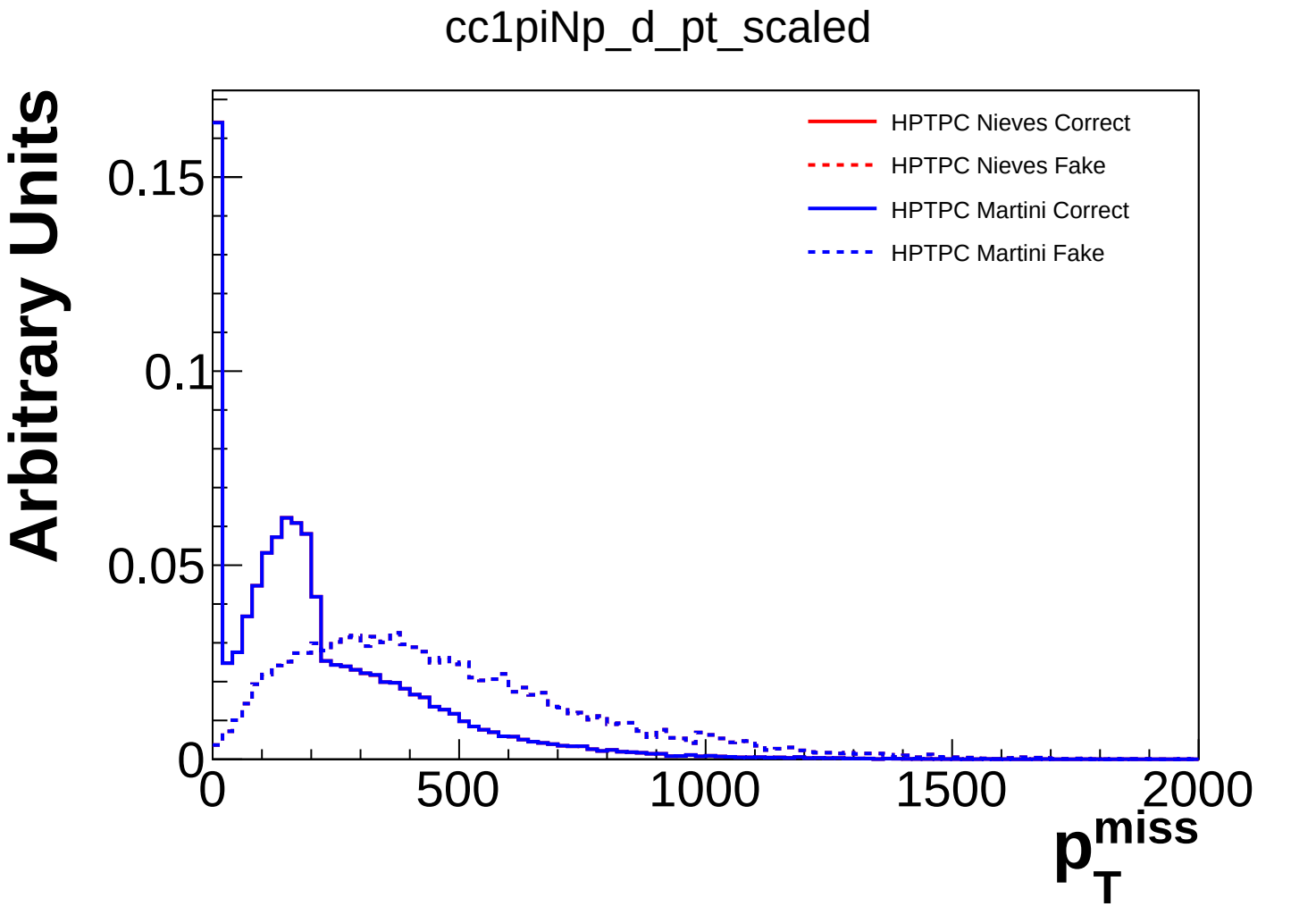

cc1piNpFake HPTPC Nieves
3.14159-d_phit
3.14159-d_alphat
0
0.5
1
1.5
2
2.5
3
0
50
100
150
200
250
300
350

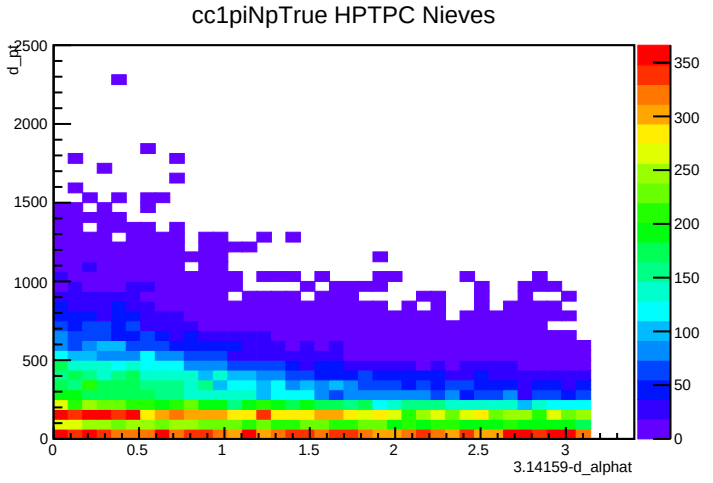

cc1piNpTrue HPTPC Martini
3.14159-d_phit
3.14159-d_alphat
0
0.5
1
1.5
2
2.5
3
0
200
400
600
800
1000

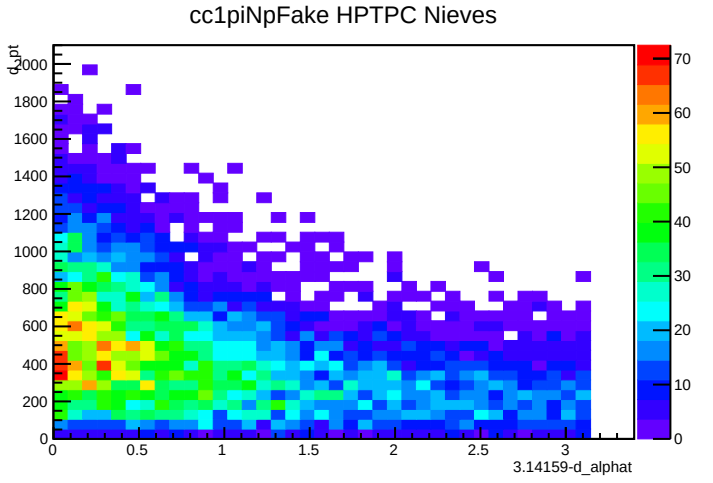

cc1piNpFake HPTPC Martini
3.14159-d_phit
3.14159-d_alphat
0
0.5
1
1.5
2
2.5
3
0
50
100
150
200
250
300
350

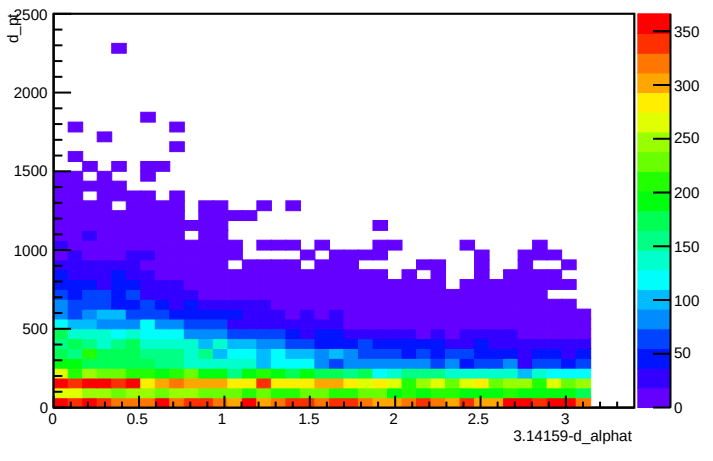

cc1piNp_d_pt
Events
8000
6000
4000
2000
0
0
500
1000
1500
2000
p_T^{miss}
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

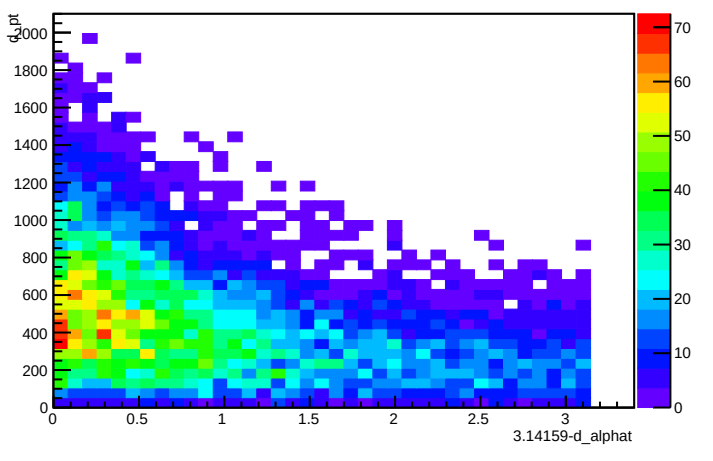

cc1piNp_d_pt
True/Fake
20
15
10
5
0
0
500
1000
1500
2000
p_T^{miss}
HPTPC Nieves
HPTPC Martini

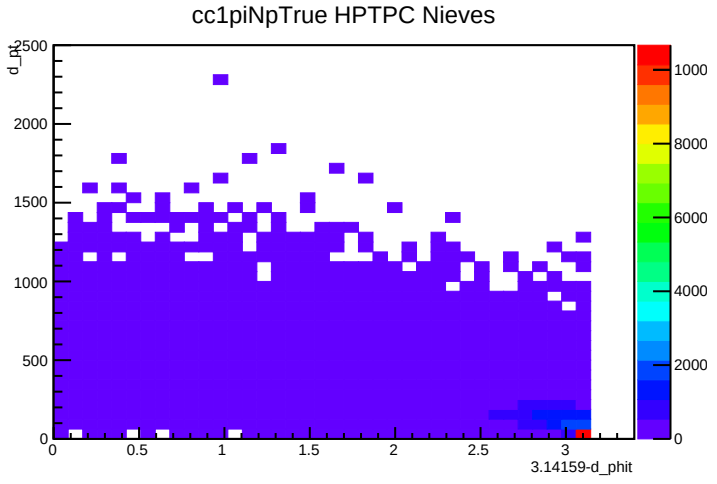

cc1piNp_d_pt_scaled
Arbitrary Units
0.15
0.1
0.05
0
0
500
1000
1500
2000
p_T^{miss}
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

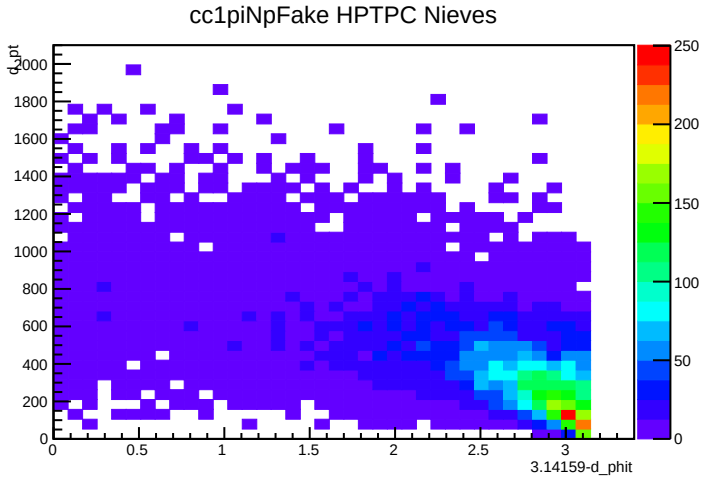

cc1piNpTrue HPTPC Nieves
d_pt
3.14159-d_alphat

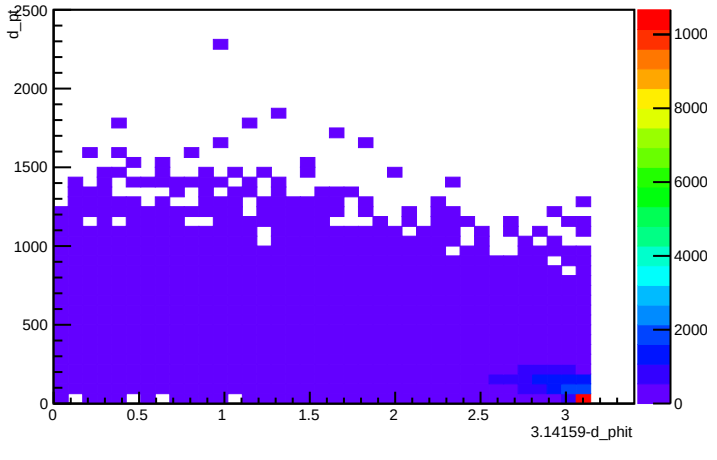

cc1piNpFake HPTPC Nieves
d_pt
3.14159-d_alphat

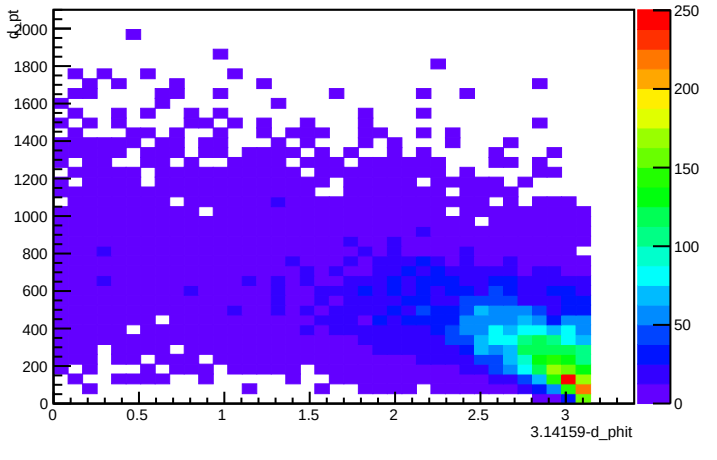

cc1piNpTrue HPTPC Martini
d_pt
3.14159-d_alphat

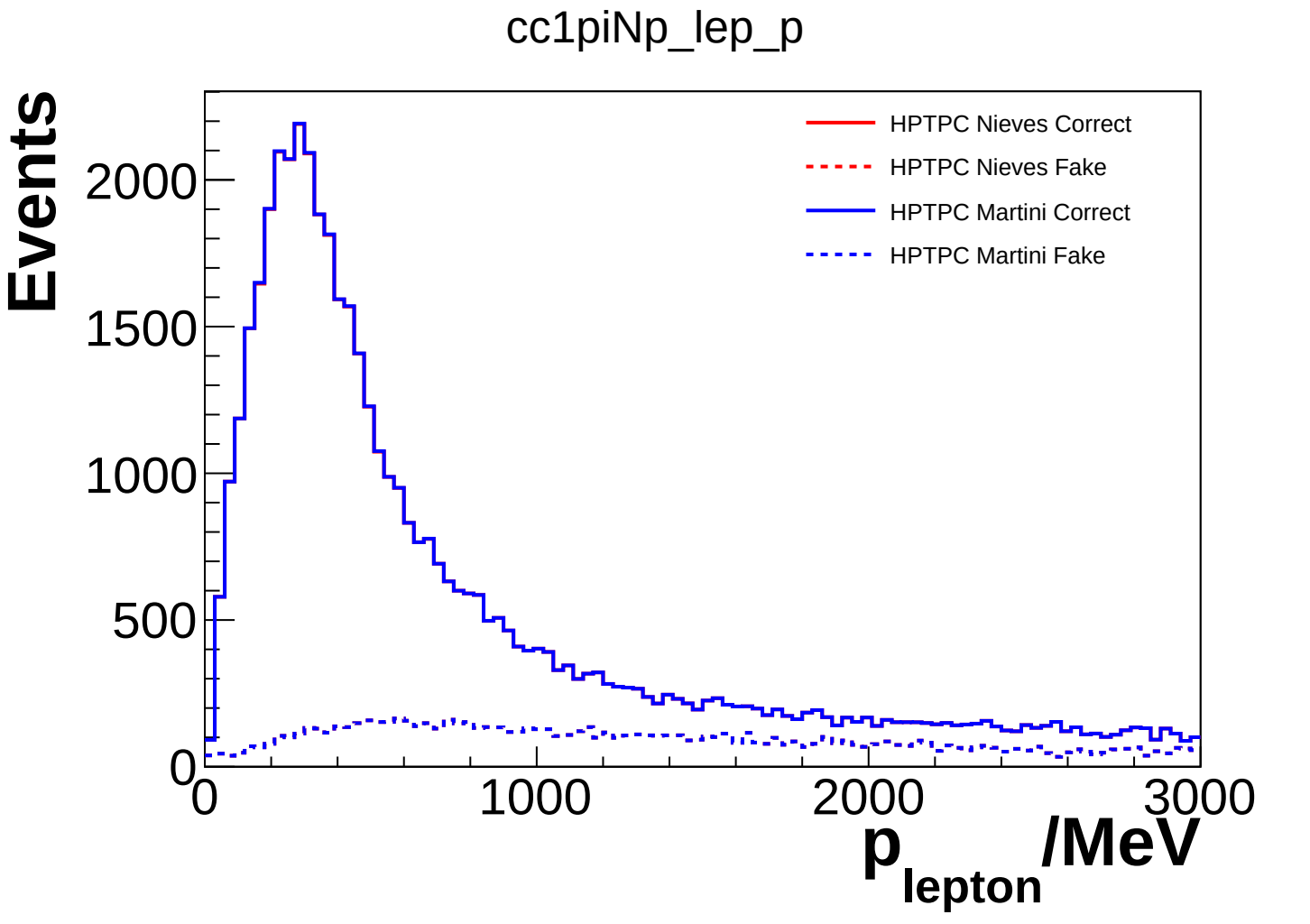

cc1piNpFake HPTPC Martini
d_pt
3.14159-d_alphat

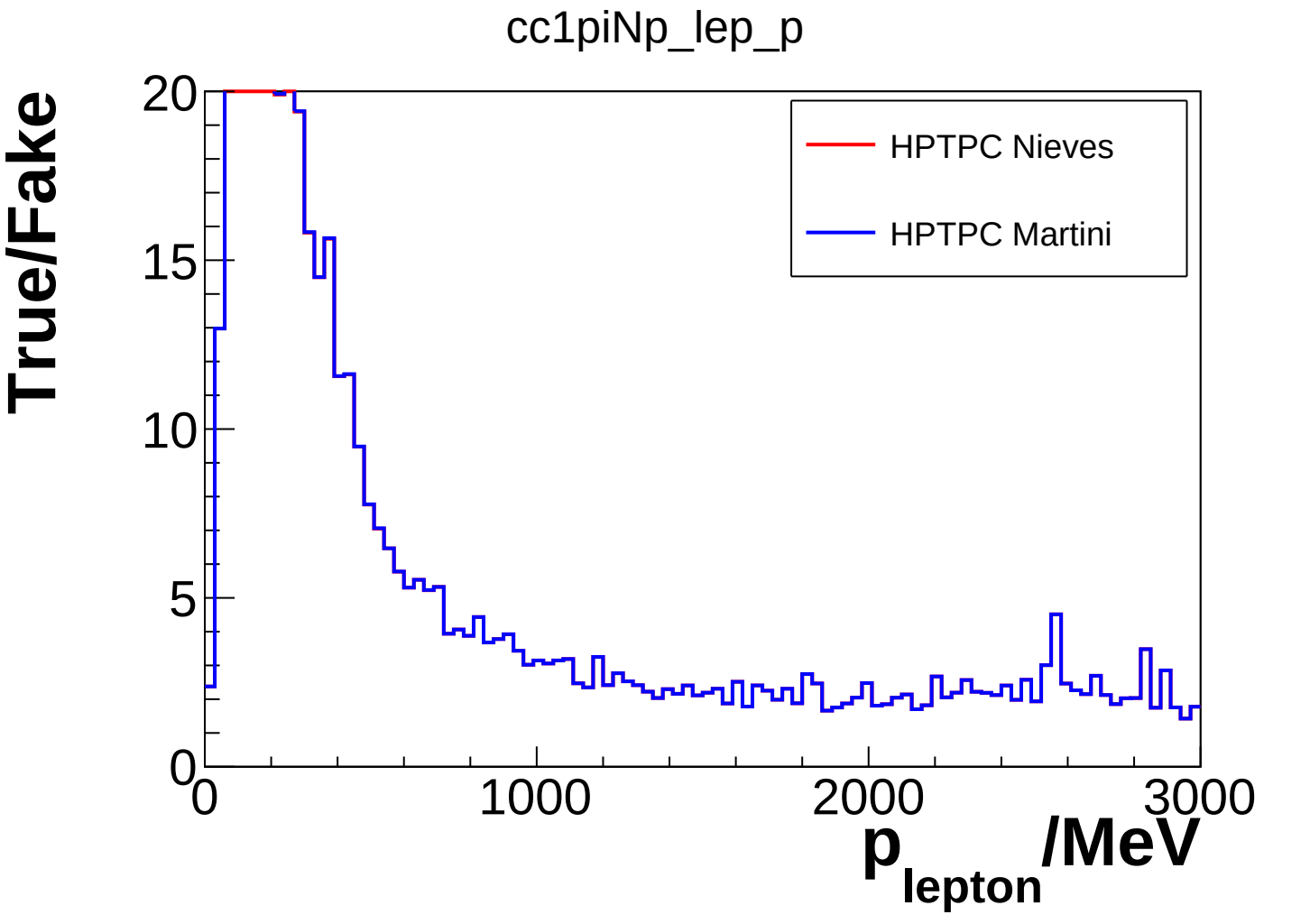

cc1piNpTrue HPTPC Nieves
d_pt
3.14159-d_phit

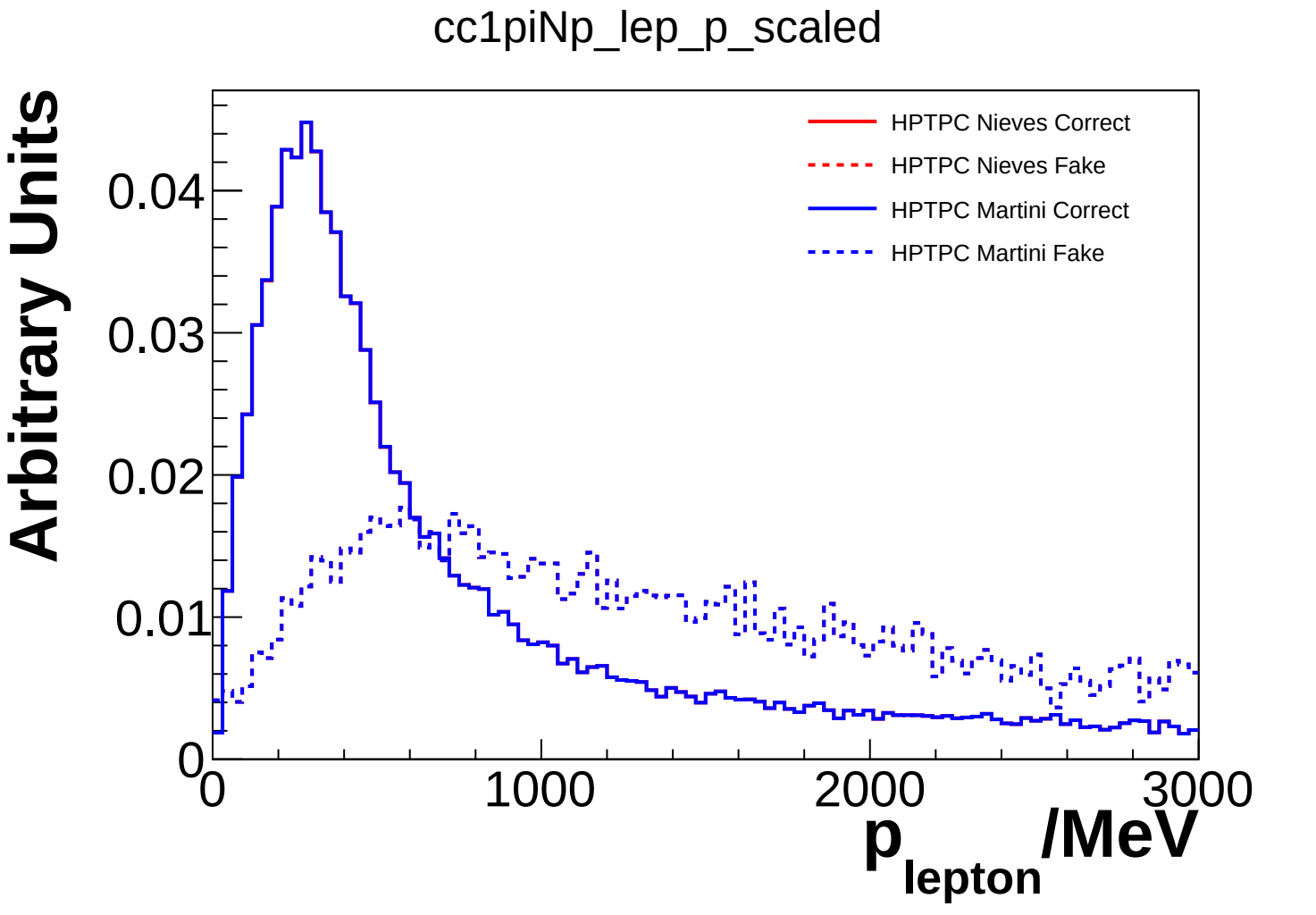

cc1piNpFake HPTPC Nieves
d_pt
3.14159-d_phit

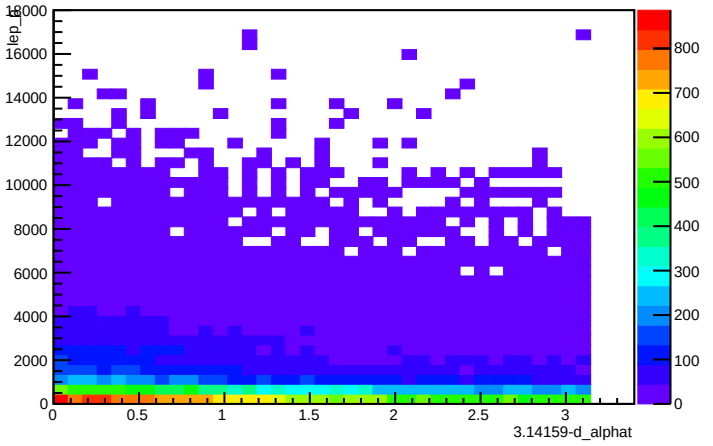

cc1piNpTrue HPTPC Martini
d_pt
3.14159-d_phit

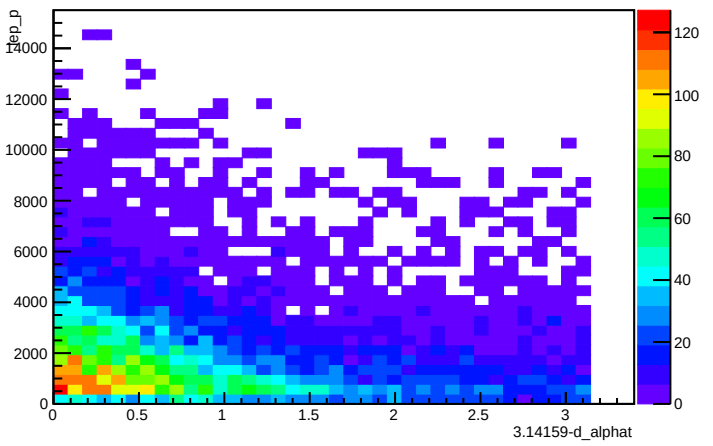

cc1piNpFake HPTPC Martini
d_pt
3.14159-d_phit

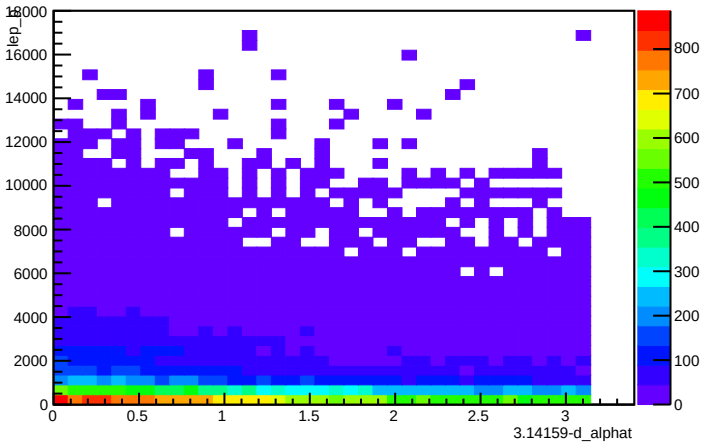

cc1piNp_lep_p
Events
2000
1500
1000
500
0
0
1000
2000
3000
p lepton /MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

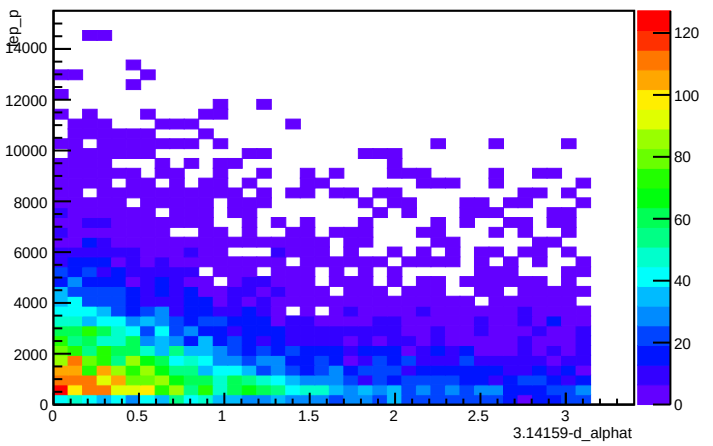

cc1piNp_lep_p
True/Fake
20
15
10
5
0
0
1000
2000
3000
p_{lepton} /MeV
HPTPC Nieves
HPTPC Martini


cc1piNp_lep_p_scaled
Arbitrary Units
0.04
0.03
0.02
0.01
0
0
1000
2000
3000
p lepton /MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

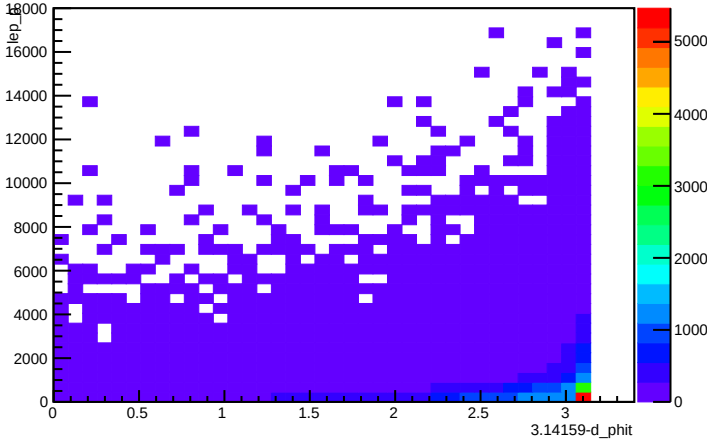

cc1piNpTrue HPTPC Nieves
lep_p
3.14159-d_alphat


cc1piNpFake HPTPC Nieves
lep_p
3.14159-d_alphat

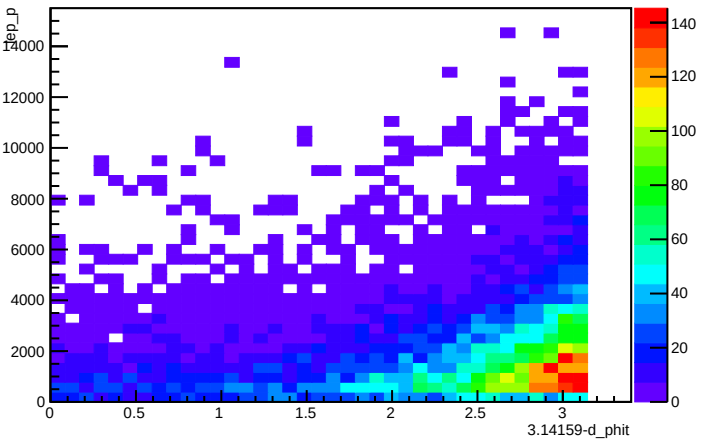

cc1piNpTrue HPTPC Martini
lep_p
3.14159-d_alphat


cc1piNpFake HPTPC Martini
lep_p
3.14159-d_alphat

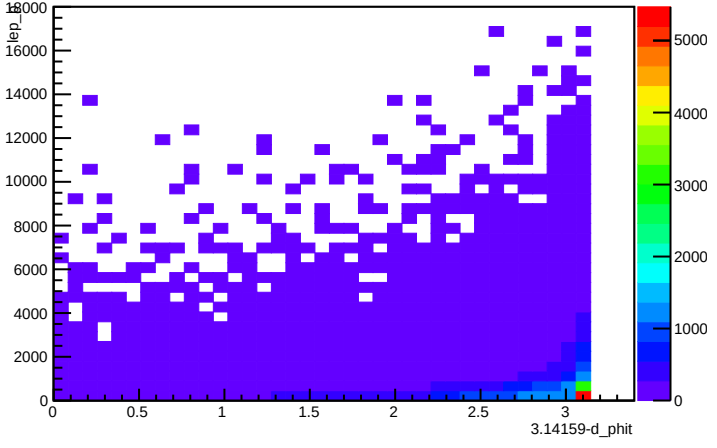
cc1piNpTrue HPTPC Nieves



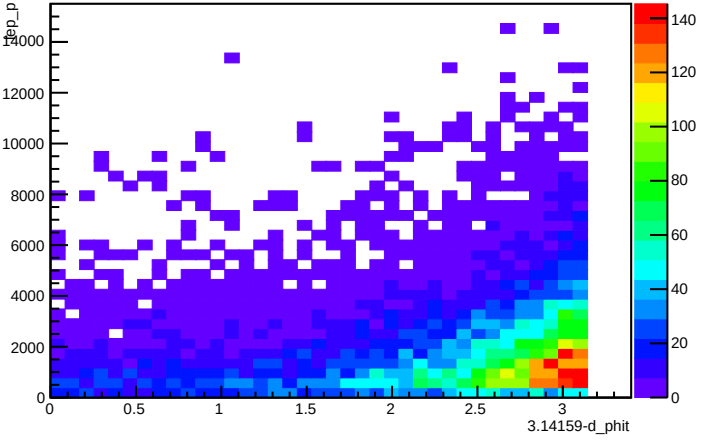
cc1piNpFake HPTPC Nieves

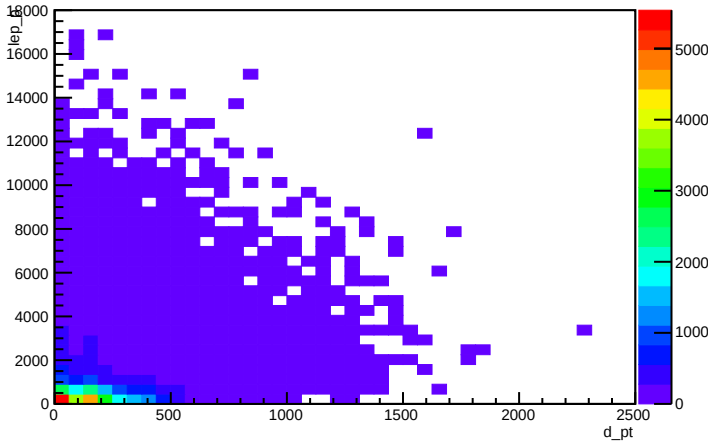


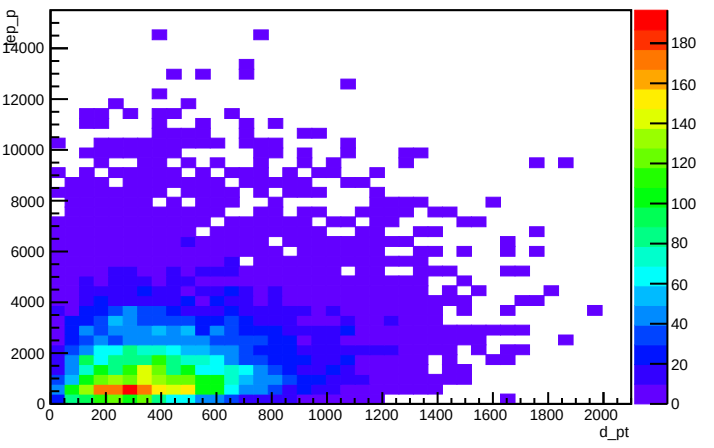
cc1piNpTrue HPTPC Martini

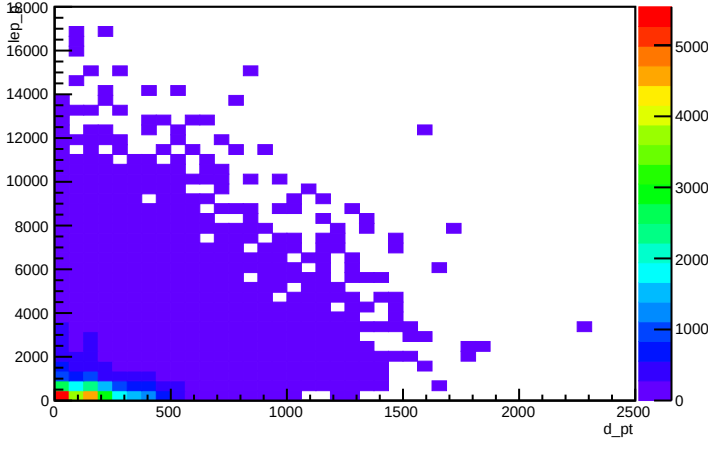


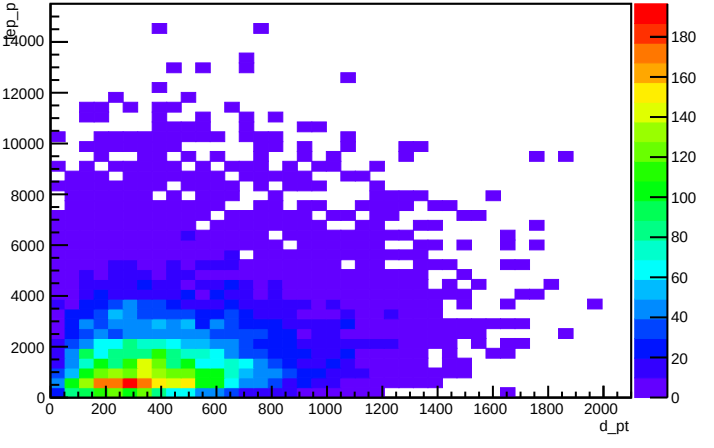
cc1piNpFake HPTPC Martini

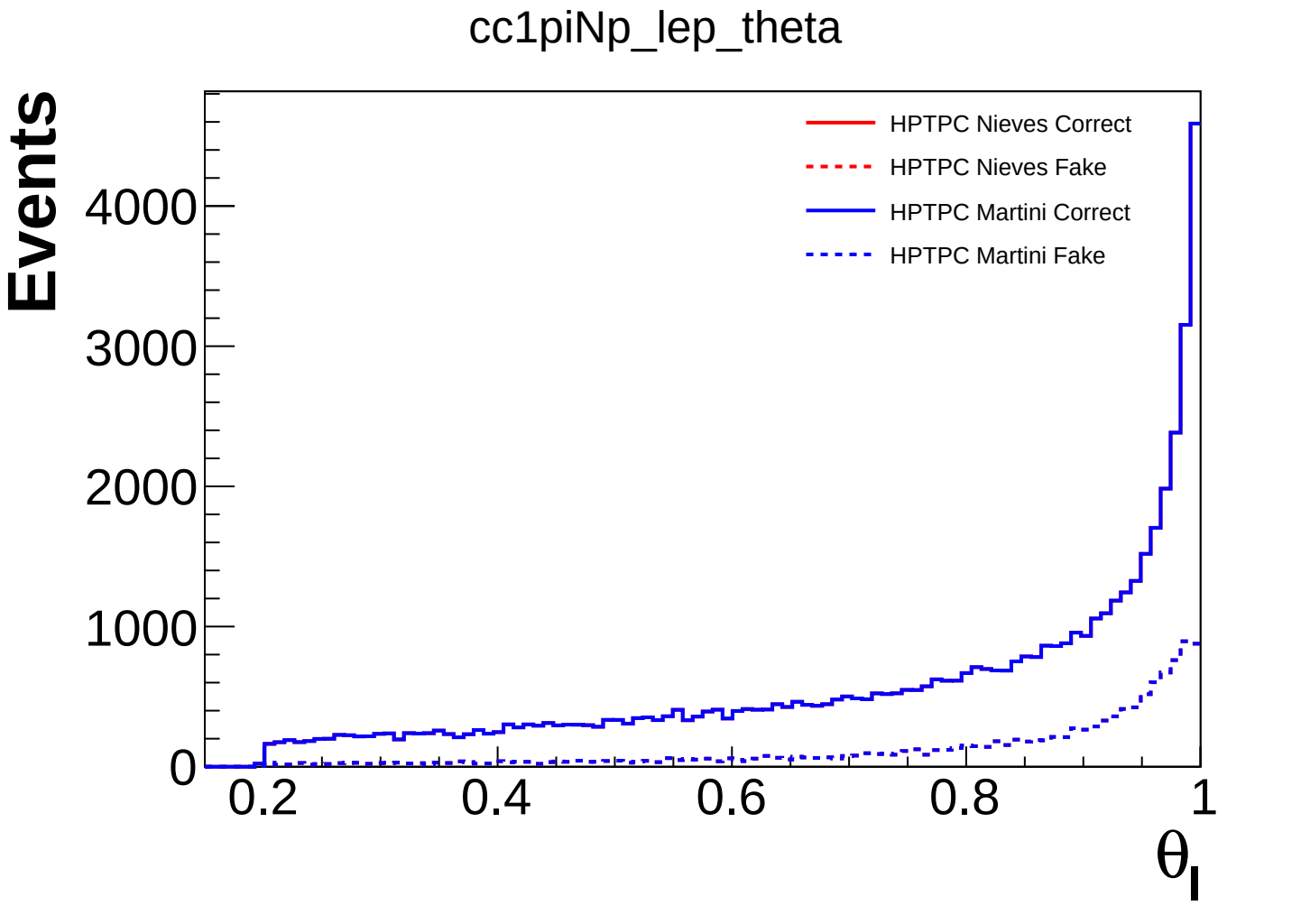


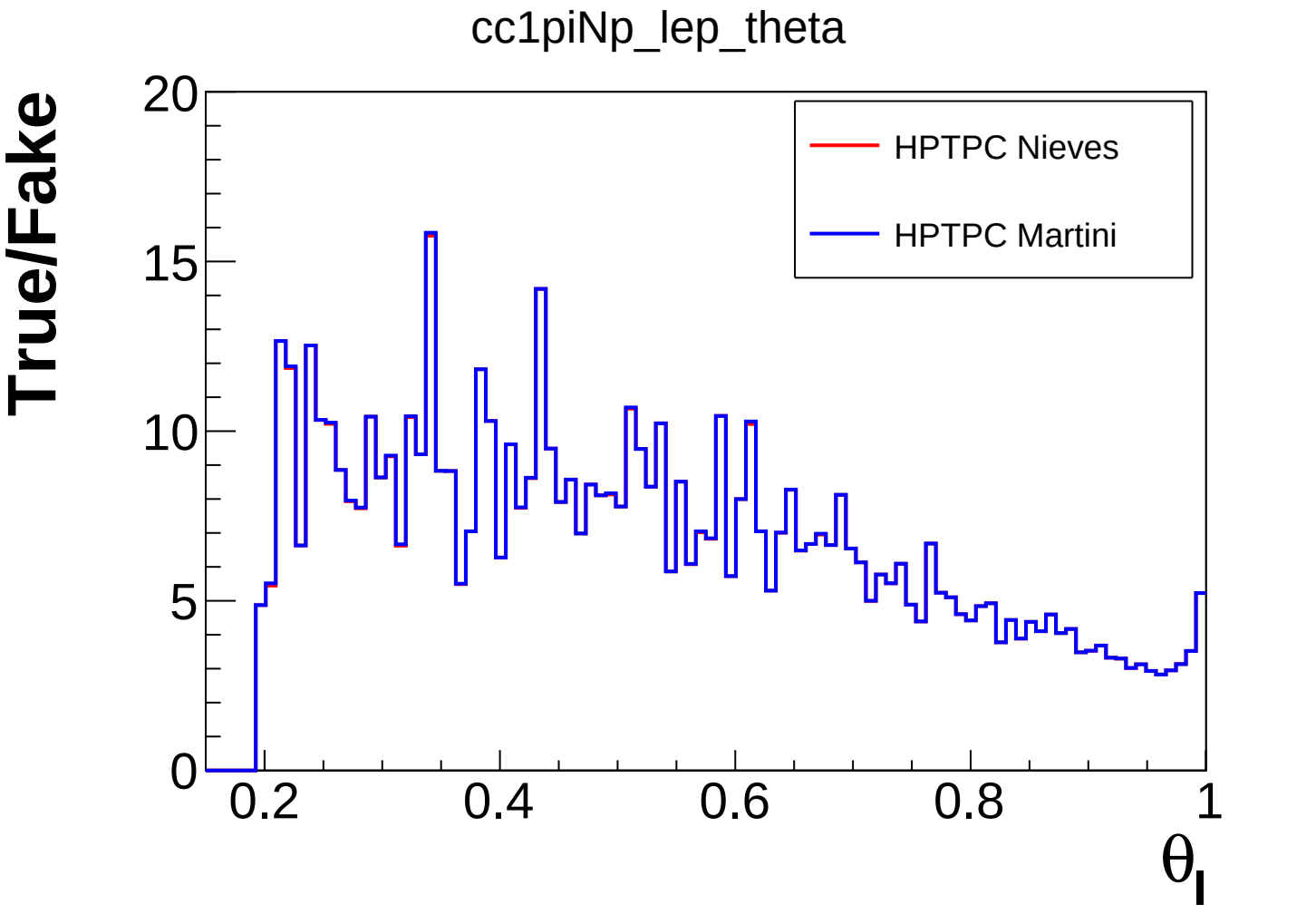

cc1piNpTrue HPTPC Nieves
lep_p
d_pt

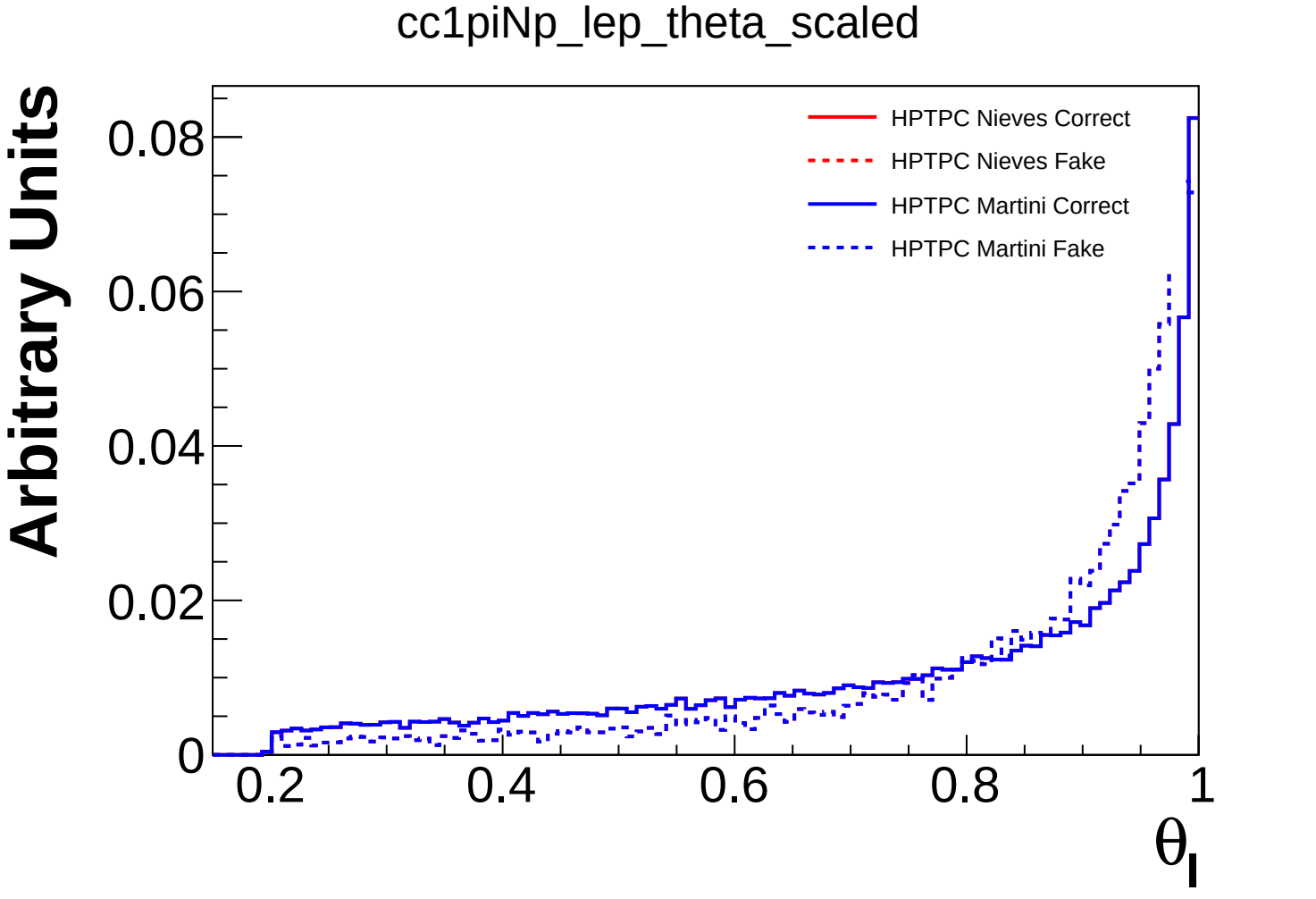

cc1piNpFake HPTPC Nieves
lep_p
d_pt

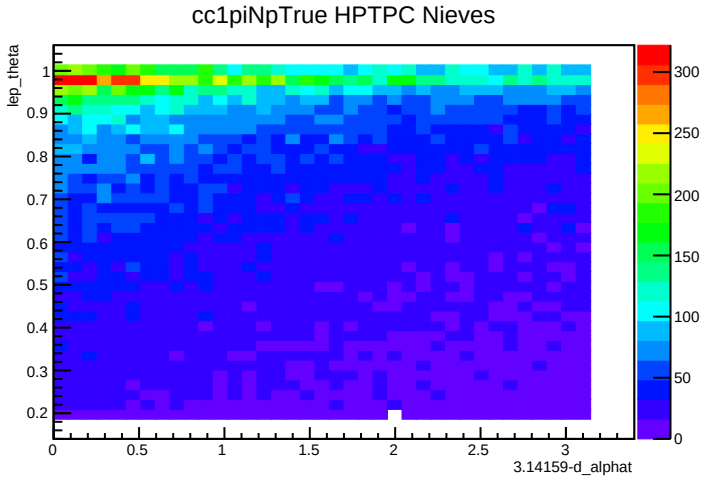

cc1piNpTrue HPTPC Martini
lep_p
d_pt

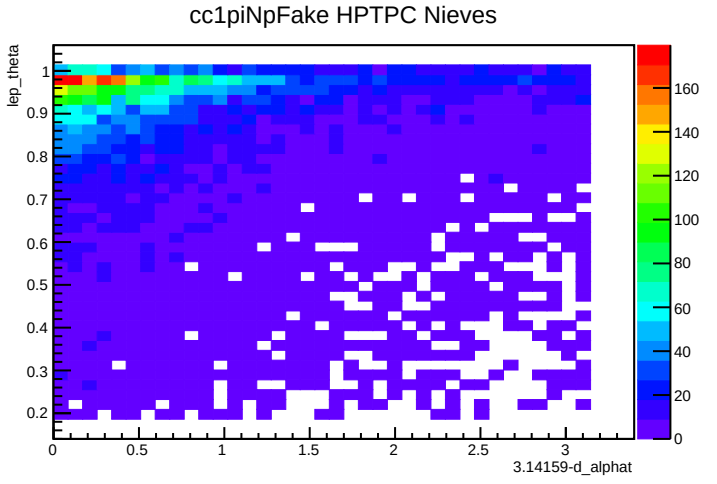

cc1piNpFake HPTPC Martini
lep_p
d_pt

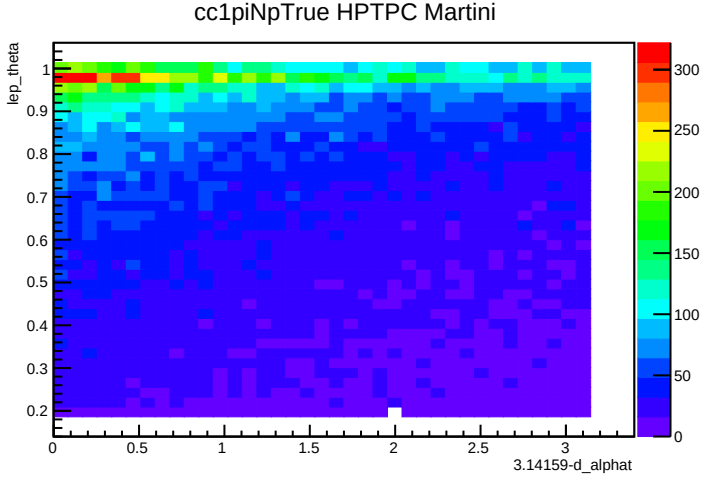

cc1piNp_lep_theta
Events
4000
3000
2000
1000
0
0.2
0.4
0.6
0.8
1
θl
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

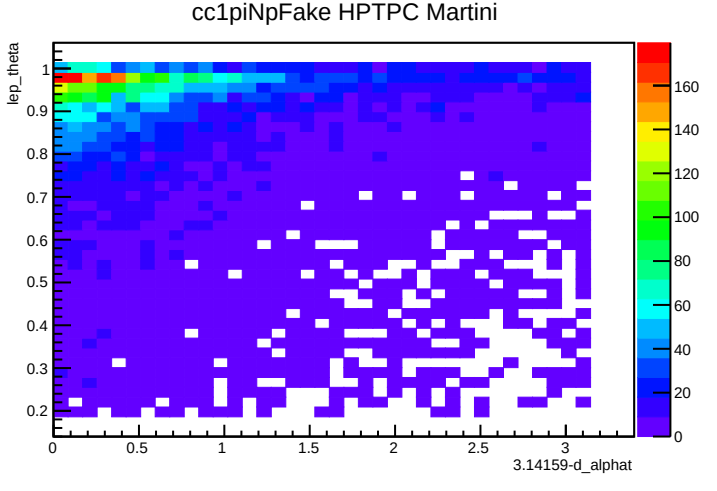

cc1piNp_lep_theta
True/Fake
20
15
10
5
0
0.2
0.4
0.6
0.8
1
θl
HPTPC Nieves
HPTPC Martini


cc1piNp_lep_theta_scaled
Arbitrary Units
0.08
0.06
0.04
0.02
0
0.2
0.4
0.6
0.8
1
θl
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake


cc1piNpTrue HPTPC Nieves
lep_theta
3.14159-d_alphat


cc1piNpFake HPTPC Nieves
lep_theta
3.14159-d_alphat


cc1piNpTrue HPTPC Martini
lep_theta
3.14159-d_alphat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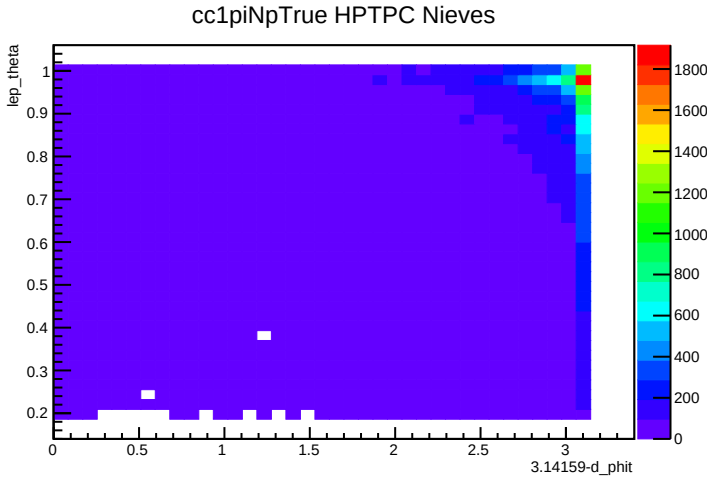
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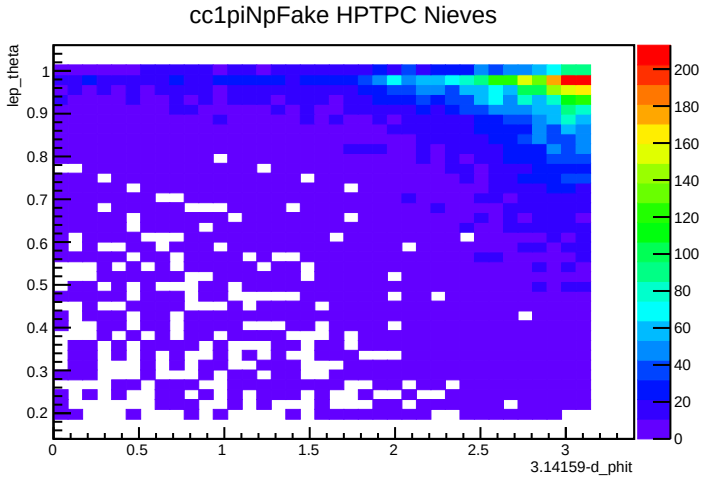
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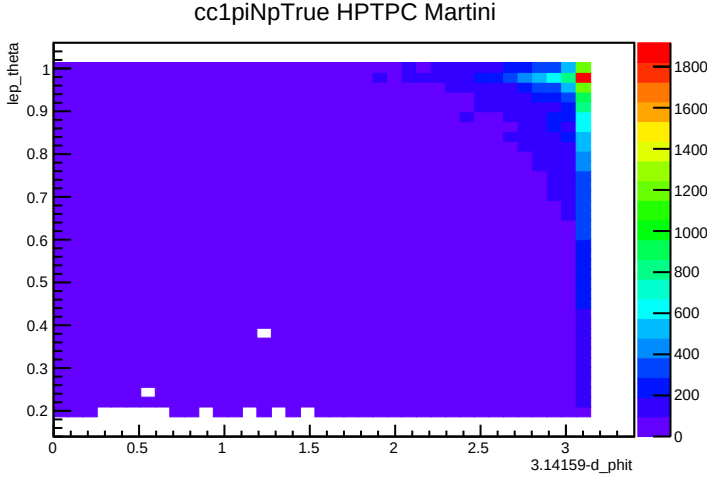
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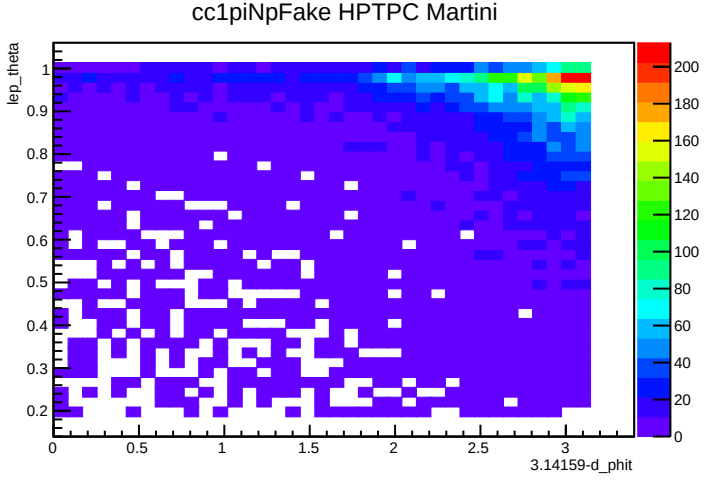
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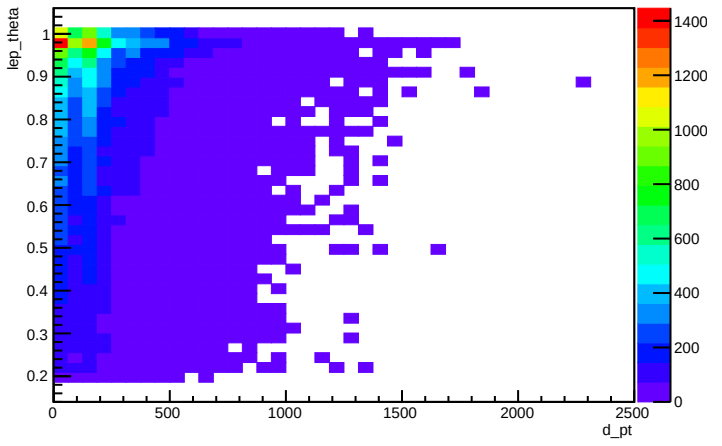
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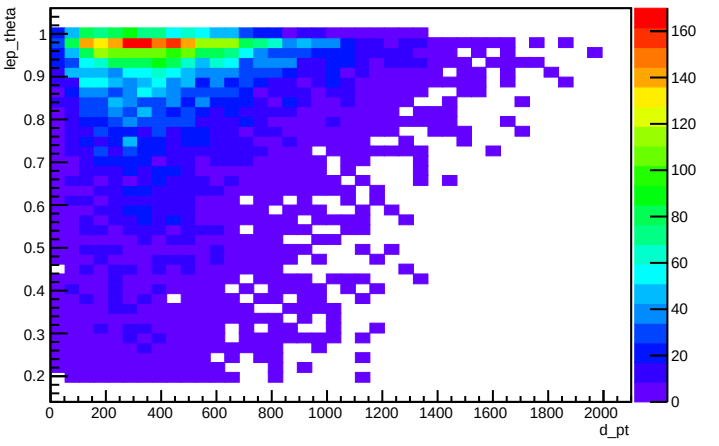
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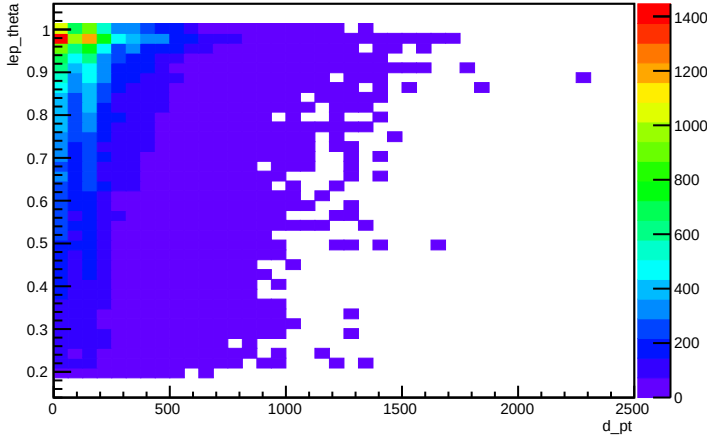
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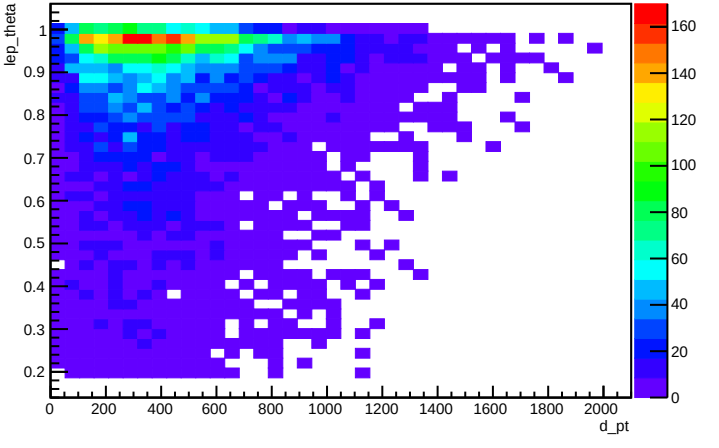
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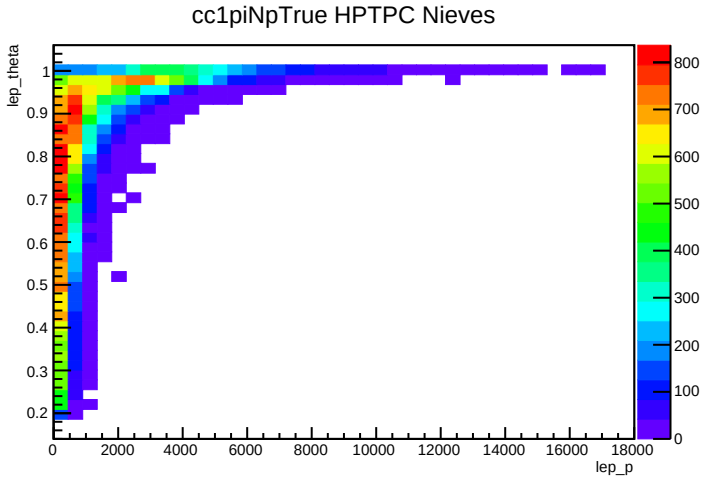
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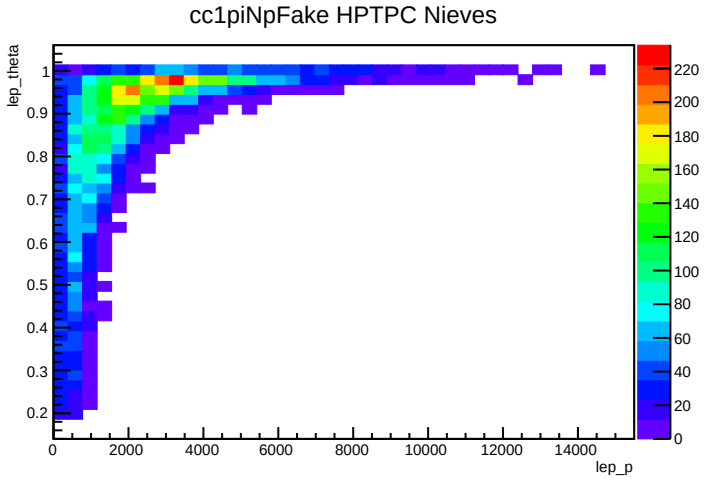
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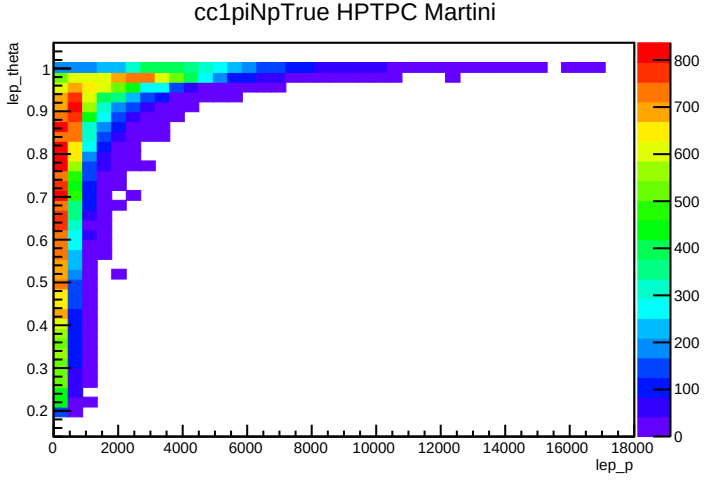
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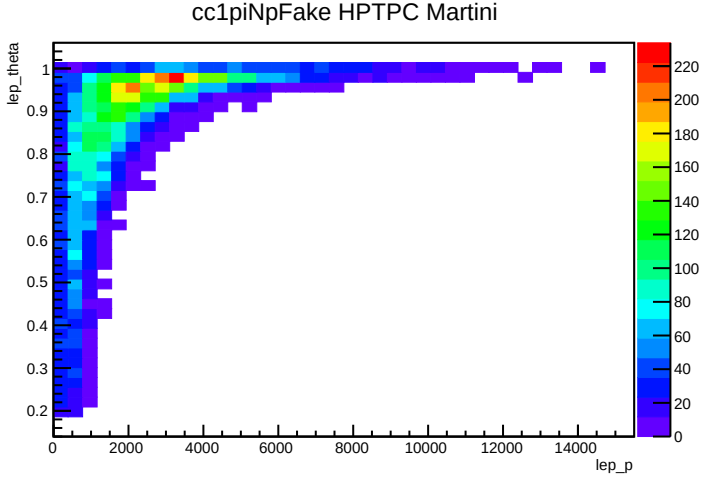
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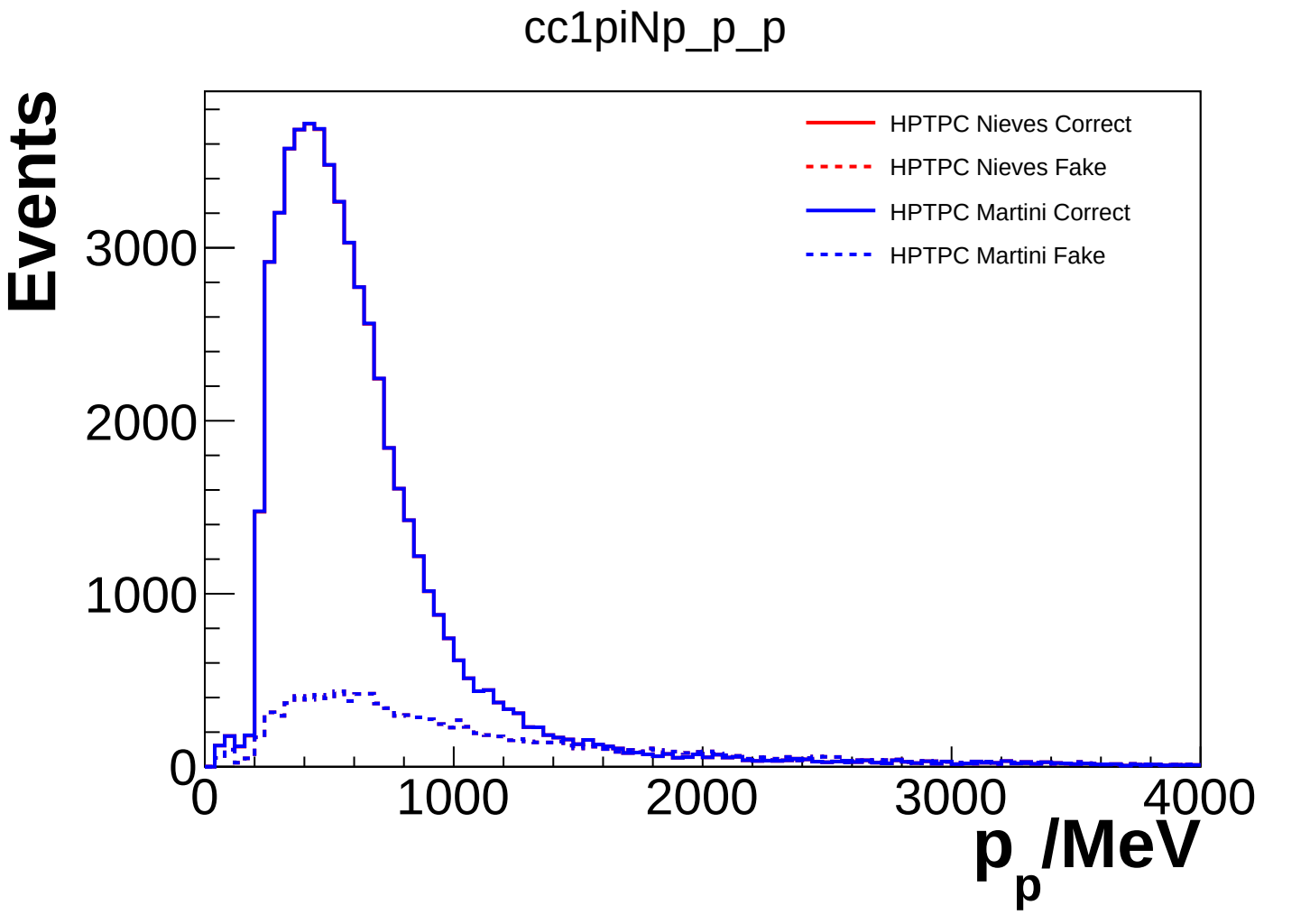
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p_p /MeV
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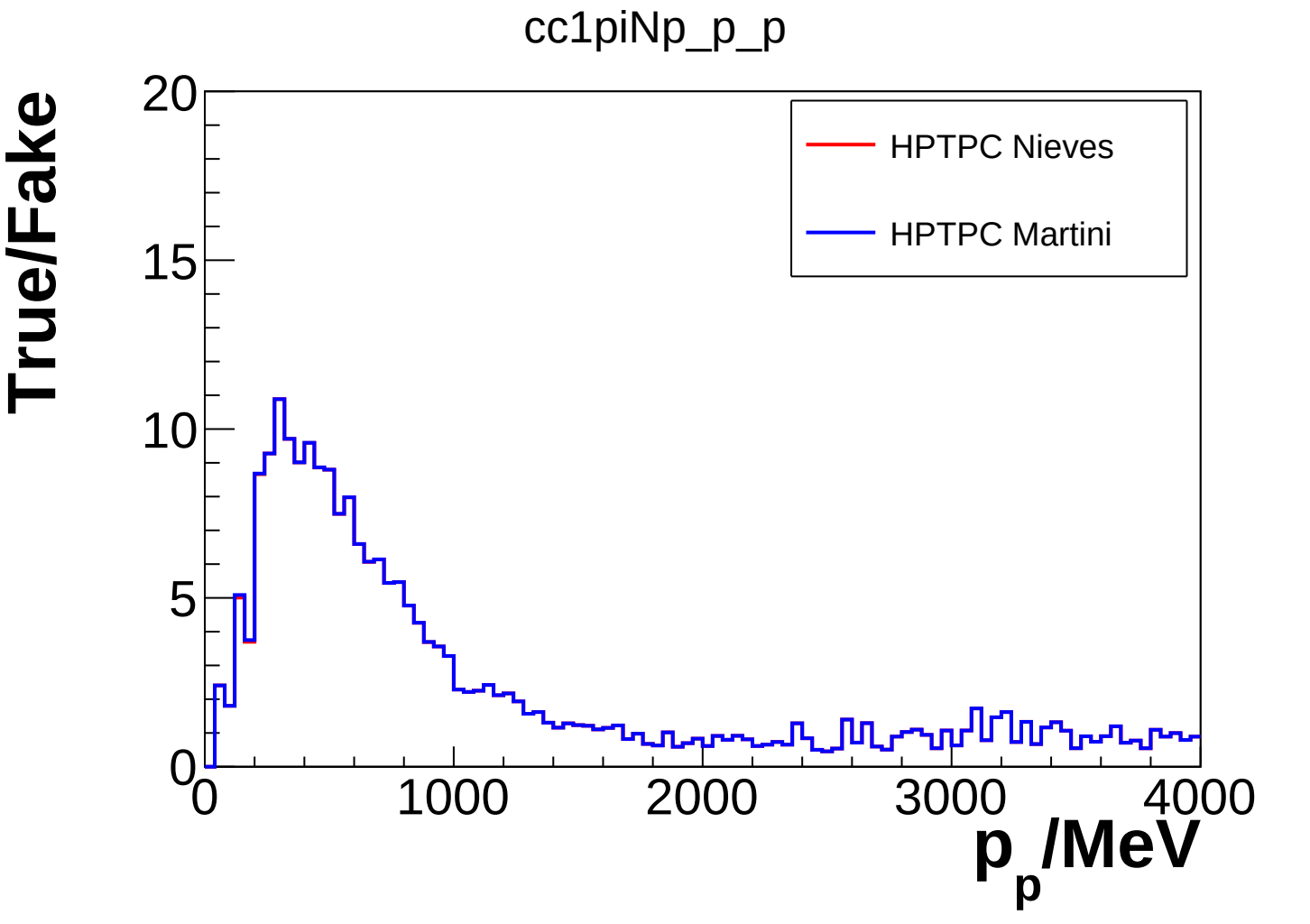
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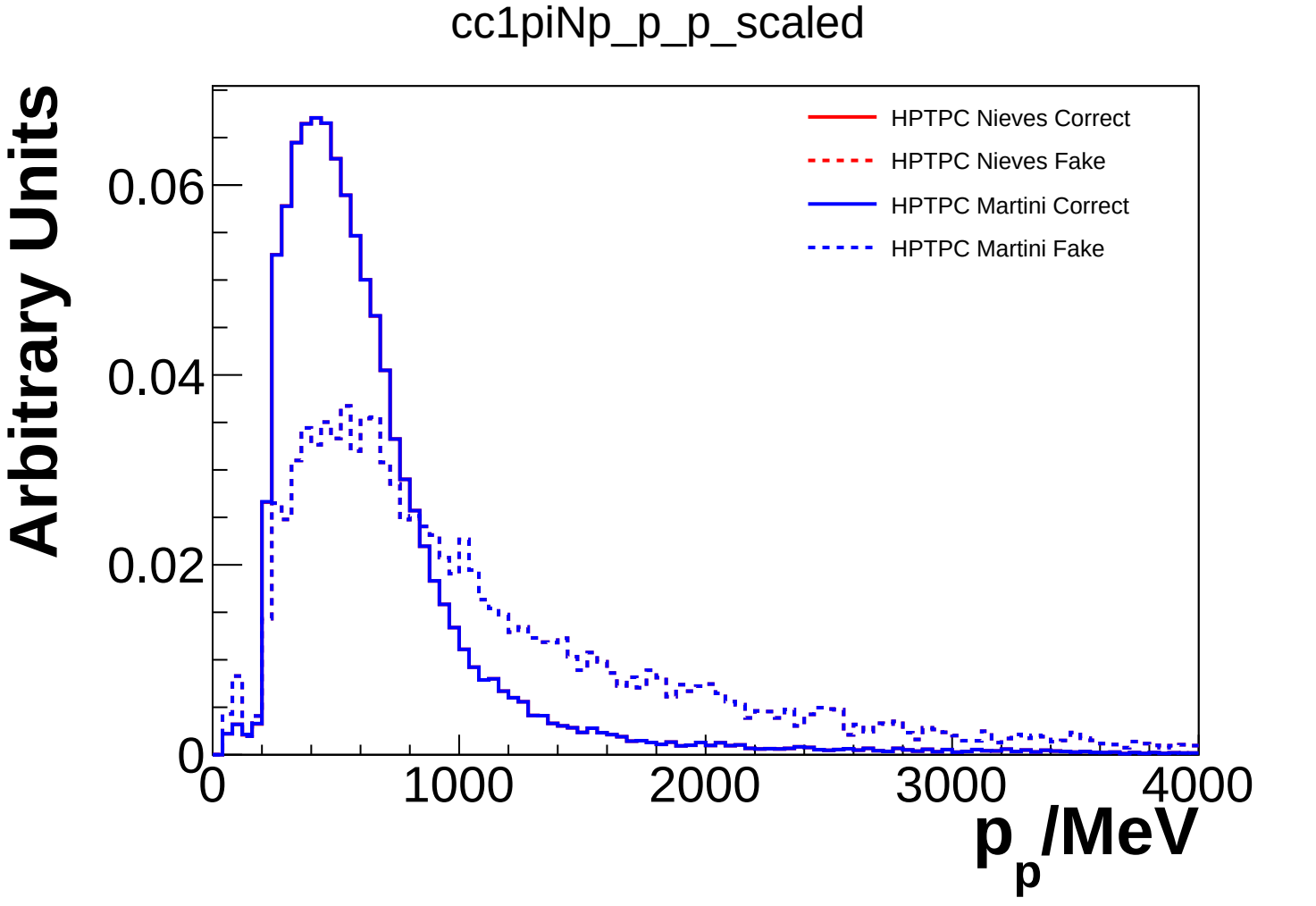
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HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake
Arbitrary Units
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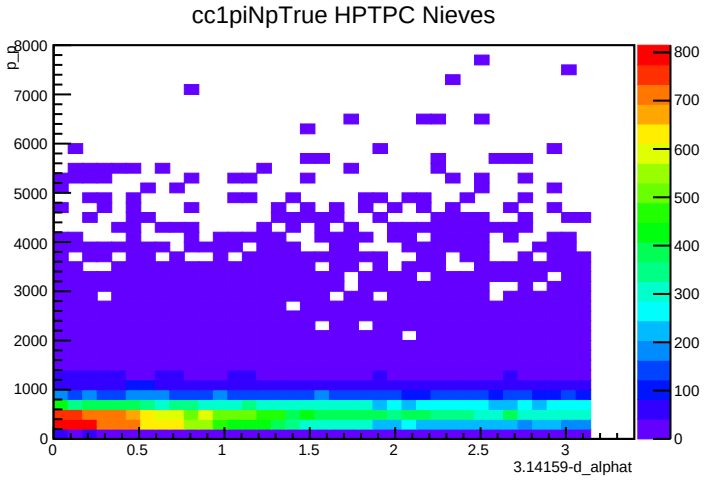
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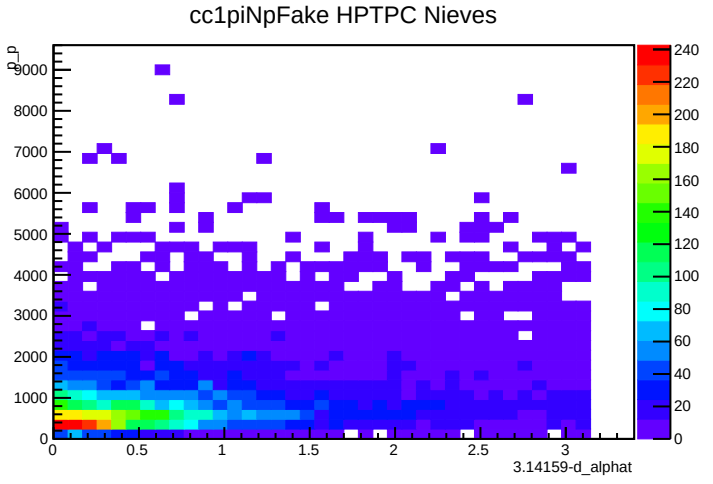
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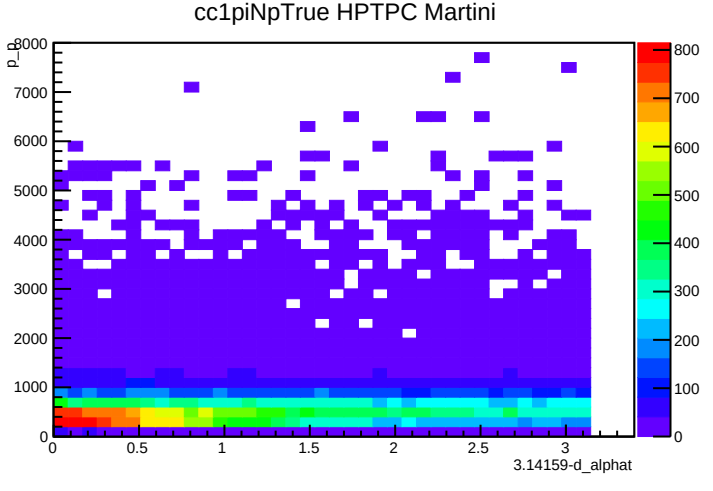
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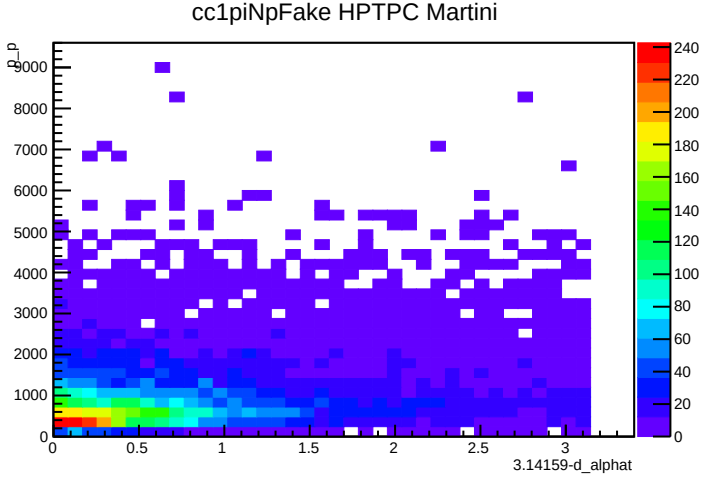
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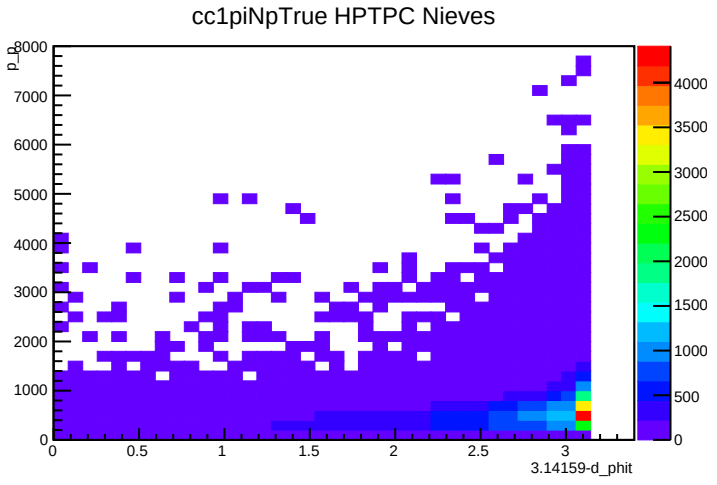
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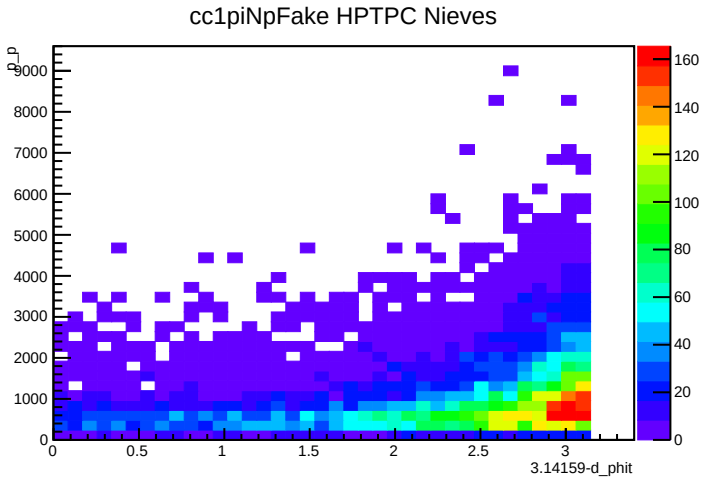
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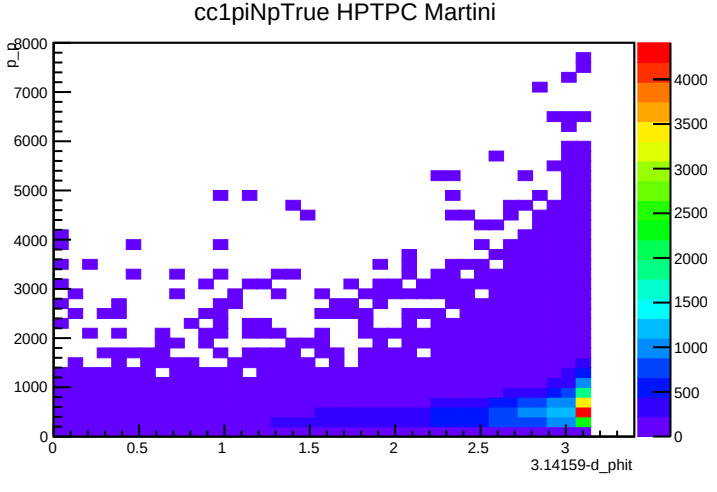
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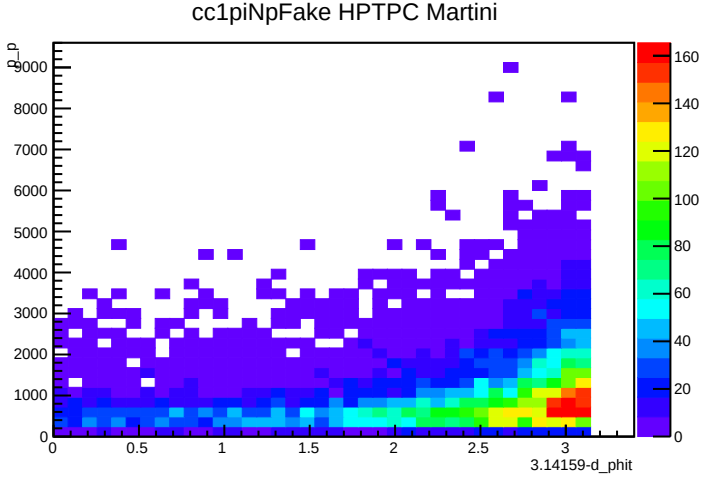
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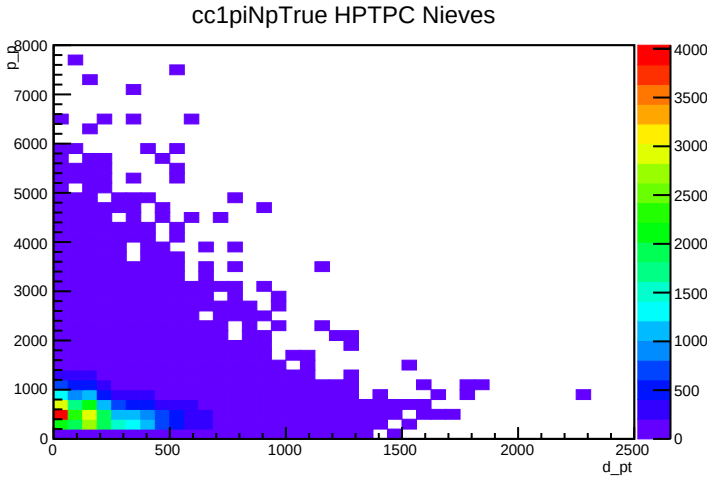
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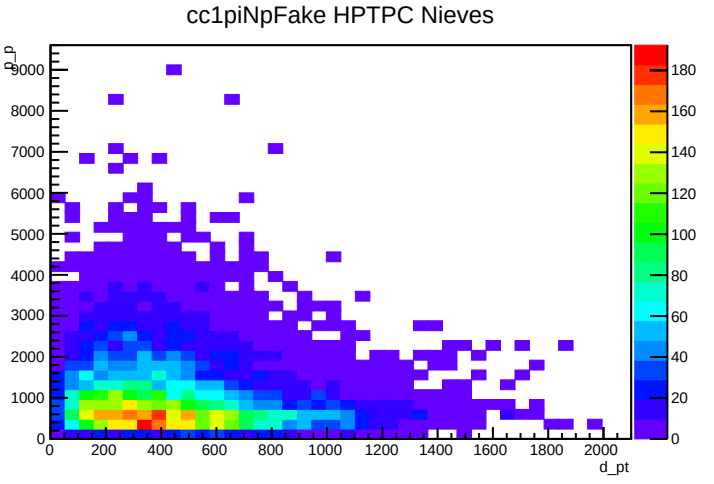
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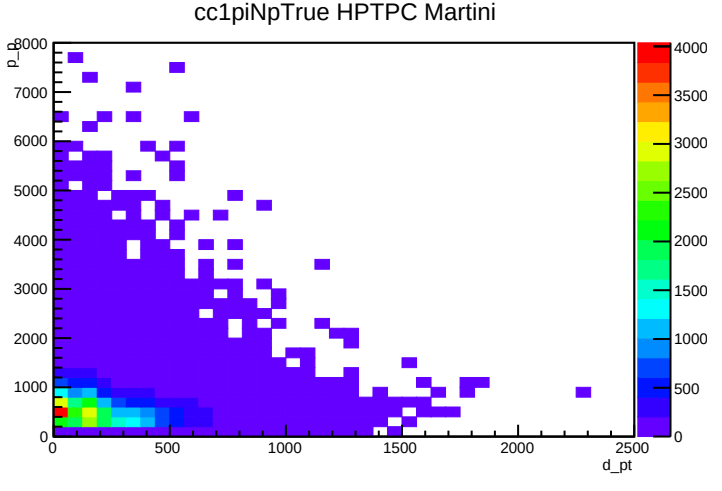
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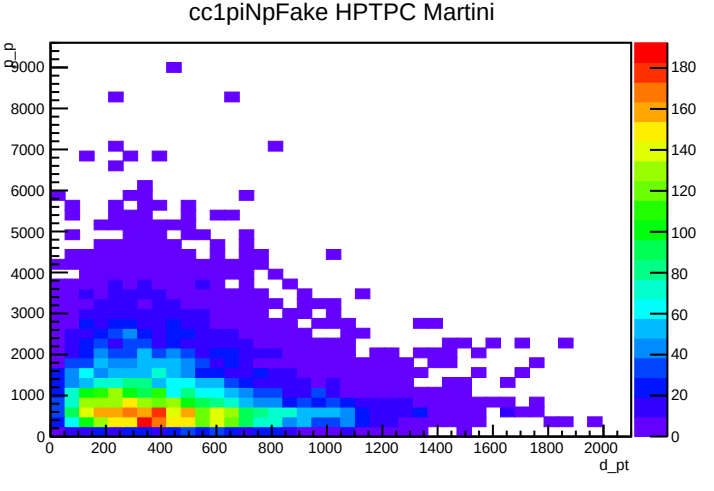
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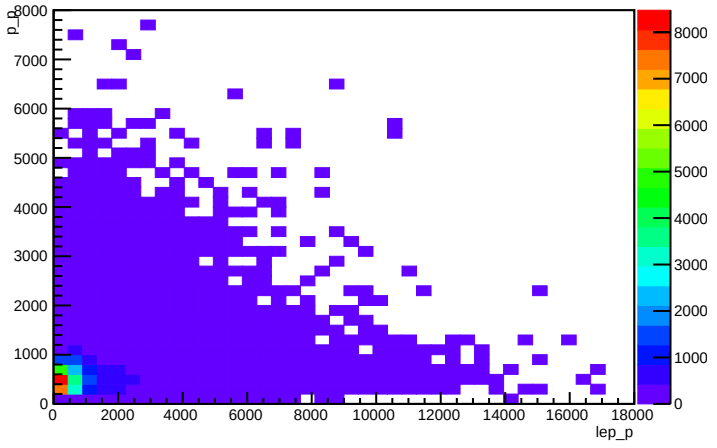
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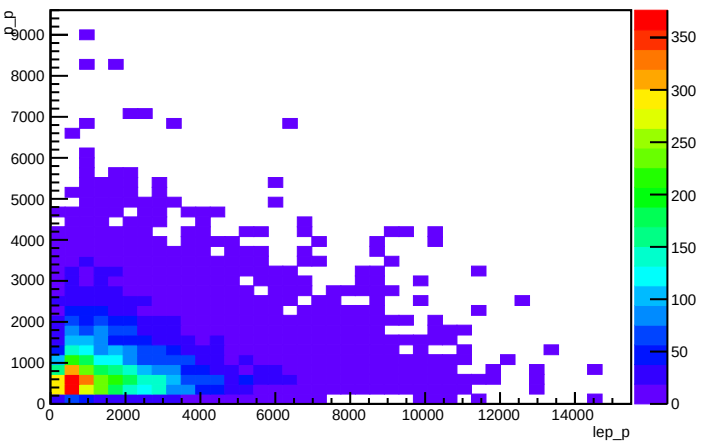
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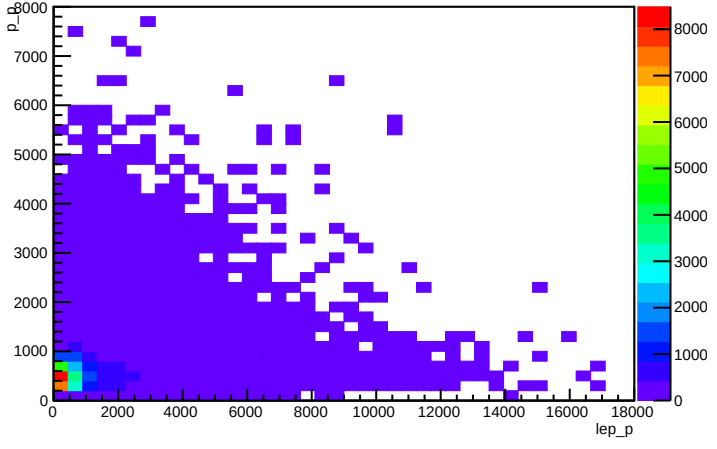
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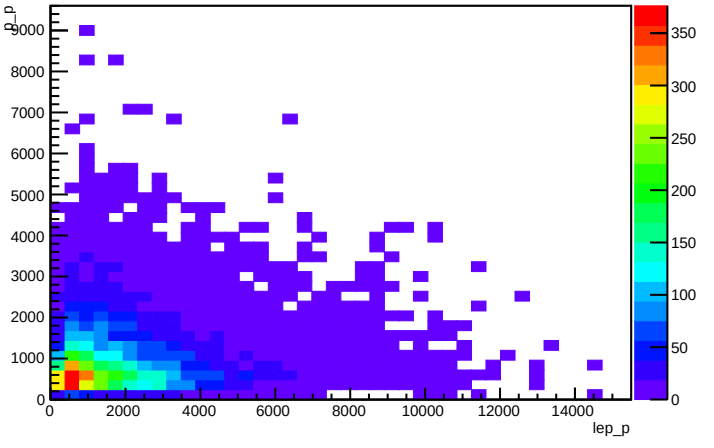
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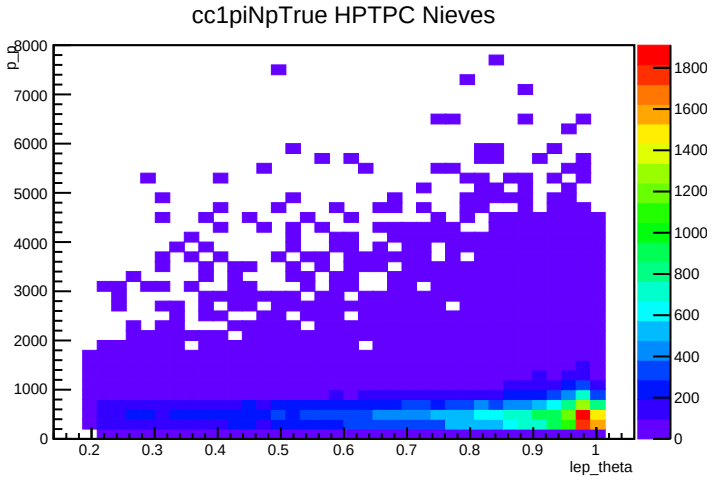
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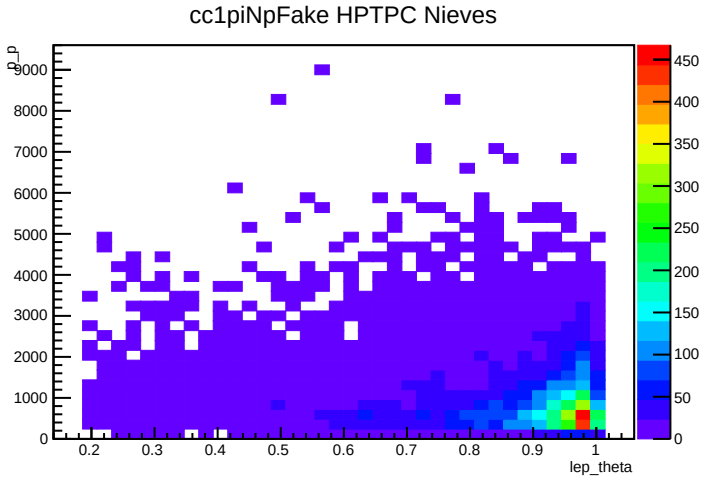
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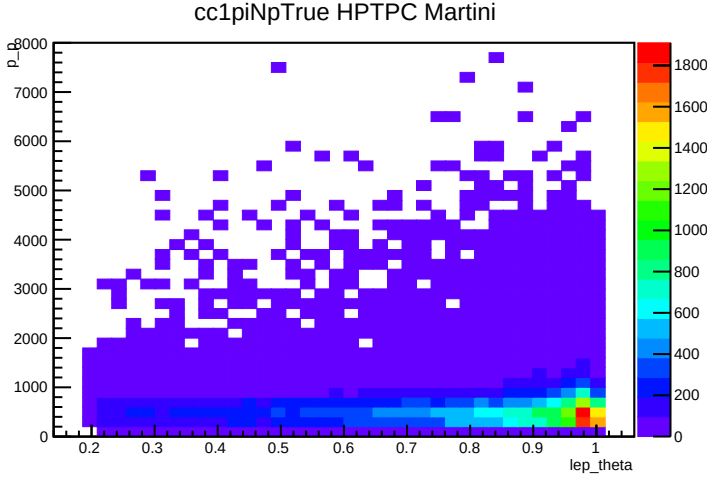
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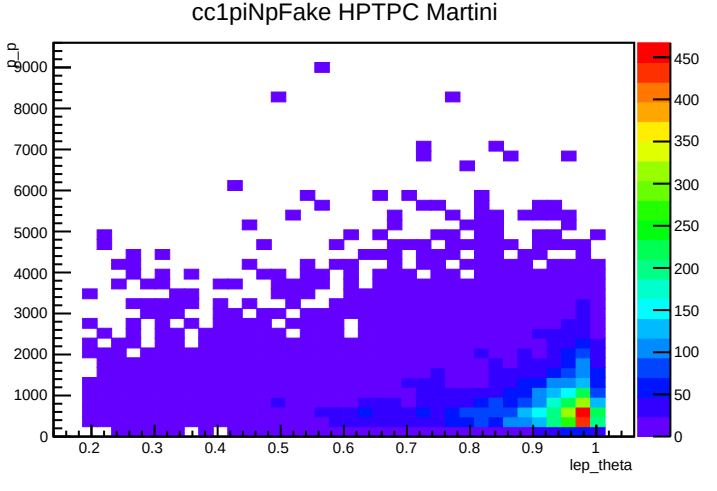
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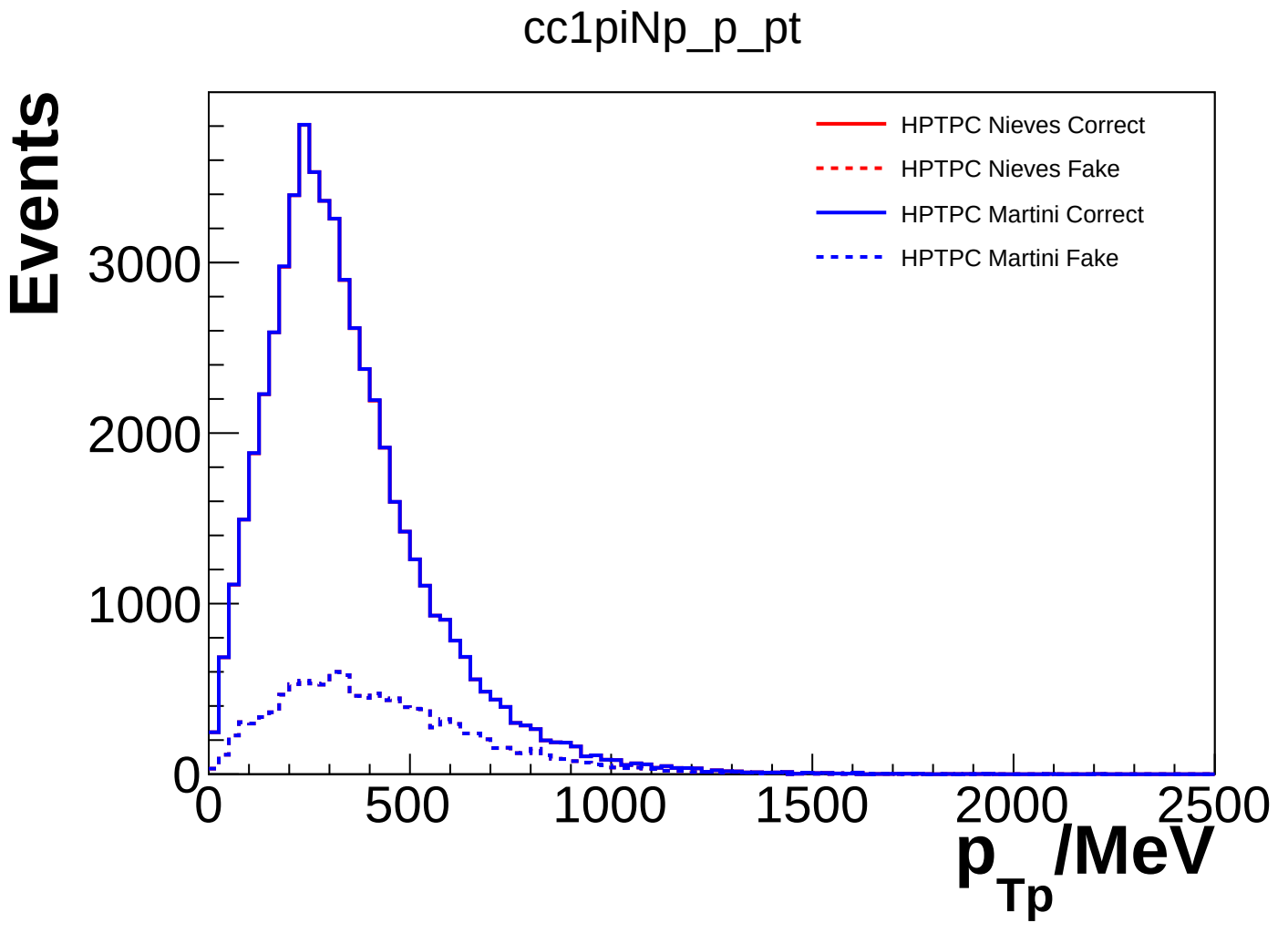
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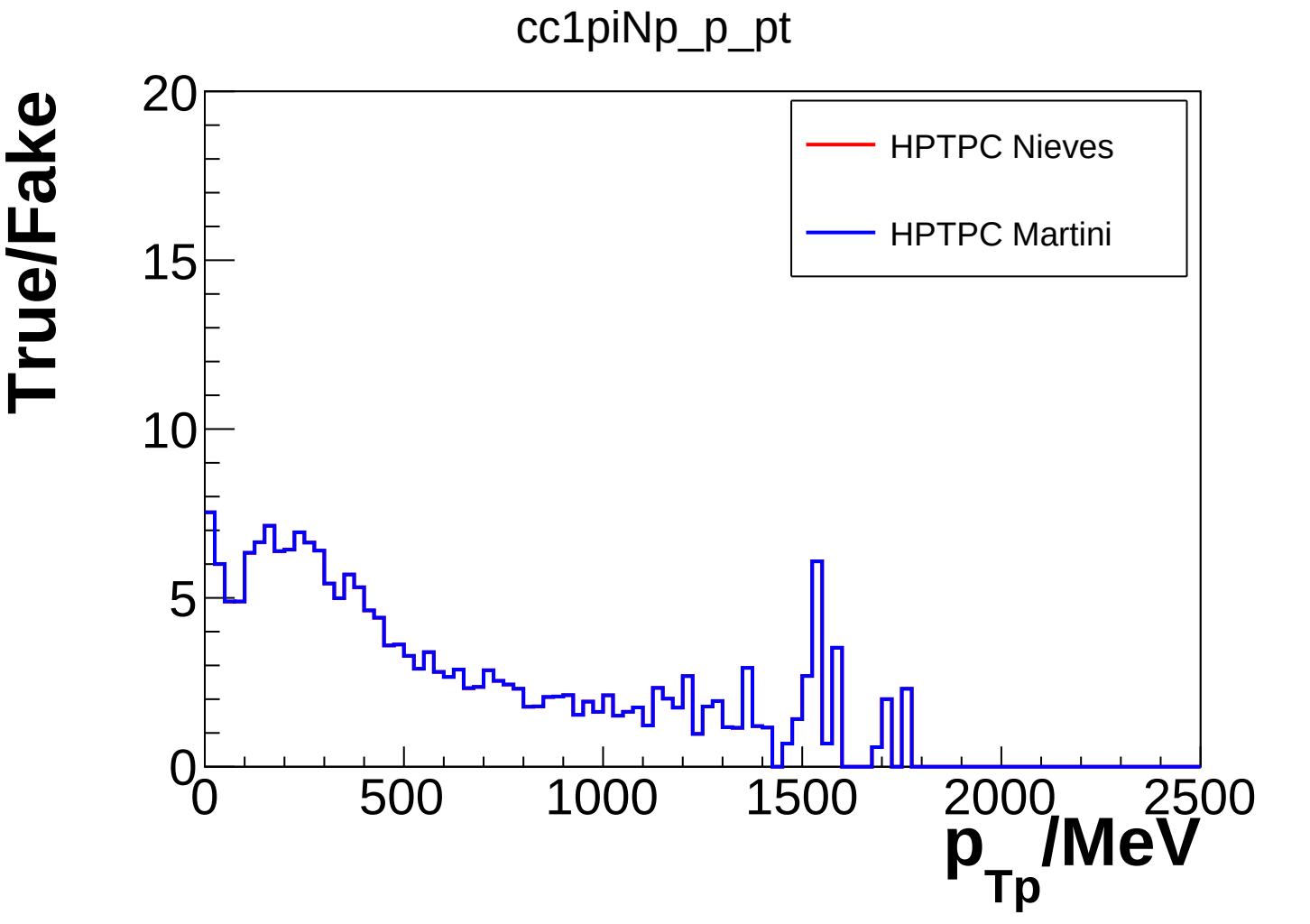
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake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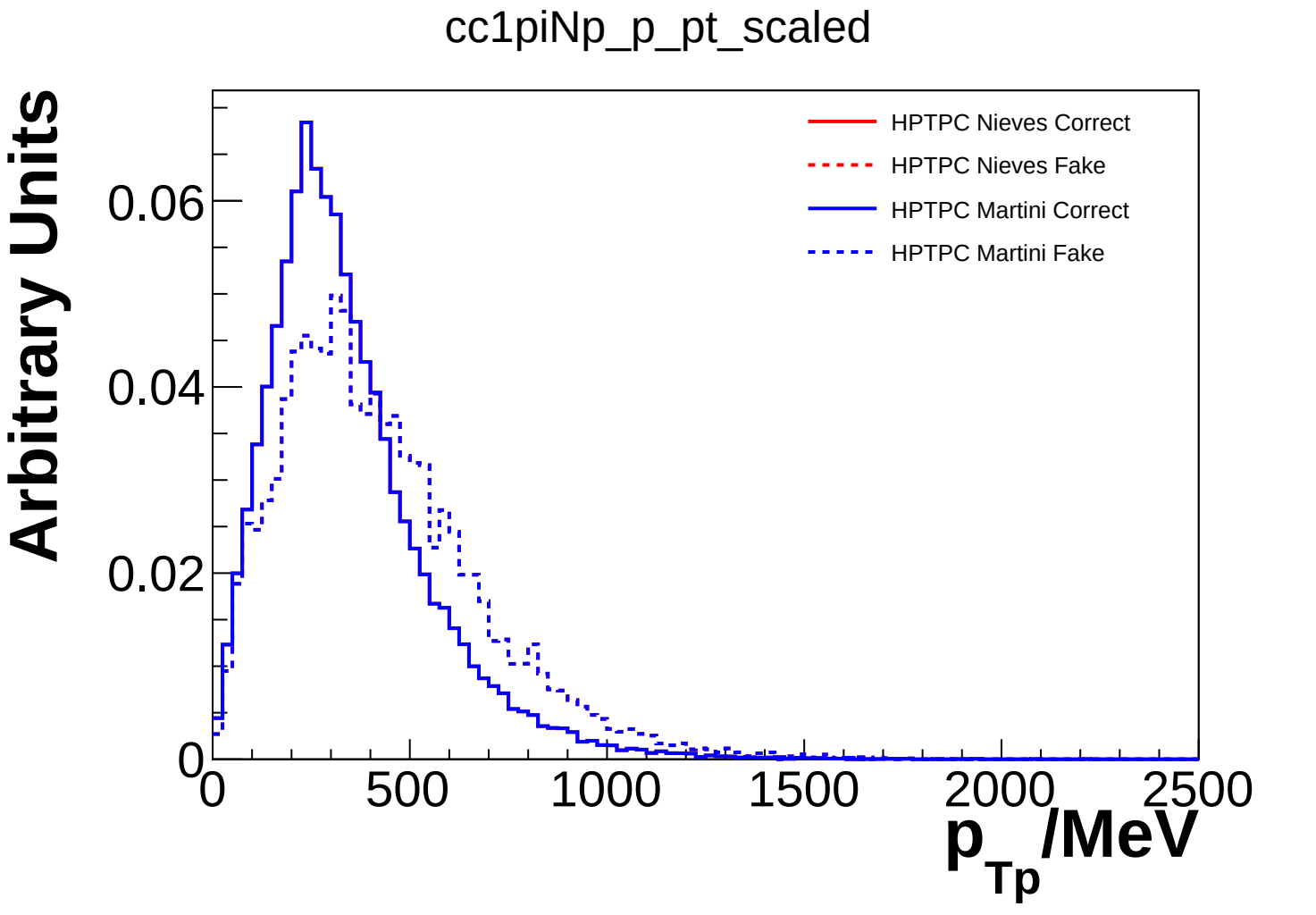
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p_Tp /MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
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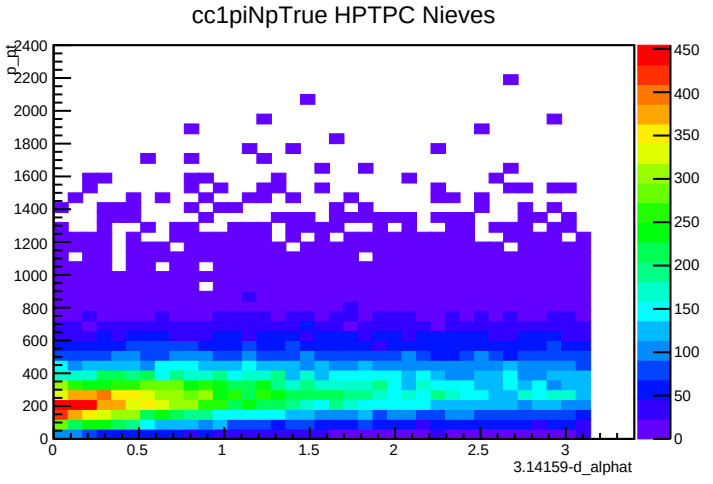
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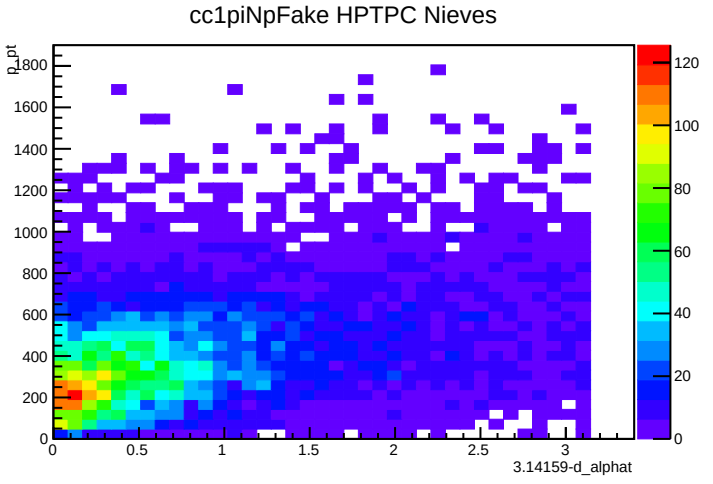
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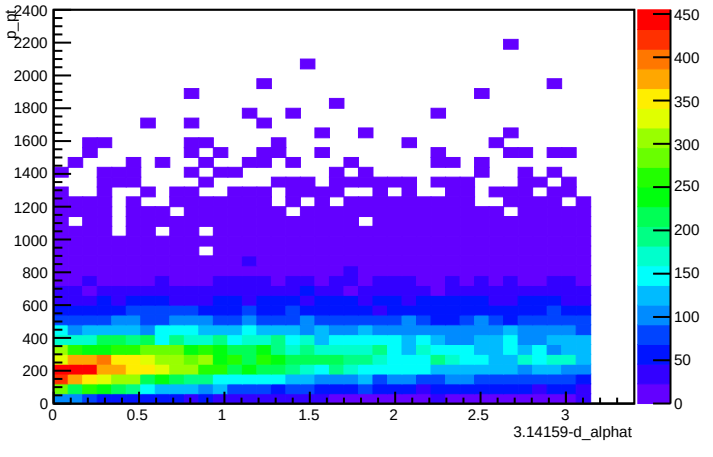
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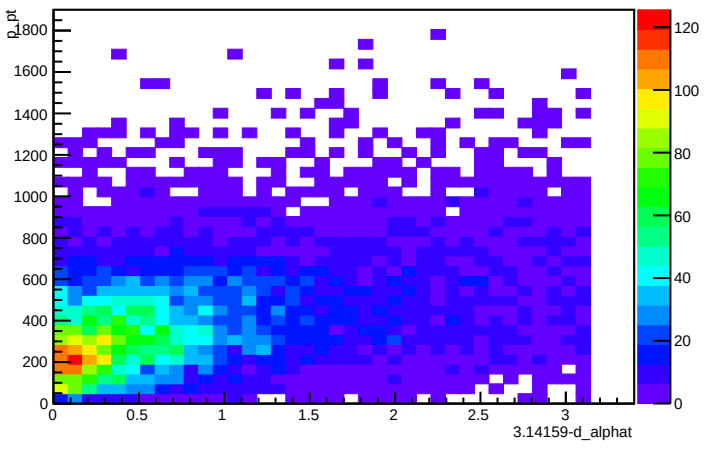
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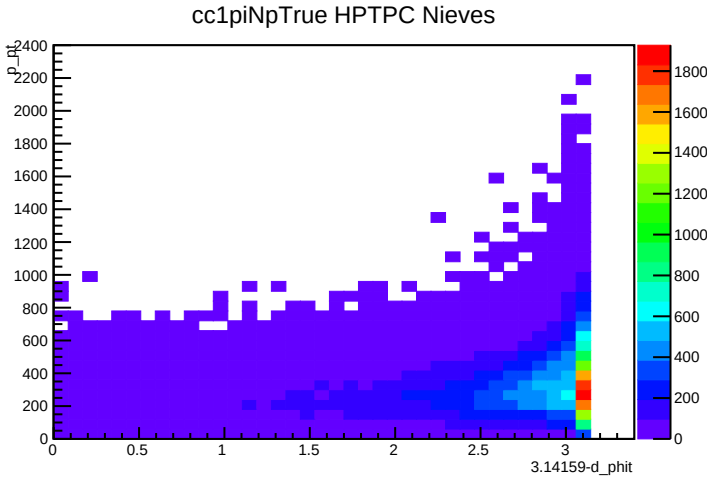
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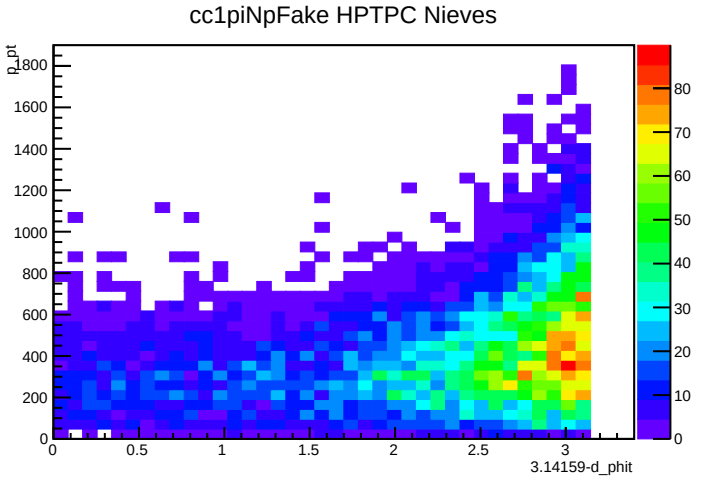
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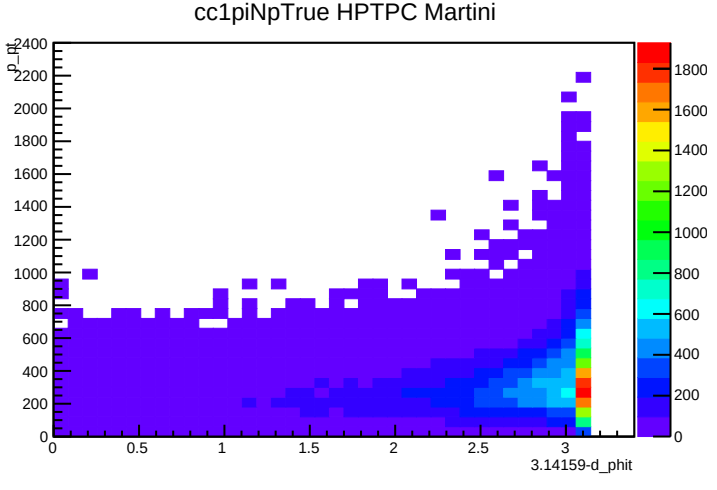
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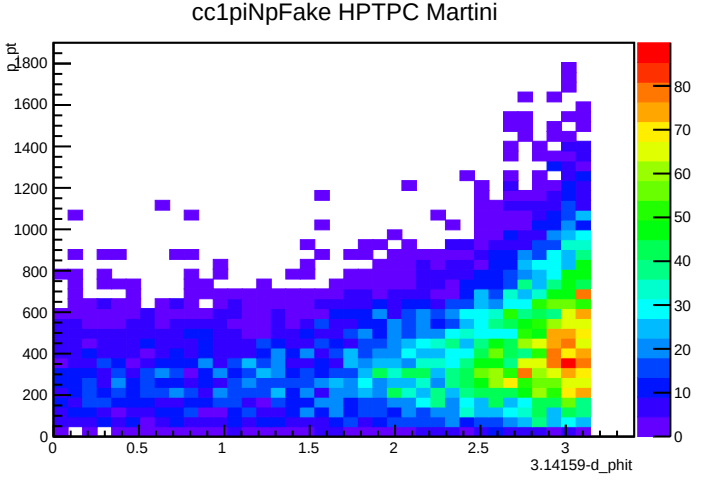
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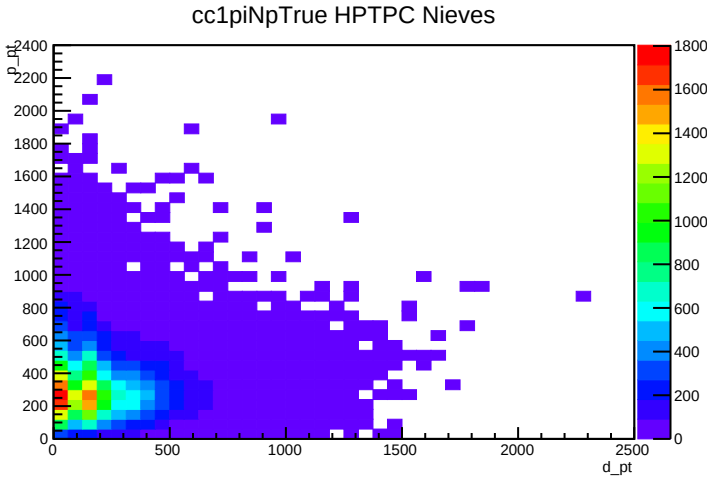
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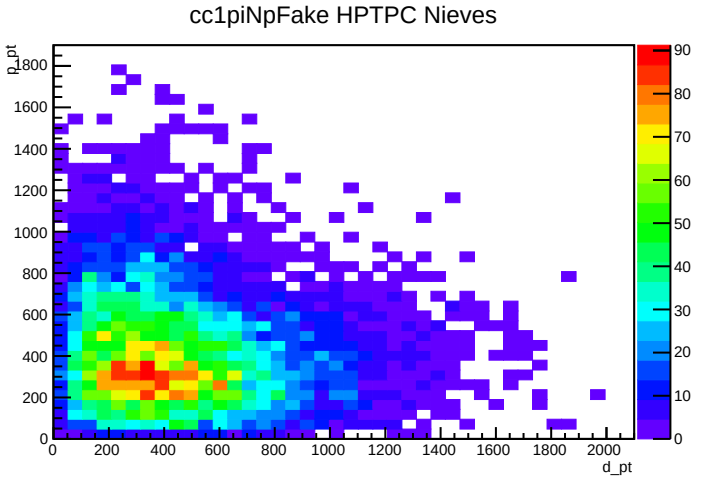
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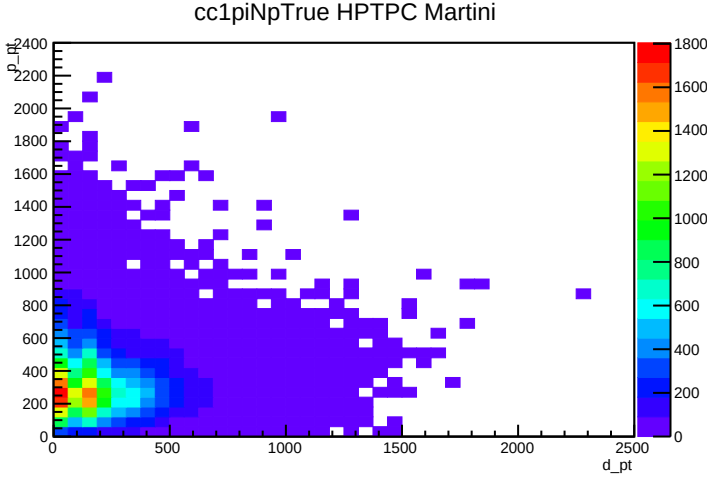
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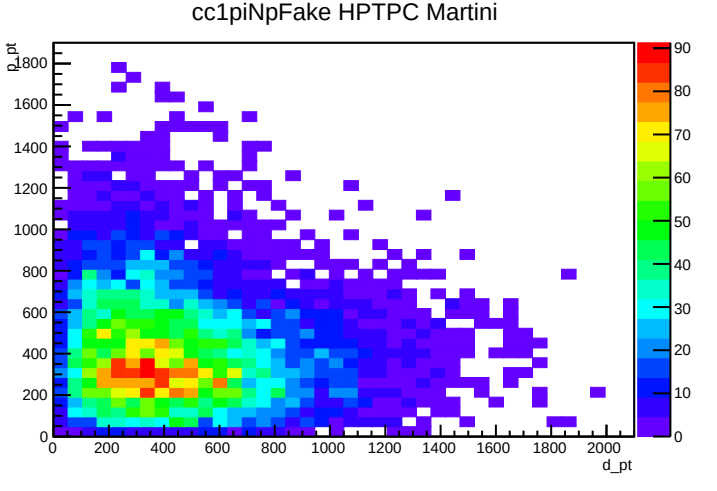
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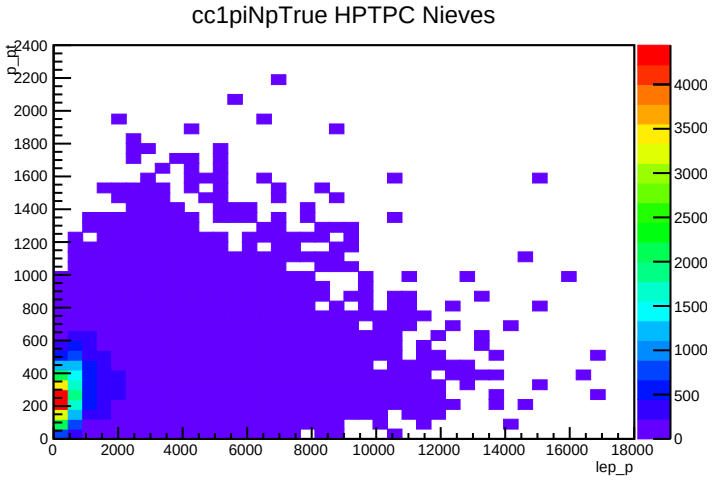
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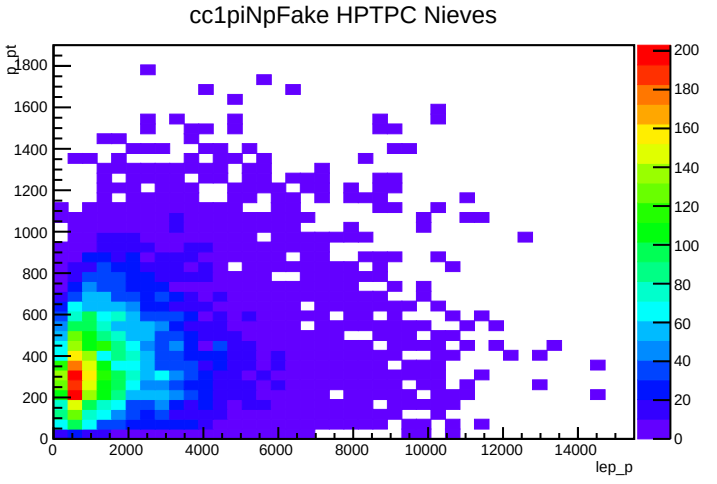
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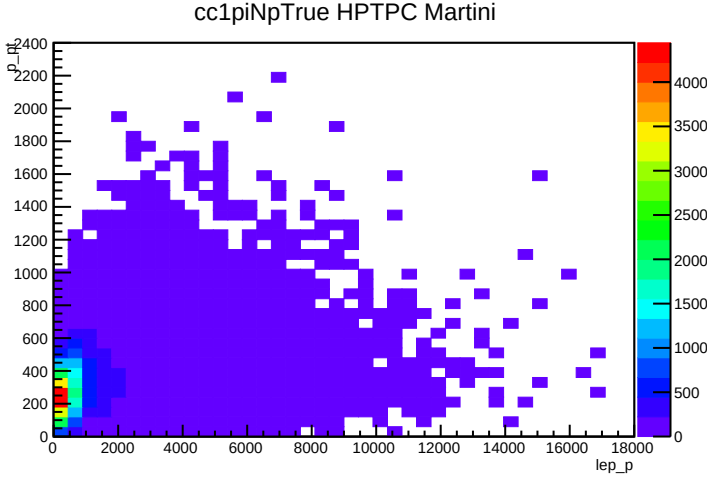
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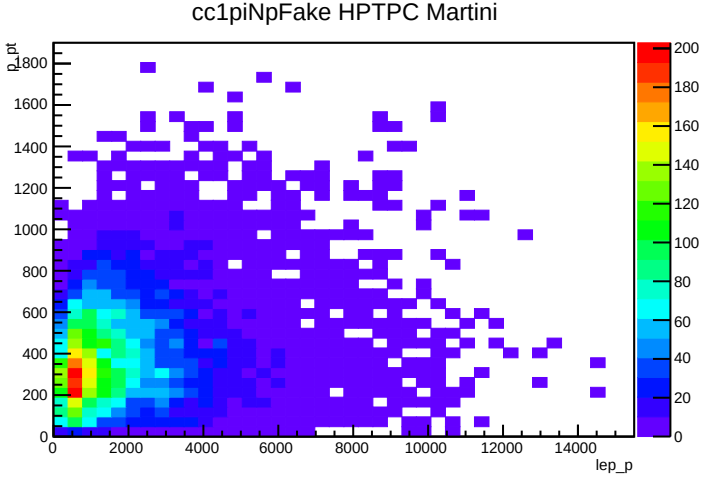
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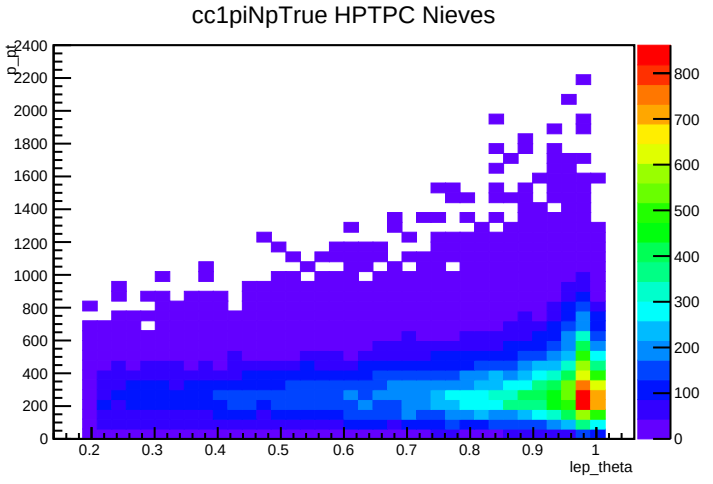
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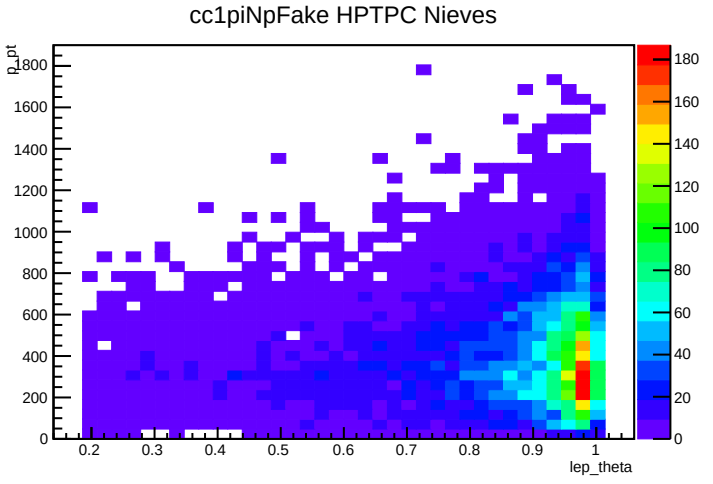
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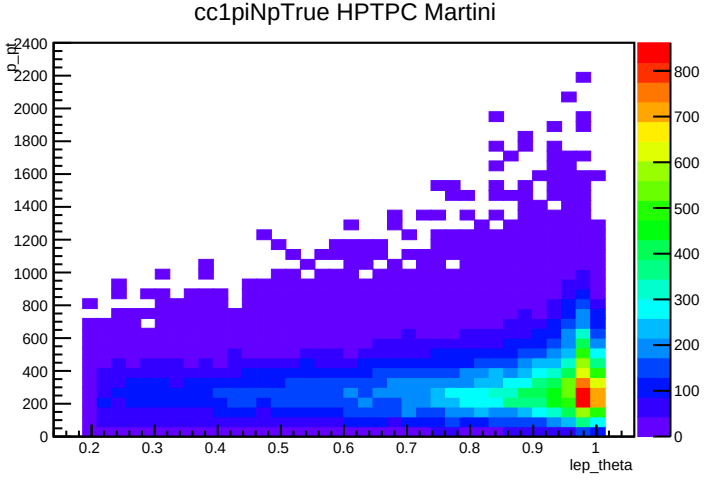
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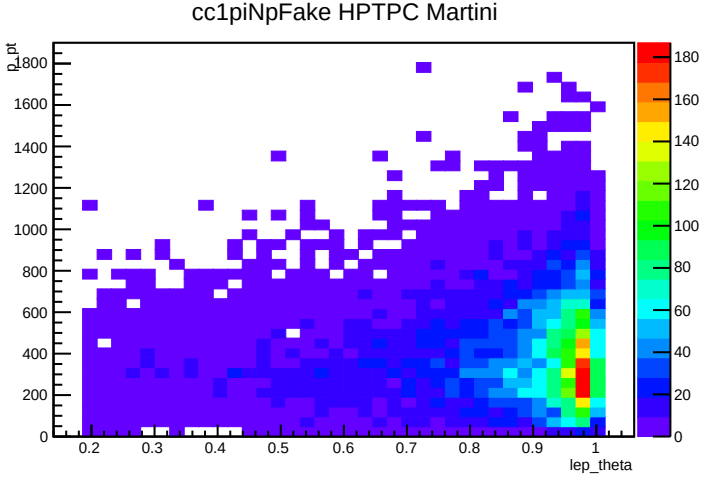
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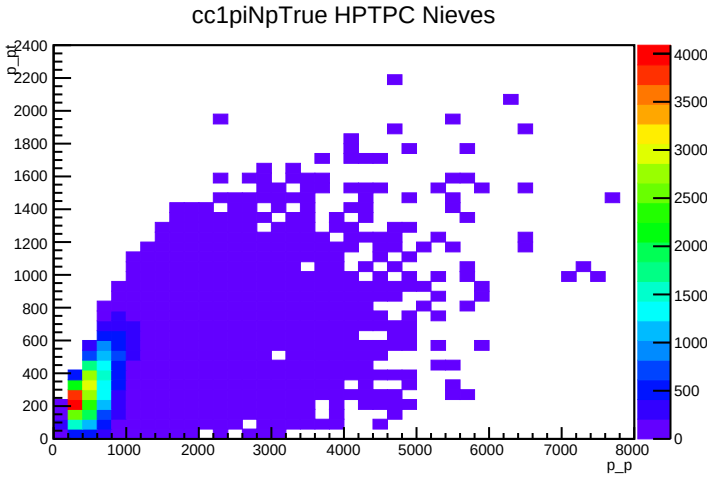
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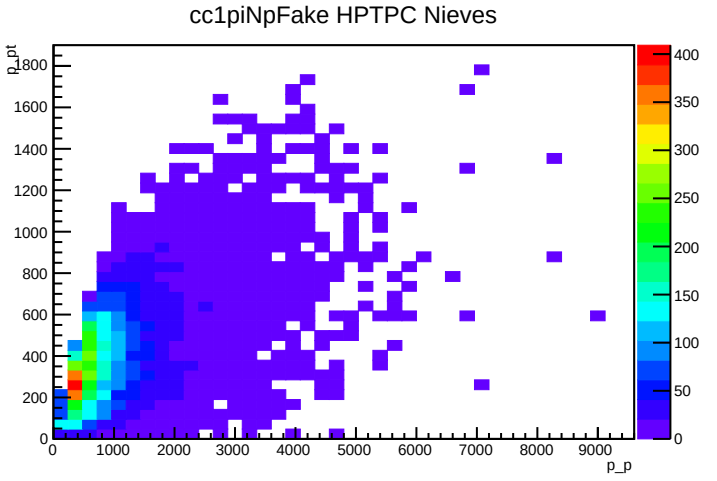
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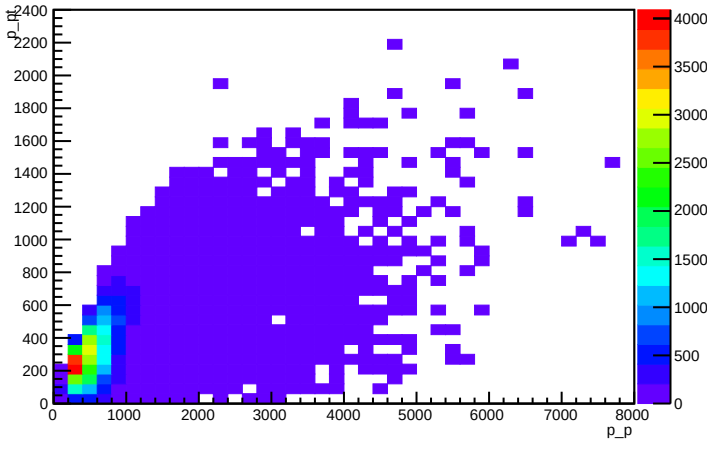
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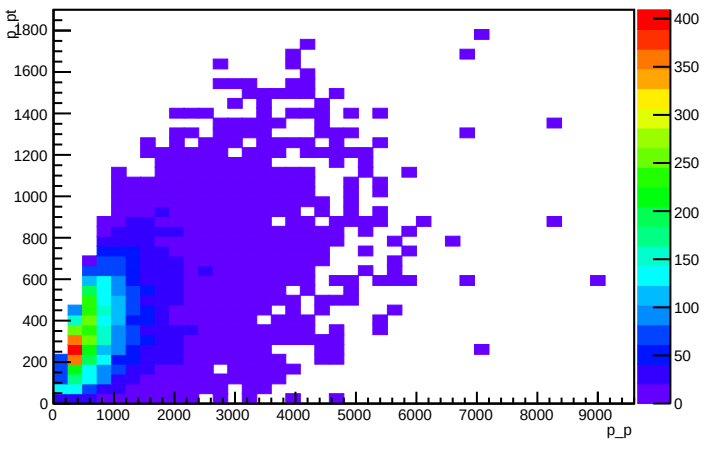
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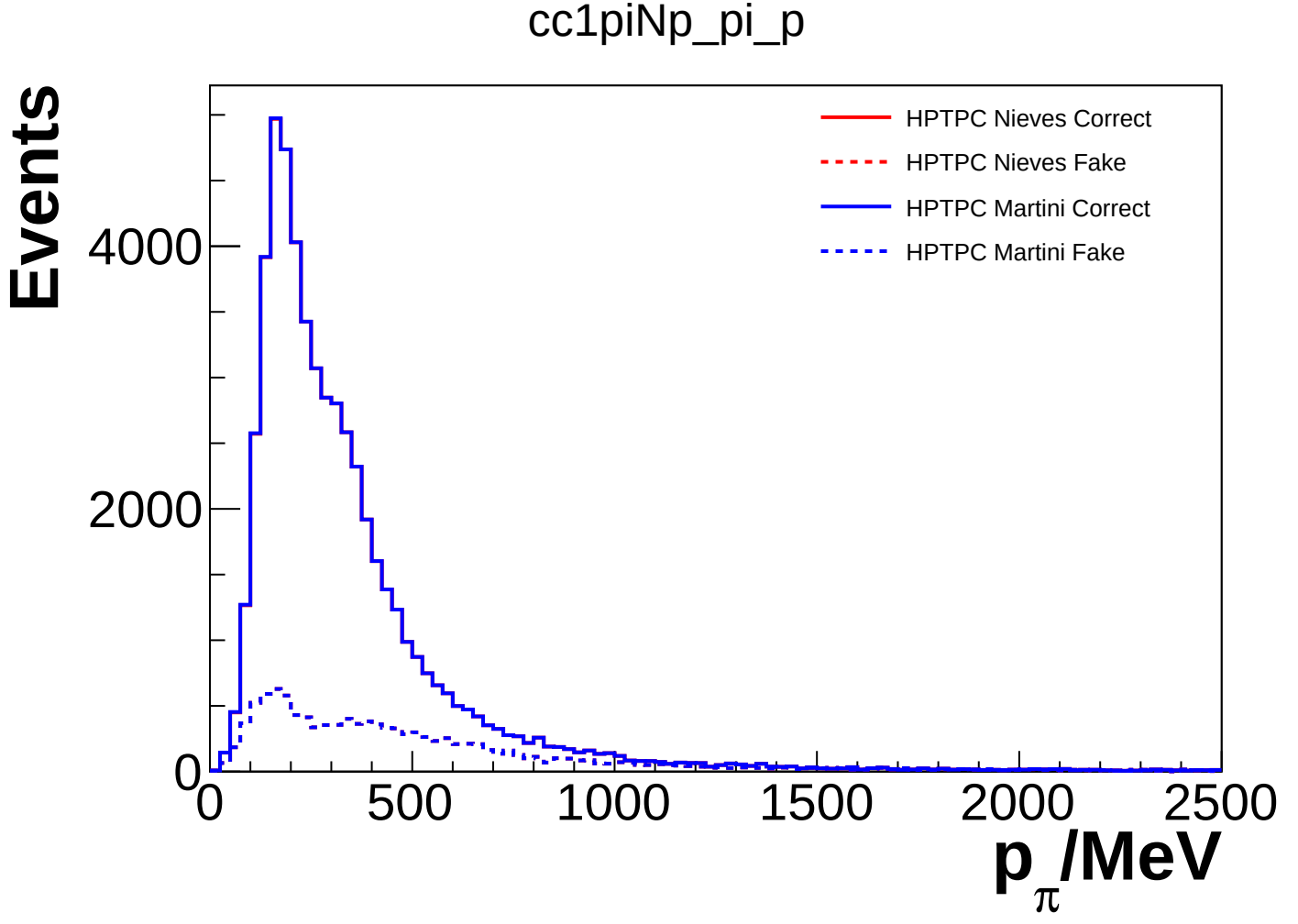
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Events
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2000
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2000
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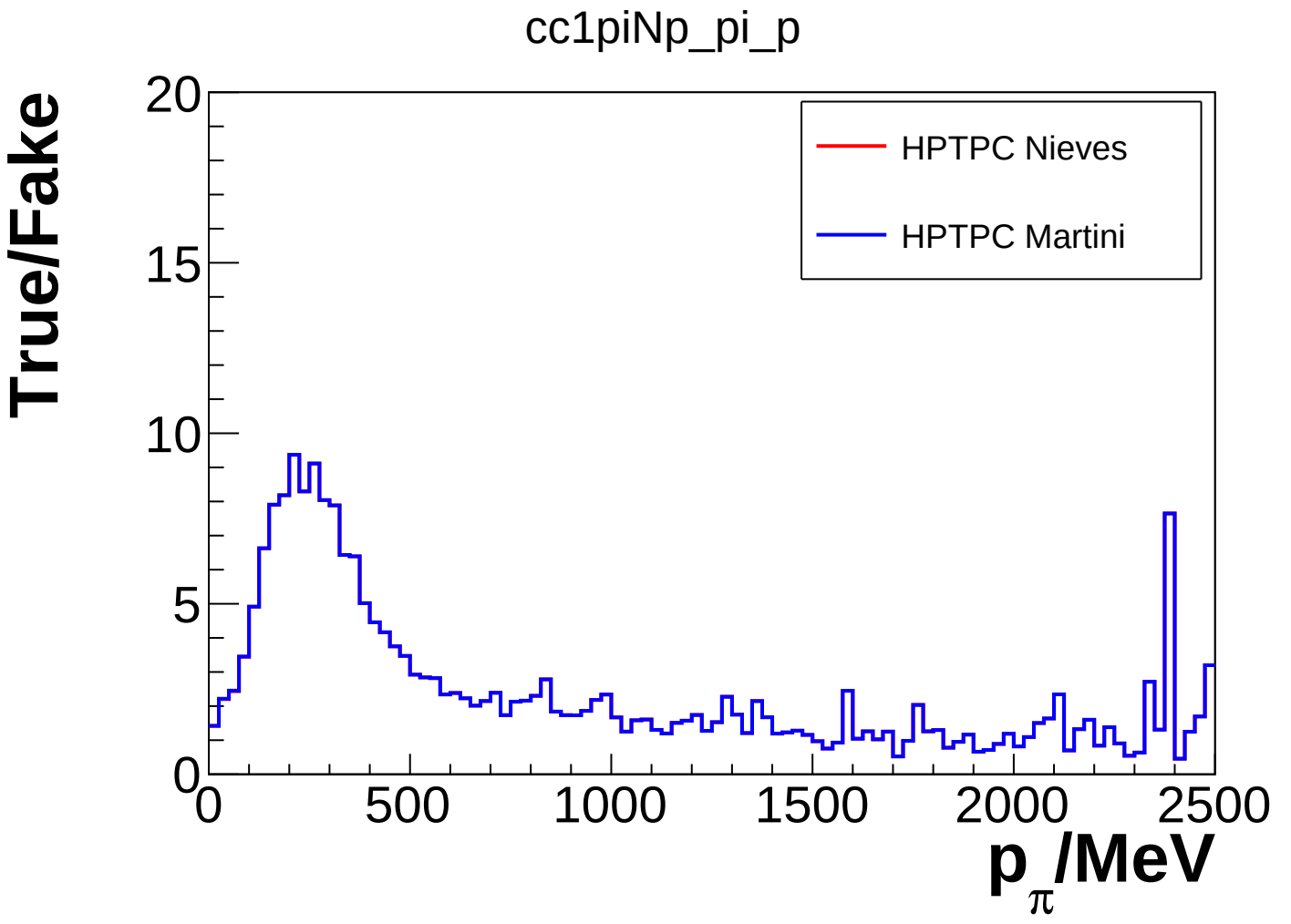
p_π /MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake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True/Fake
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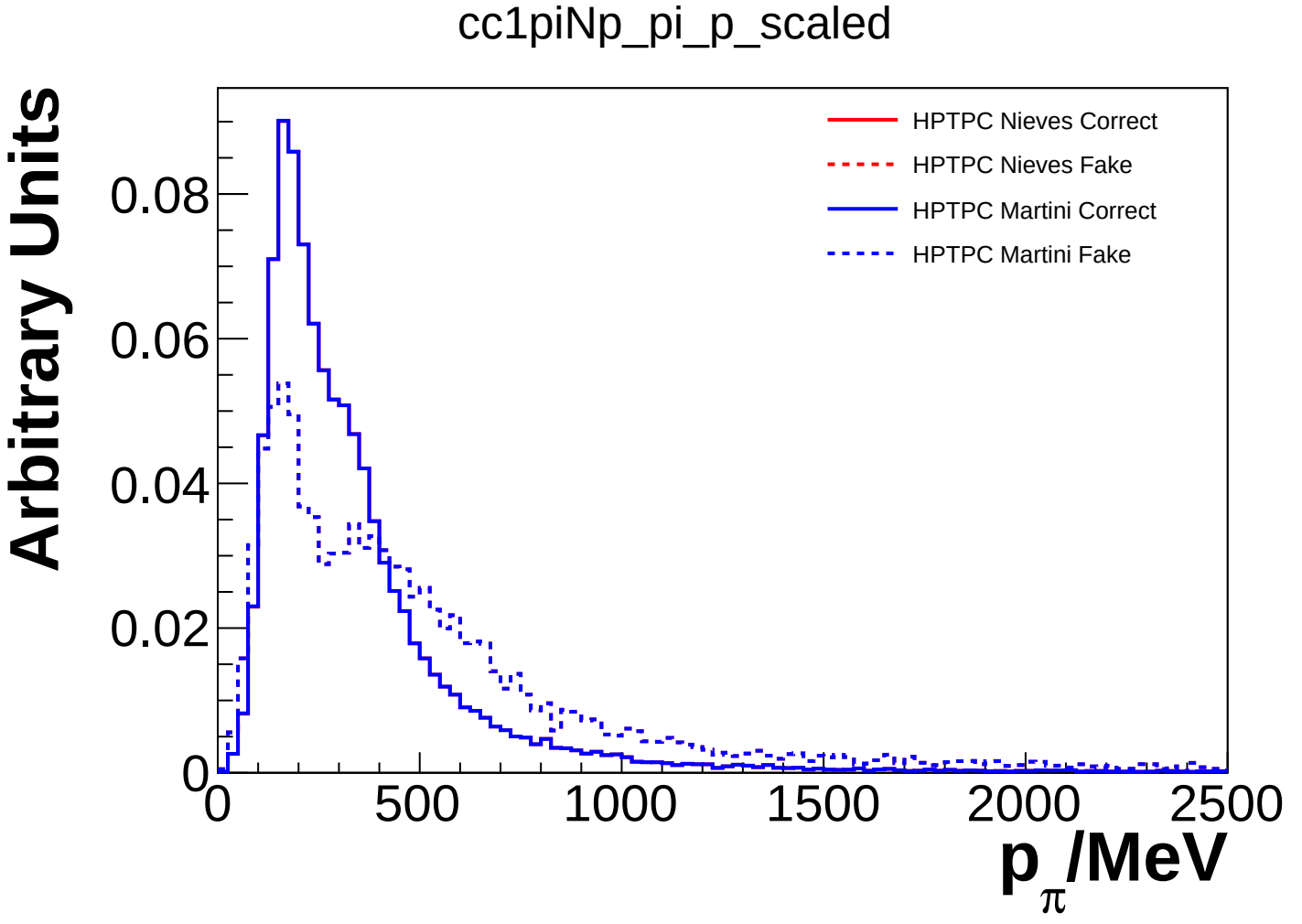
p_π/MeV
HPTPC Nieves
HPTPC Martini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HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake
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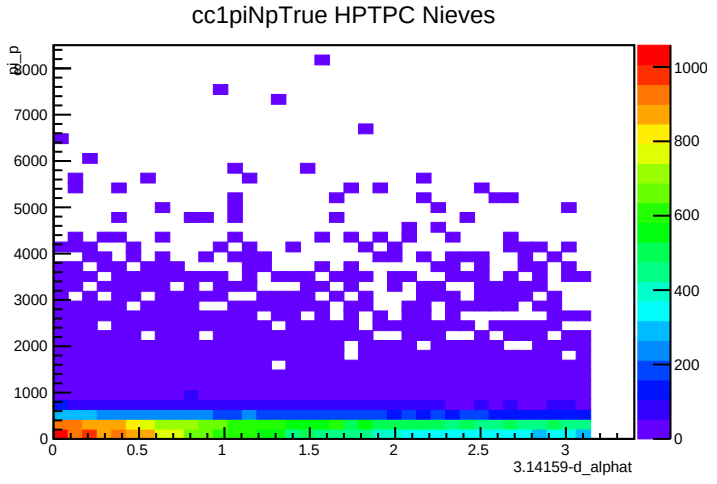
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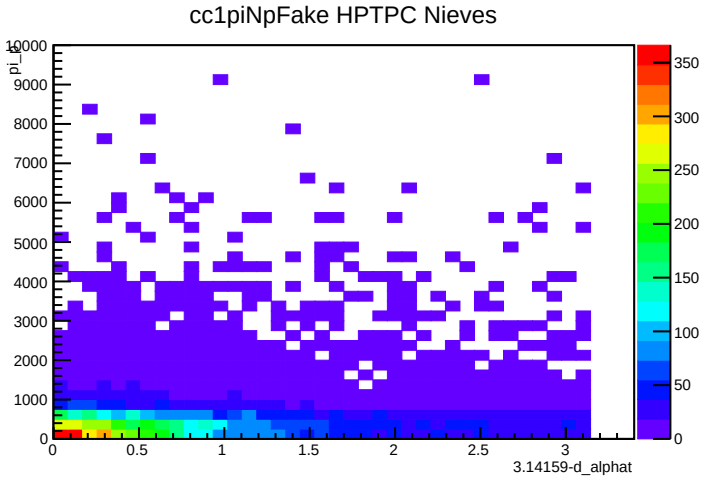
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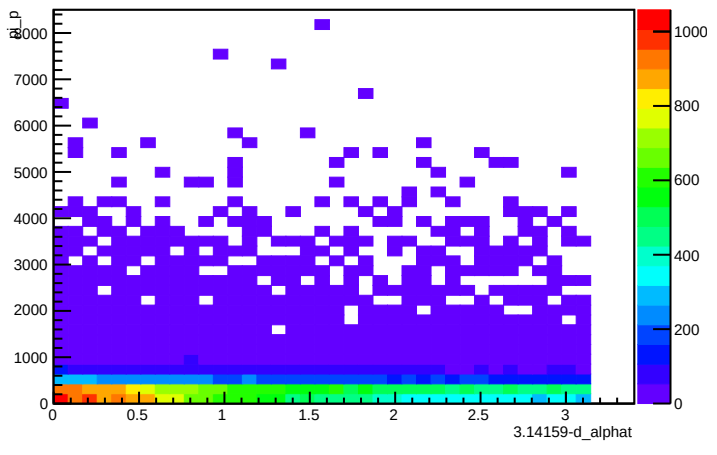
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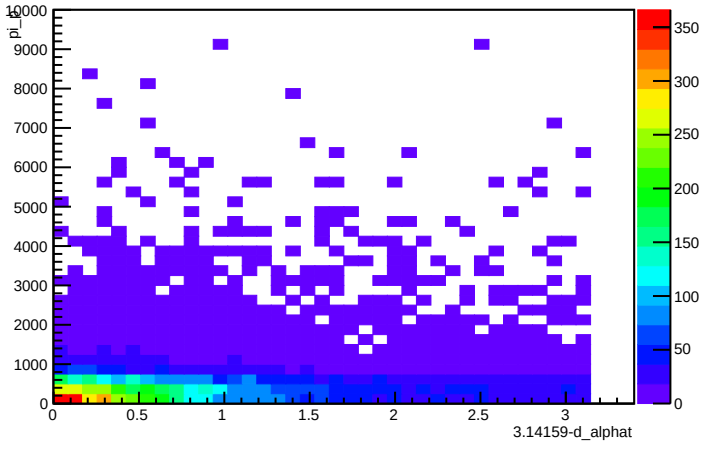
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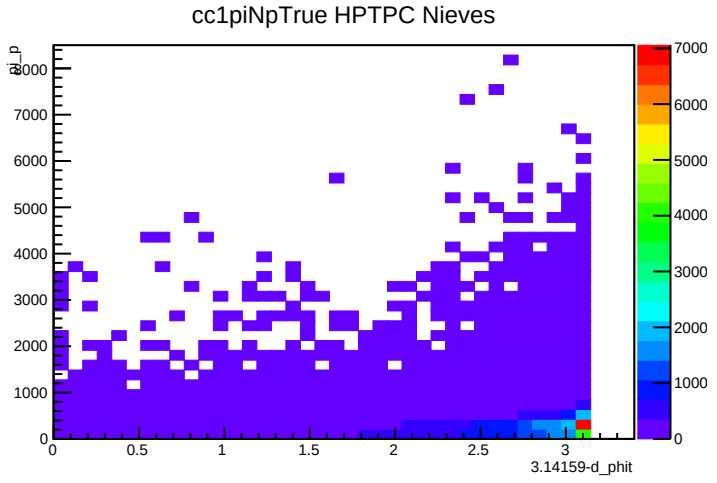
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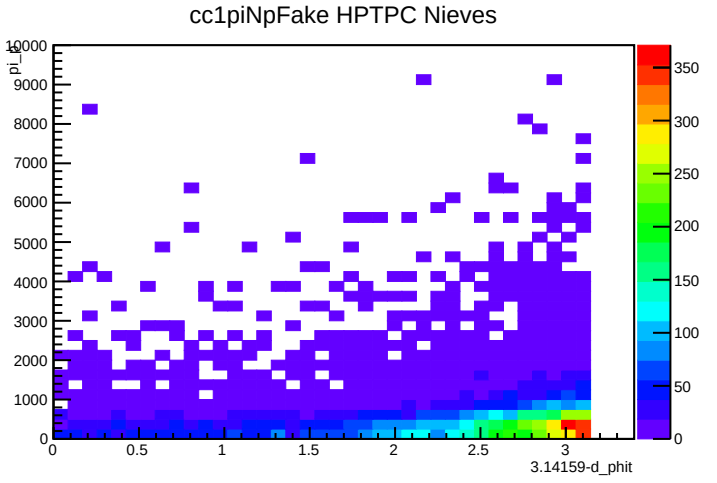
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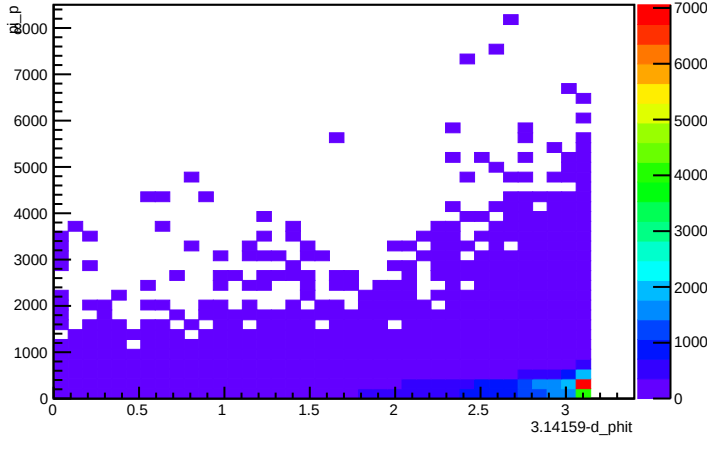
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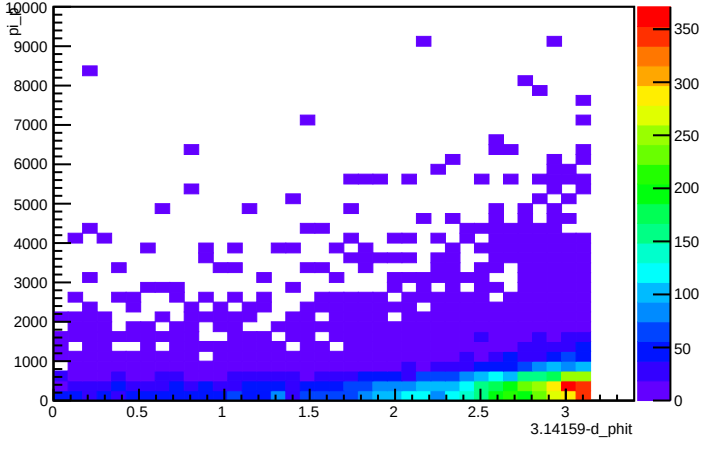
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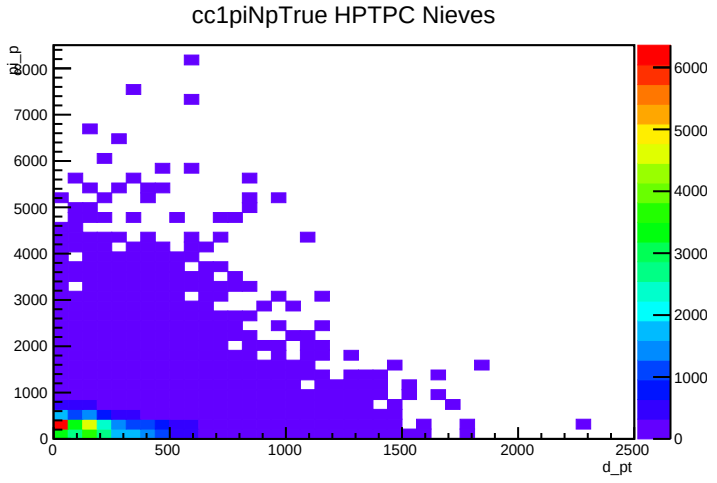
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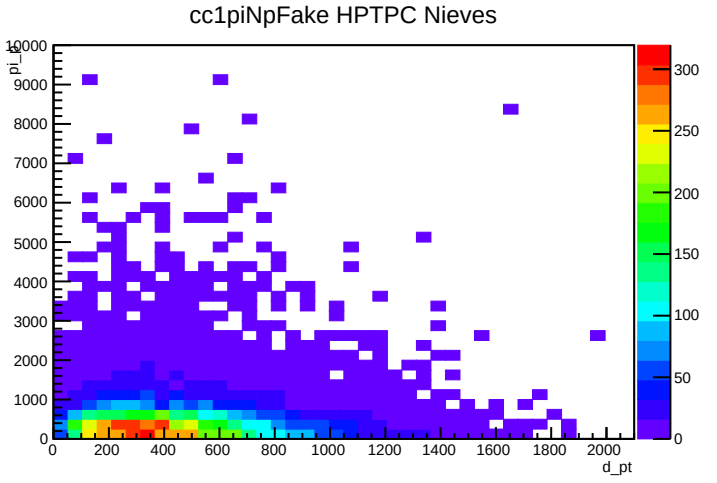
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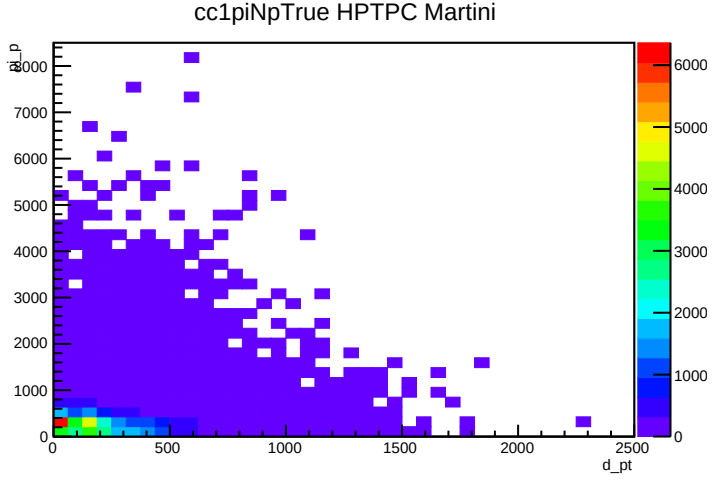
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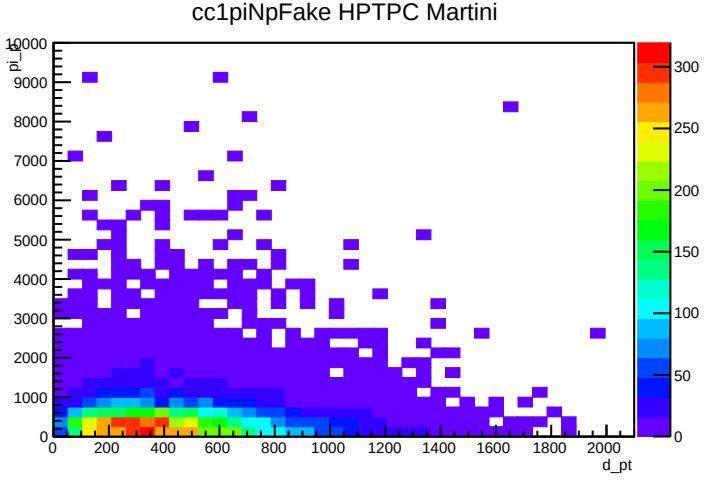
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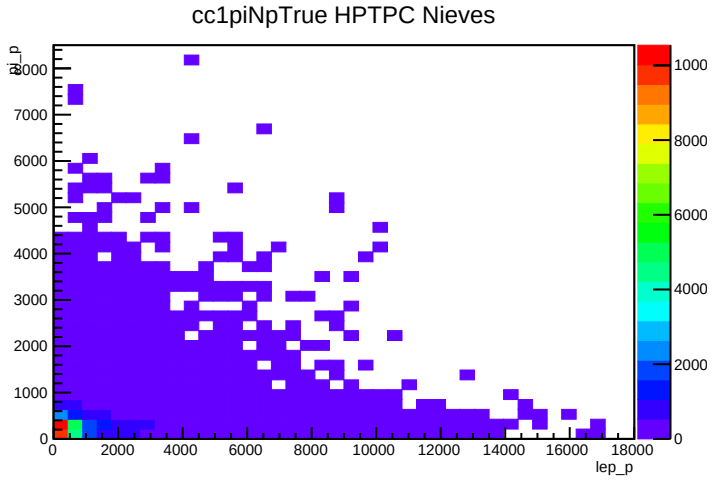
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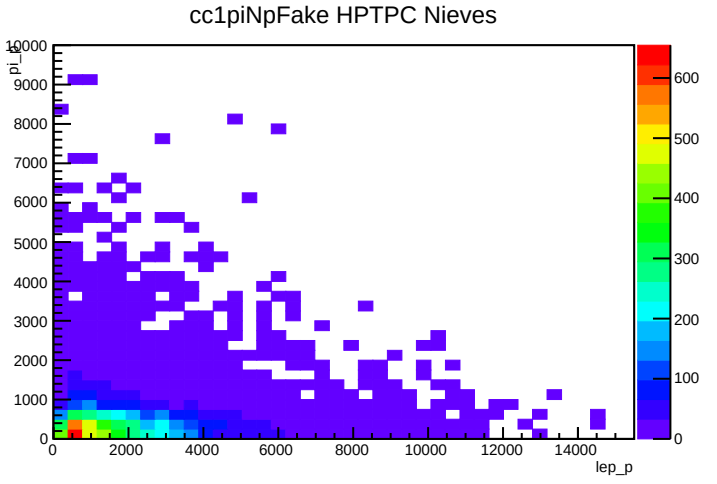
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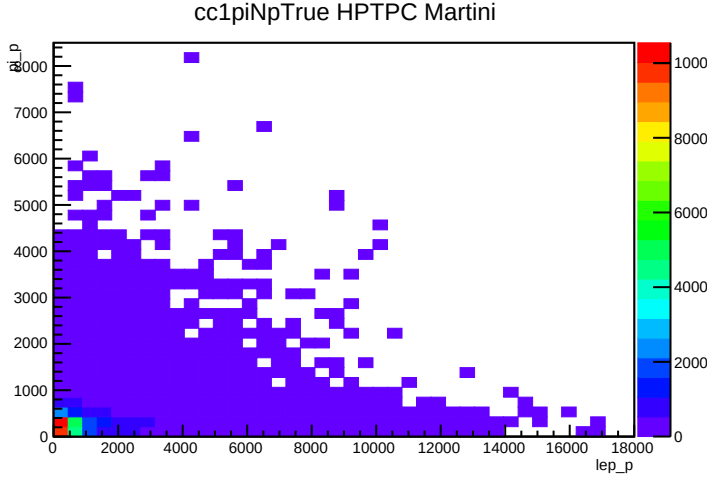
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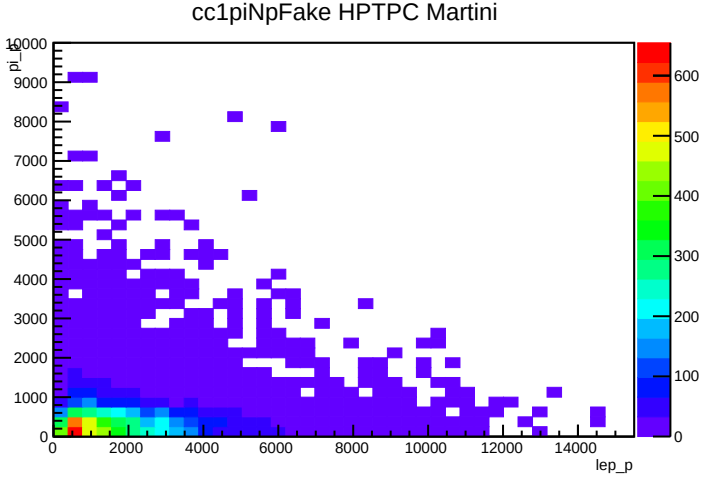
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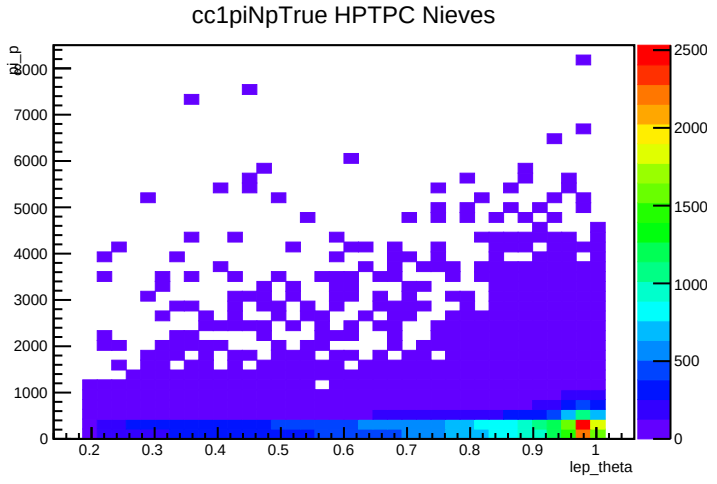
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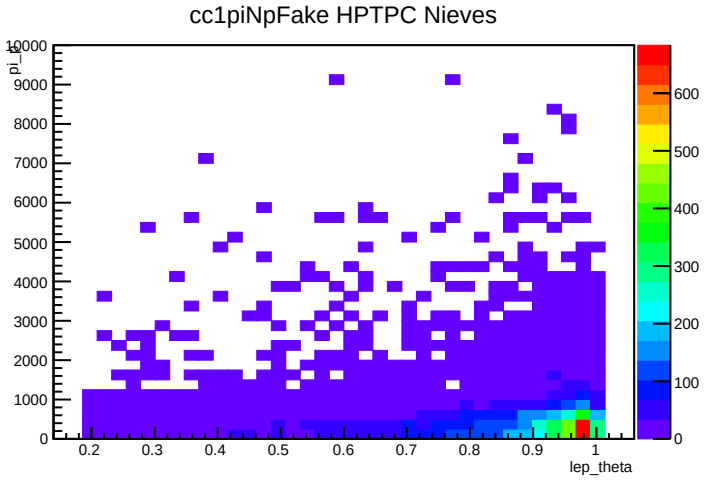
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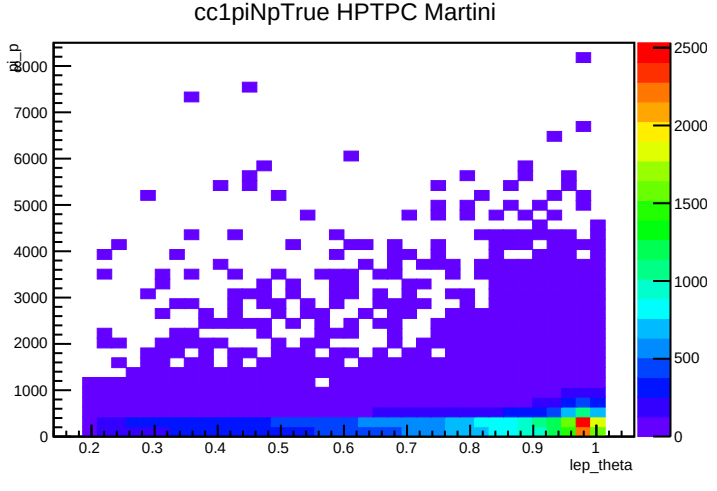
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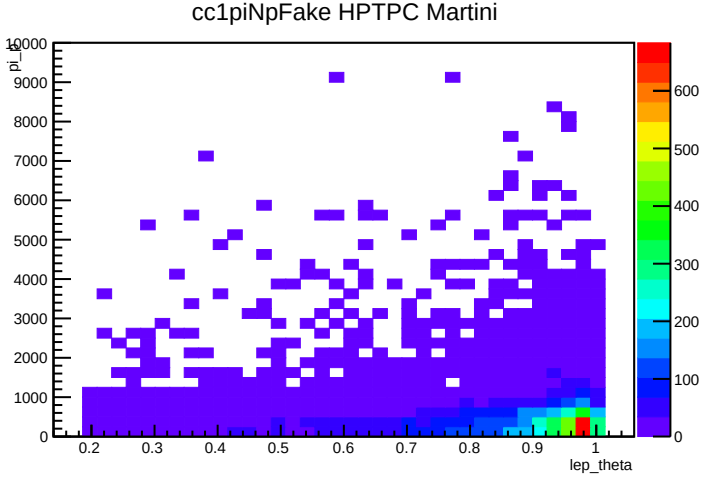
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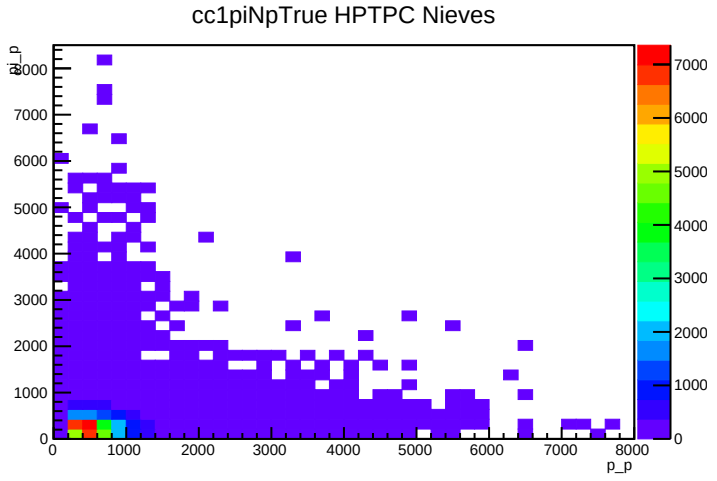
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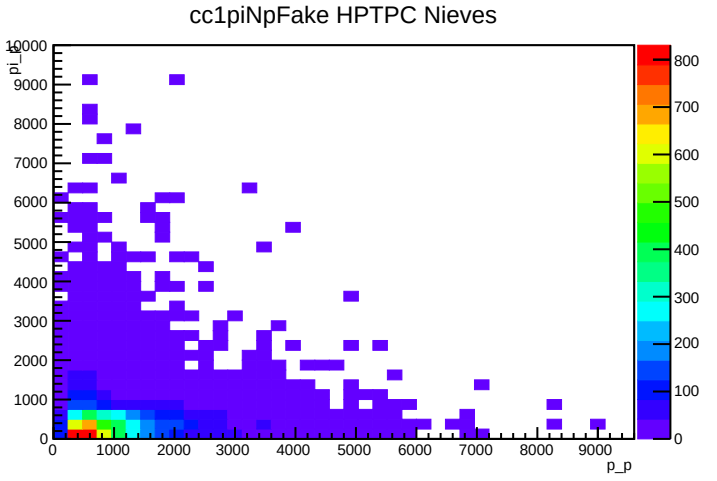
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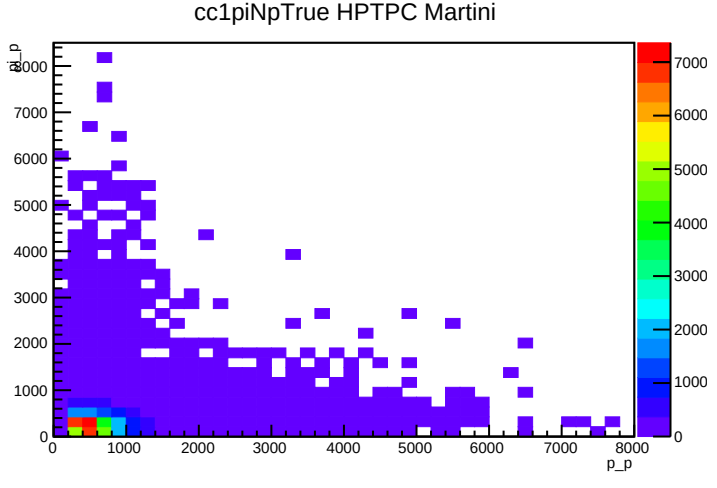
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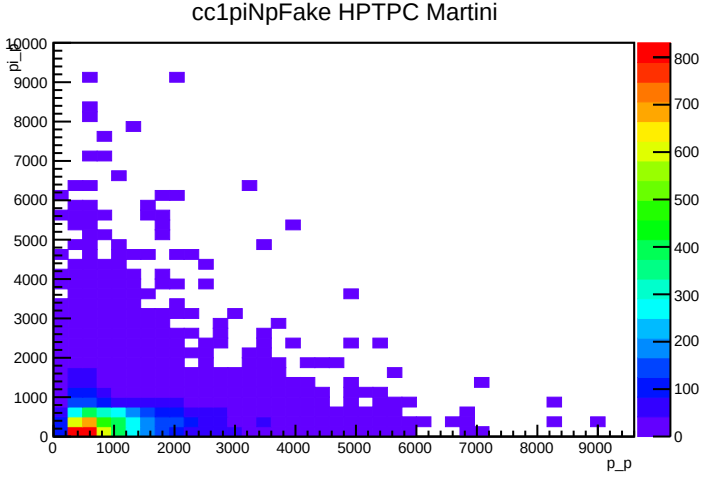
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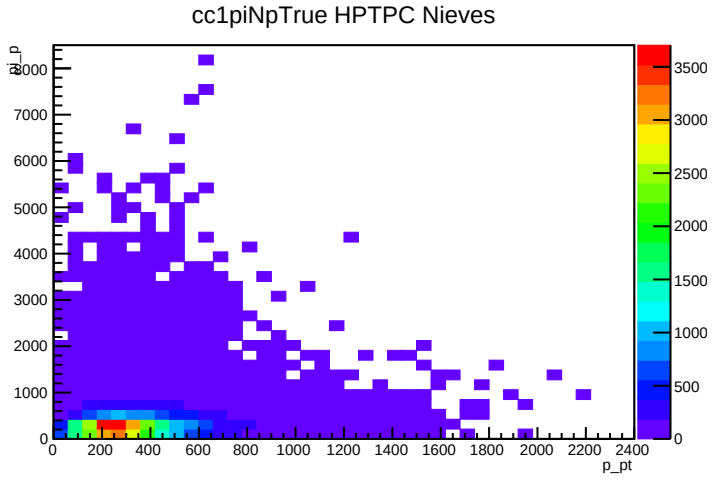
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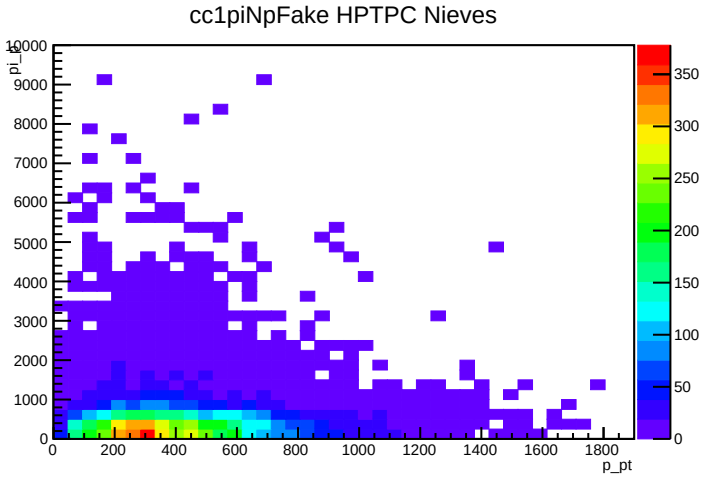
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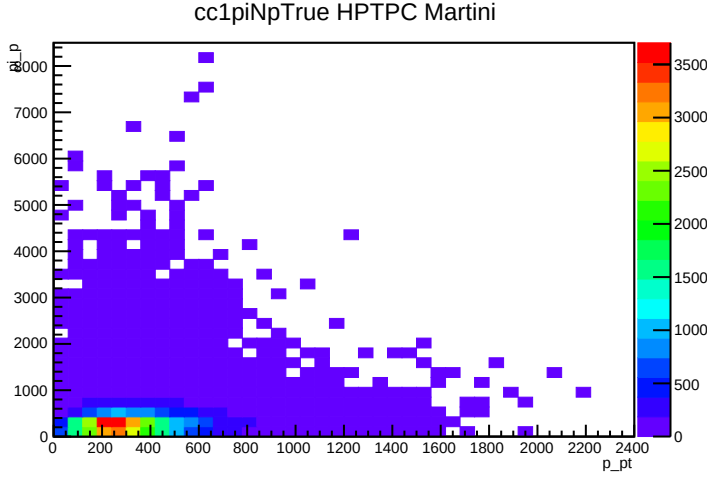
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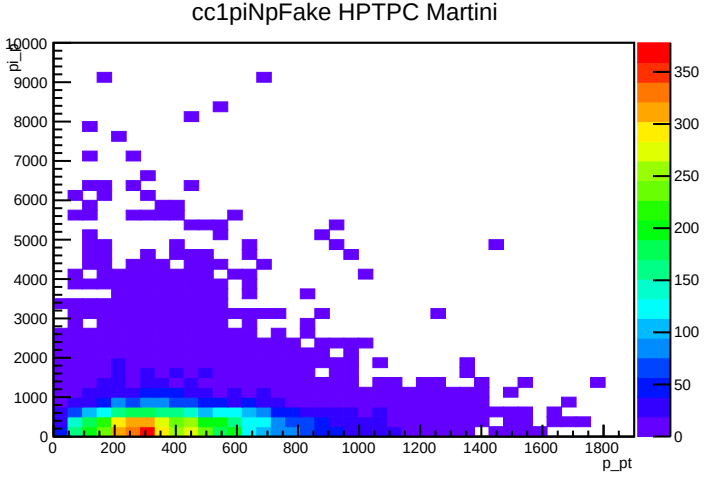
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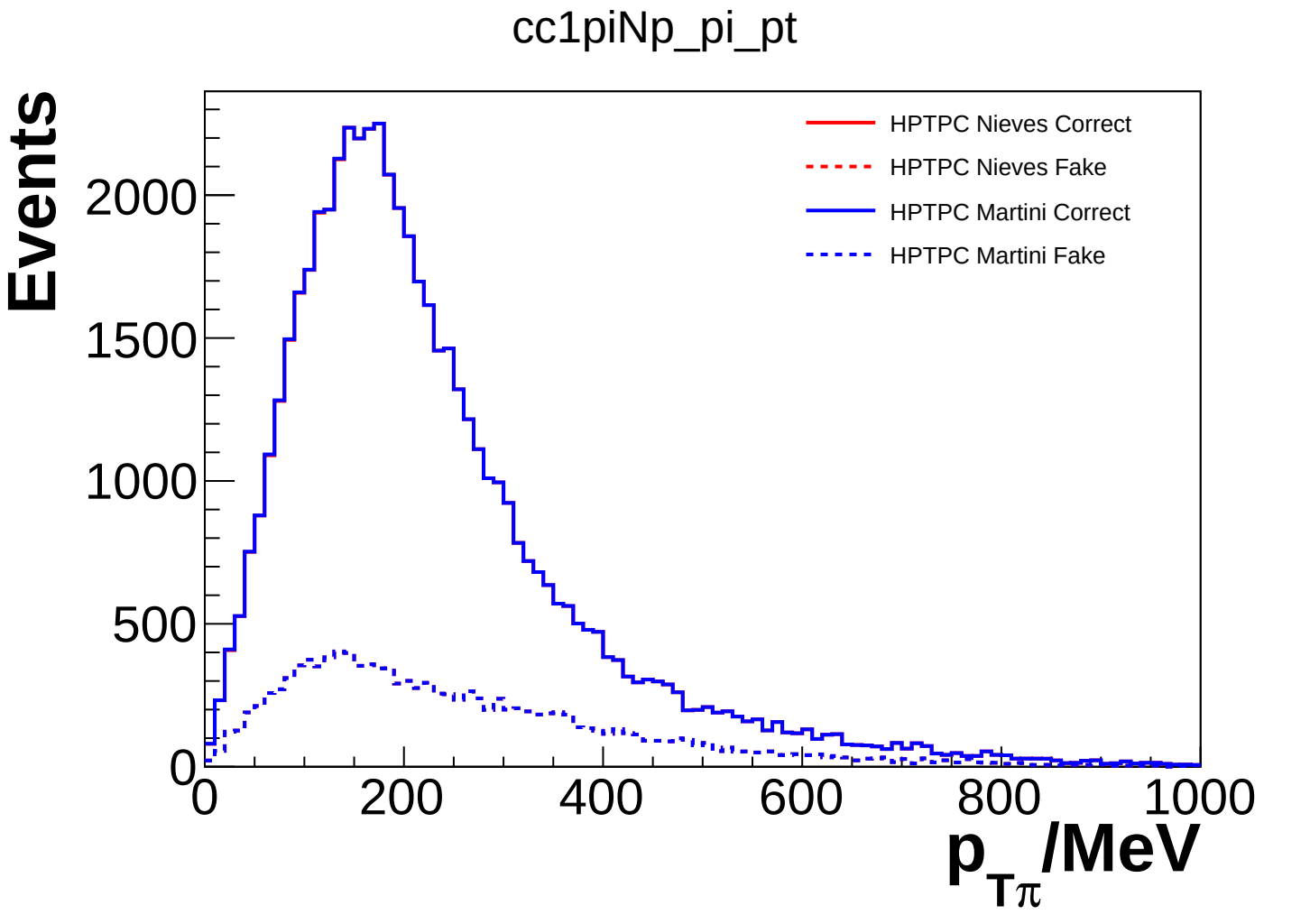
p_pt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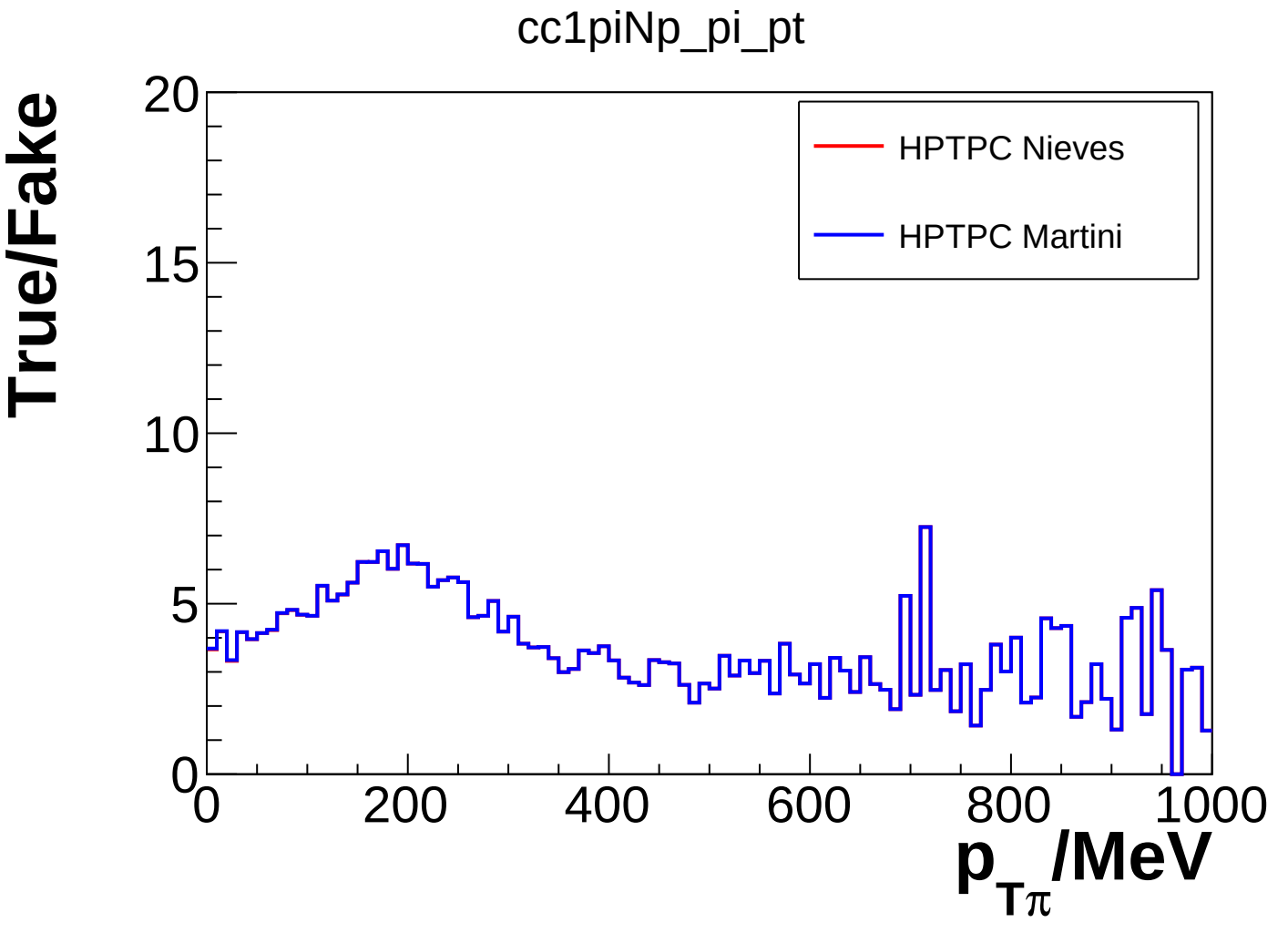
Events
2000
1500
1000
500
0
0
200
400
600
800
1000
$p_{T\pi}$/MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake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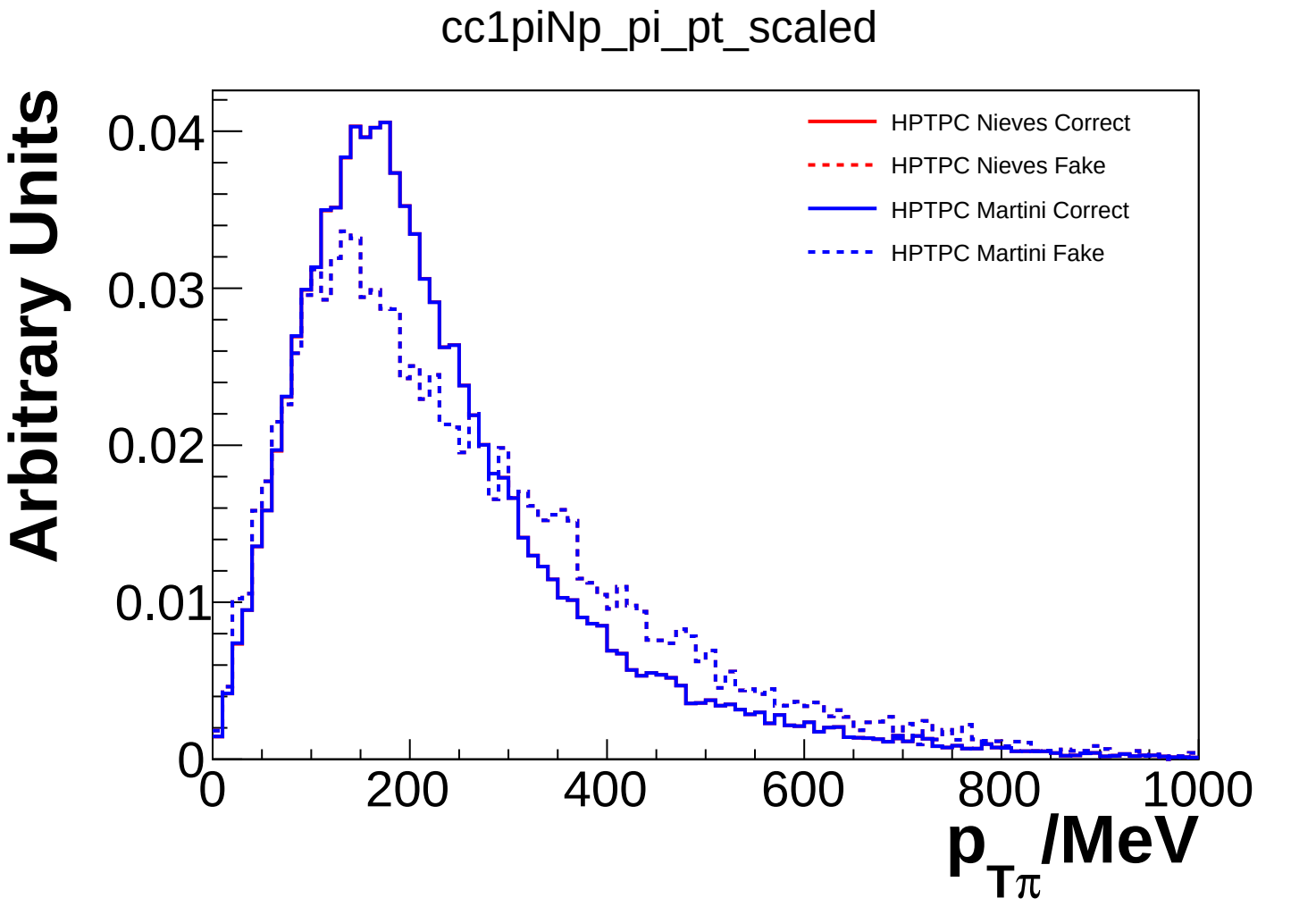
True/Fake
20
15
10
5
0
0
200
400
600
800
1000
$p_{T\pi}$/MeV
HPTPC Nieves
HPTPC Martini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Arbitrary Units
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0.03
0.02
0.01
0
0
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400
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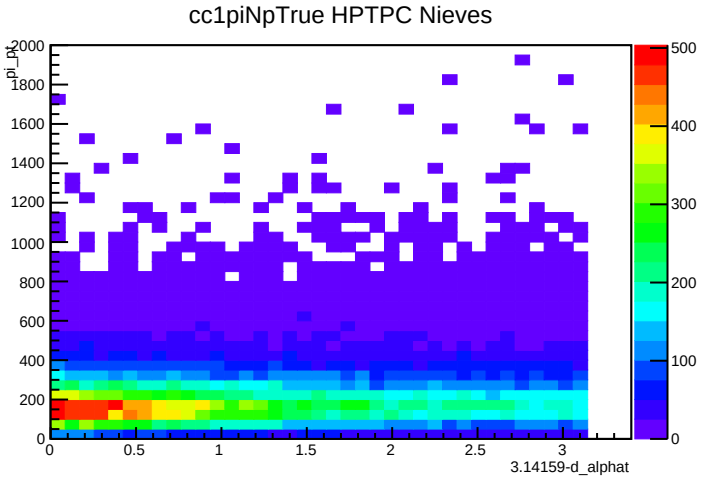
$p_{T\pi}$/MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake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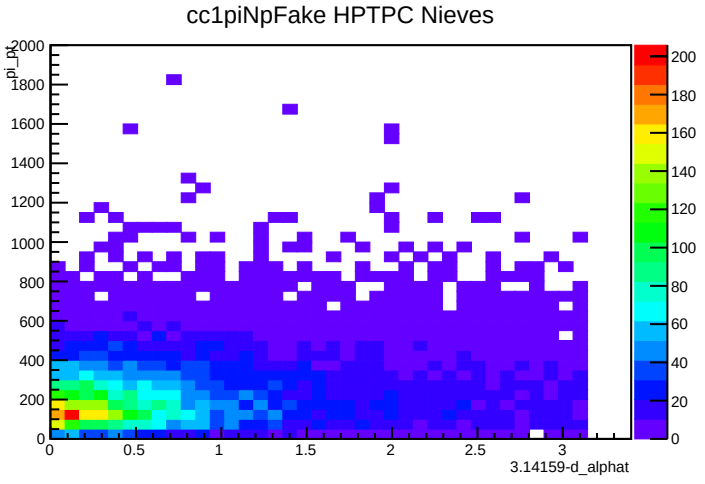
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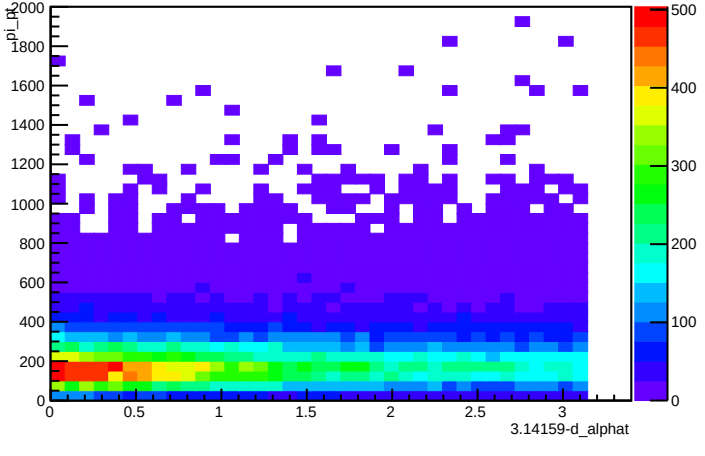
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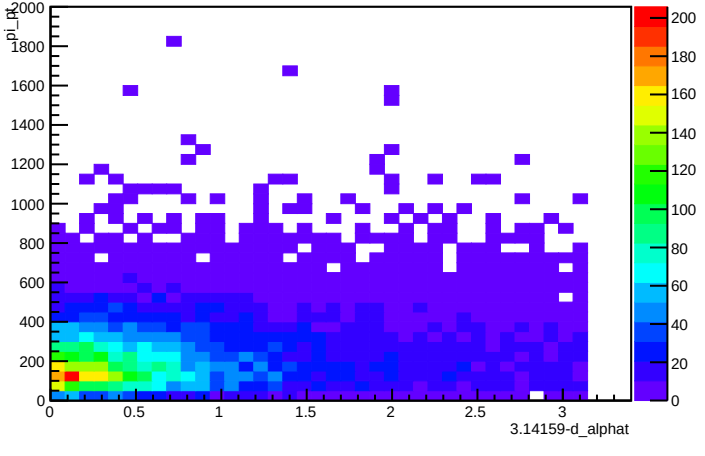
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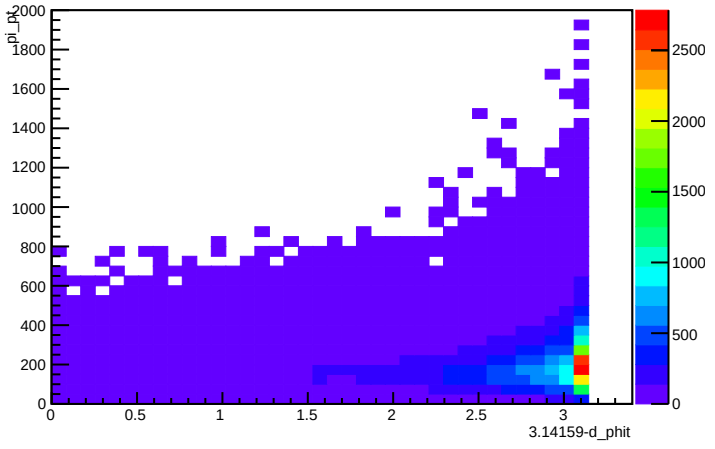
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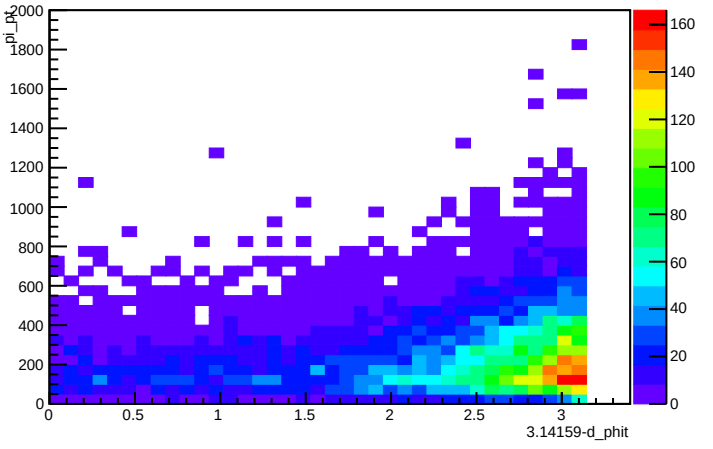
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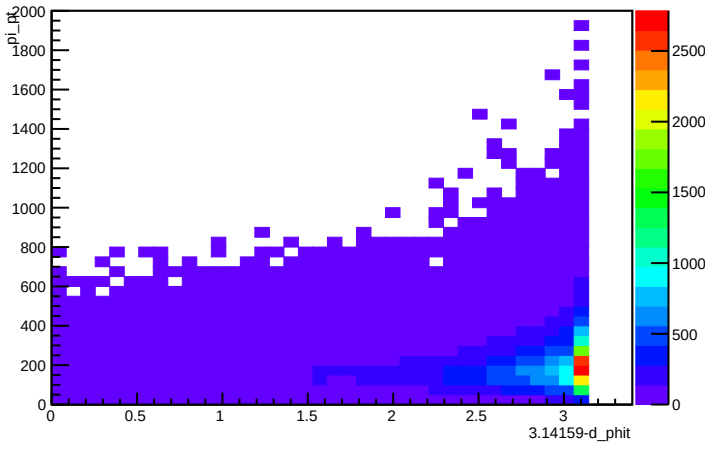
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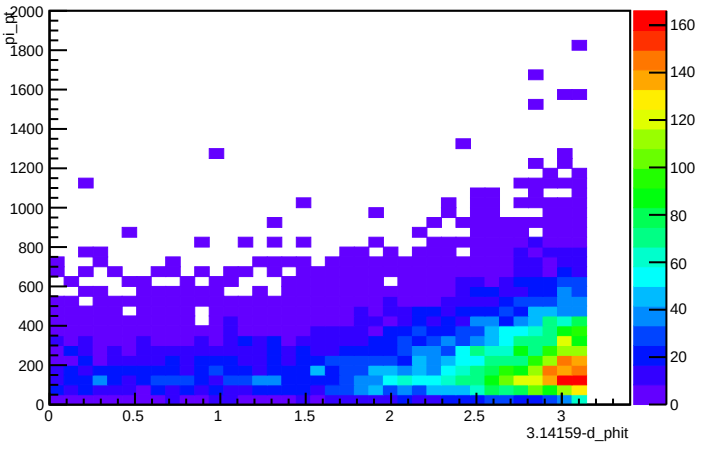
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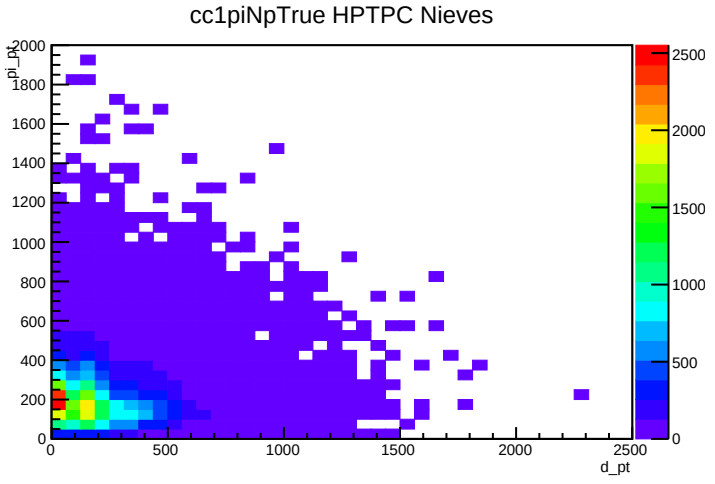
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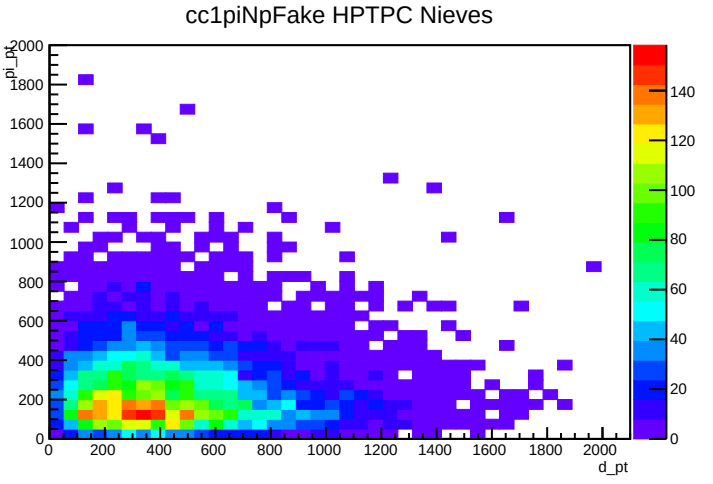
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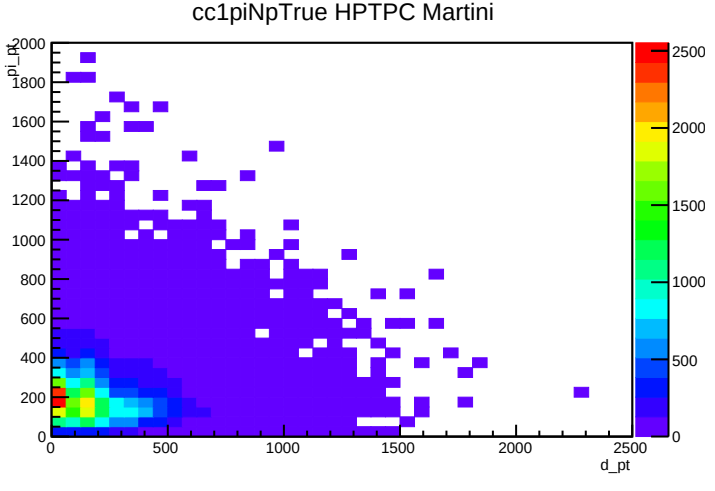
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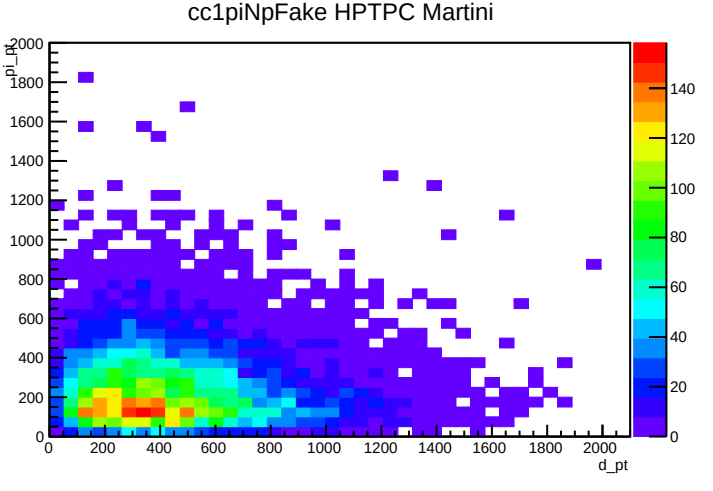
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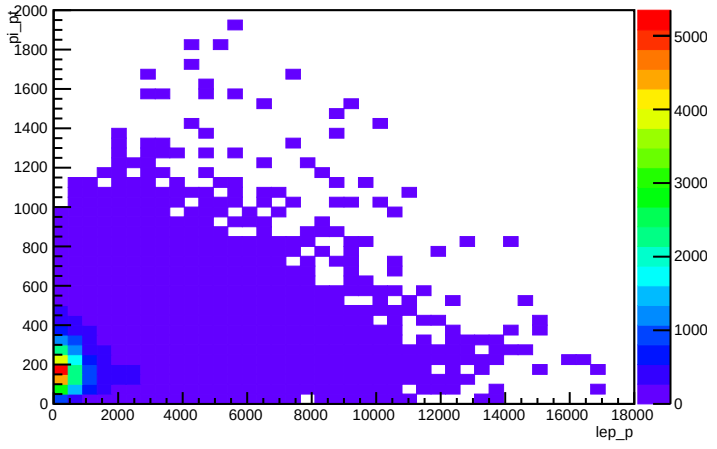
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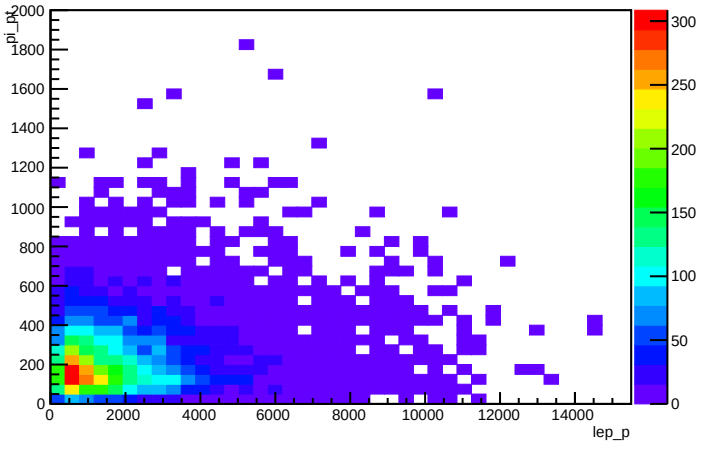
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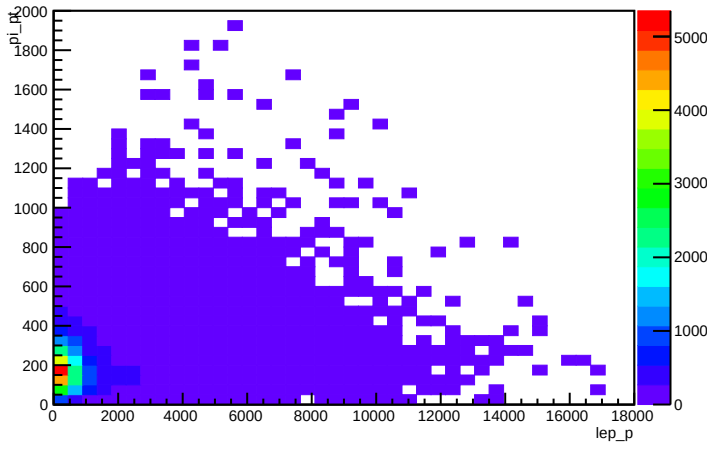
pi_p
lep_p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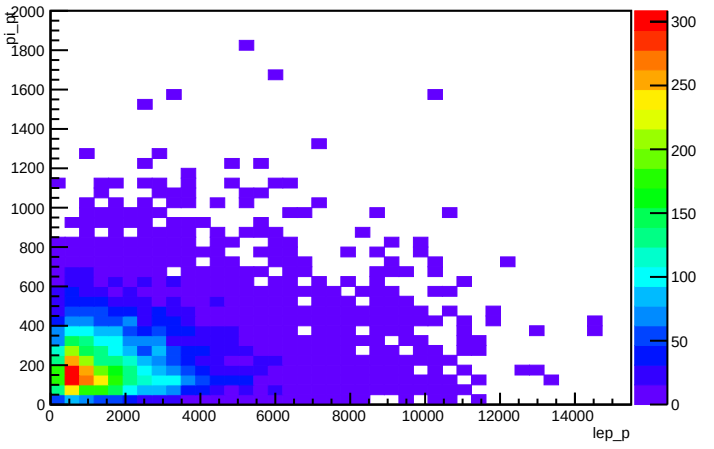
lep_p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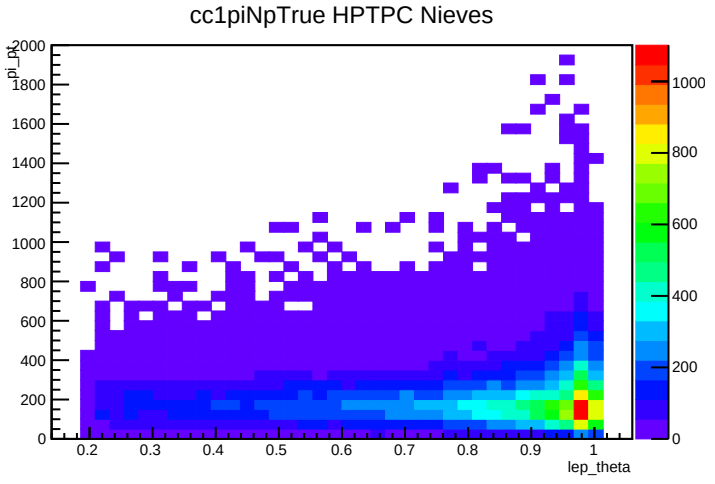
lep_p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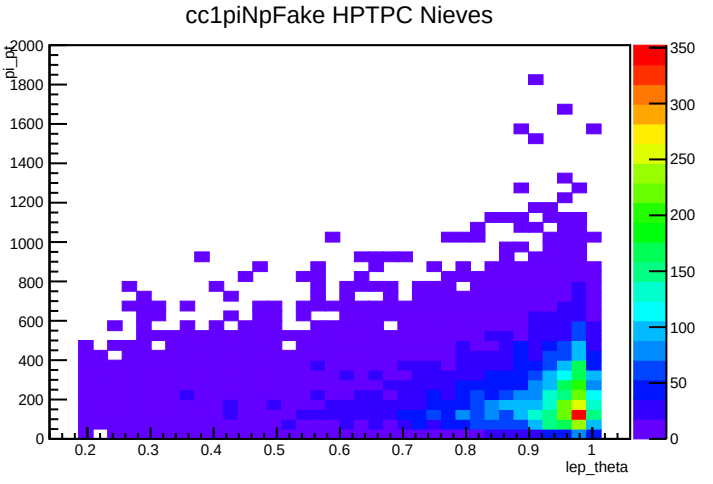
pi_pt
lep_theta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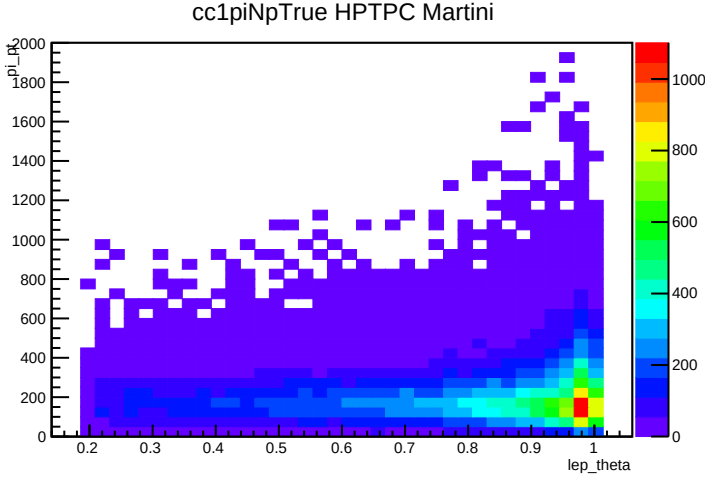
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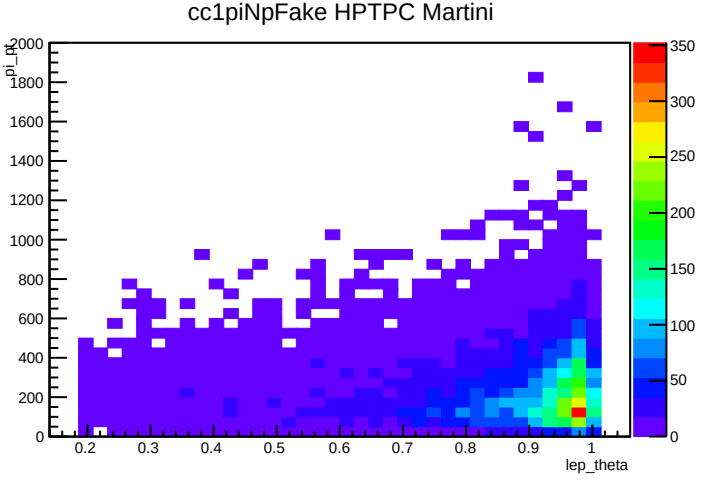
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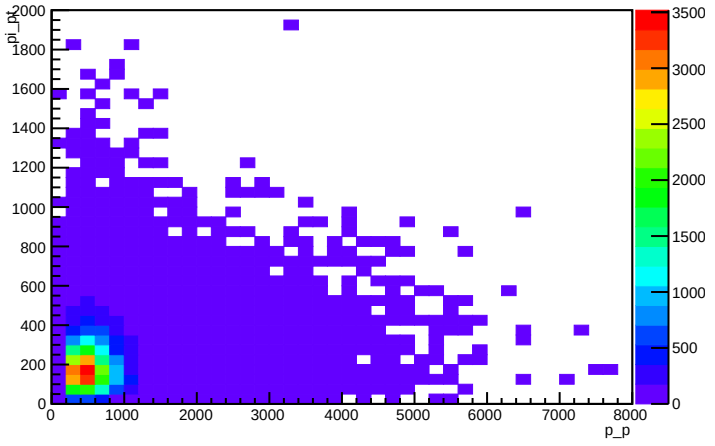
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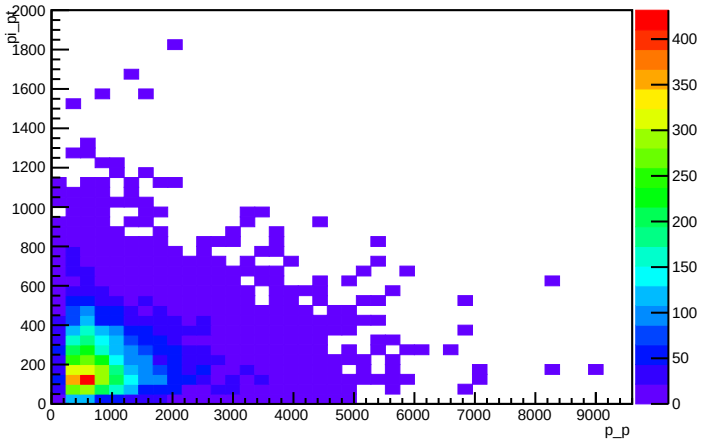
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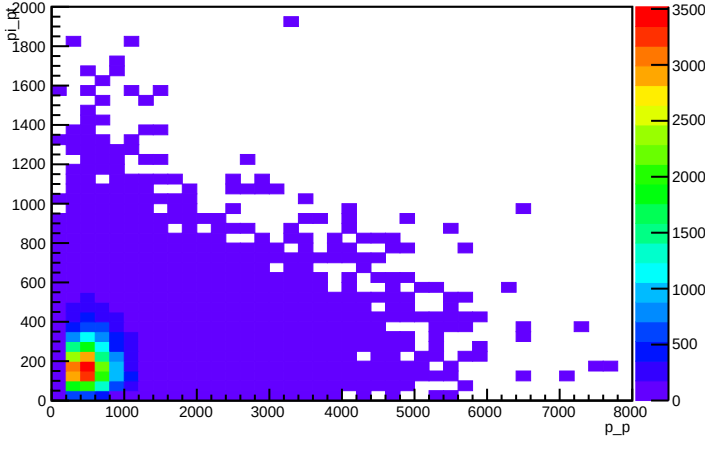
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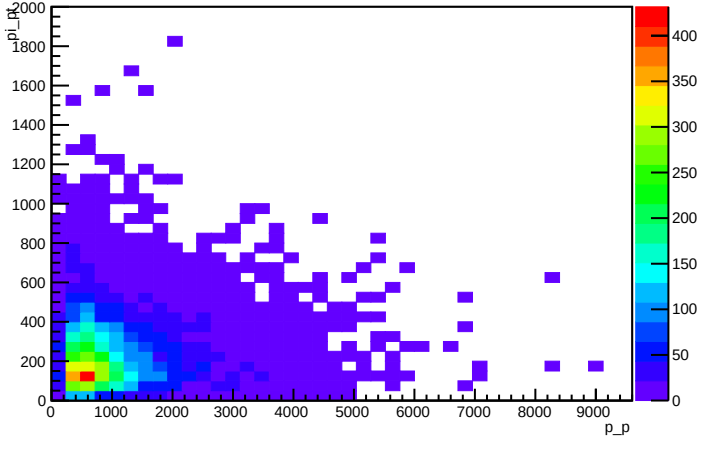
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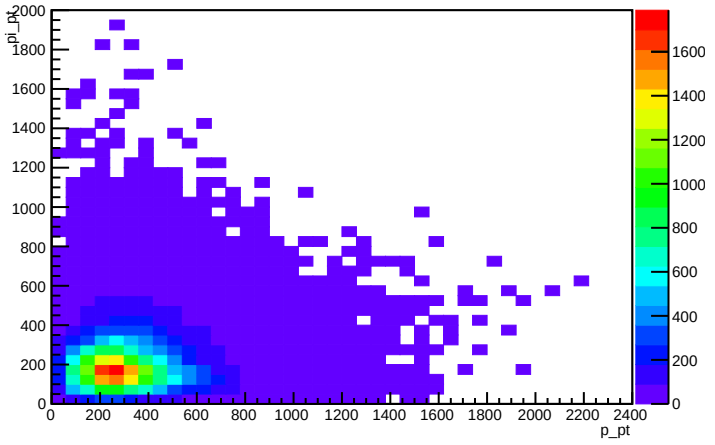
pi_pt
p_p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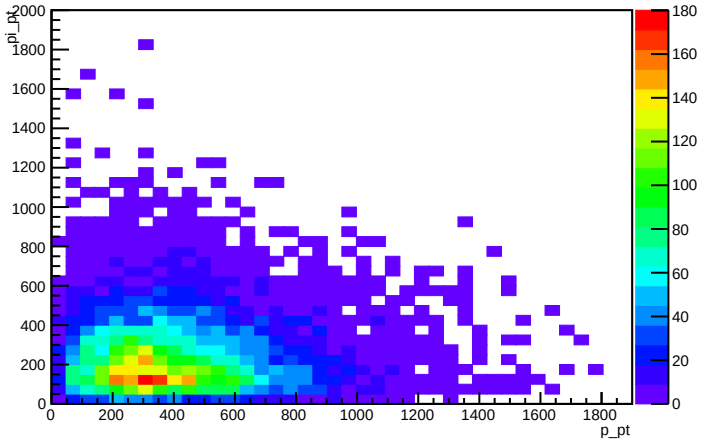
p_pt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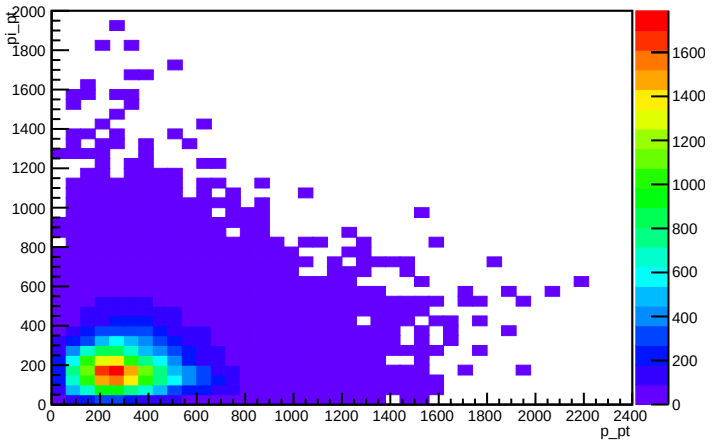
pi_pt
p_pt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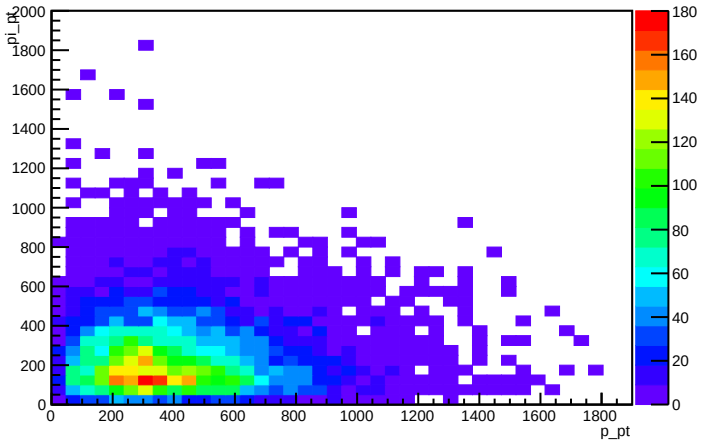
p_pt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pi_pt
p_pt

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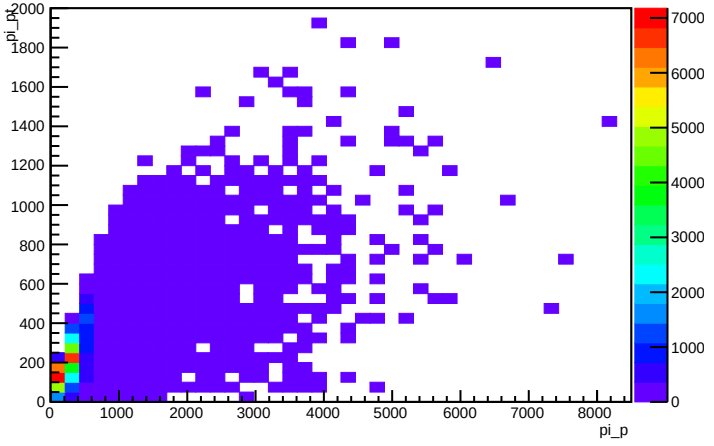

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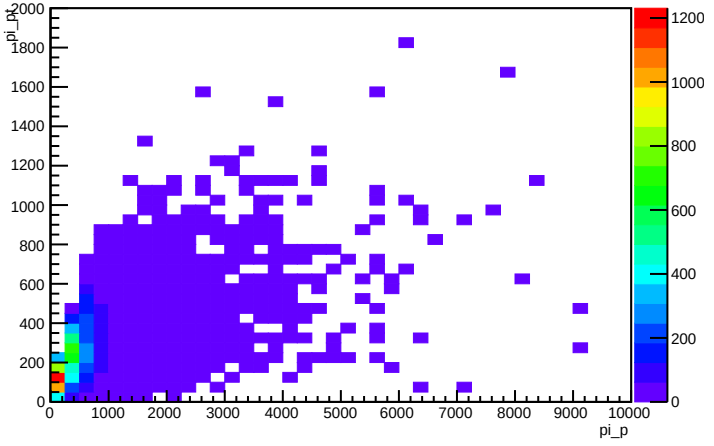

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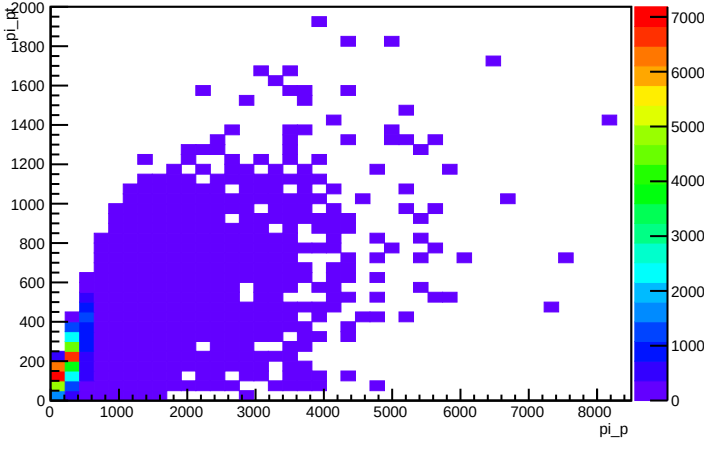

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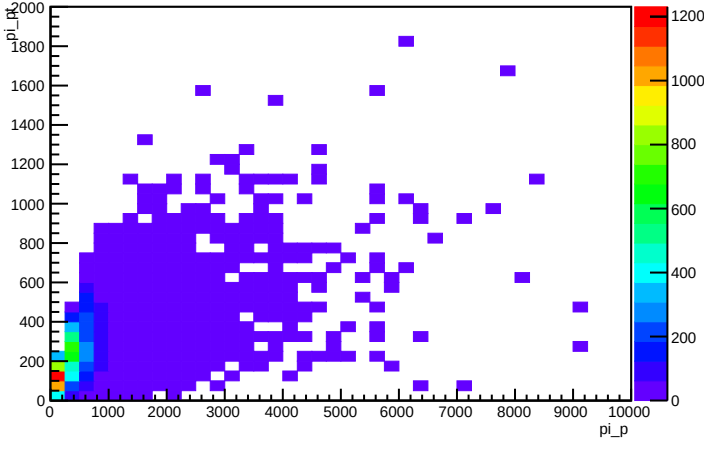

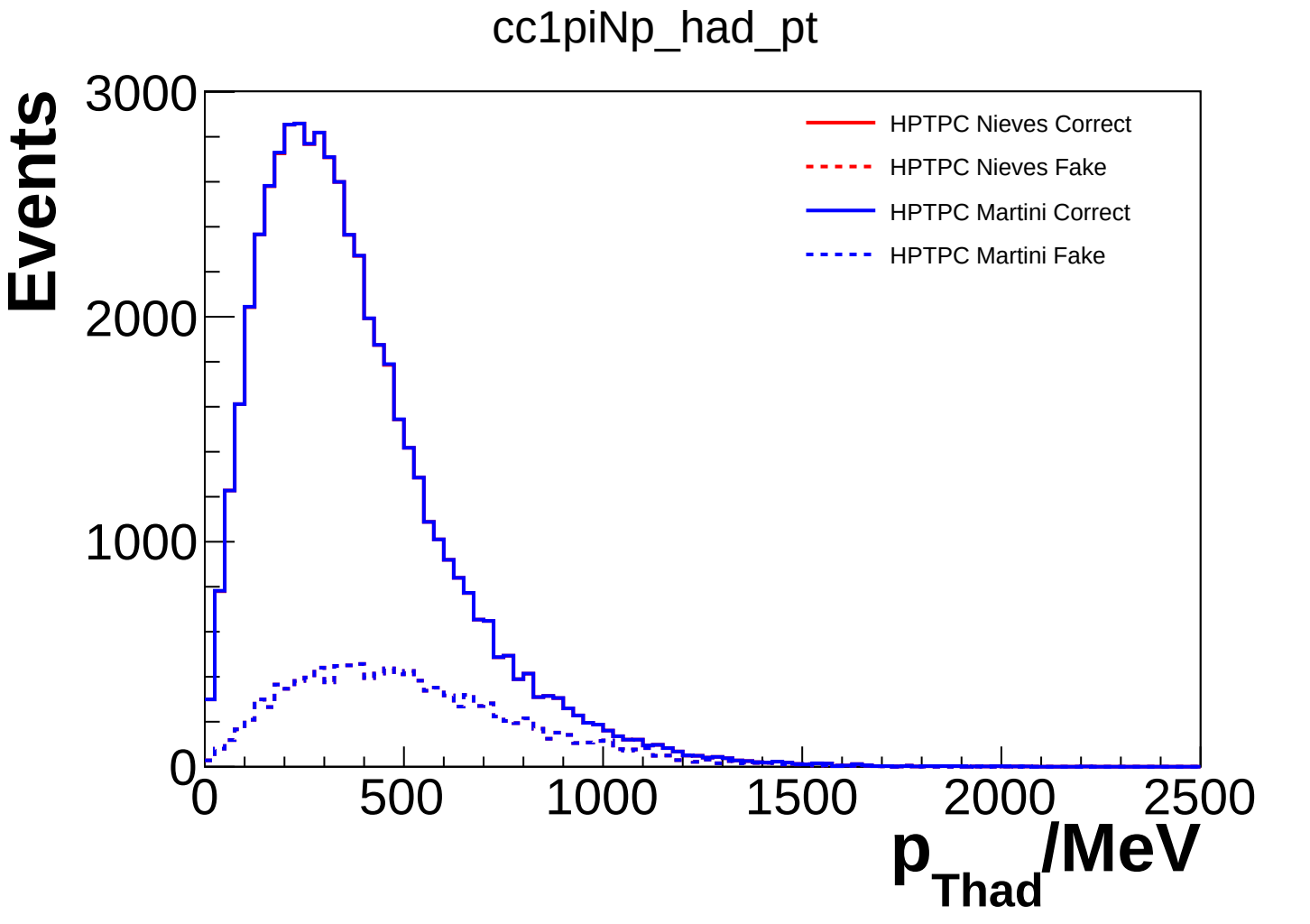
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Events
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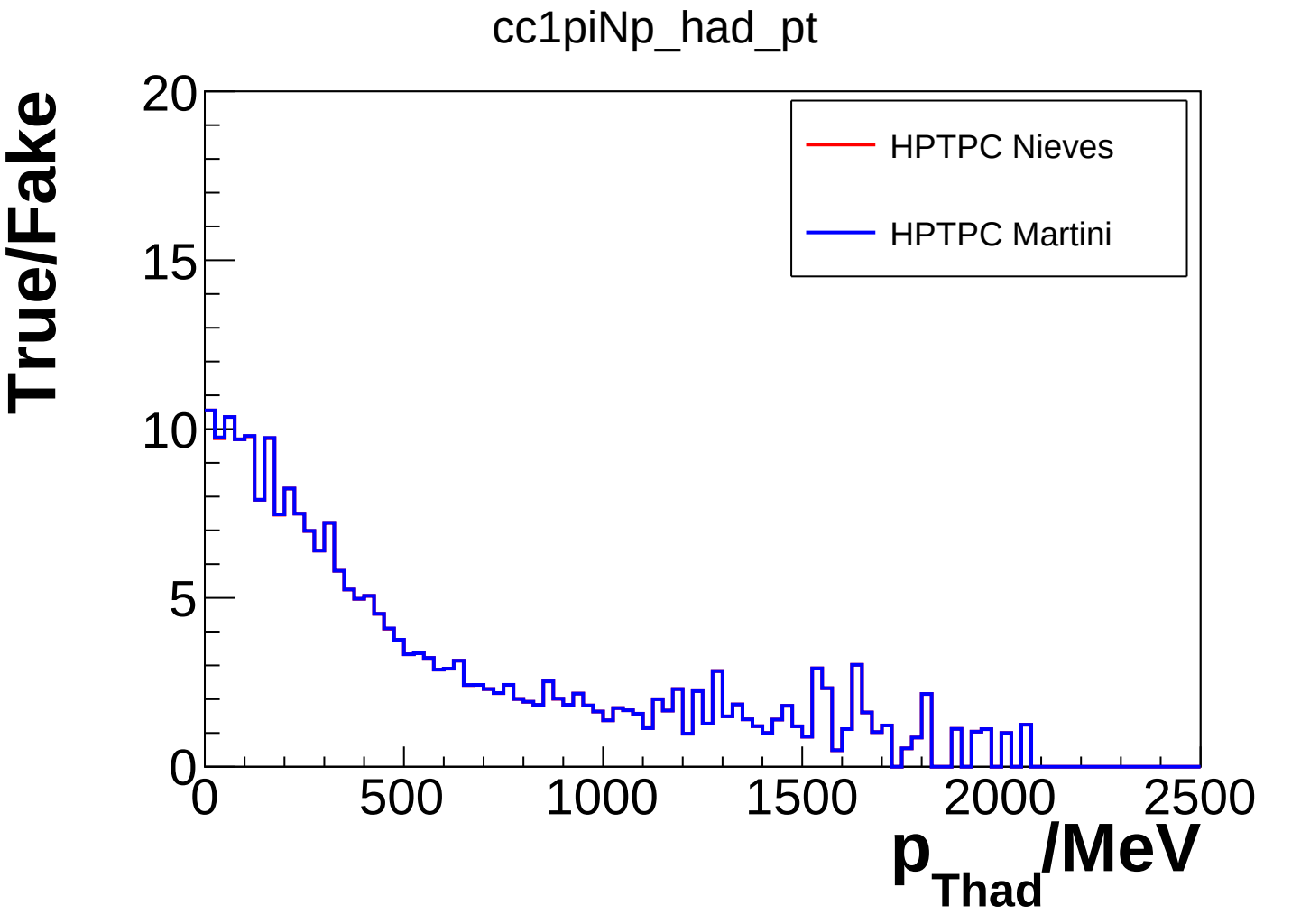
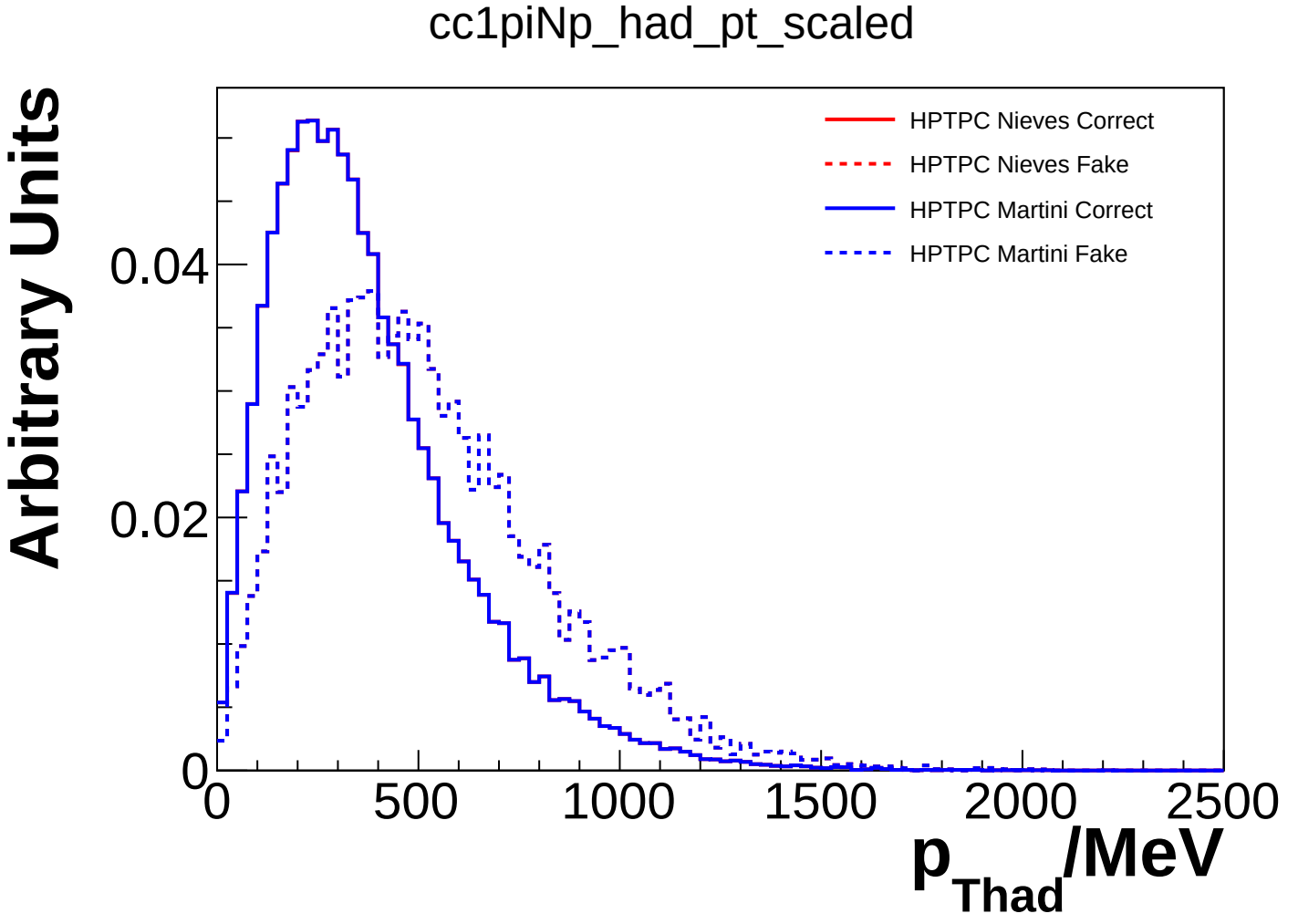
1500
2000
2500
p_Thad/MeV
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake


cc1piNp_had_pt
True/Fake
20
15
10
5
0
0
500
1000
1500
2000
2500
p_{Thad}/MeV
HPTPC Nieves
HPTPC Martini


cc1piNp_had_pt_scaled
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake
Arbitrary Units
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0.02
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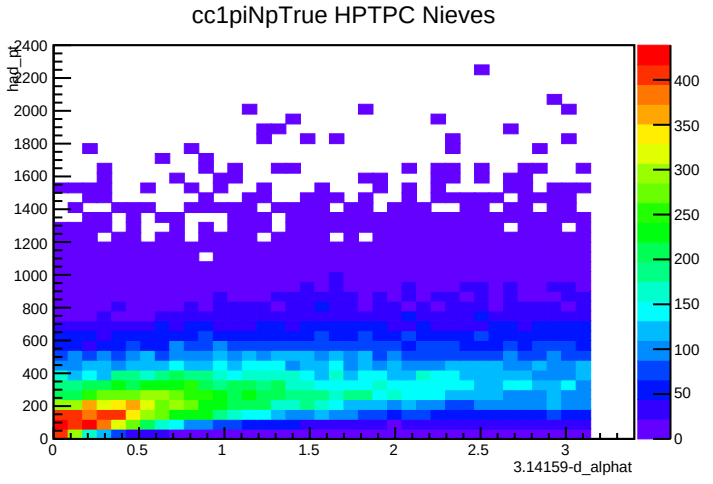
0
500
1000
1500
2000
2500
p_Thad/MeV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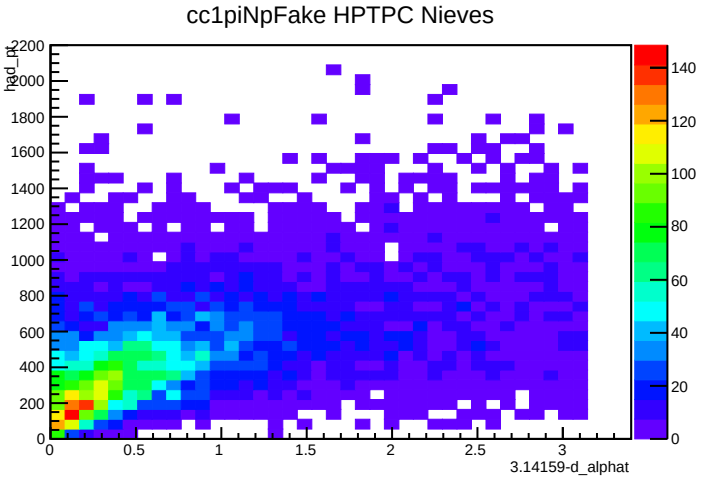
had_pt
3.14159-d_alphat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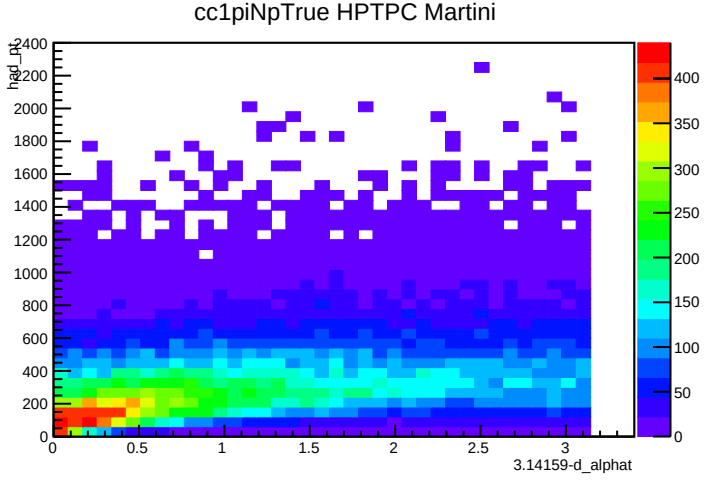
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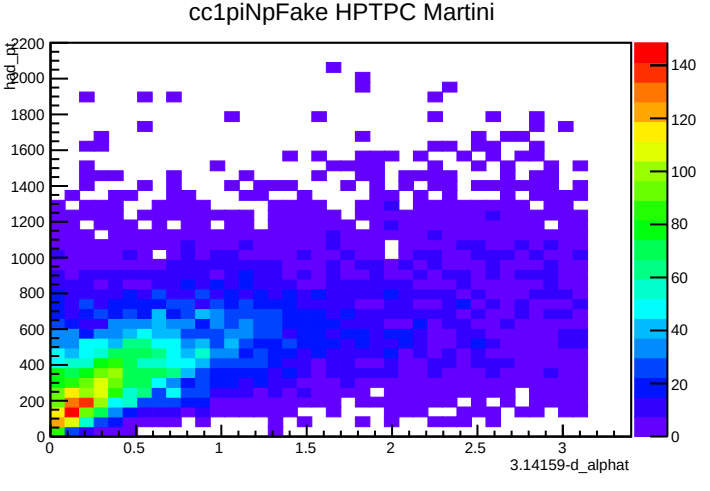
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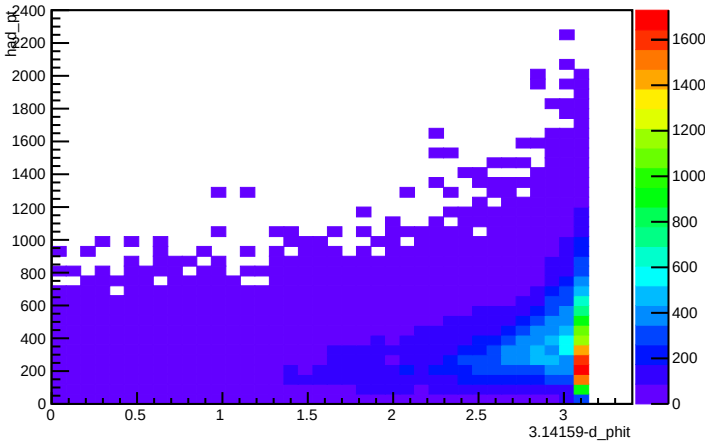
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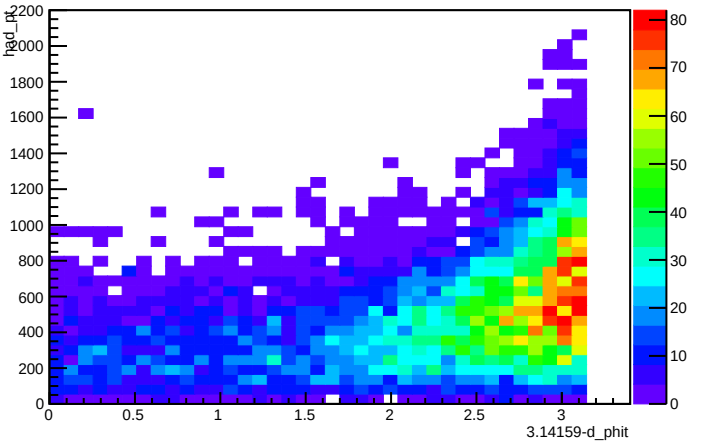
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had_pt
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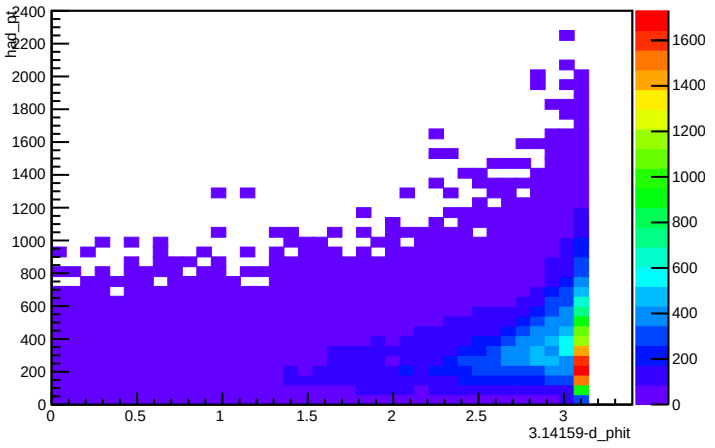
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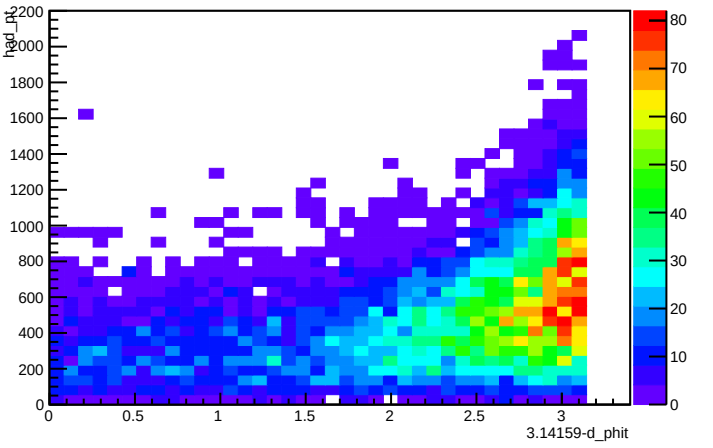
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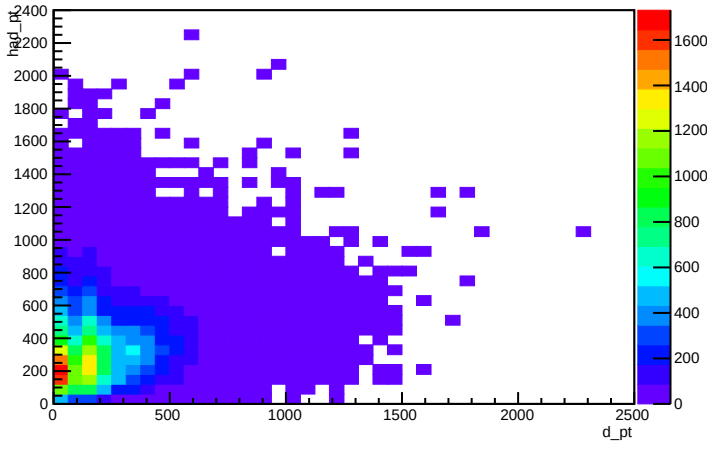
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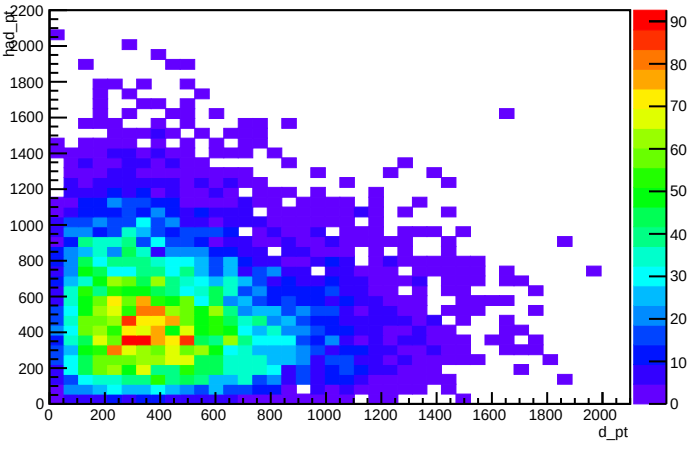
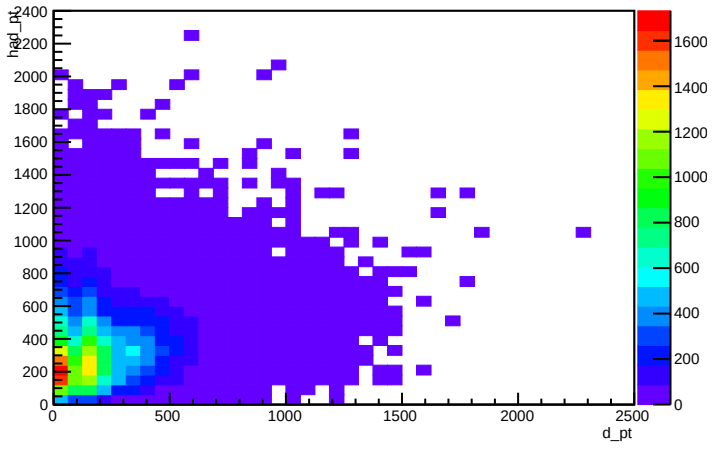
had_pt
d_pt


cc1piNpFake HPTPC Nieves
had_pt
d_pt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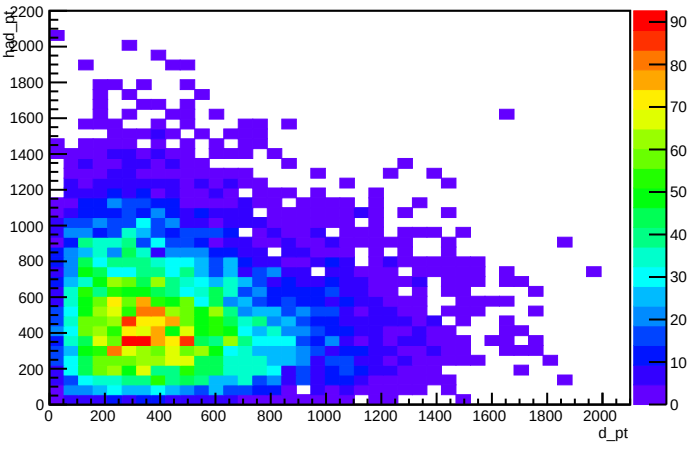
had_pt
d_pt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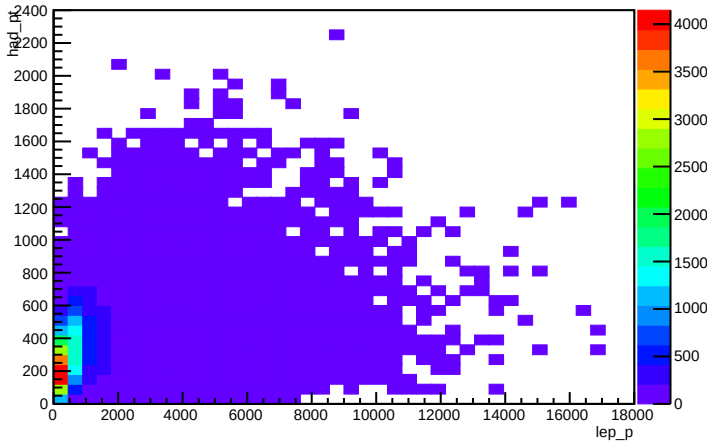
had_pt
d_pt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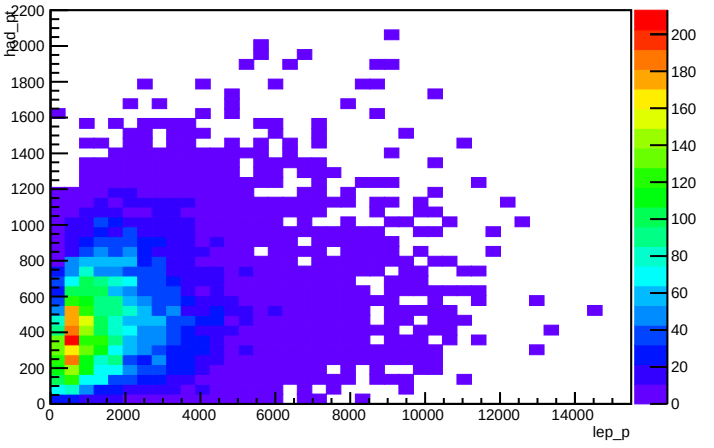
lep_p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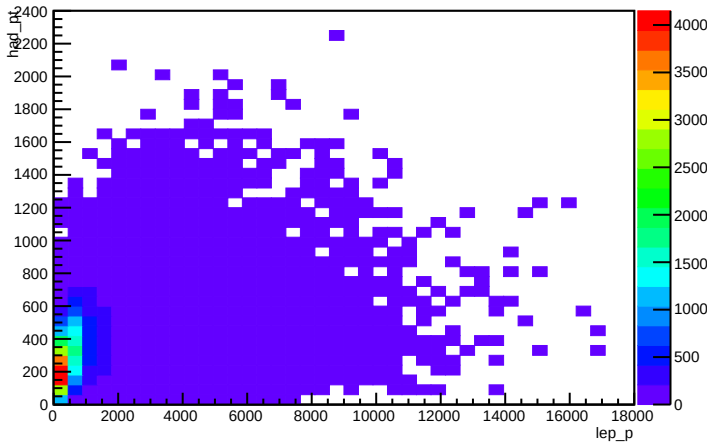
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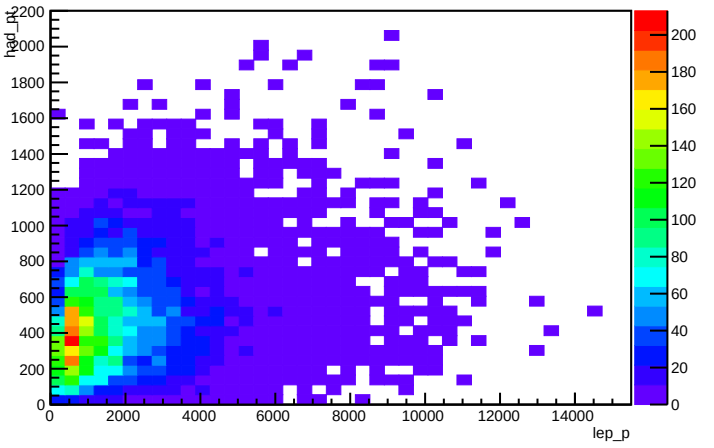
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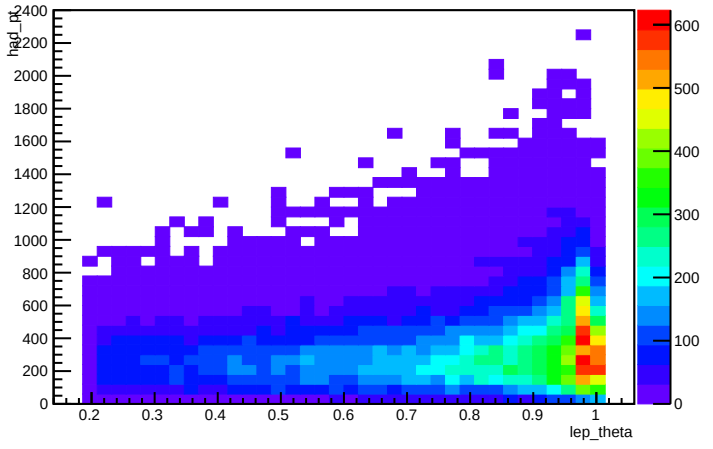
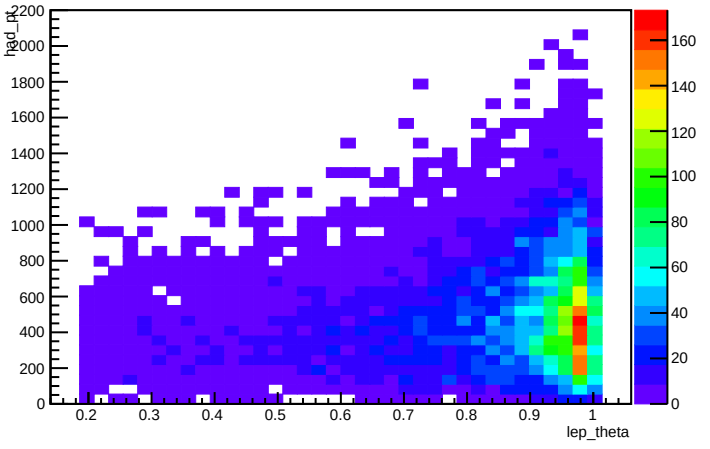

cc1piNpTrue HPTPC Nieves
had_pt
lep_theta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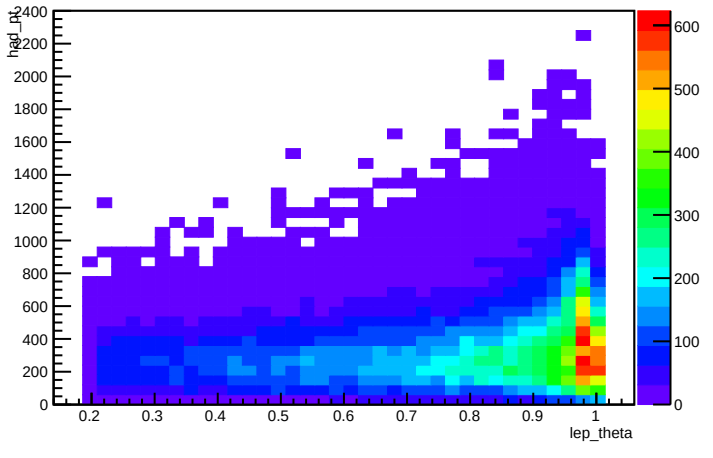
had_pt
lep_theta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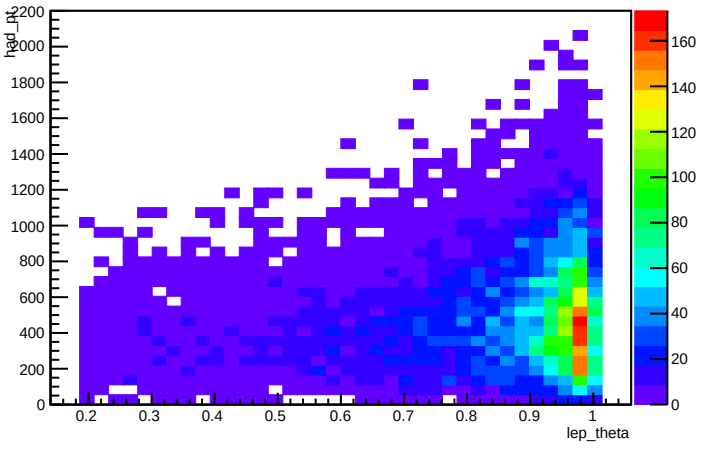
lep_theta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lep_theta

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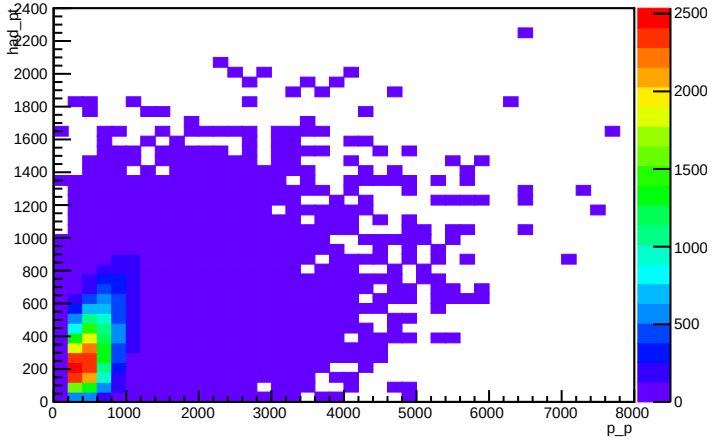

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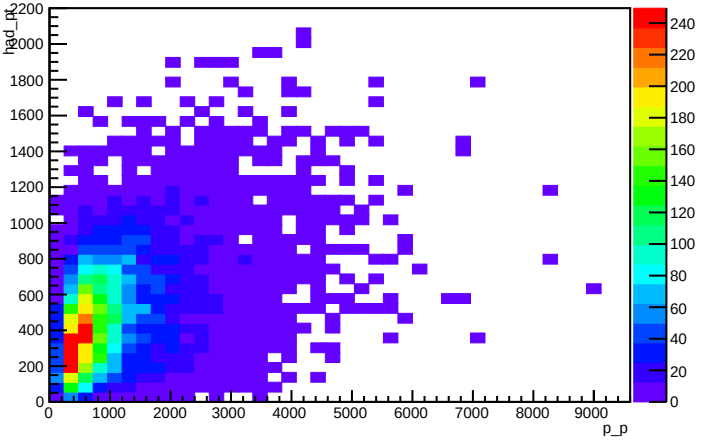

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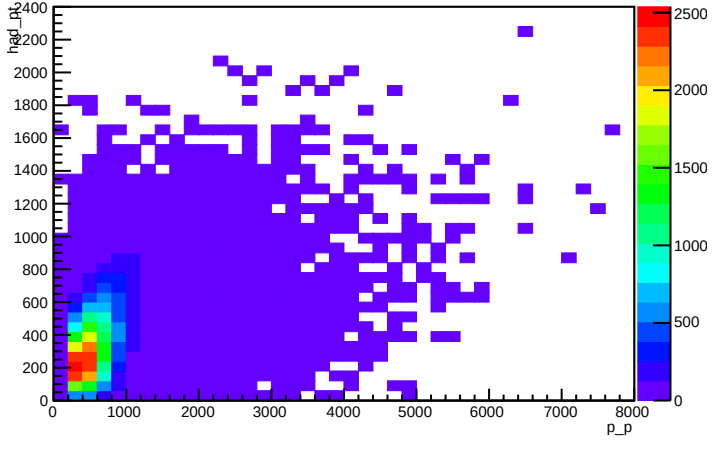

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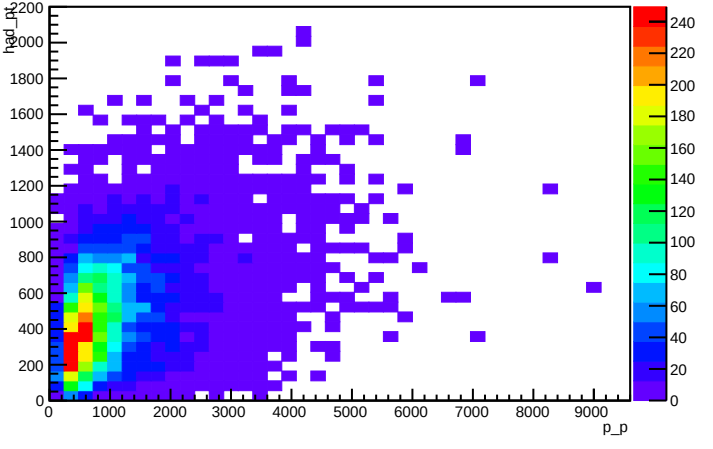
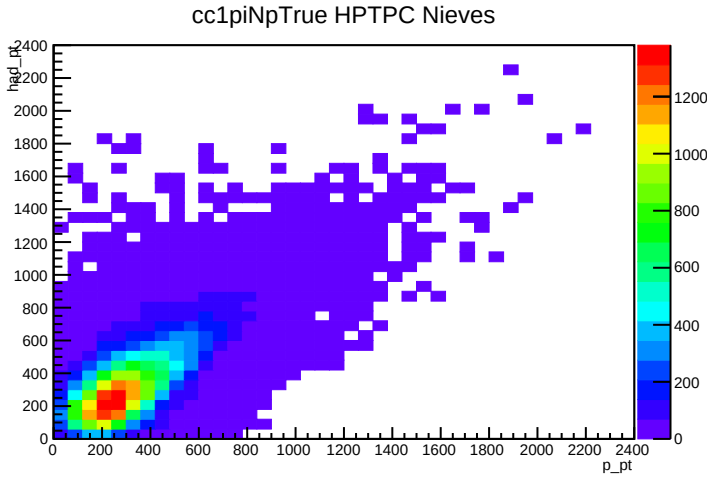
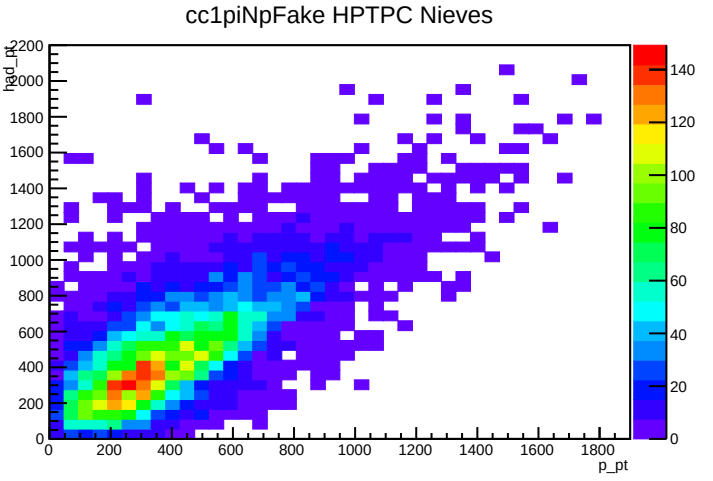



cc1piNpTrue HPTPC Nieves
had_pt
p_pt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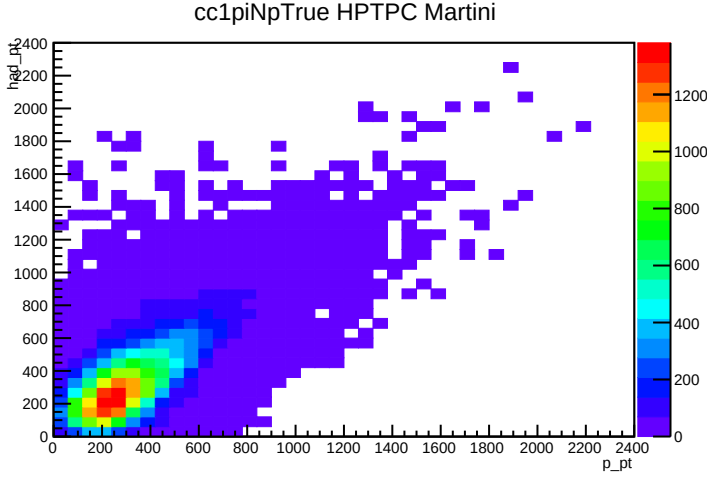
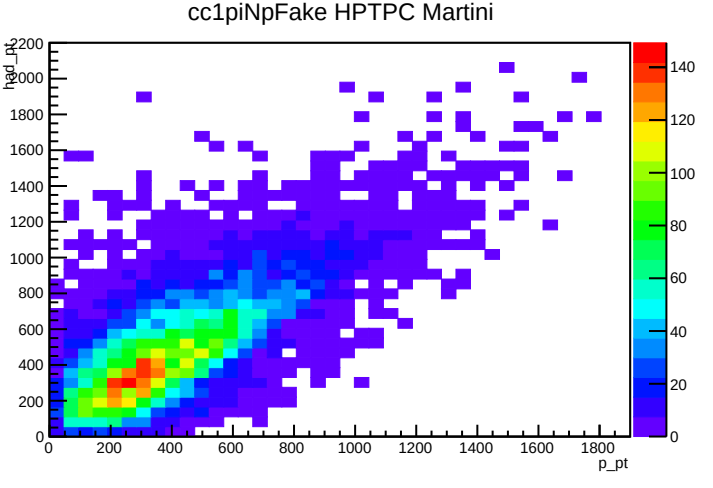
had_pt
p_pt


cc1piNpTrue HPTPC Martini
had_pt
p_pt


cc1piNpFake HPTPC Martini
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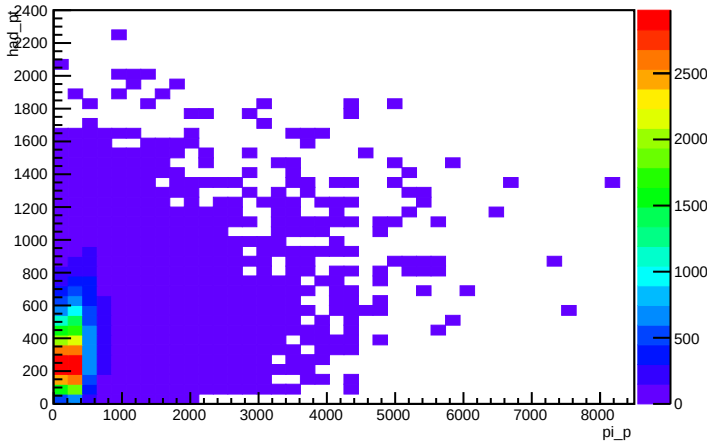
p_pt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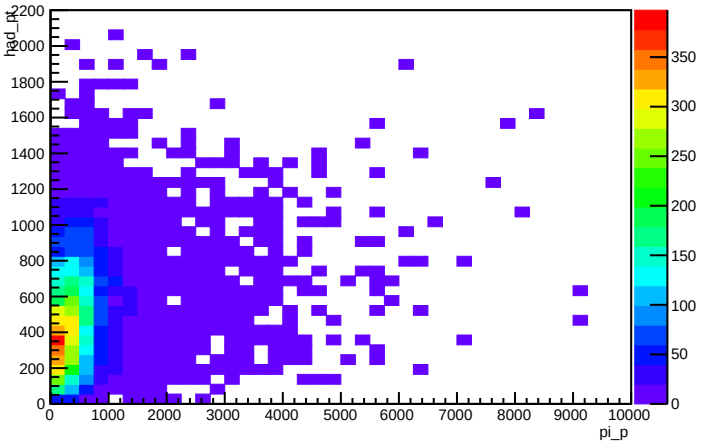
had_pt
pi_p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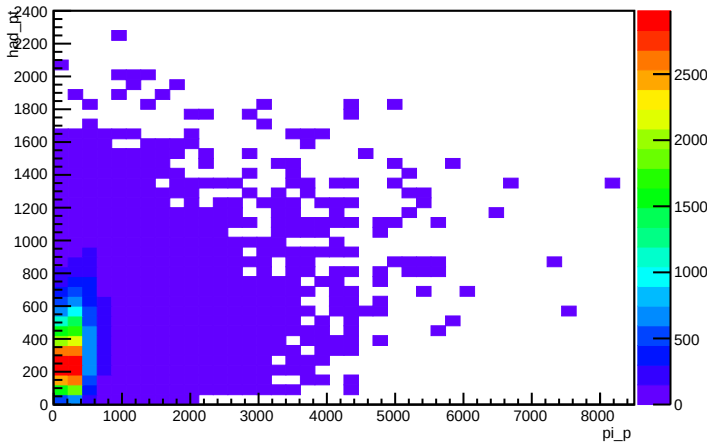
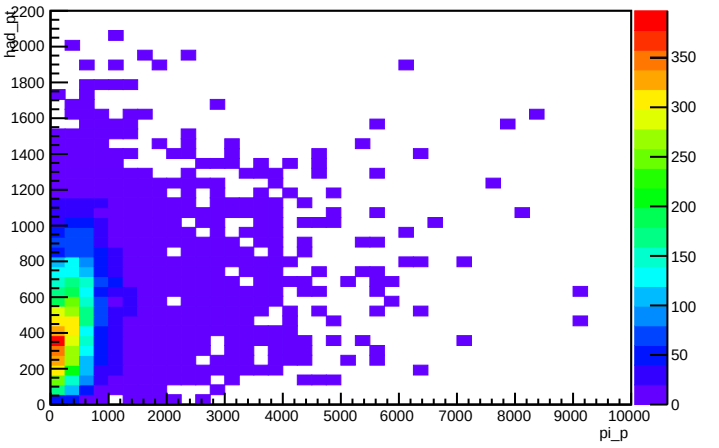

cc1piNpTrue HPTPC Martini
had_pt
pi_p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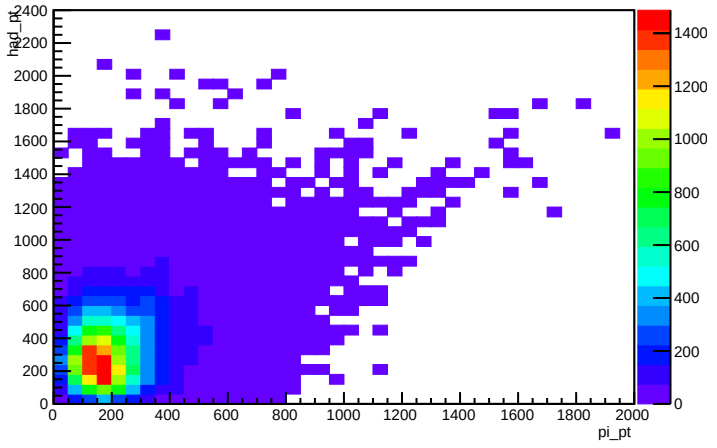
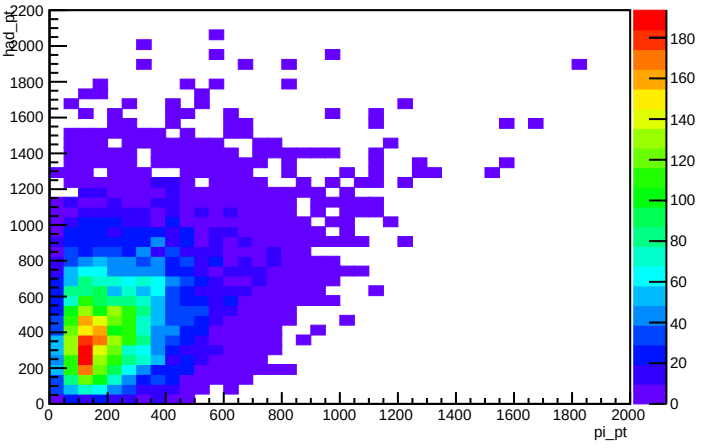

cc1piNpTrue HPTPC Nieves
had_pt
pi_pt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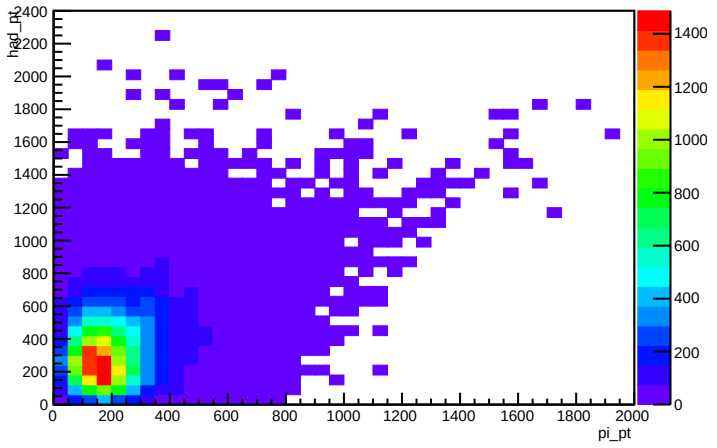
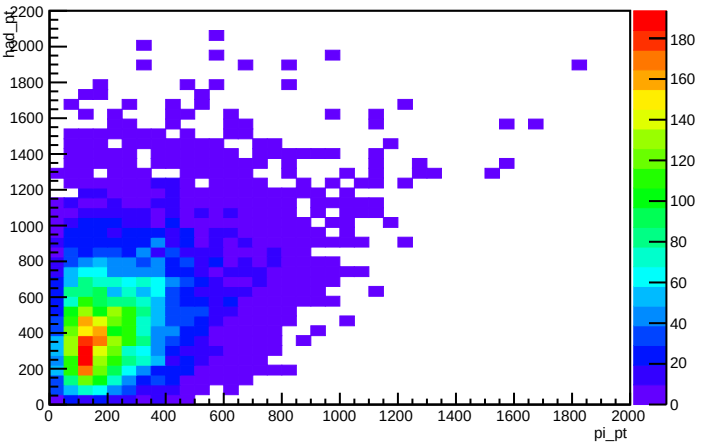
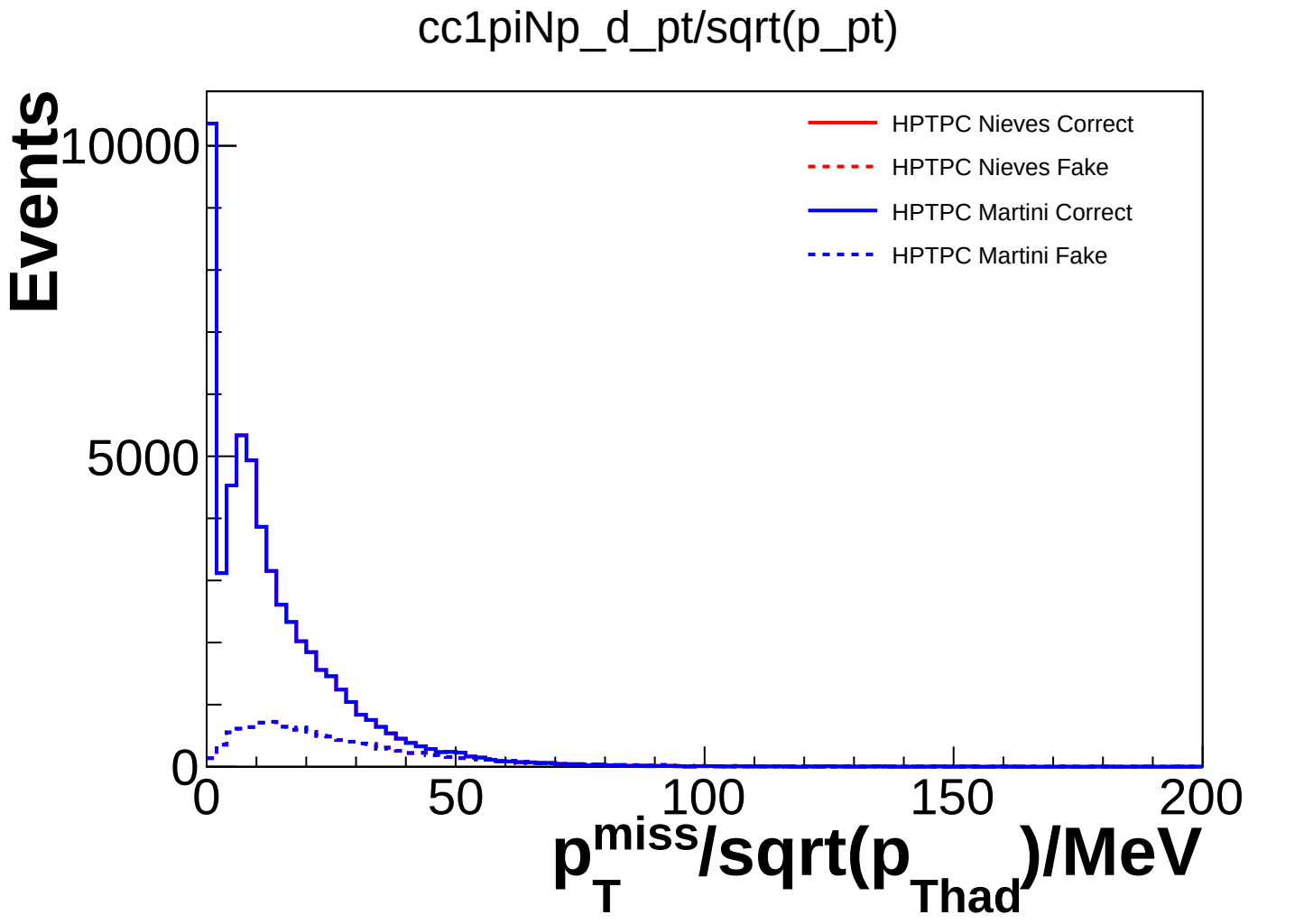
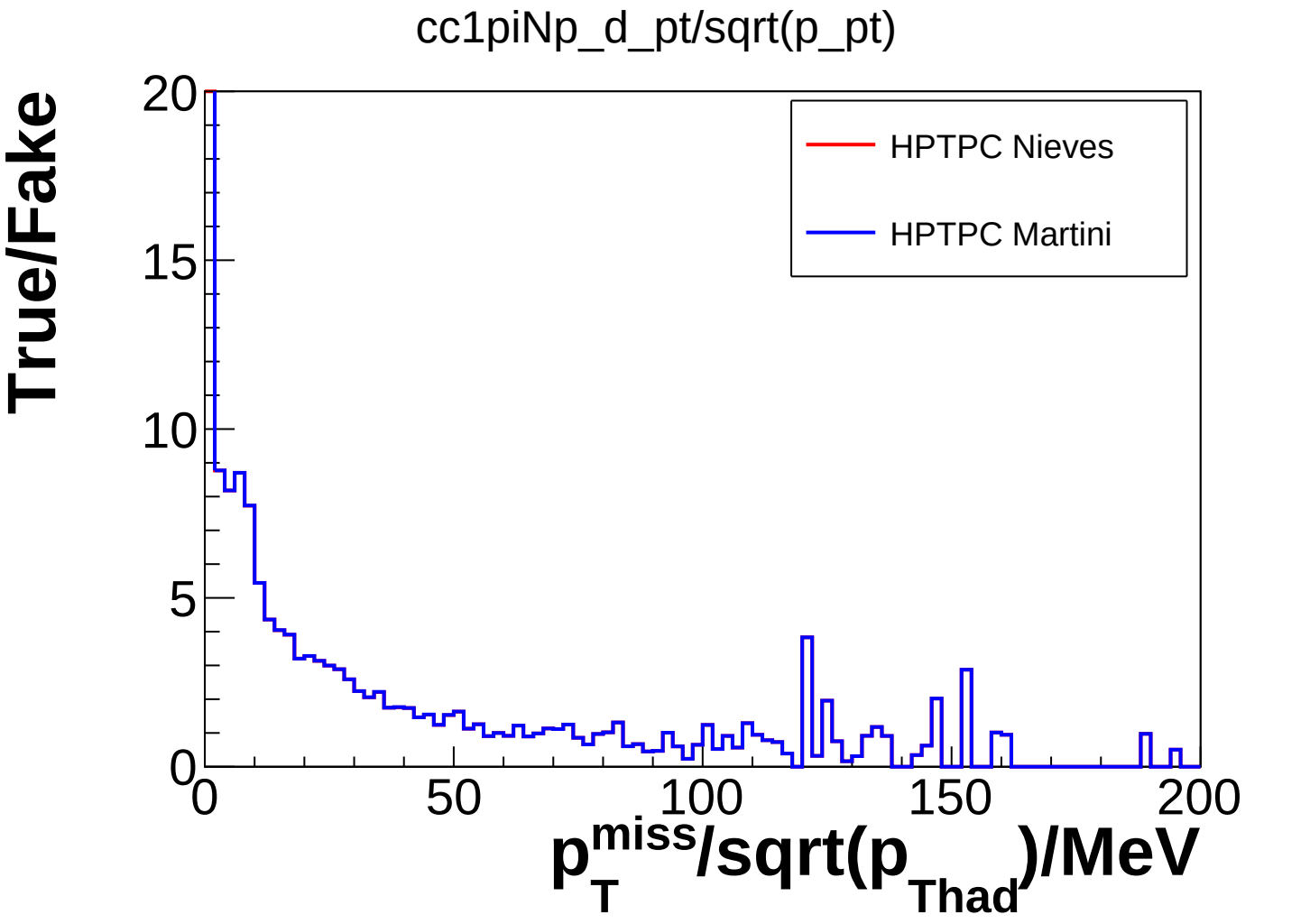
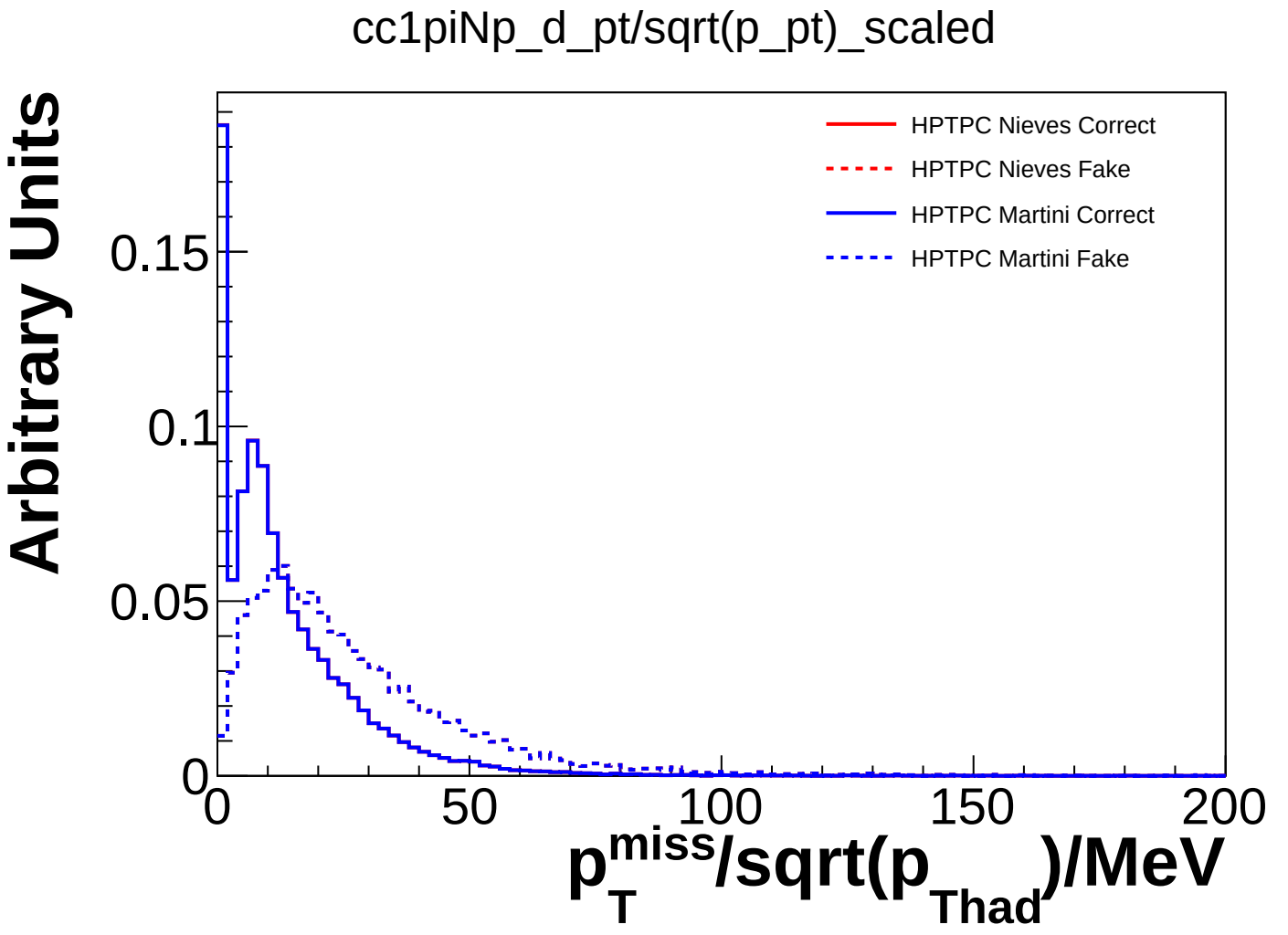
had_pt
pi_pt

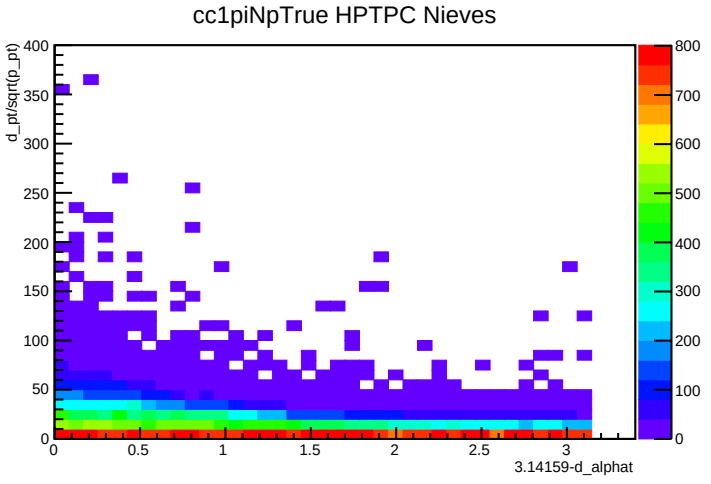

cc1piNpTrue HPTPC Martini
had_pt
pi_pt

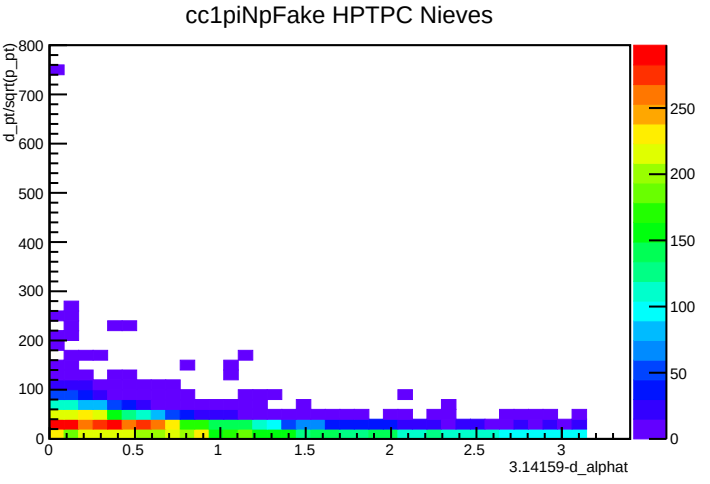

cc1piNpFake HPTPC Martini
had_pt
pi_pt

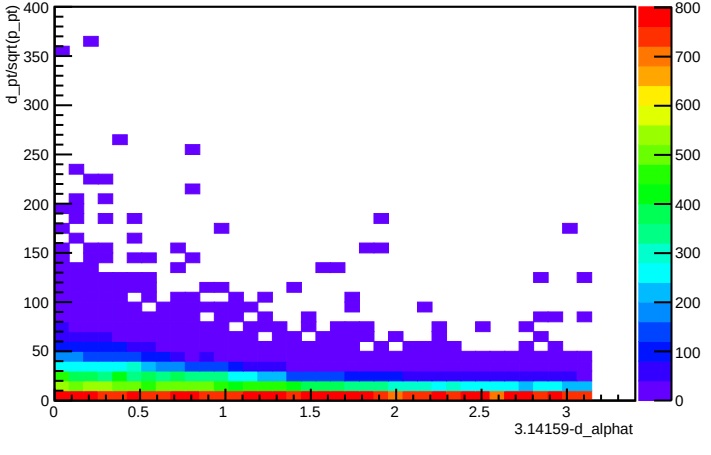

cc1piNp_d_pt/sqrt(p_pt)
Events
10000
5000
0
0
50
100
150
200
$p_T^{miss}/sqrt(p_{Thad})/MeV$
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake

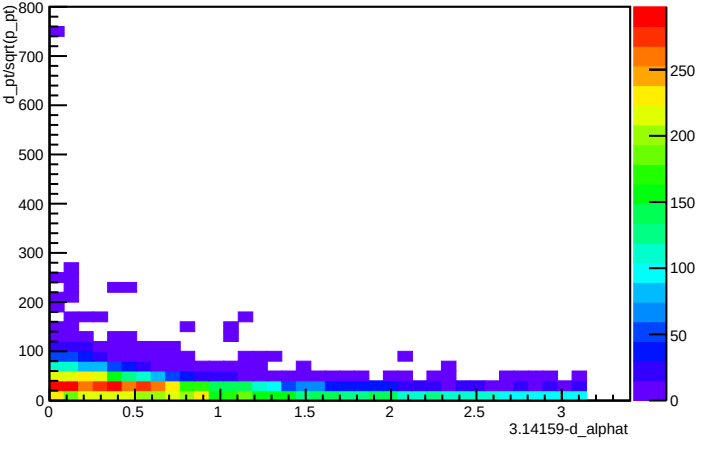

cc1piNp_d_pt/sqrt(p_pt)
True/Fake
20
15
10
5
0
0
50
100
150
200
HPTPC Nieves
HPTPC Martini
p_T^miss/sqrt(p_Thad)/MeV


cc1piNp_d_pt/sqrt(p_pt)_scaled
HPTPC Nieves Correct
HPTPC Nieves Fake
HPTPC Martini Correct
HPTPC Martini Fake
Arbitrary Units
0.15
0.1
0.05
0
0
50
100
150
200
p_T^miss/sqrt(p_Thad)/MeV


cc1piNpTrue HPTPC Nieves
d_pt/sqrt(p_pt)
3.14159-d_alphat


cc1piNpFake HPTPC Nieves
d_pt/sqrt(p_pt)
3.14159-d_alphat


cc1piNpTrue HPTPC Martini
d_pt/sqrt(p_pt)
3.14159-d_alphat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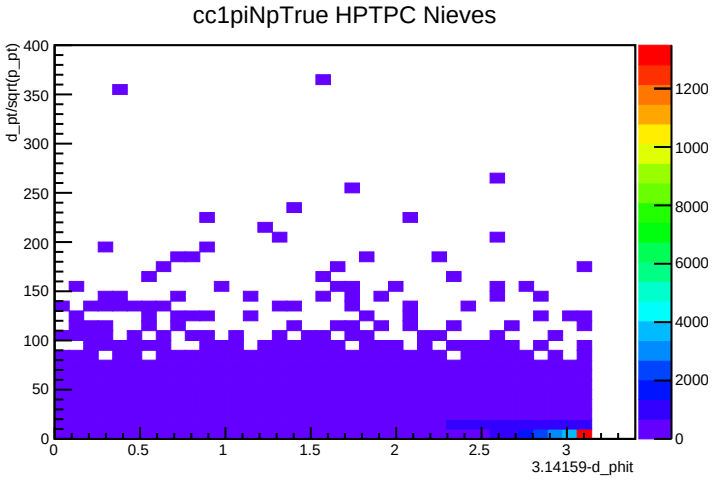
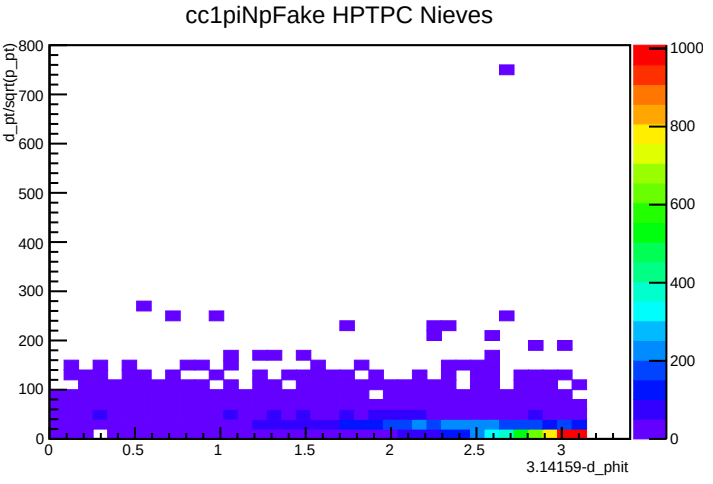
d_pt/sqrt(p_pt)
3.14159-d_alphat


cc1piNpTrue HPTPC Nieves
d_pt/sqrt(p_pt)
3.14159-d_phit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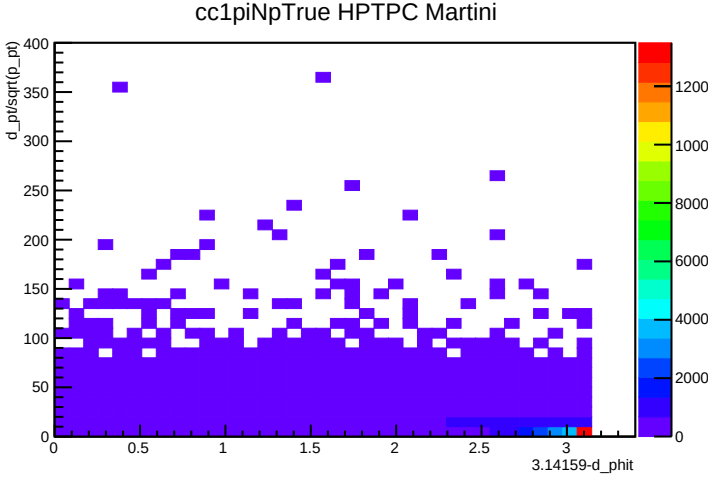
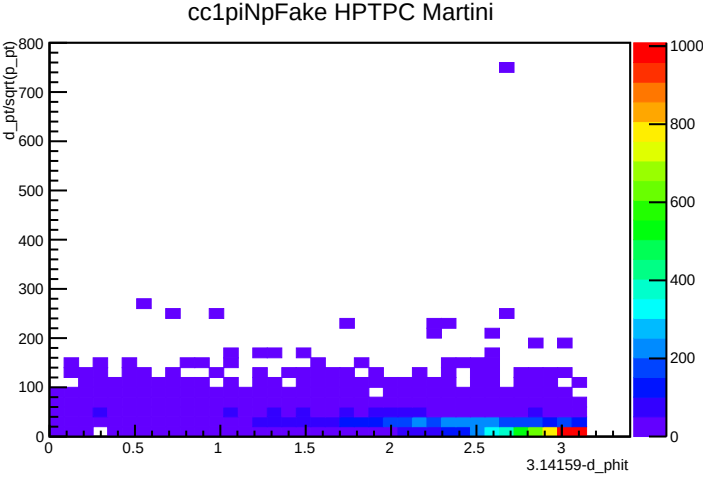
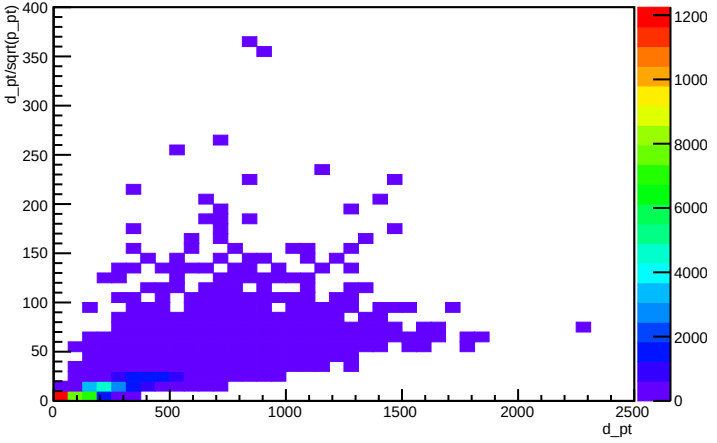
d_pt/sqrt(p_pt)
3.14159-d_phit


cc1piNpTrue HPTPC Martini
d_pt/sqrt(p_pt)
3.14159-d_phit


cc1piNpFake HPTPC Martini
d_pt/sqrt(p_pt)
3.14159-d_phit

cc1piNpTrue HPTPC Nieves



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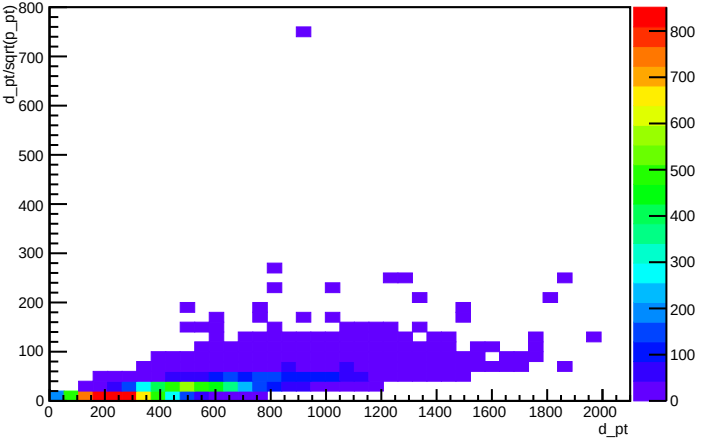

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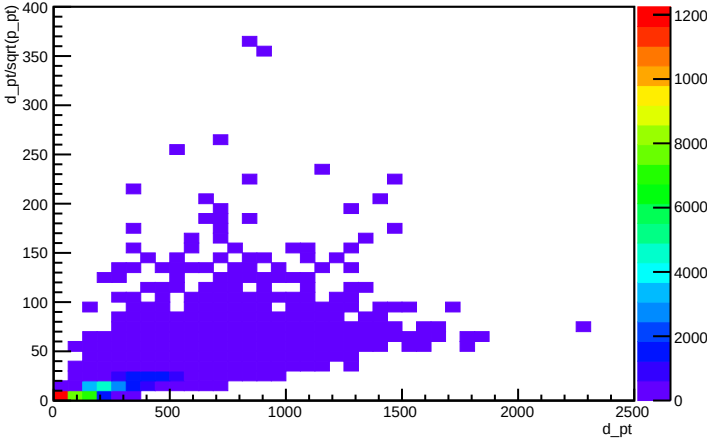
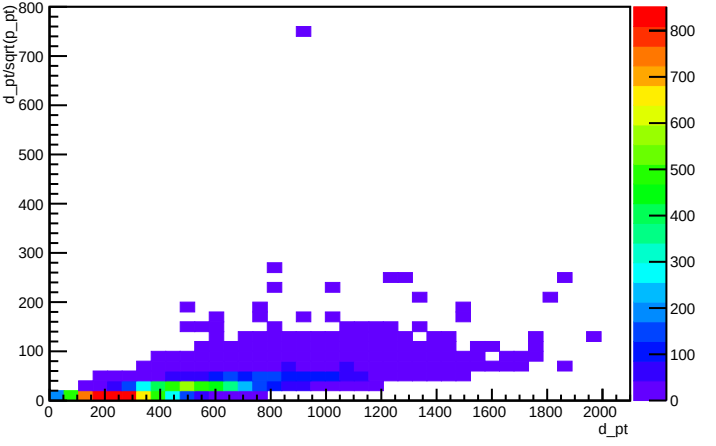
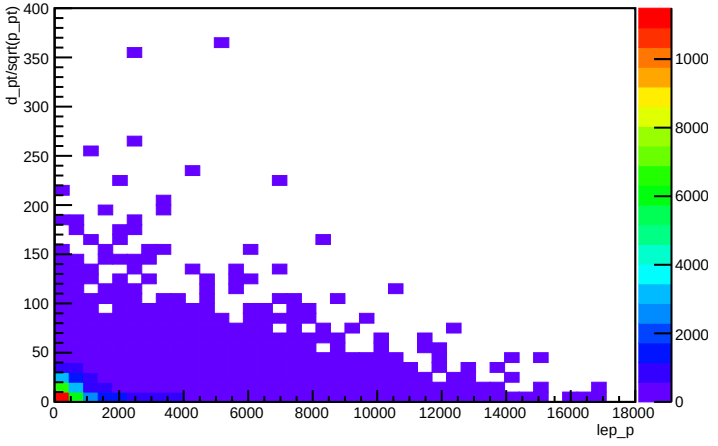
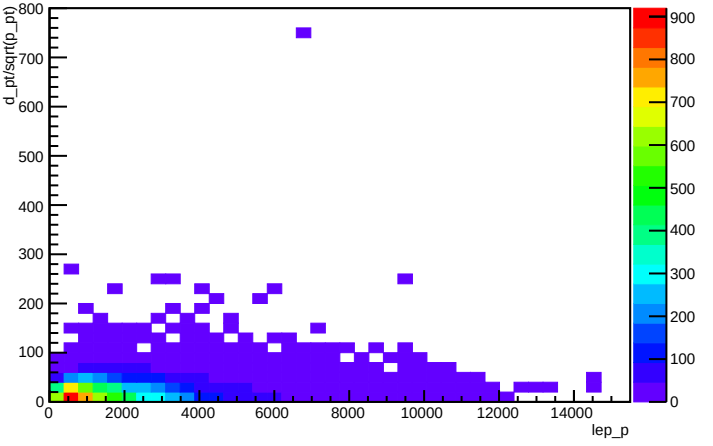


cc1piNpFake HPTPC Martini




cc1piNpTrue HPTPC Nieves
d_pt/sqrt(p_pt)
lep_p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d_pt/sqrt(p_pt)
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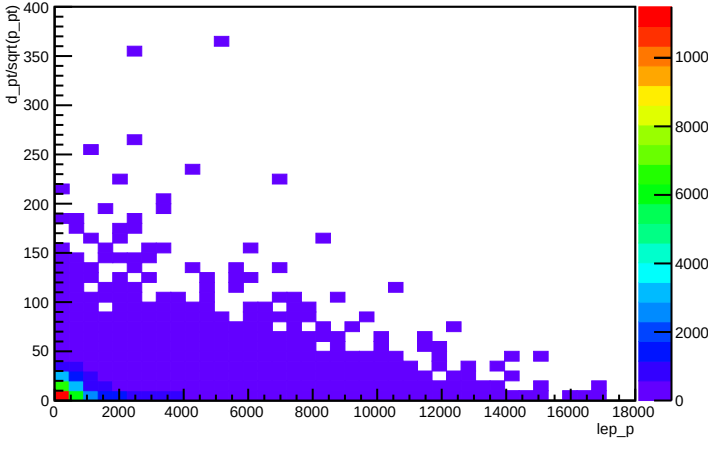
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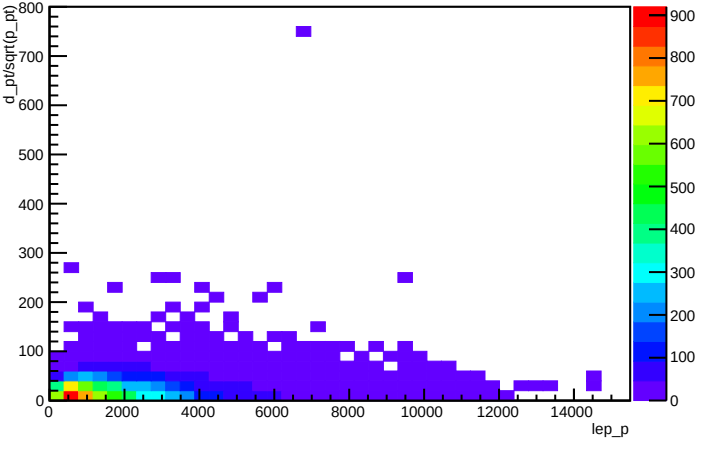
d_pt/sqrt(p_pt)
lep_p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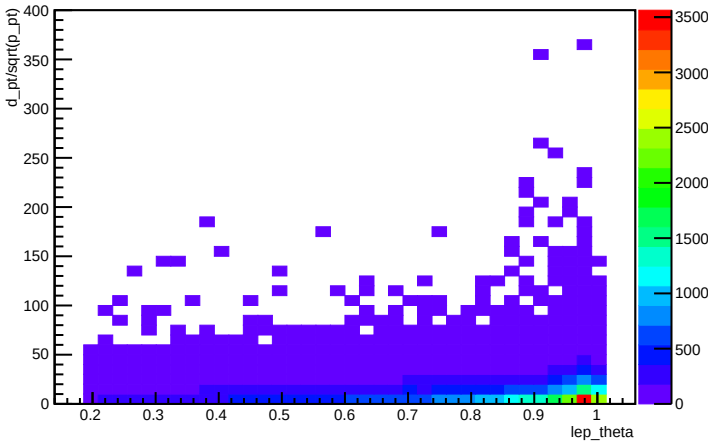
d_pt/sqrt(p_pt)
lep_p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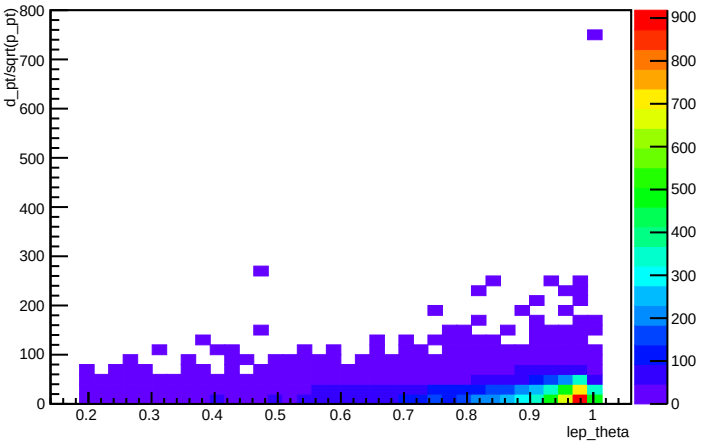
d_pt/sqrt(p_pt)
lep_theta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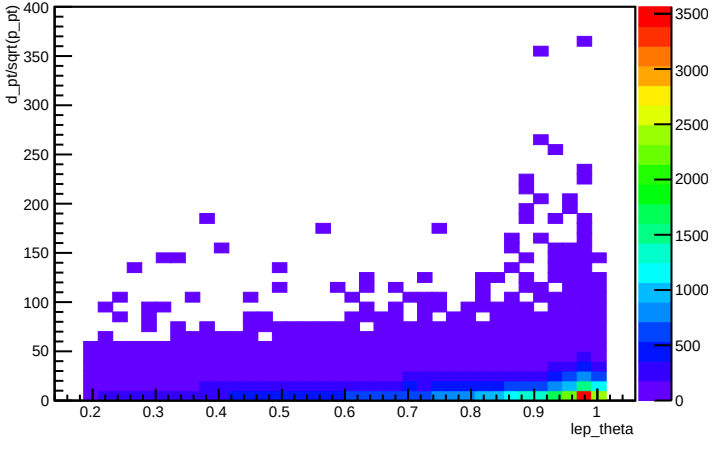
lep_theta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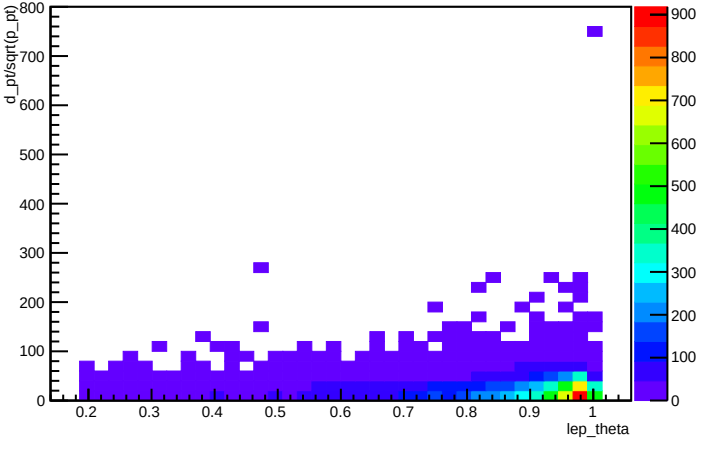
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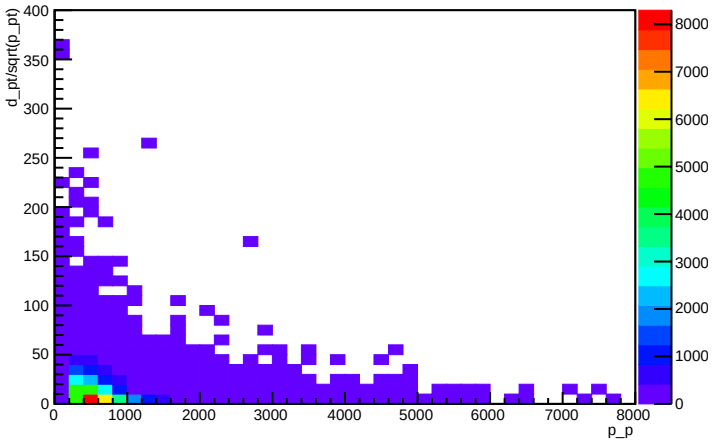
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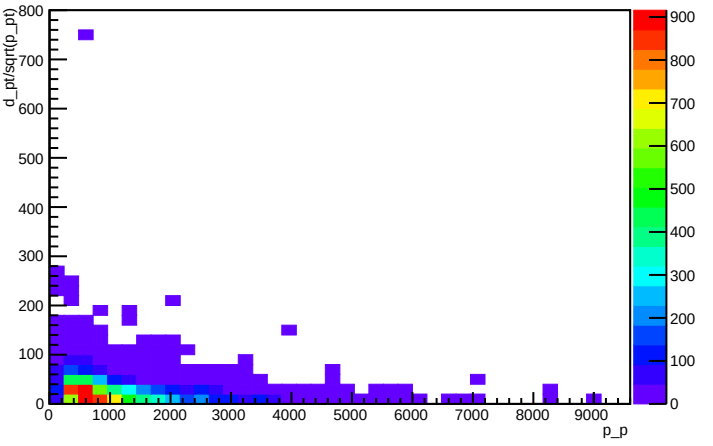
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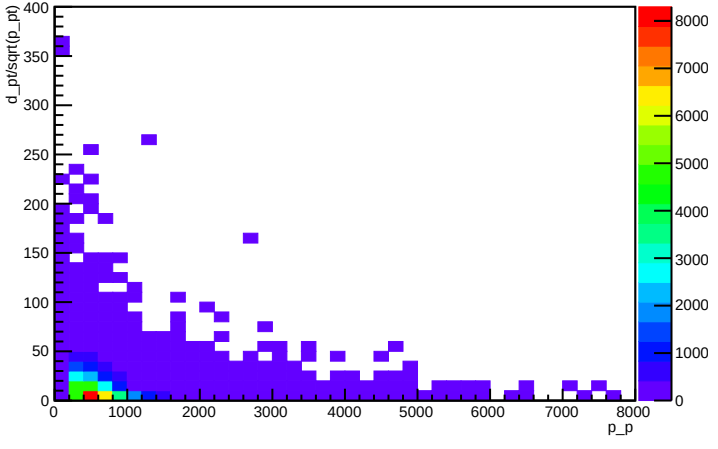
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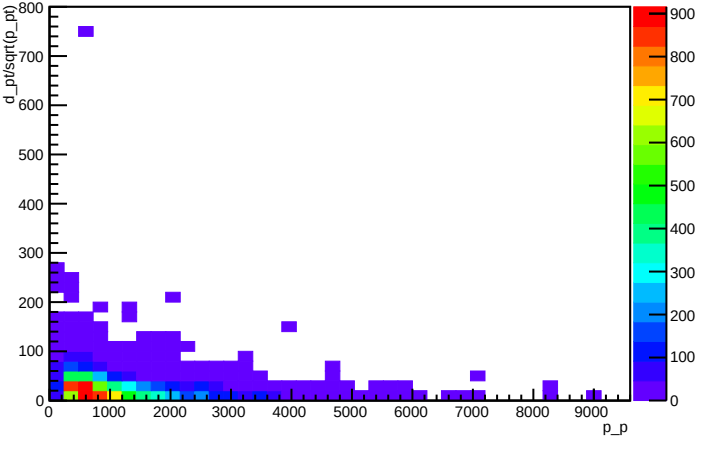
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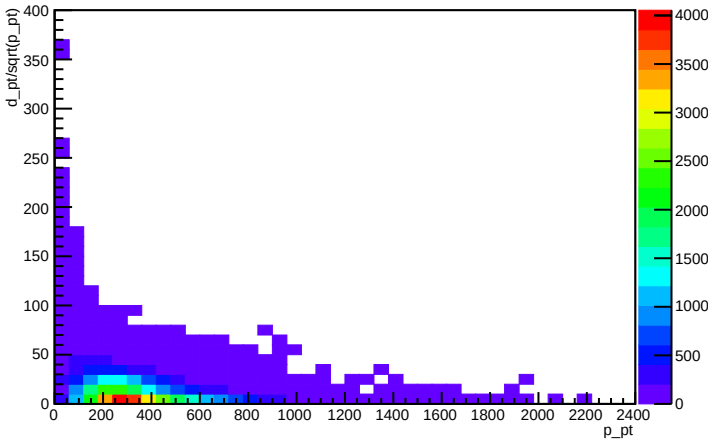
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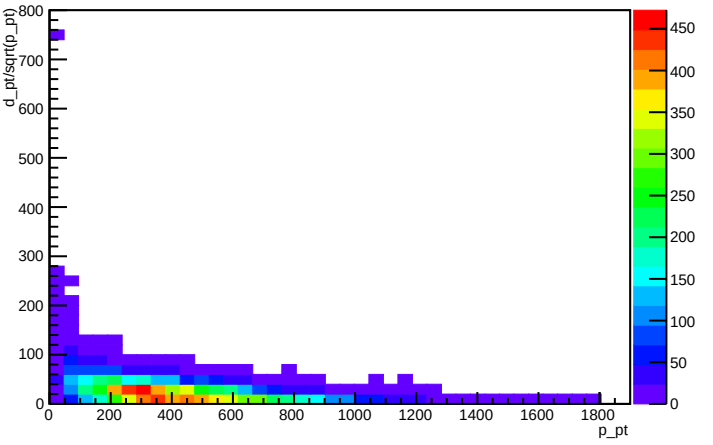
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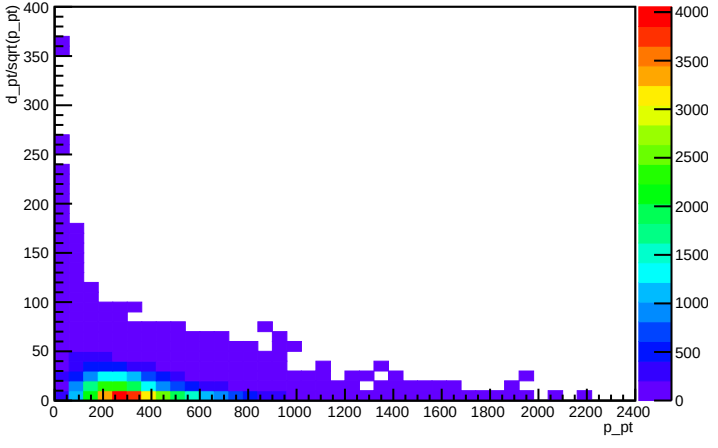
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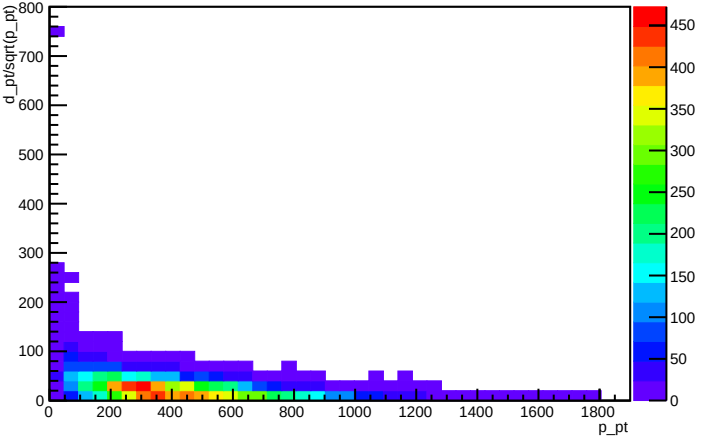
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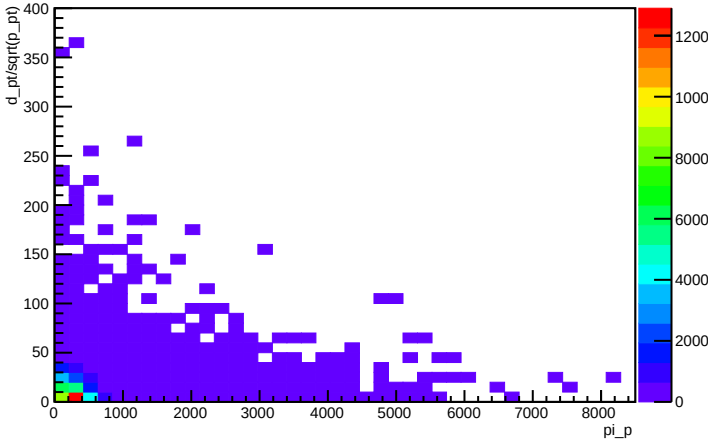
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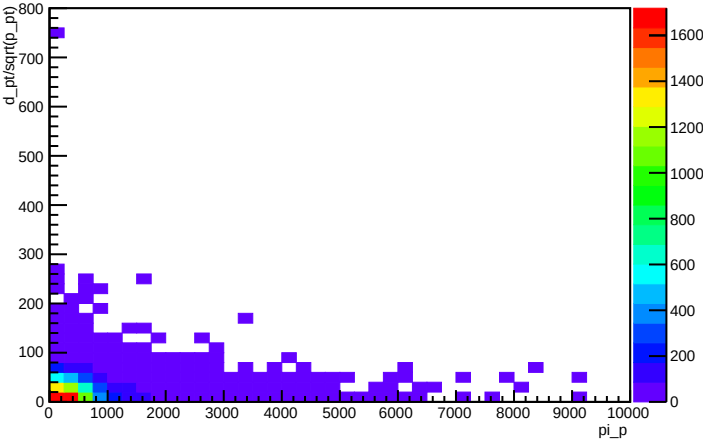
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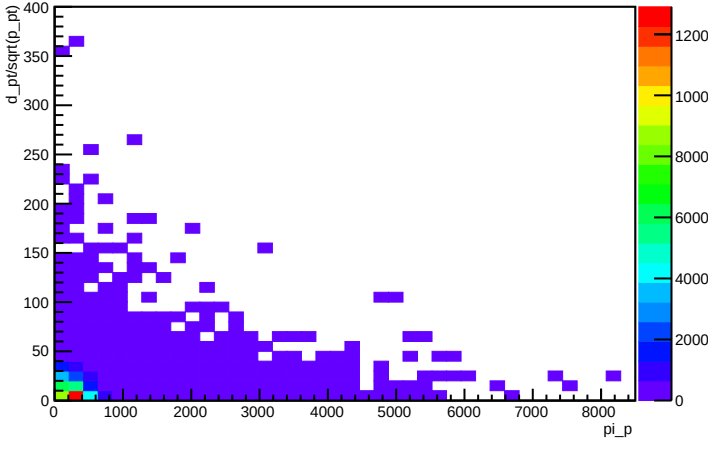
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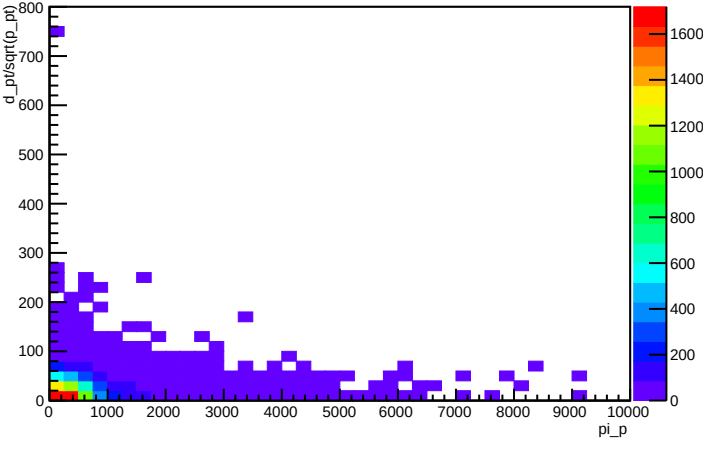
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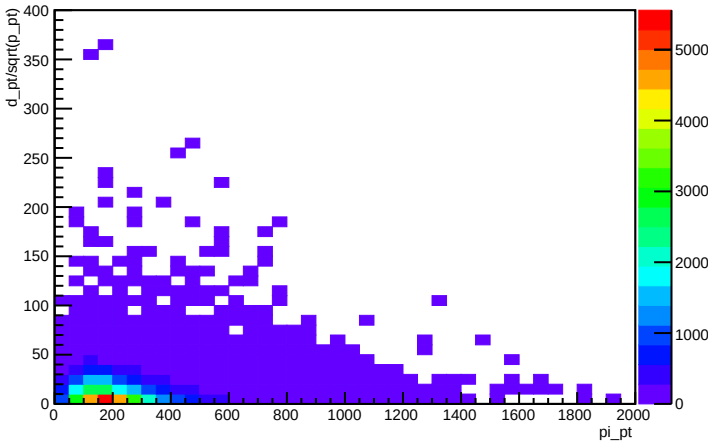
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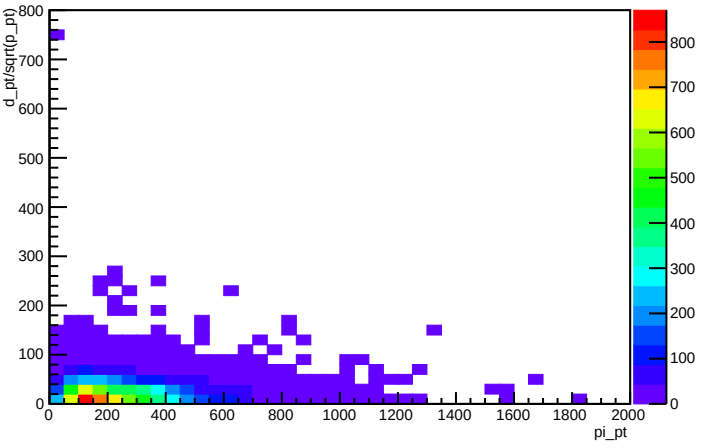
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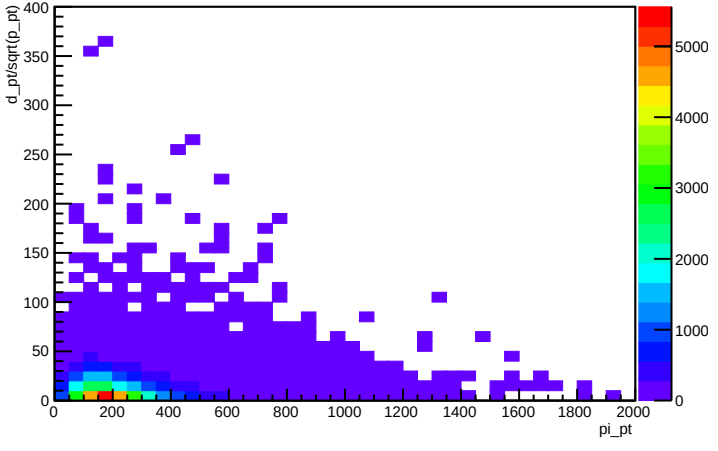
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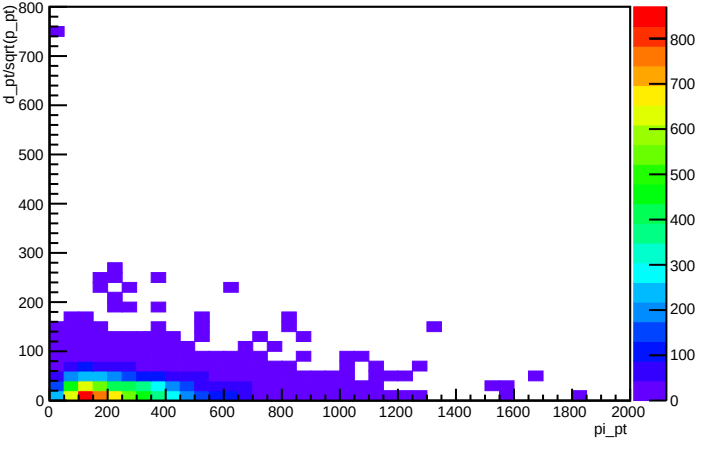
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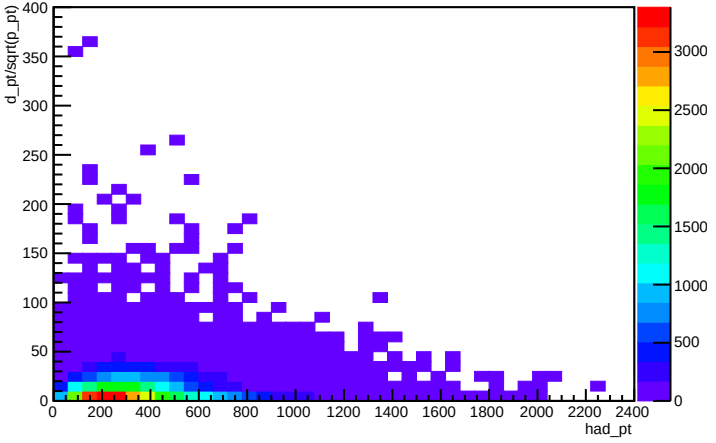

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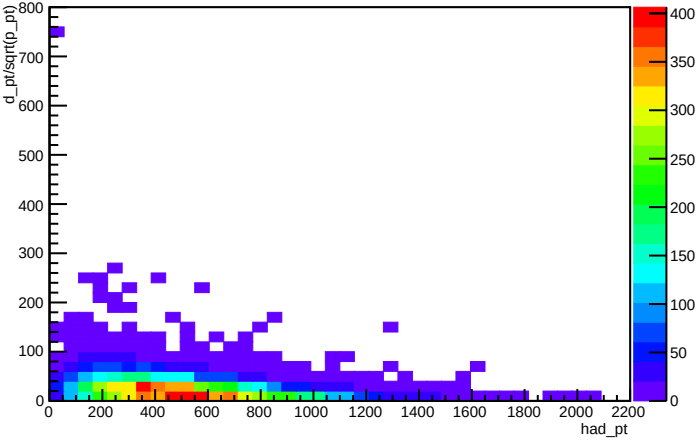

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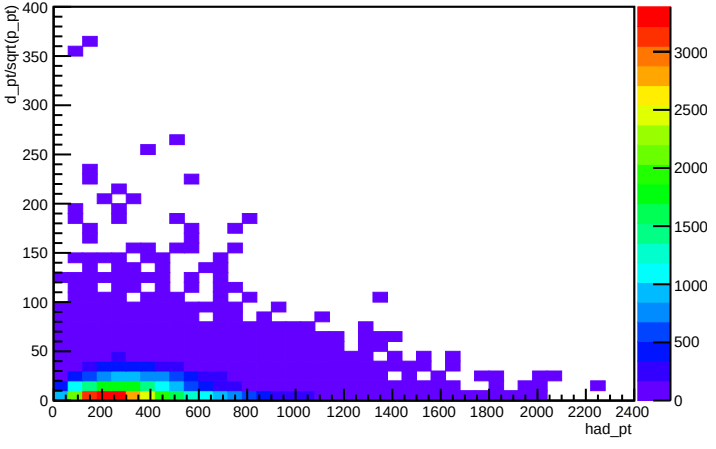
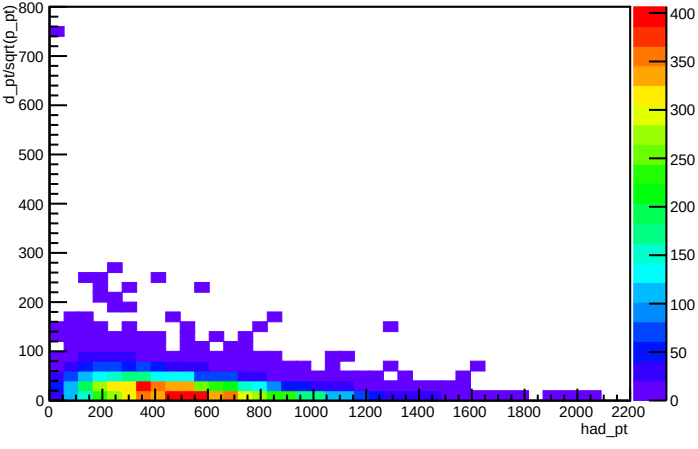
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