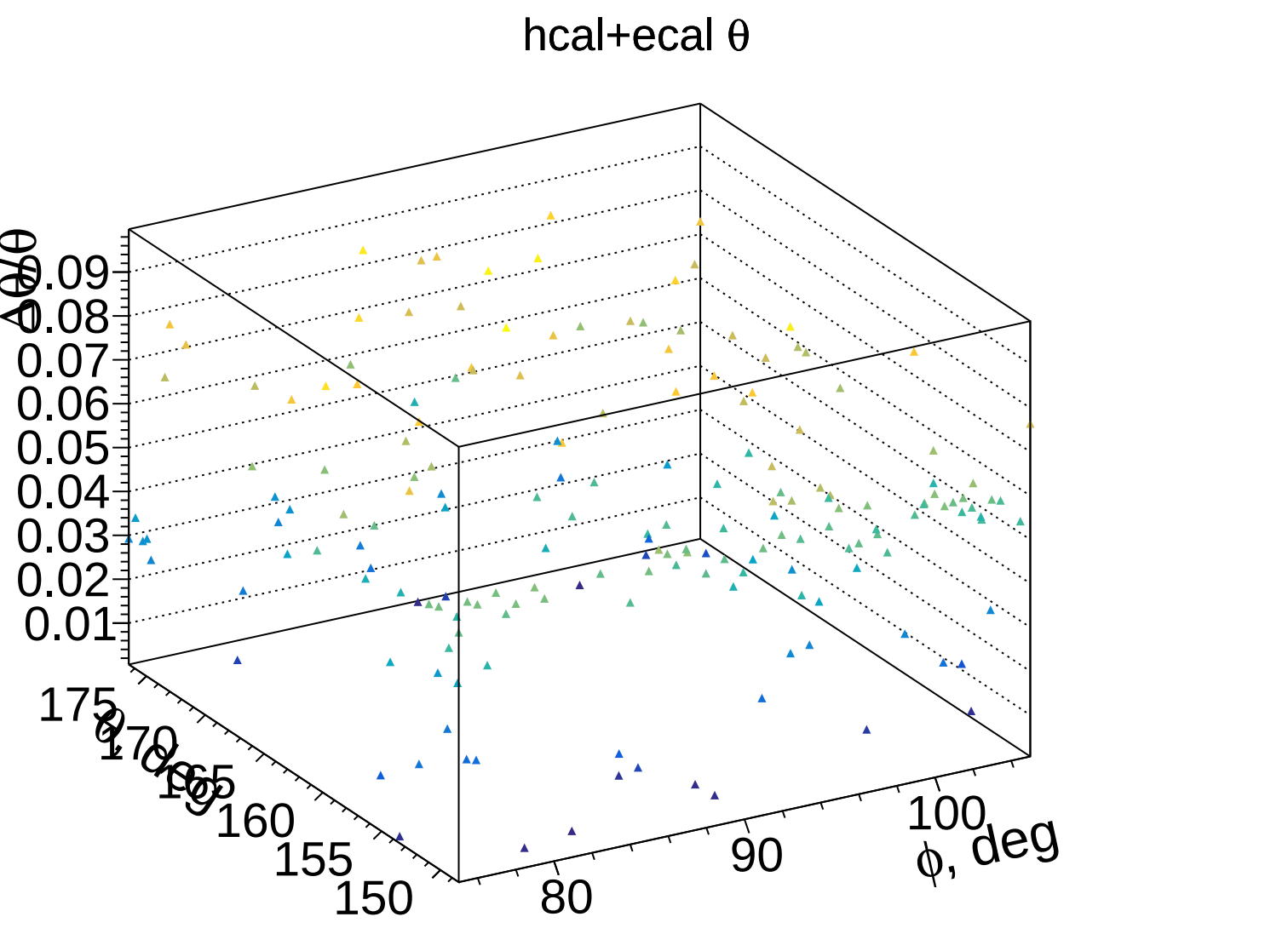
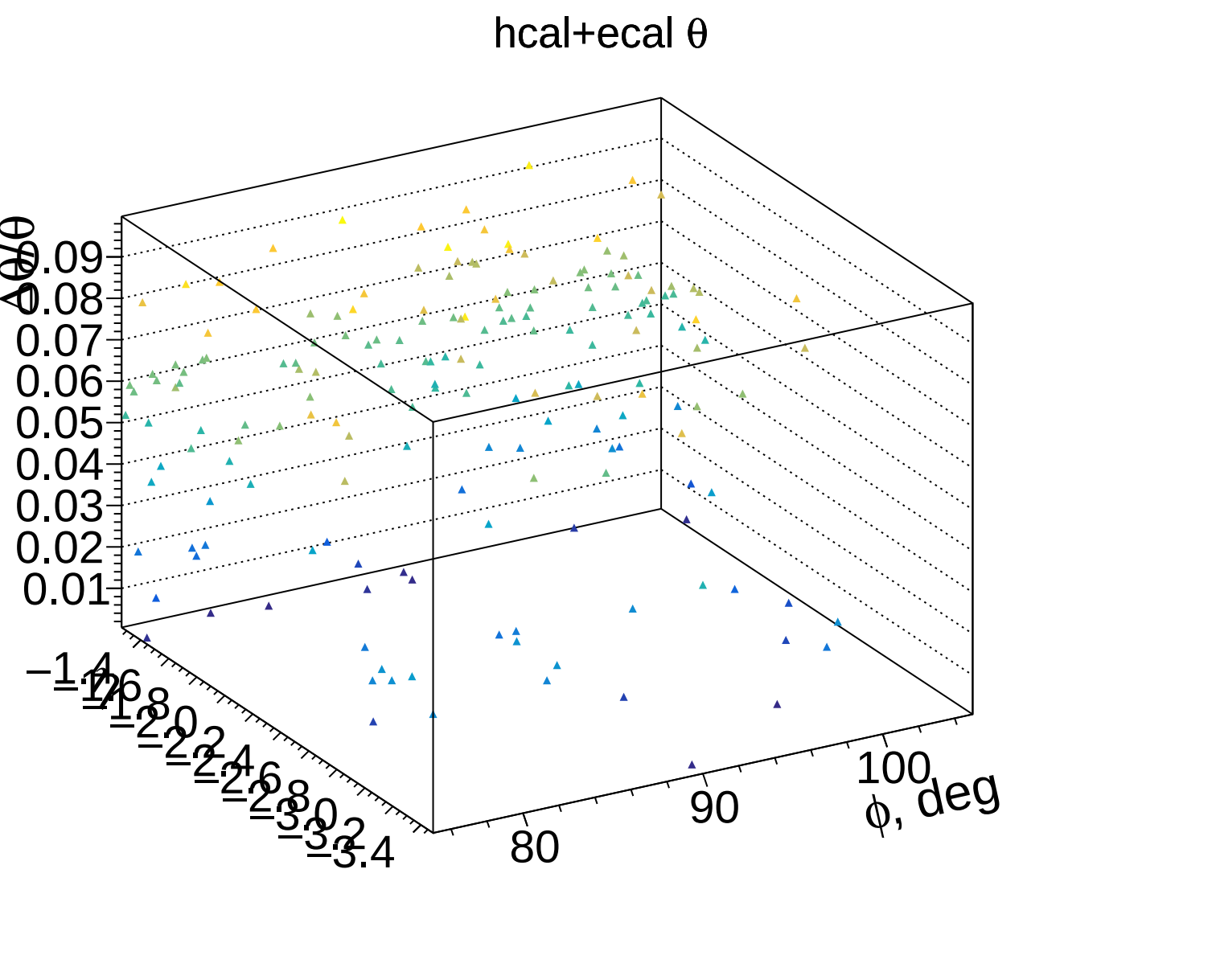
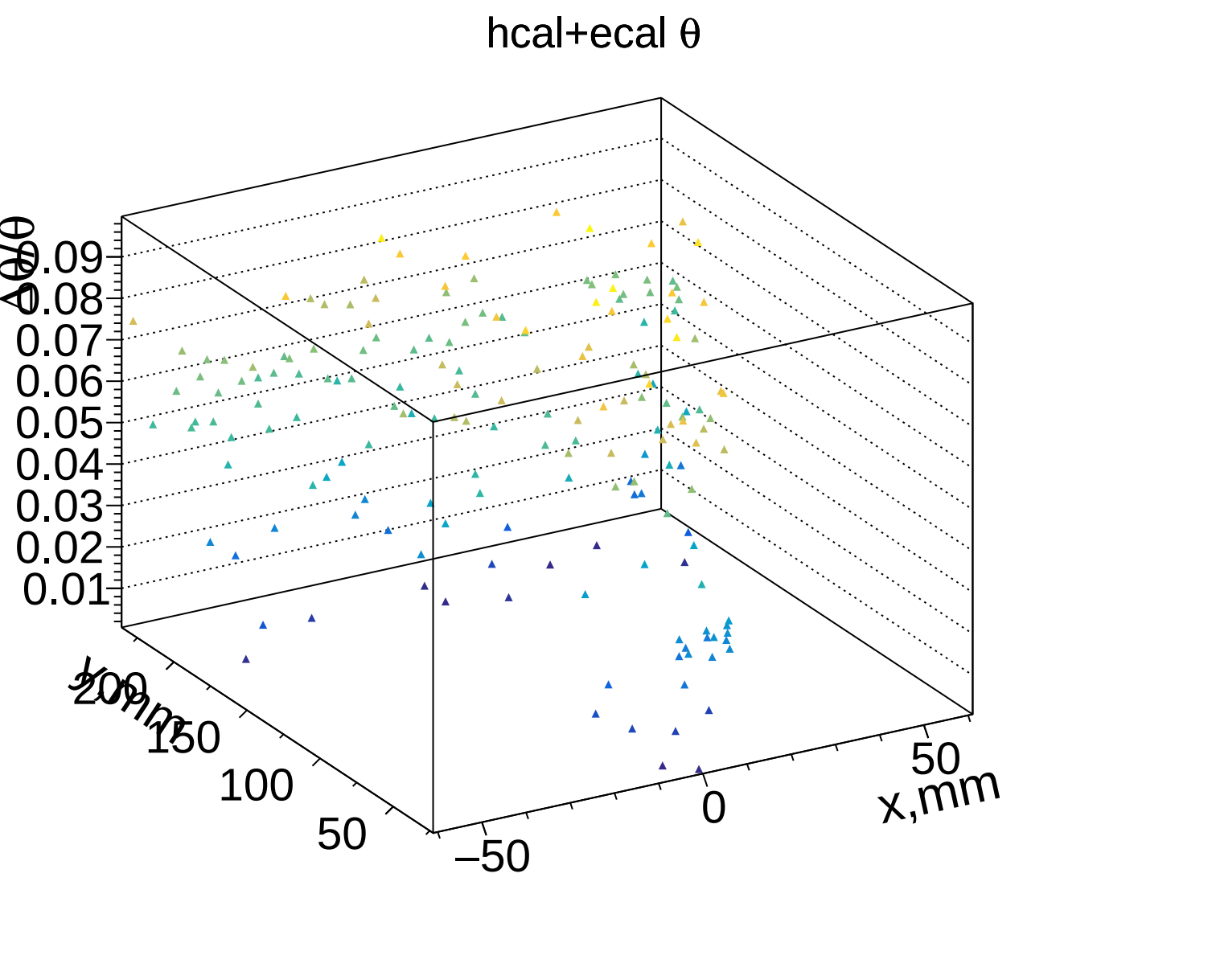
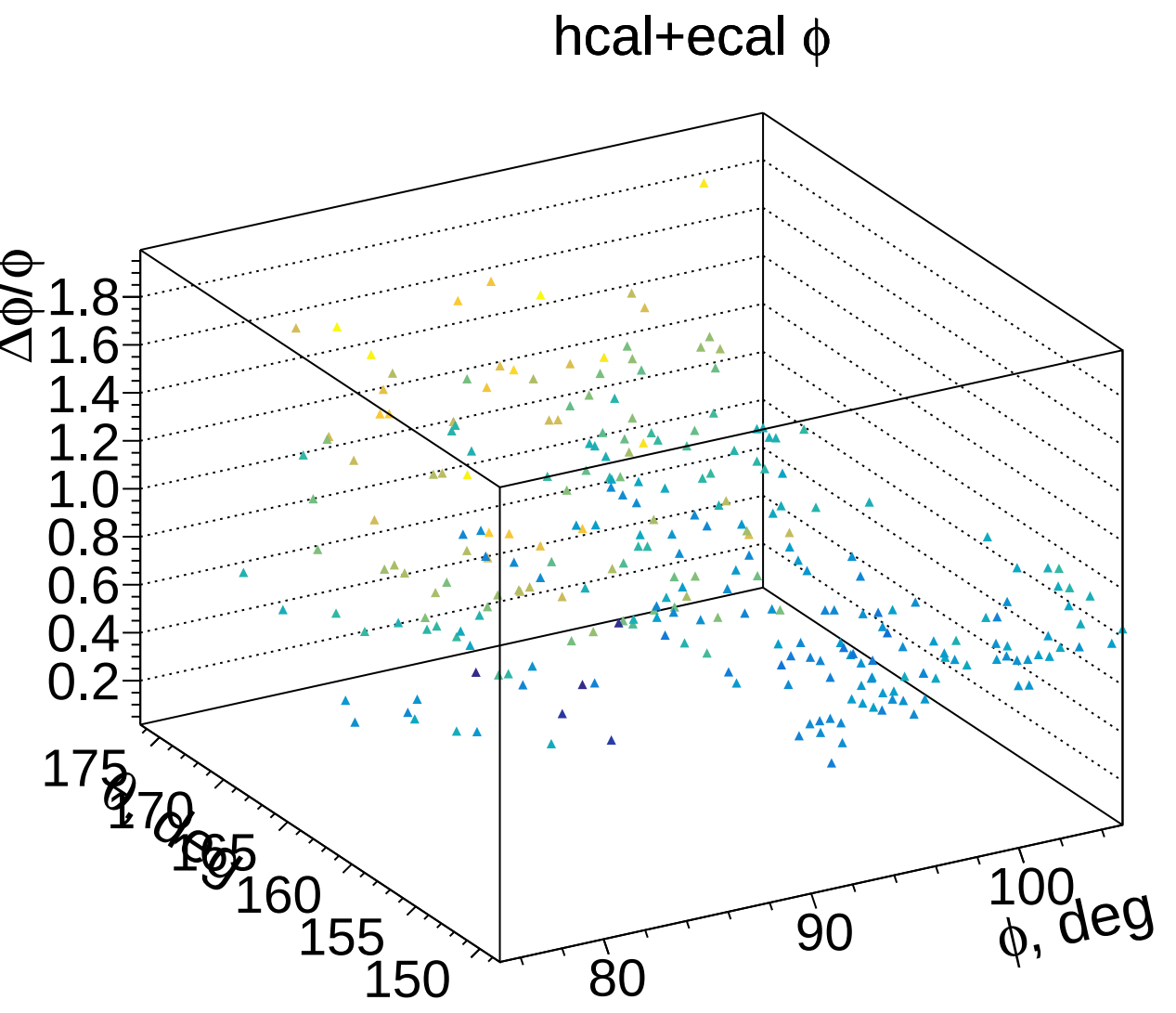
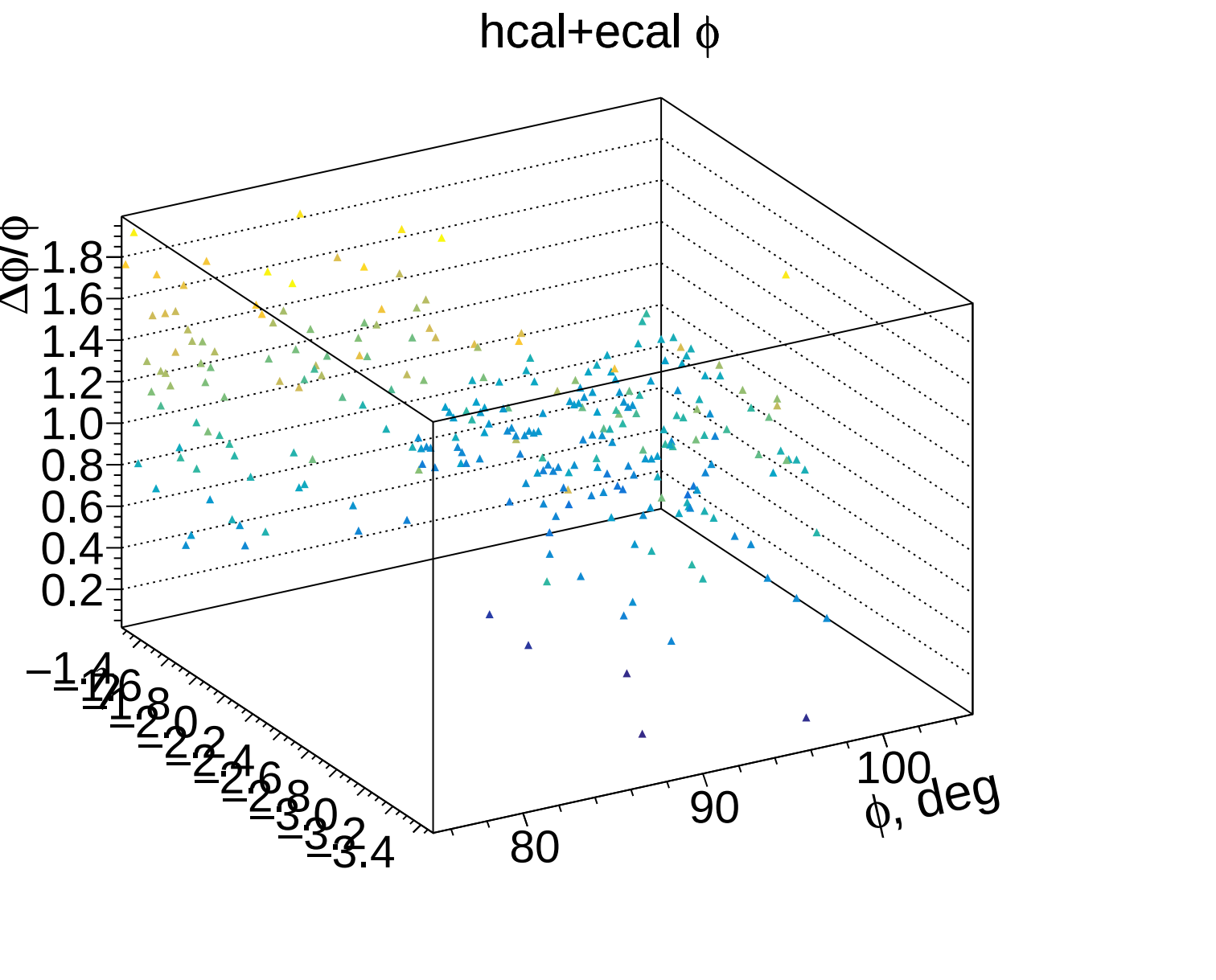

hcal+ecal θ
Δθ/θ
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
175
θ, deg
170
165
160
155
150
80
90
100
ϕ, deg


hcal+ecal θ
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal+ecal θ
Δθ/θ
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
y,mm
200
150
100
50
x,mm
–50
0
50


hcal+ecal ϕ
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
175
170
165
160
155
150
80
90
100
ϕ, deg


hcal+ecal ϕ
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
−1.4
−1.6
−1.8
−2.0
−2.2
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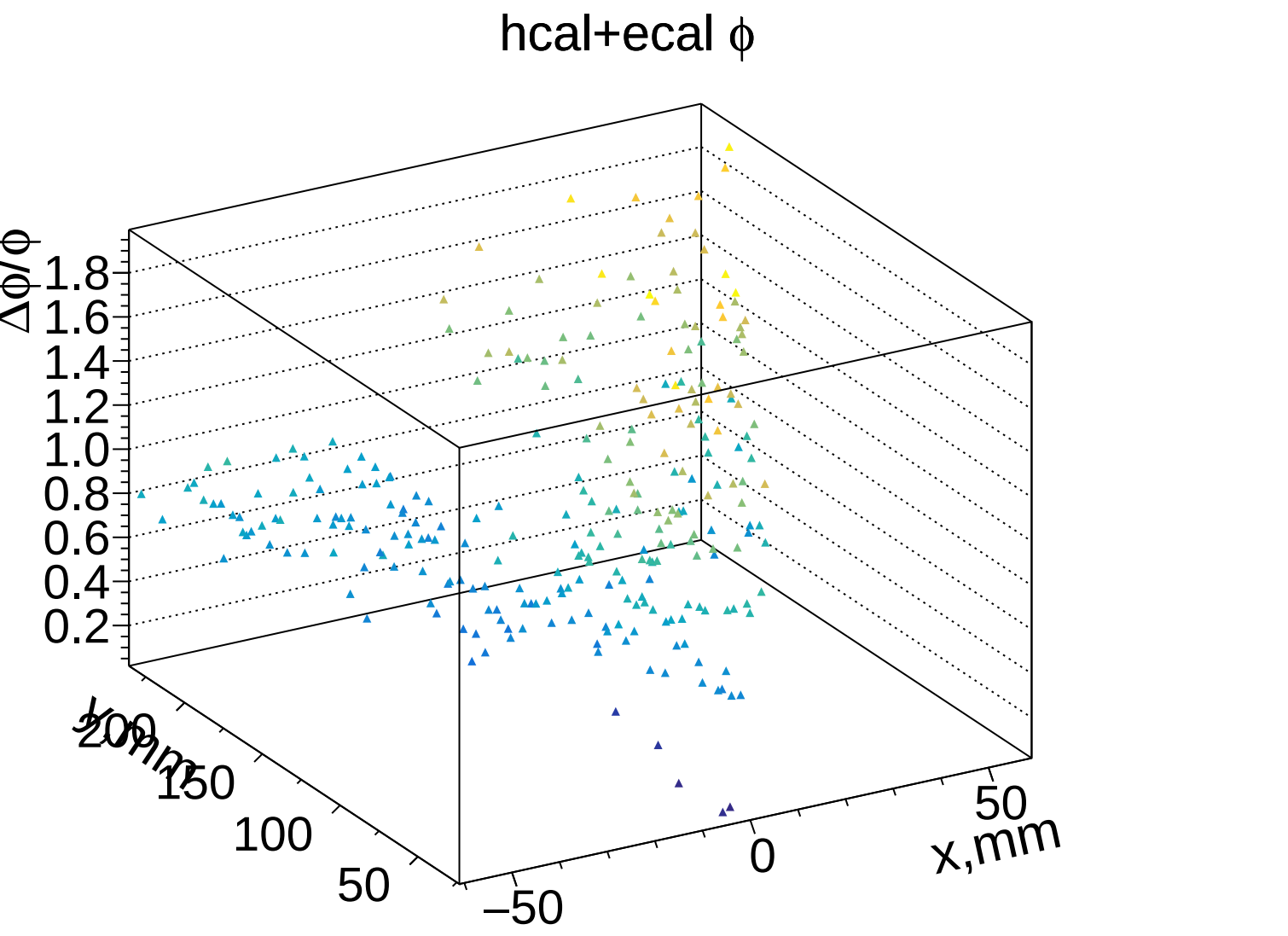
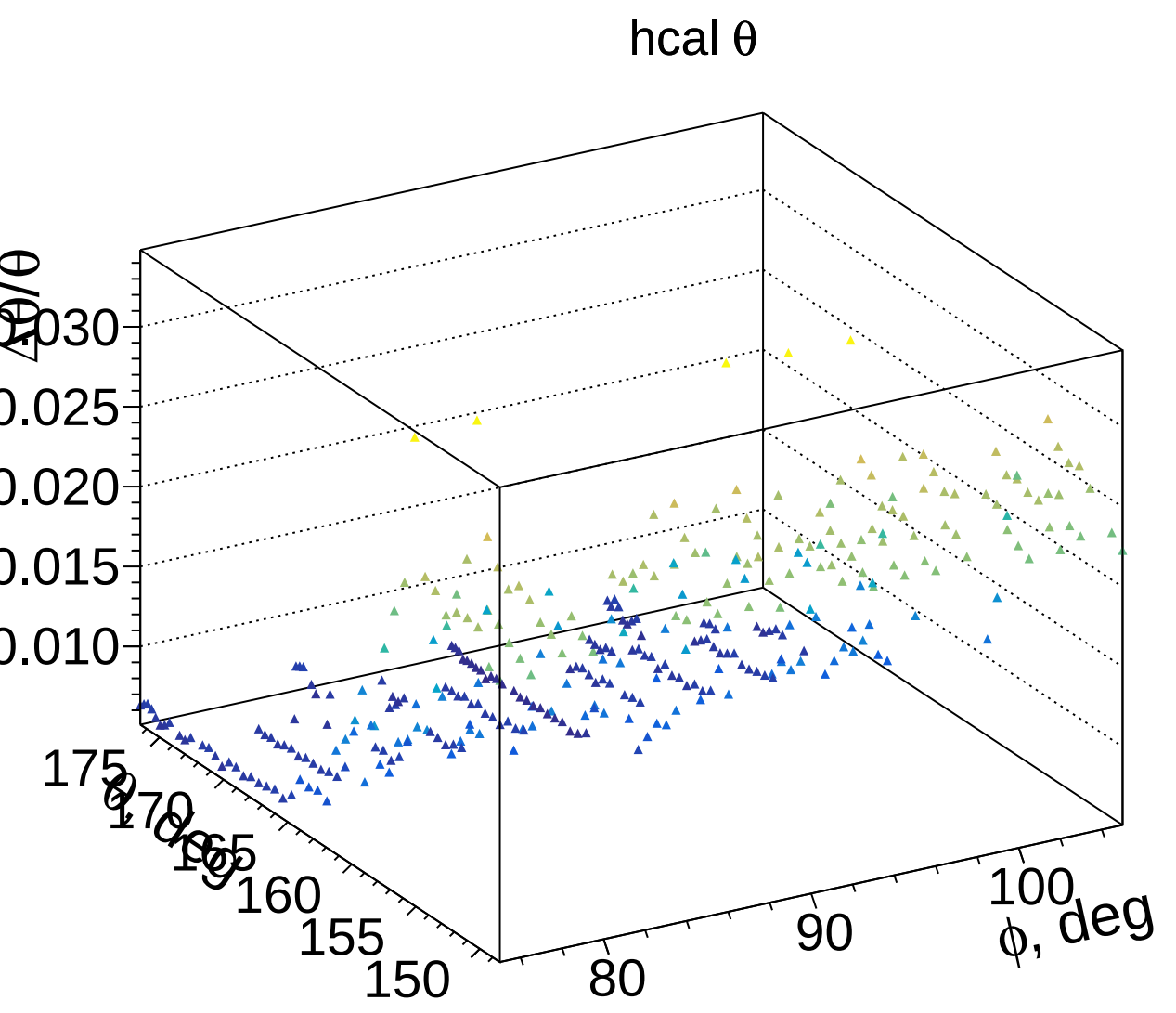
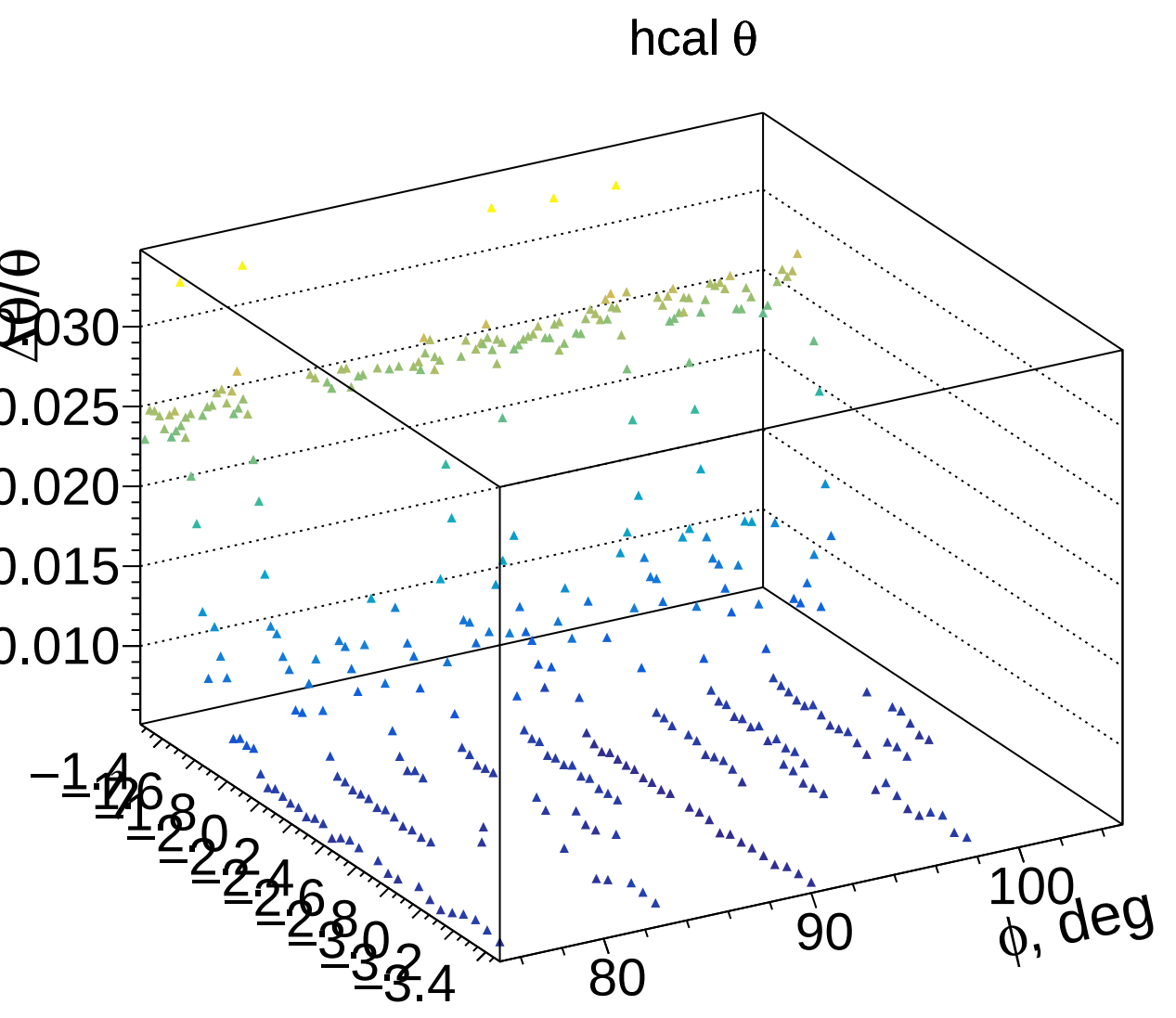
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal+ecal ϕ
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
y,mm
200
150
100
50
−50
0
50
x,mm


hcal θ
Δθ/θ
0.030
0.025
0.020
0.015
0.010
175
170
165
160
155
150
θ, deg
80
90
100
ϕ, deg


hcal θ
Δθ/θ
0.030
0.025
0.020
0.015
0.010
−1.4
−1.6
−1.8
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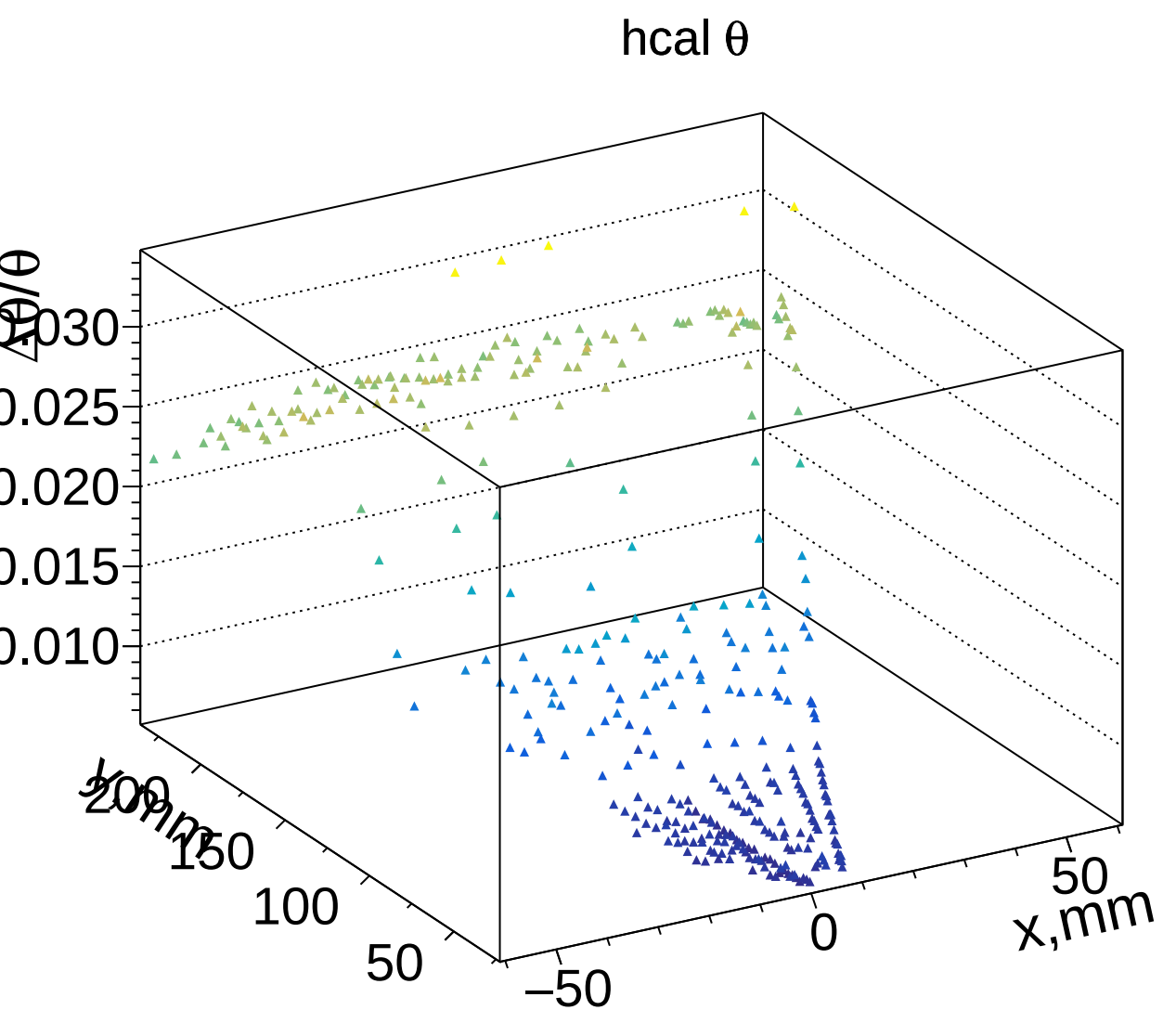
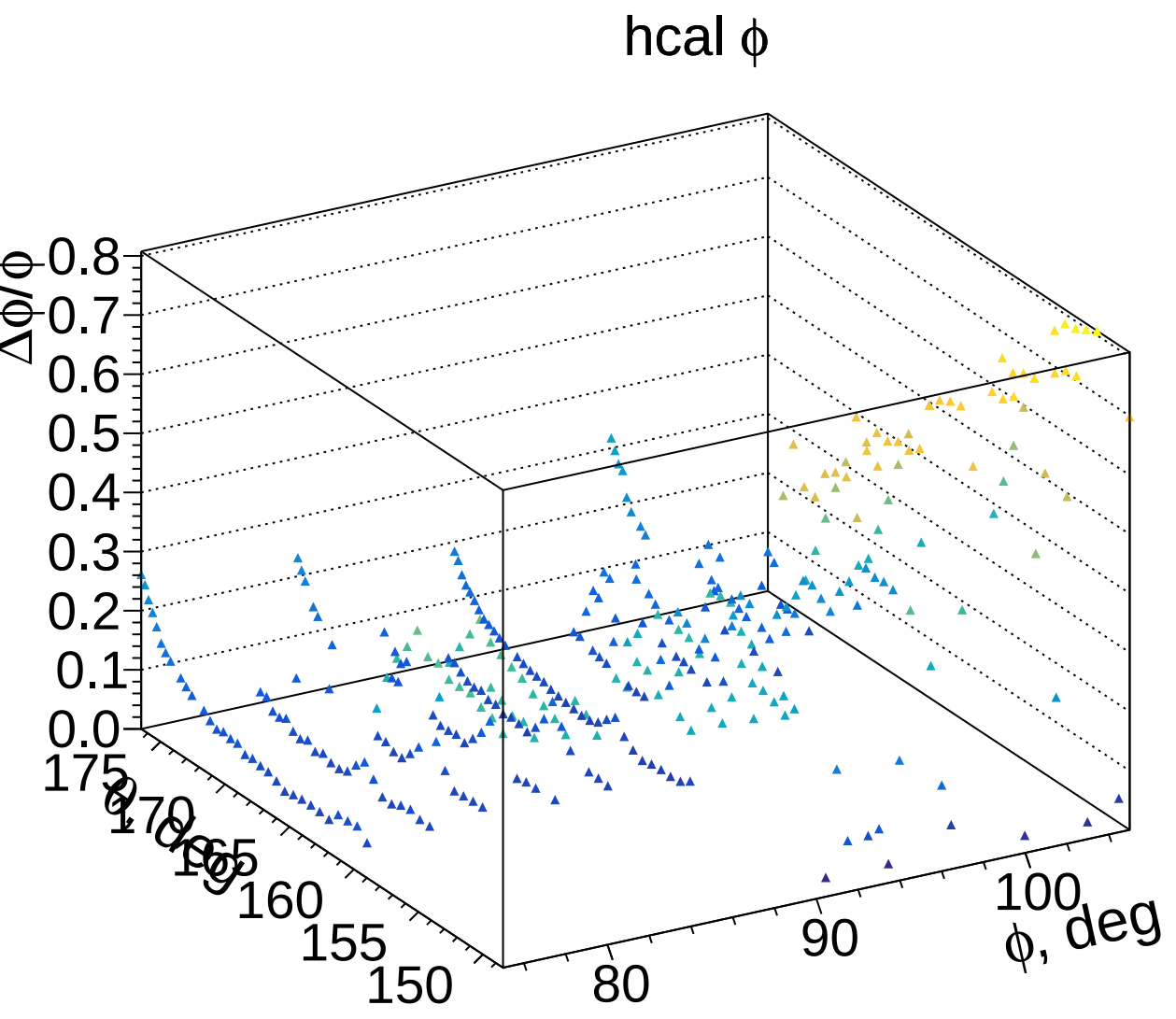
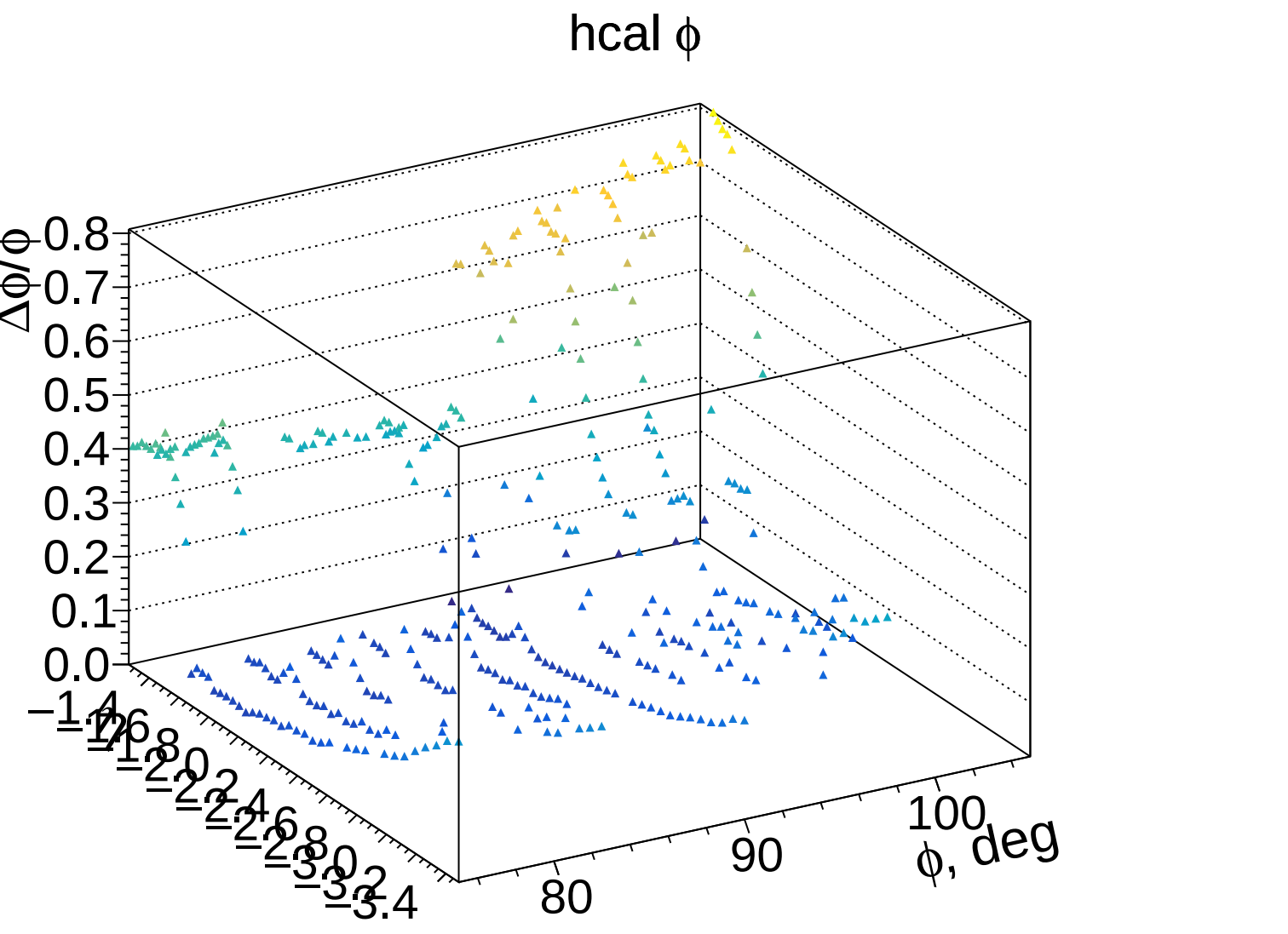
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal θ
Δθ/θ
0.030
0.025
0.020
0.015
0.010
y,mm
200
150
100
50
−50
0
50
x,mm


hcal ϕ
Δϕ/ϕ
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
175
170
165
160
155
150
80
90
100
ϕ, deg


hcal ϕ
Δϕ/ϕ
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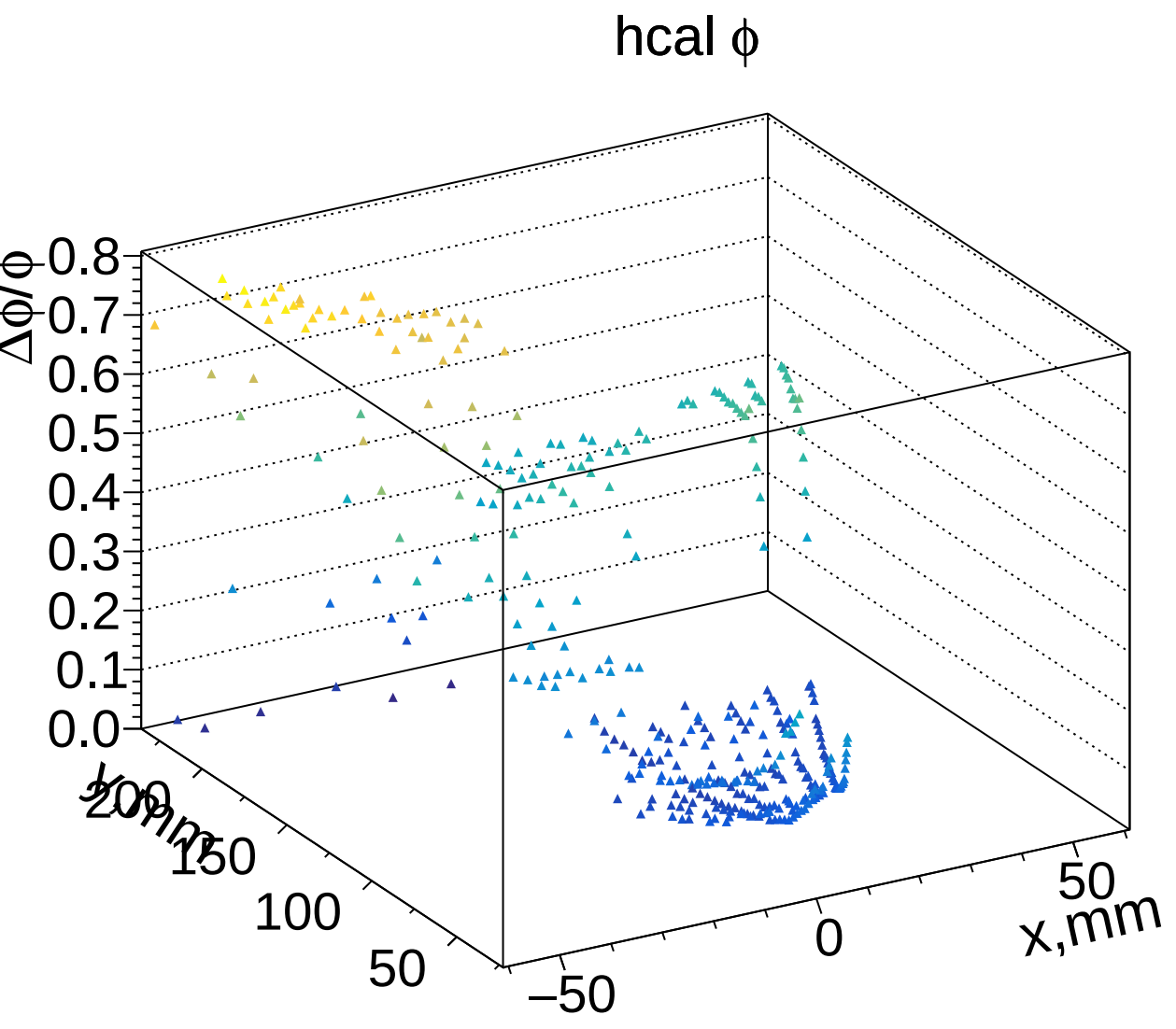
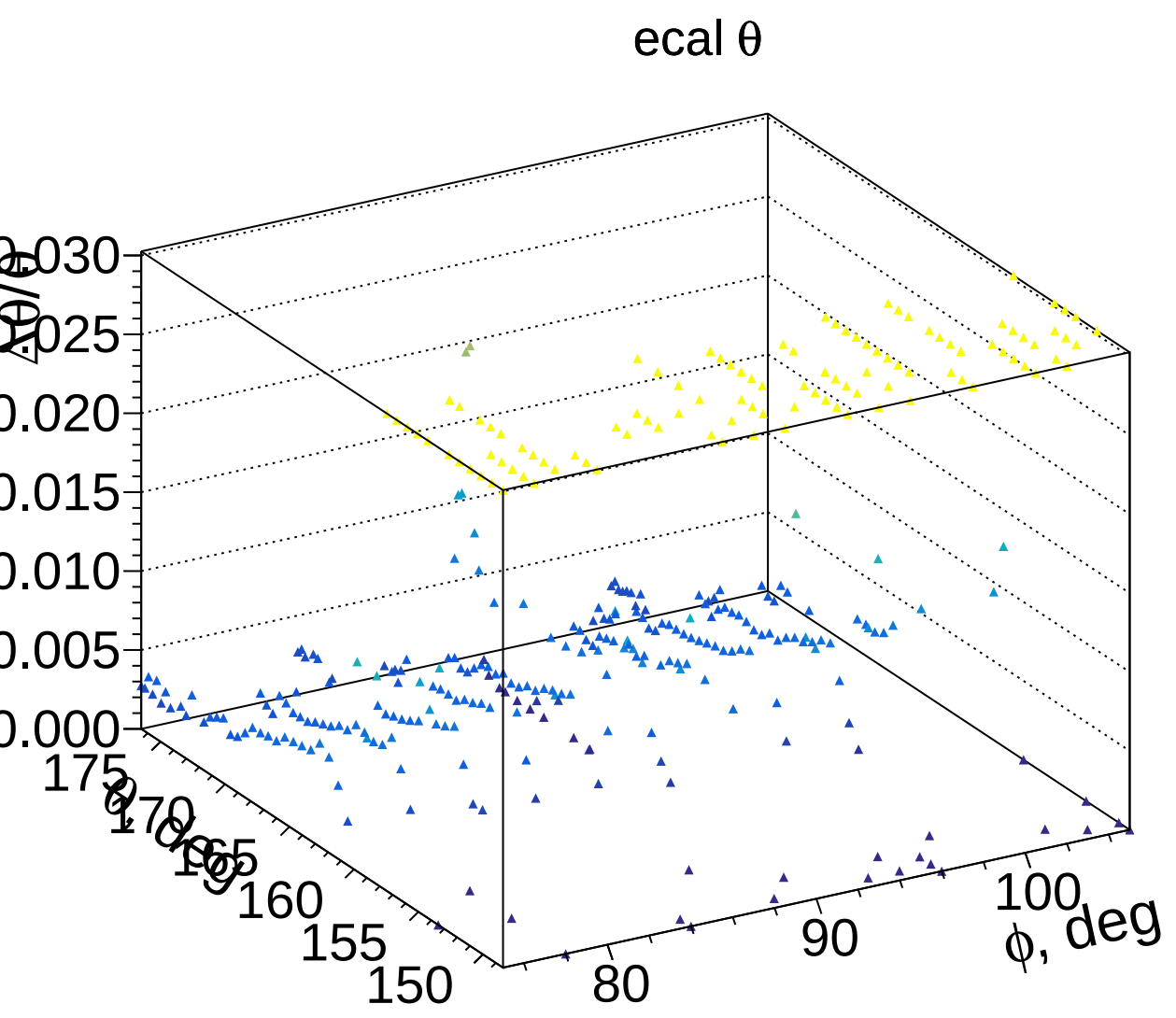
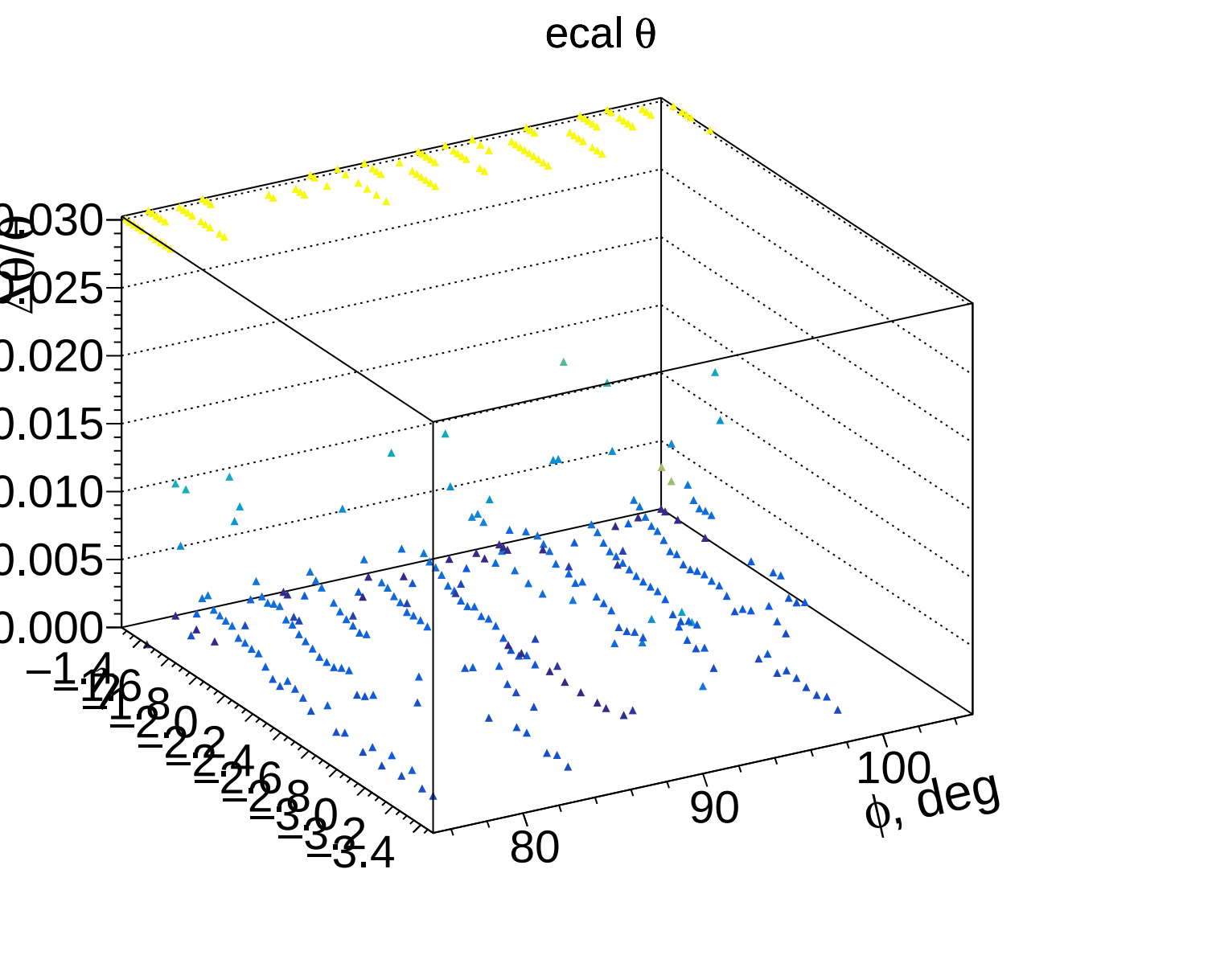
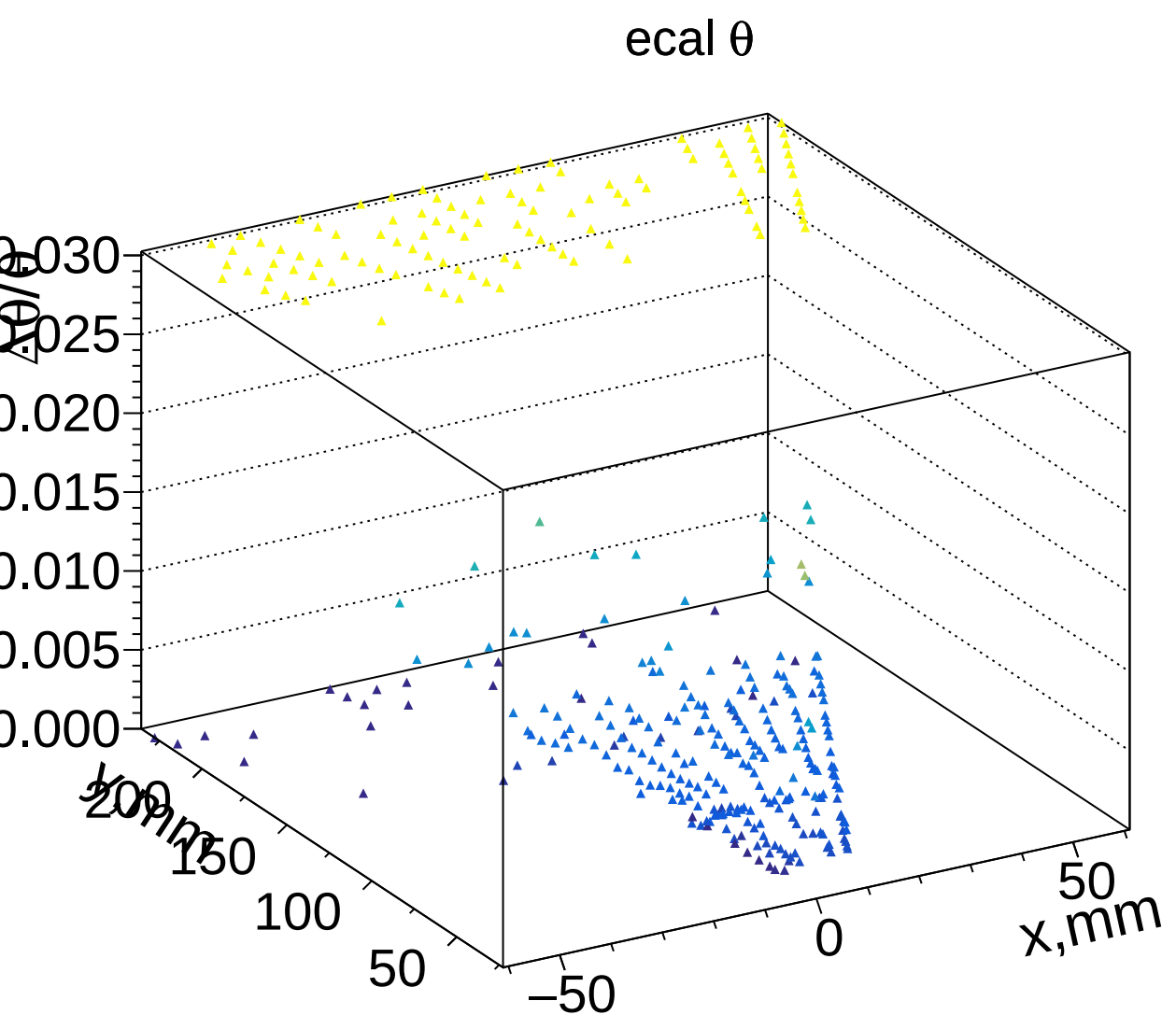
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal ϕ
Δϕ/ϕ
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
y,mm
200
150
100
50
–50
0
50
x,mm


ecal θ
Δθ/θ
0.030
0.025
0.020
0.015
0.010
0.005
0.000
175
170
165
160
155
150
θ, deg
80
90
100
ϕ, deg


ecal θ
Δθ/θ
0.030
0.025
0.020
0.015
0.010
0.005
0.000
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


ecal θ
Δθ/θ
0.030
0.025
0.020
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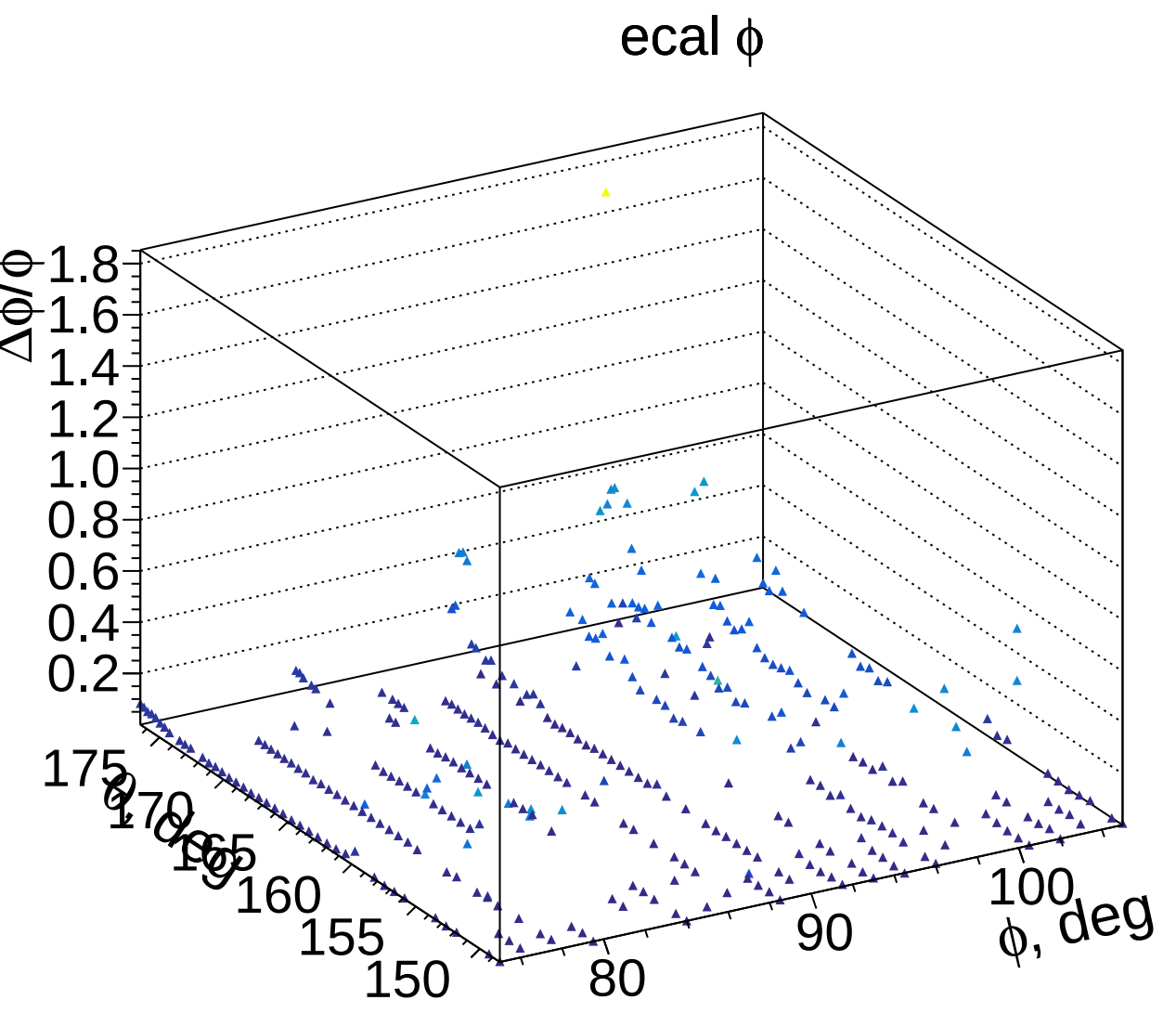
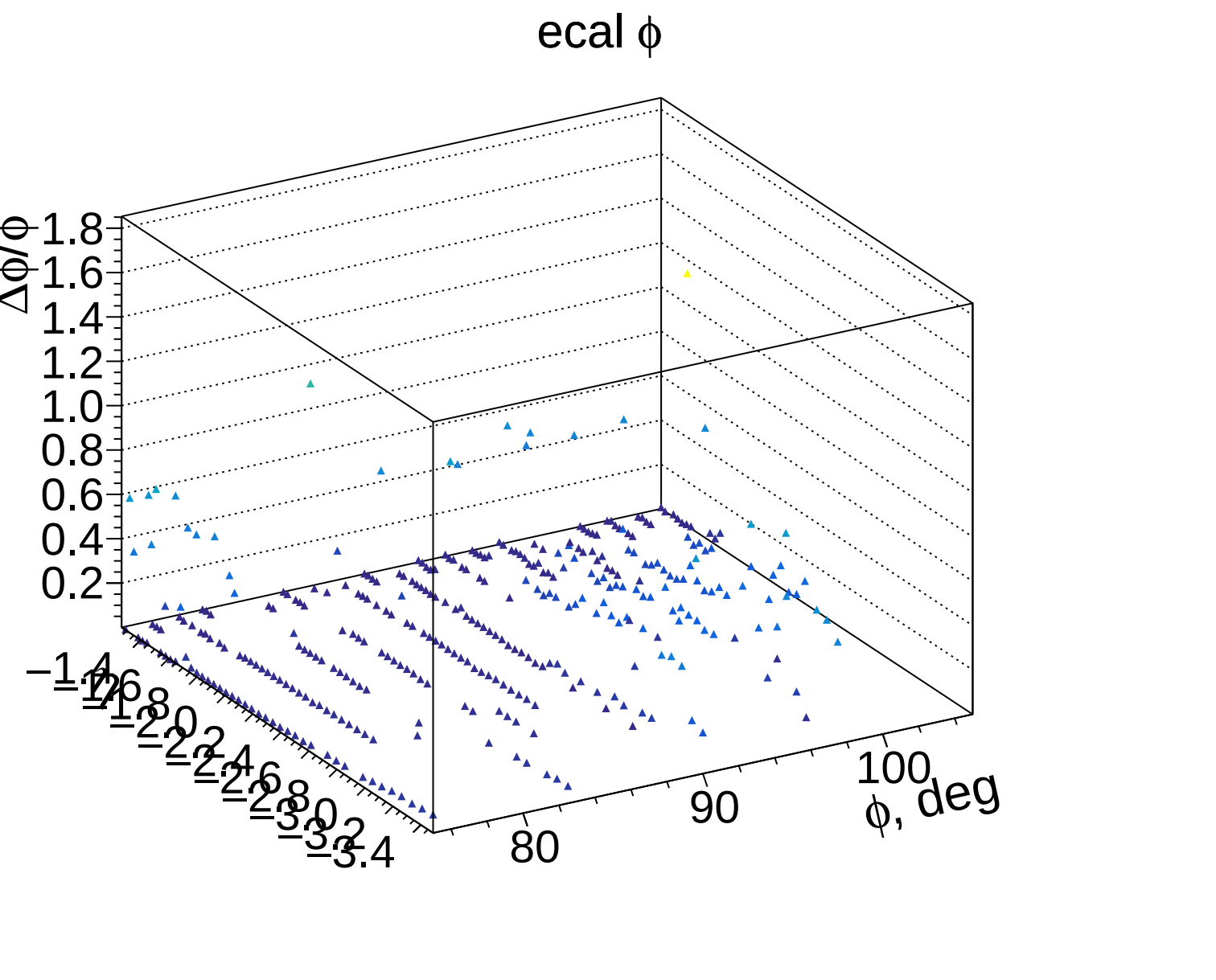
0.010
0.005
0.000
y,mm
200
150
100
50
–50
0
50
x,mm


ecal ϕ
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
175
170
165
160
155
150
80
90
100
ϕ, deg


ecal ϕ
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
−1.4
−1.6
−1.8
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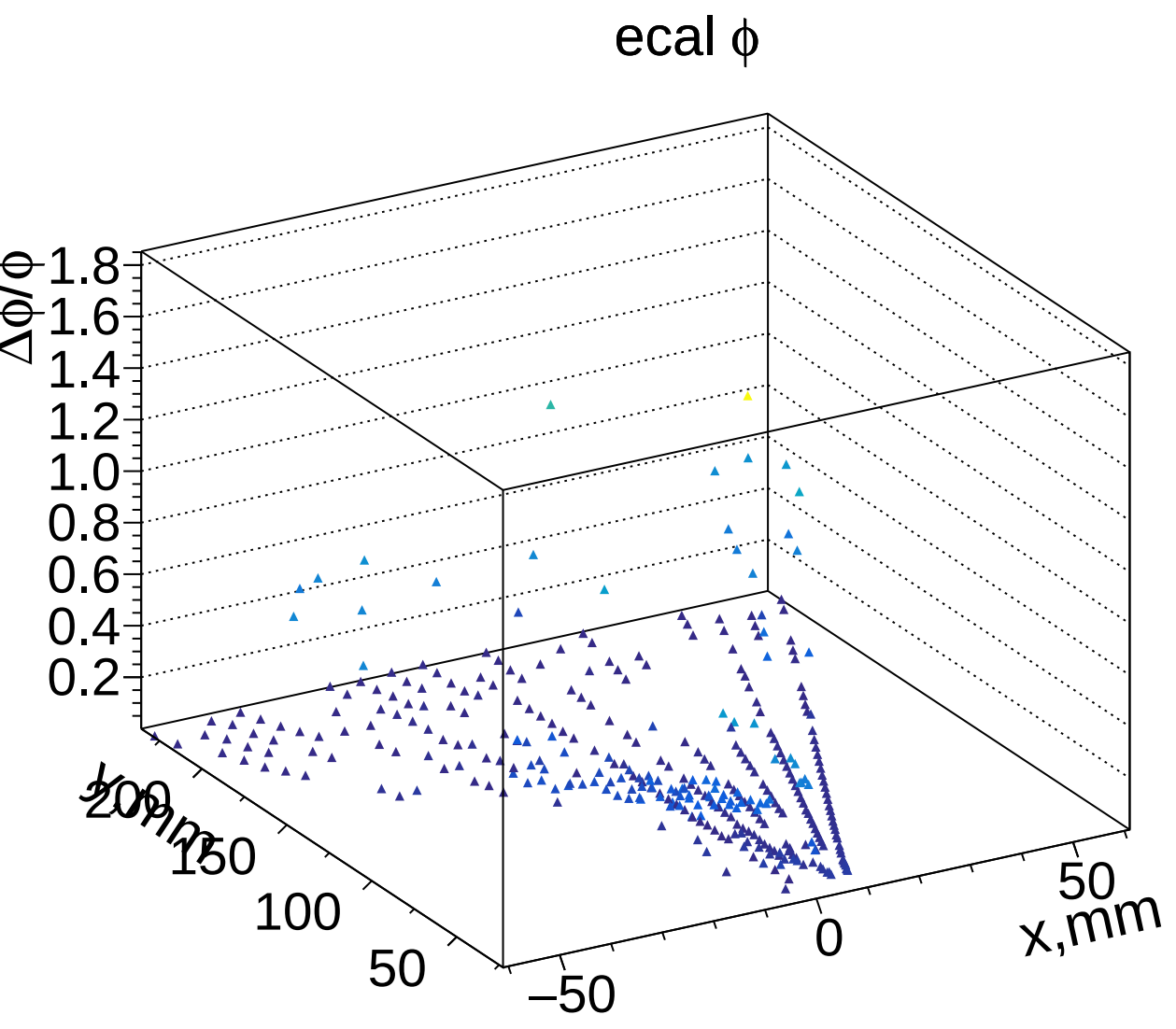
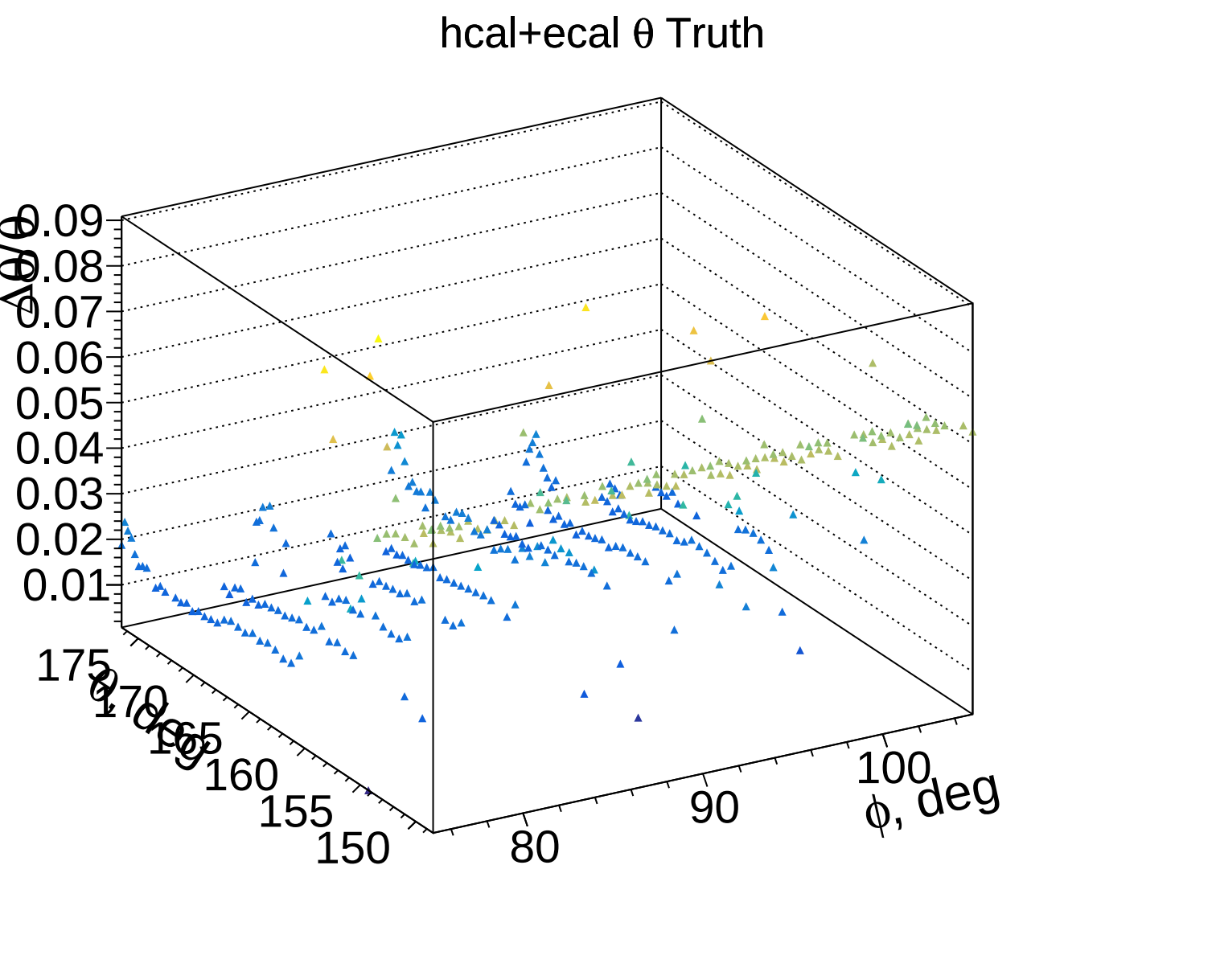
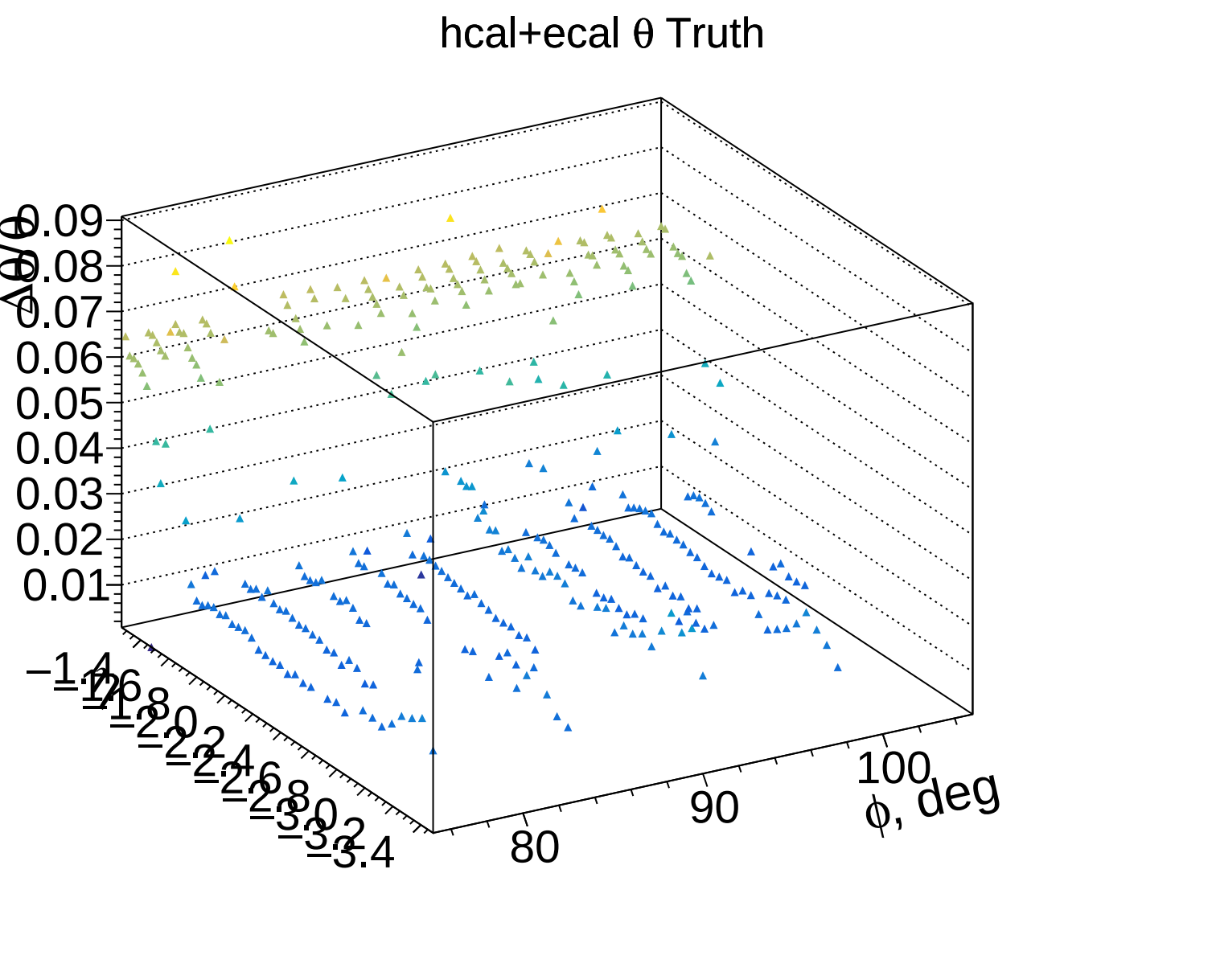
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


ecal ϕ
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
y,mm
200
150
100
50
–50
0
50
x,mm


hcal+ecal θ Truth
Δθ/θ
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
175
170
165
160
155
150
θ, deg
80
90
100
φ, deg


hcal+ecal θ Truth
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
−1.4
−1.6
−1.8
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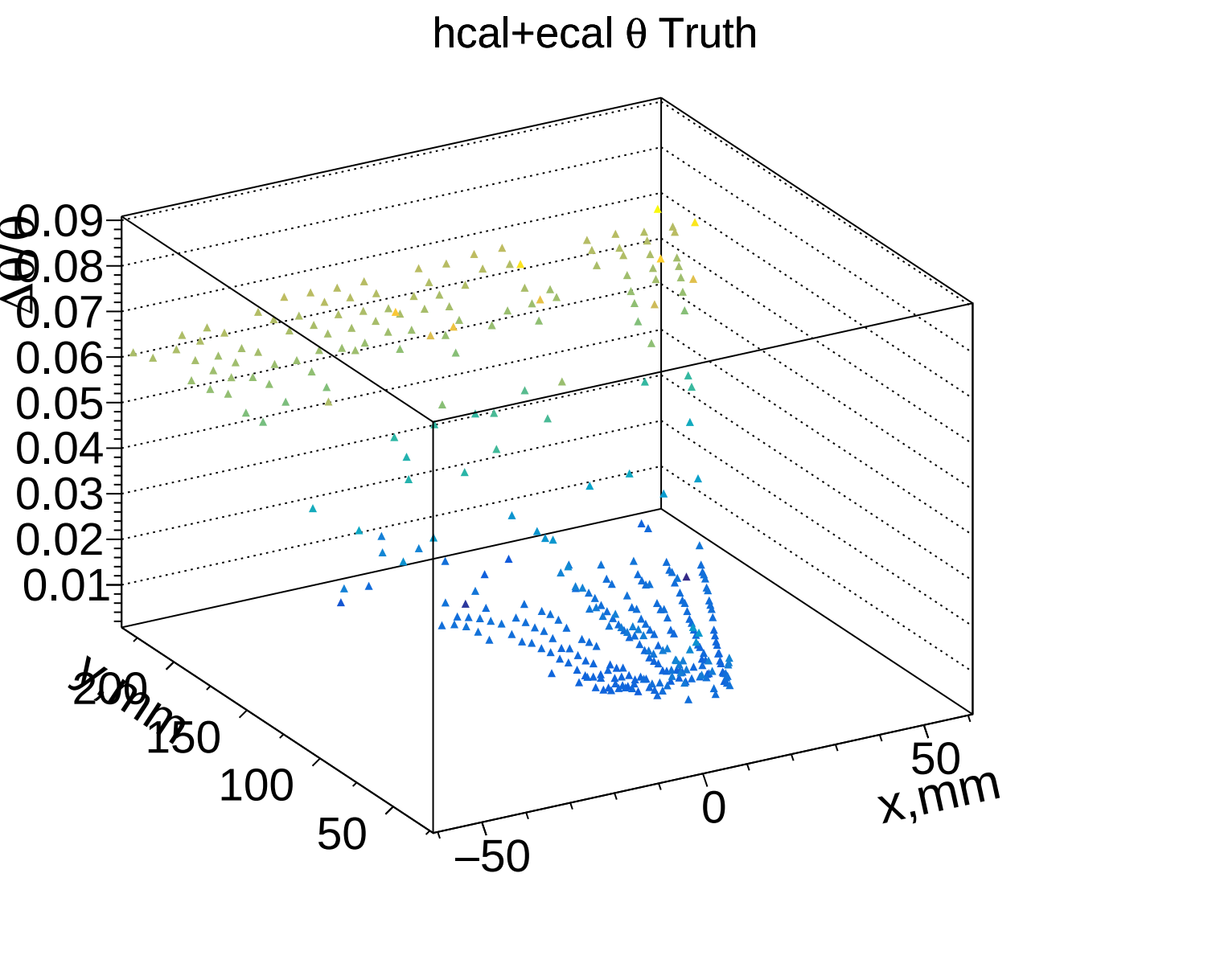
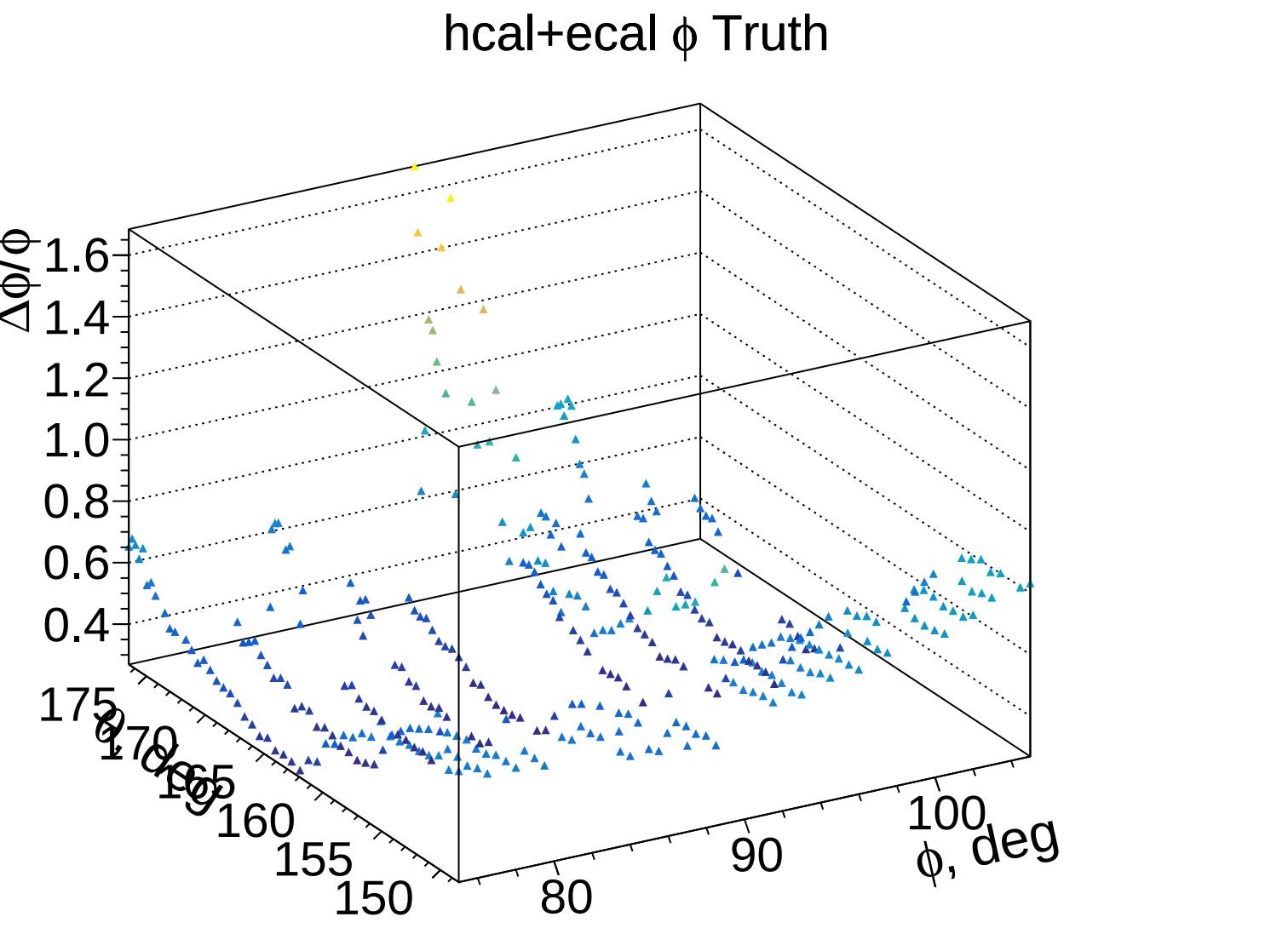
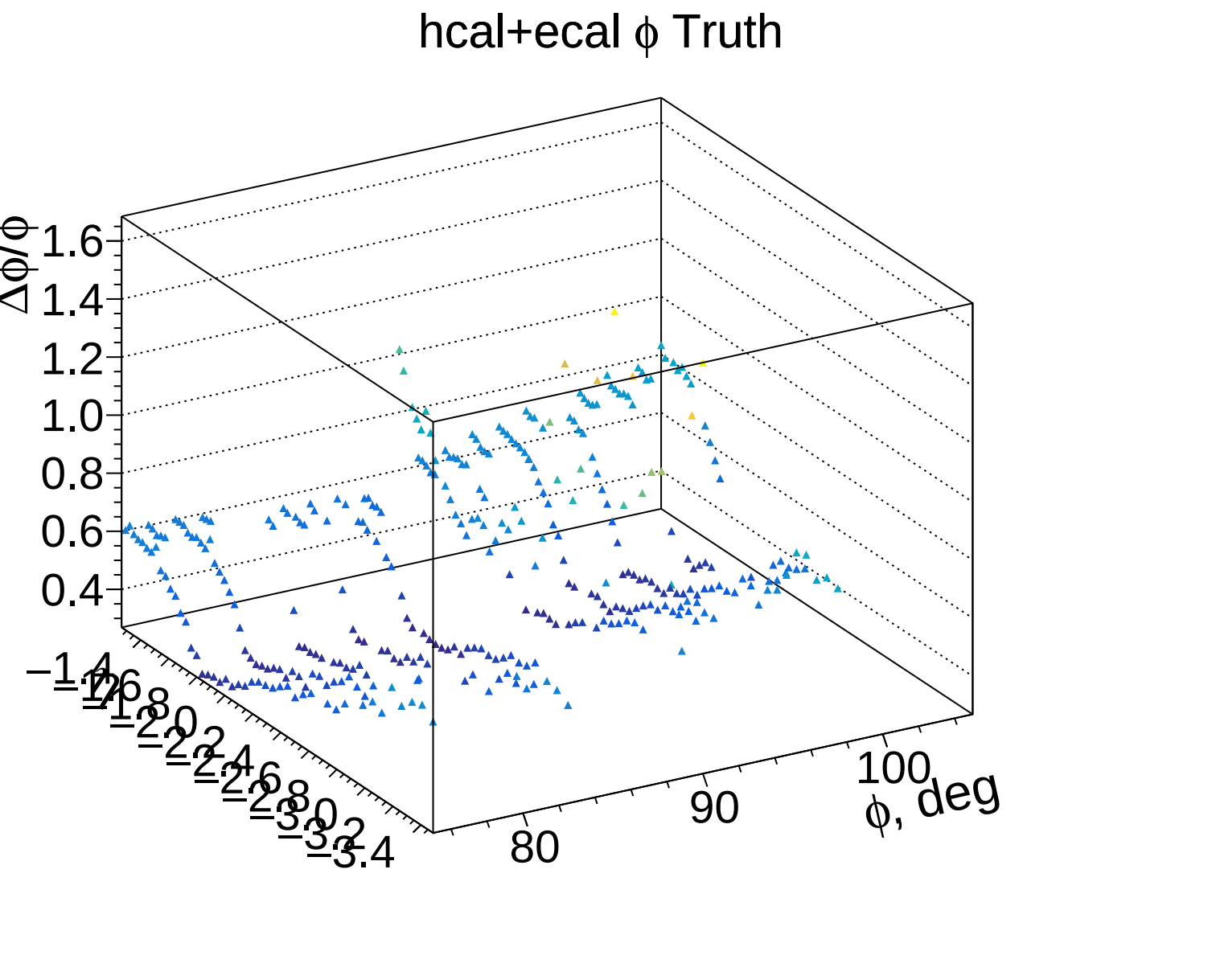
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal+ecal θ Truth
Δθ/θ
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
y,mm
200
150
100
50
x,mm
–50
0
50


hcal+ecal ϕ Truth
Δϕ/ϕ
1.6
1.4
1.2
1.0
0.8
0.6
0.4
175
170
165
160
155
150
80
90
100
ϕ, deg


hcal+ecal ϕ Truth
Δϕ/ϕ
1.6
1.4
1.2
1.0
0.8
0.6
0.4
−1.4
−1.6
−1.8
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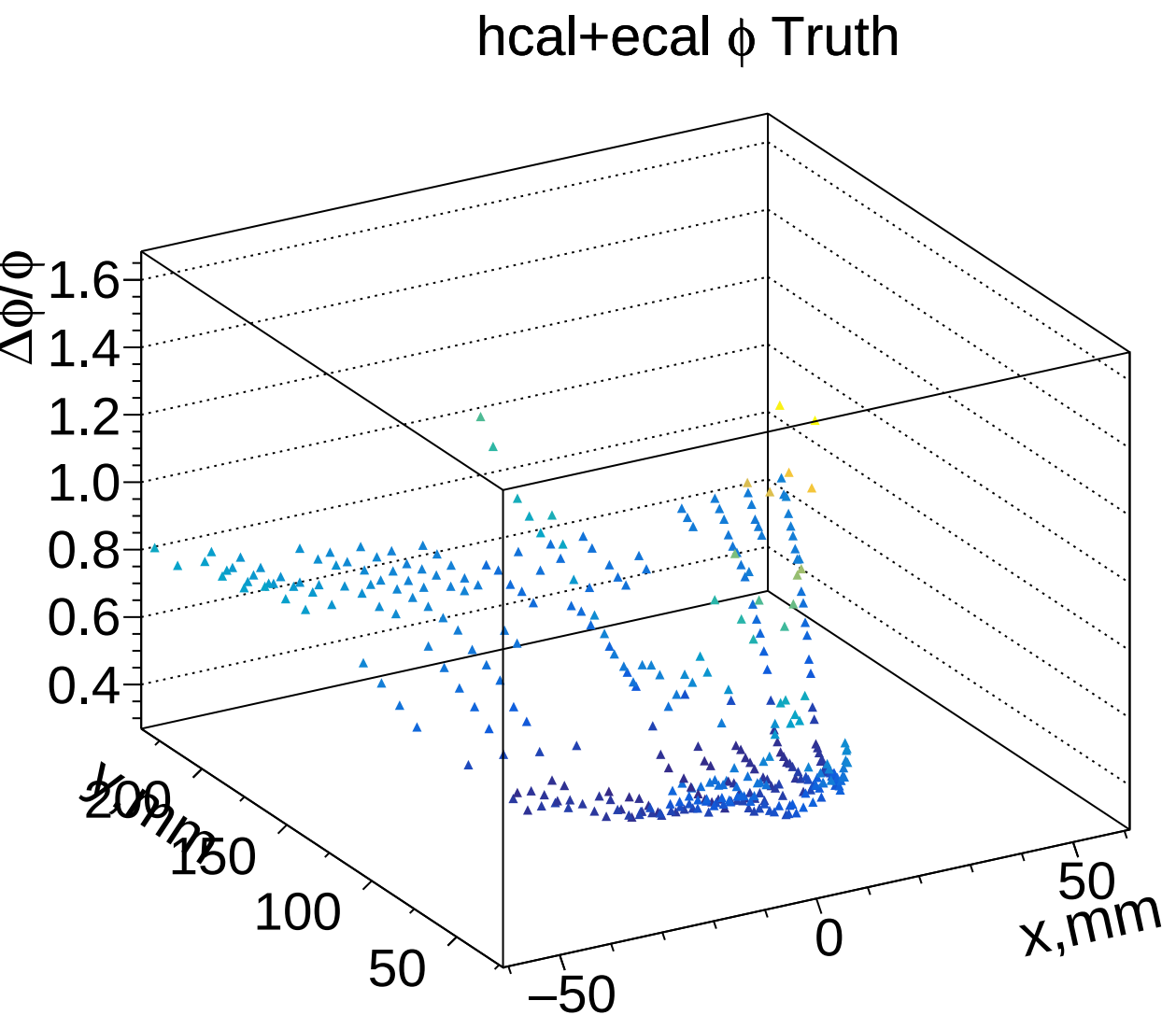
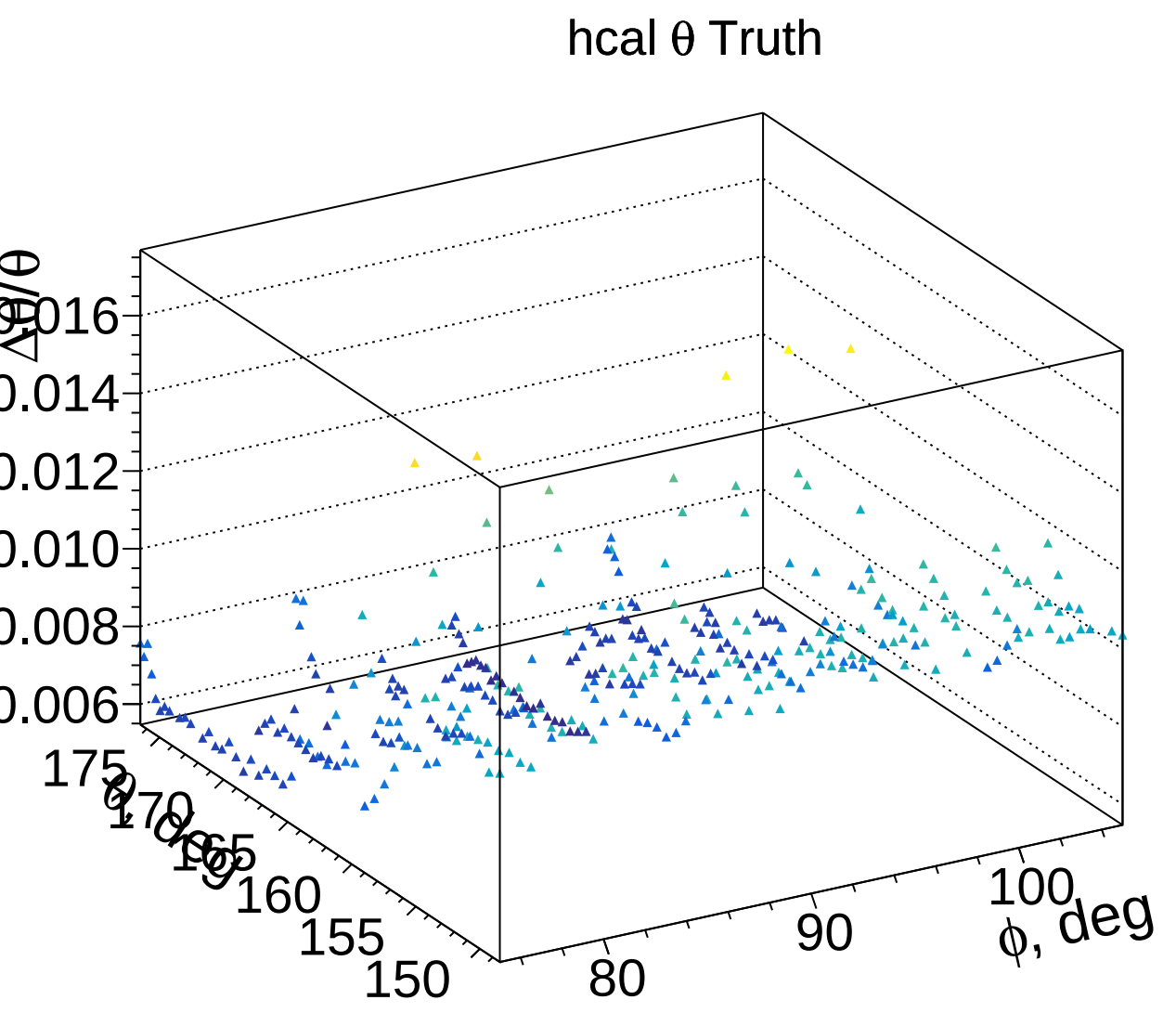
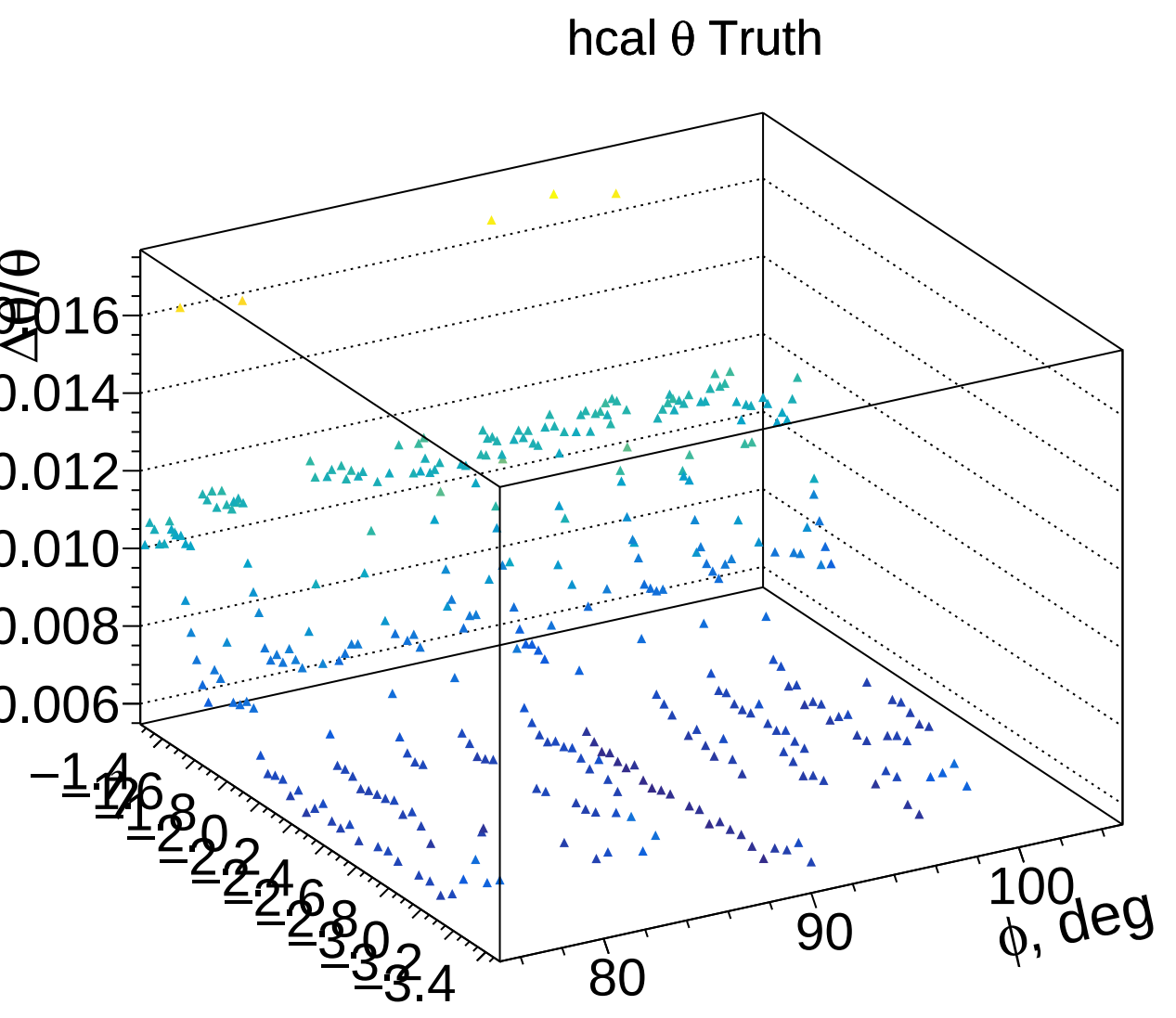
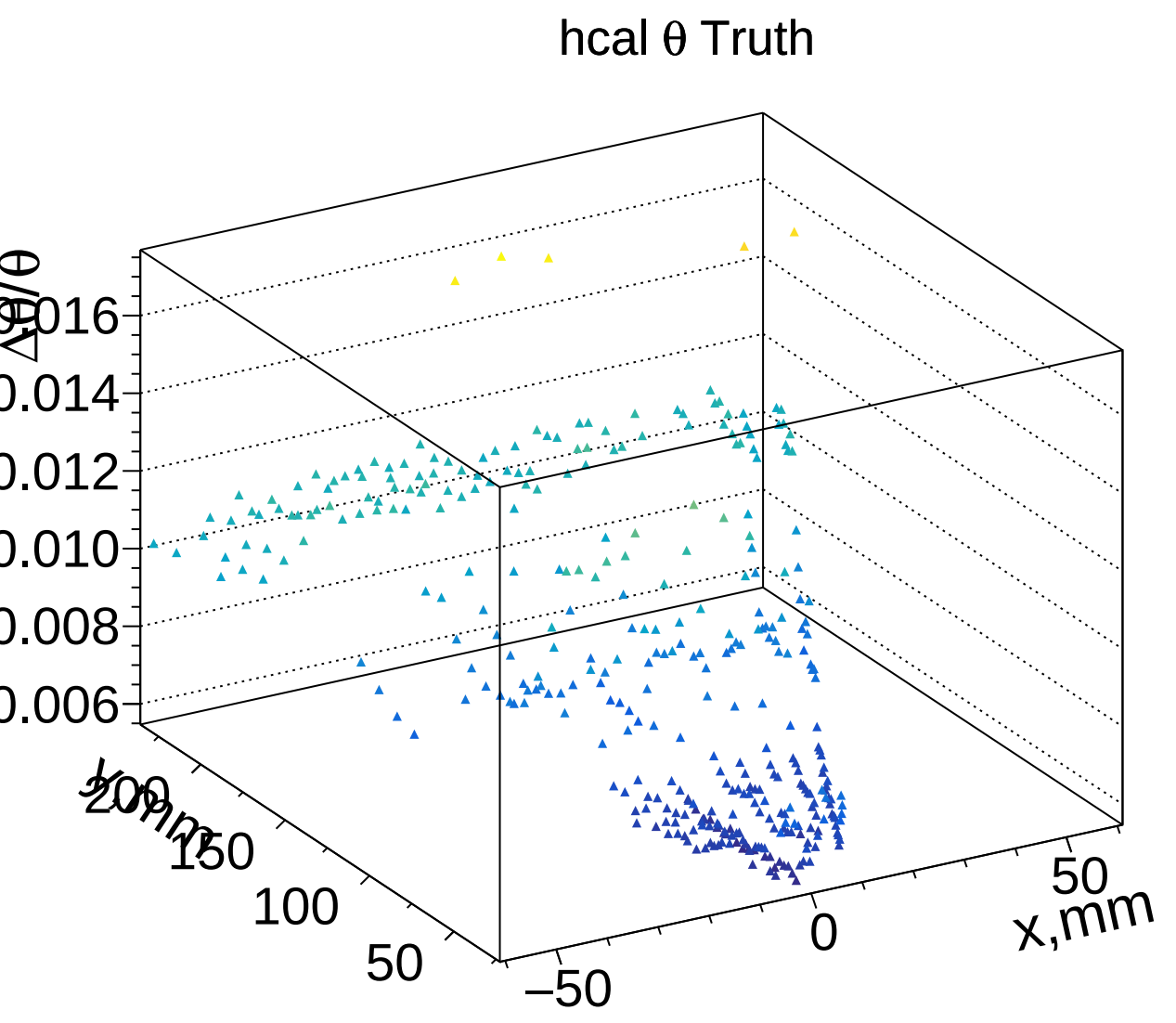
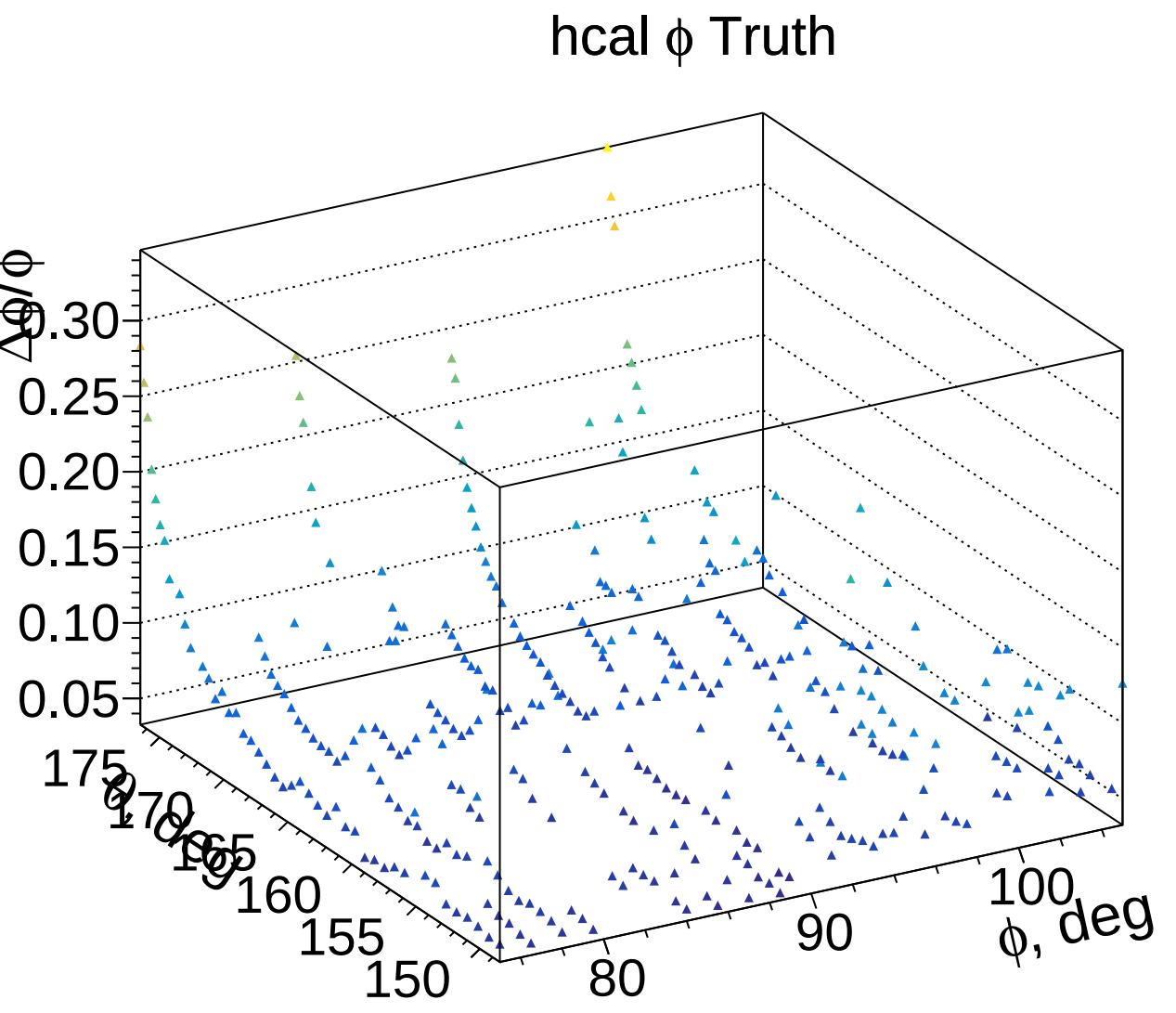
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal+ecal ϕ Truth
Δϕ/ϕ
1.6
1.4
1.2
1.0
0.8
0.6
0.4
y,mm
200
150
100
50
–50
0
50
x,mm


hcal θ Truth
Δθ/θ
0.016
0.014
0.012
0.010
0.008
0.006
175
170
165
160
155
150
θ, deg
80
90
100
ϕ, deg


hcal θ Truth
Δθ/θ
0.016
0.014
0.012
0.010
0.008
0.006
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal θ Truth
Δθ/θ
0.016
0.014
0.012
0.010
0.008
0.006
y,mm
200
150
100
50
x,mm
50
0
–50


hcal ϕ Truth
Δϕ/ϕ
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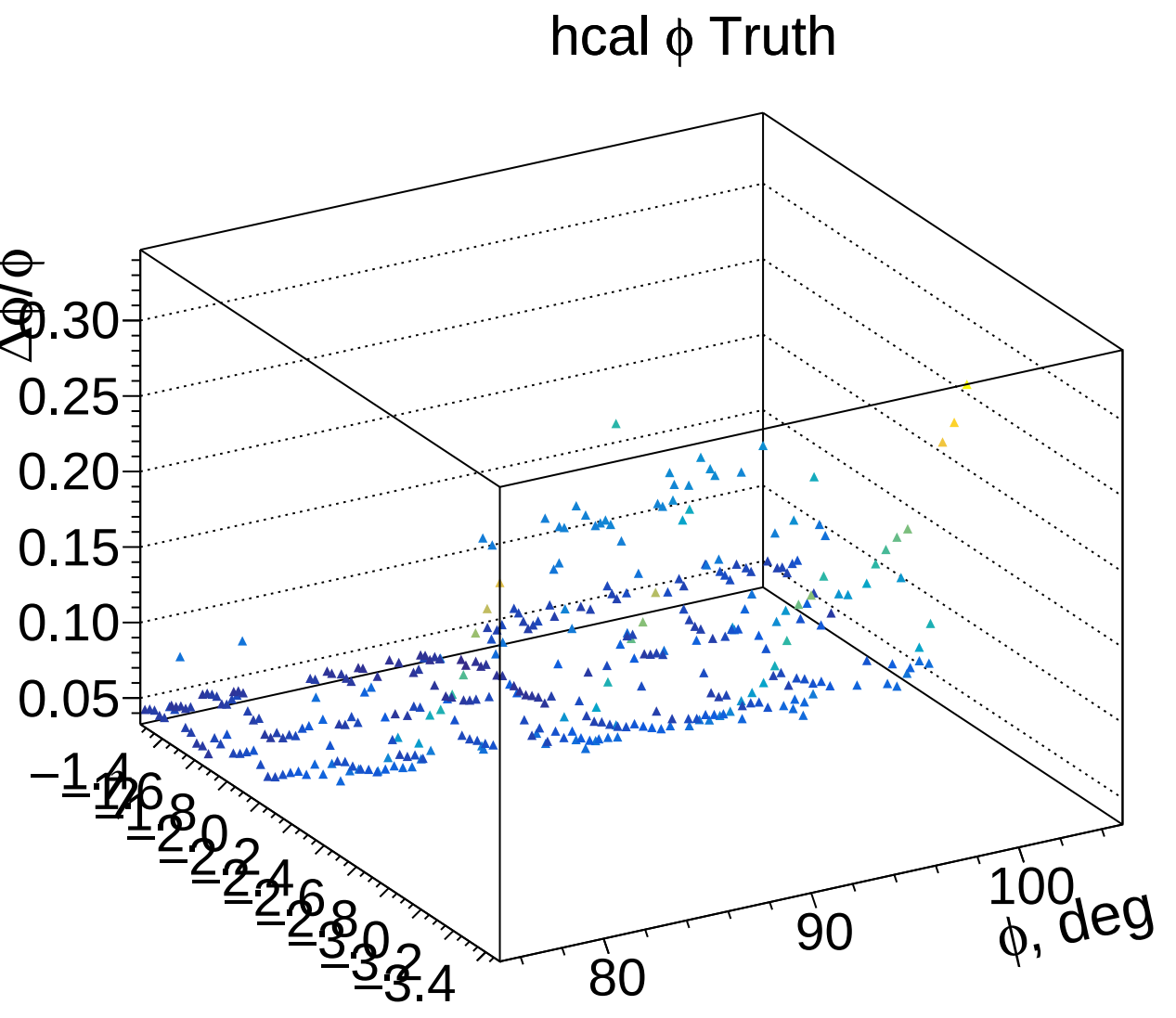
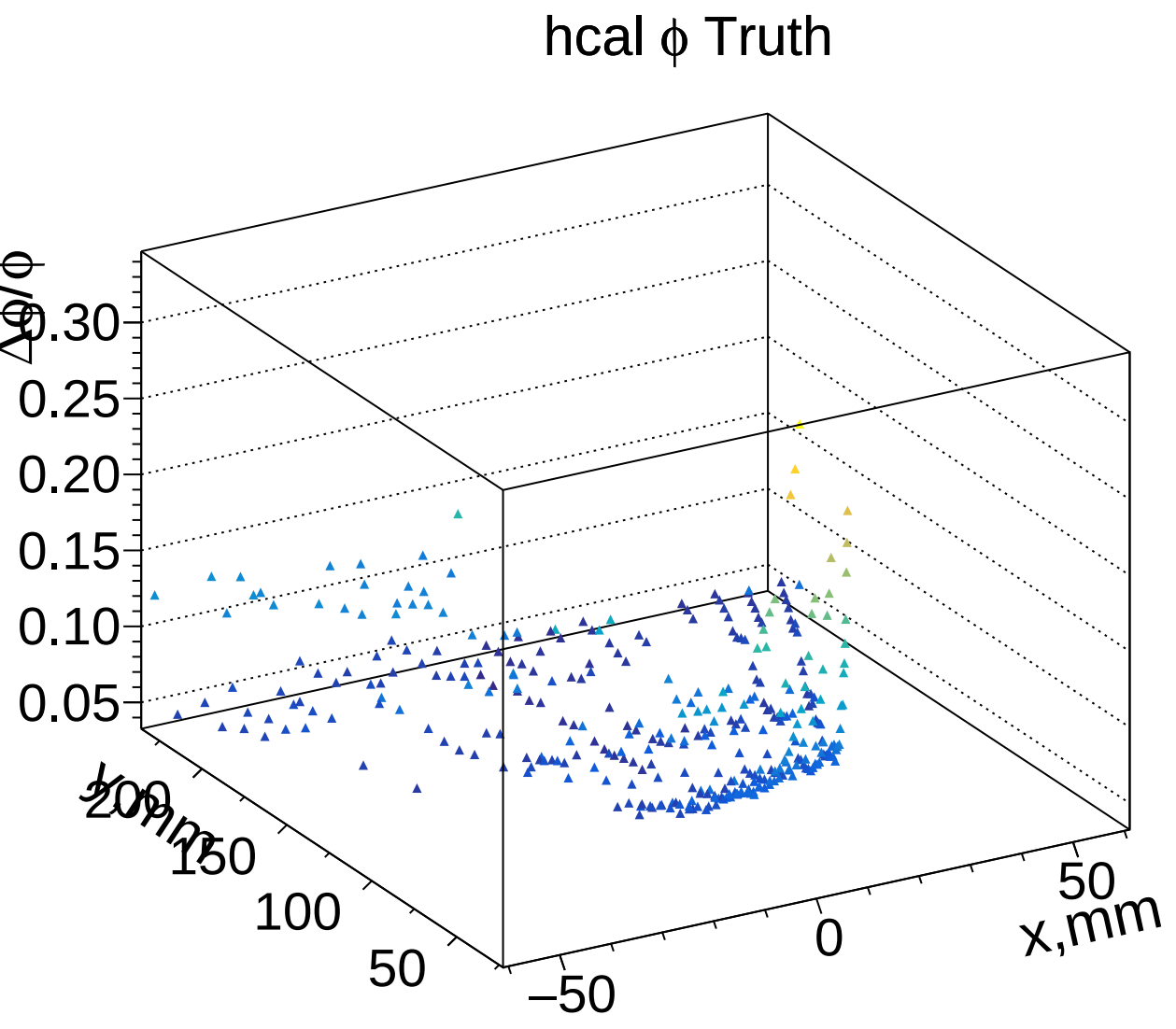
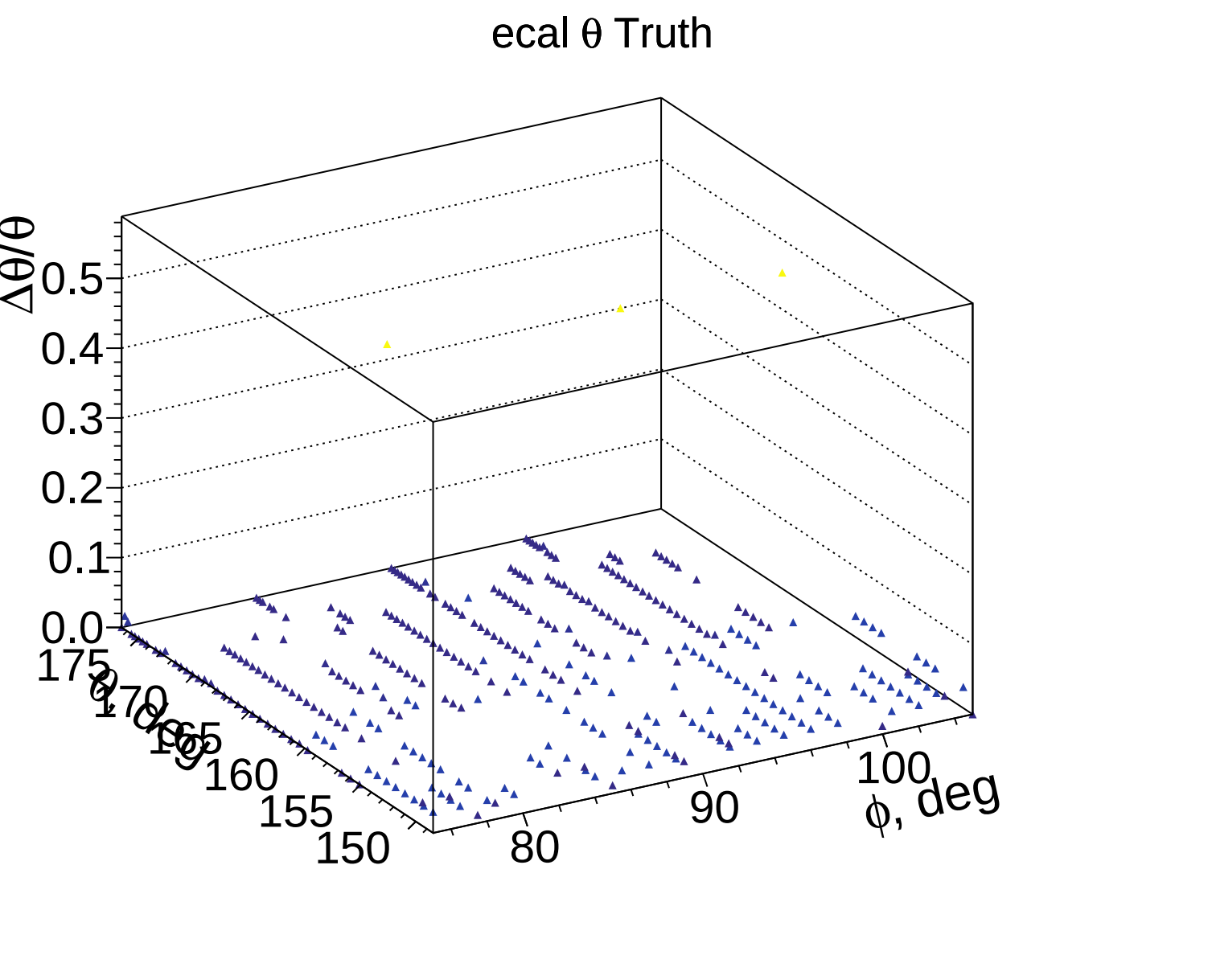
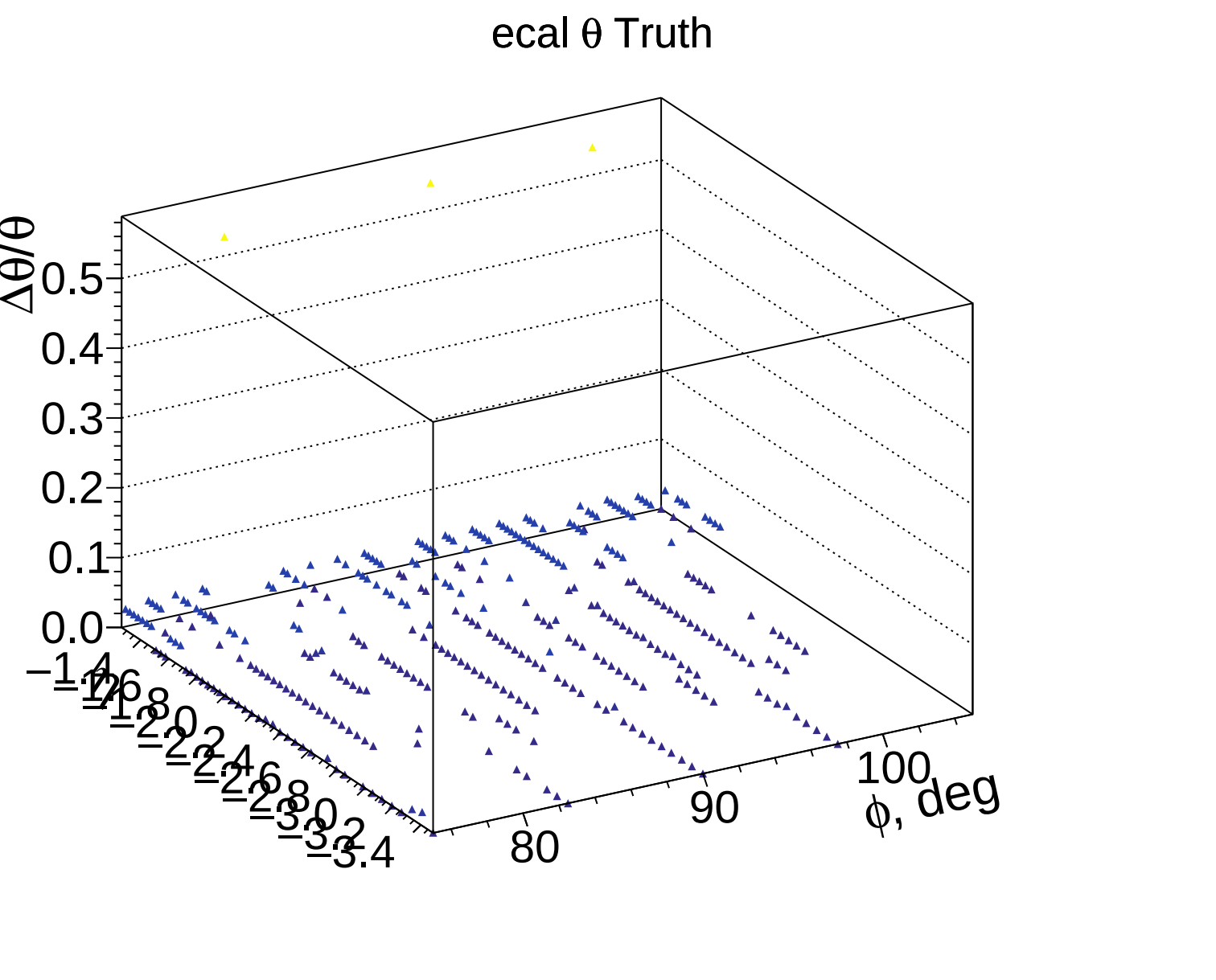
0.25
0.20
0.15
0.10
0.05
175
170
165
160
155
150
80
90
100
ϕ, deg


hcal ϕ Truth
Δϕ/ϕ
0.30
0.25
0.20
0.15
0.10
0.05
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


hcal ϕ Truth
Δϕ/ϕ
0.30
0.25
0.20
0.15
0.10
0.05
y,mm
200
150
100
50
−50
0
50
x,mm


ecal θ Truth
Δθ/θ
0.5
0.4
0.3
0.2
0.1
0.0
175
170
165
160
155
150
80
90
100
ϕ, deg


ecal θ Truth
Δθ/θ
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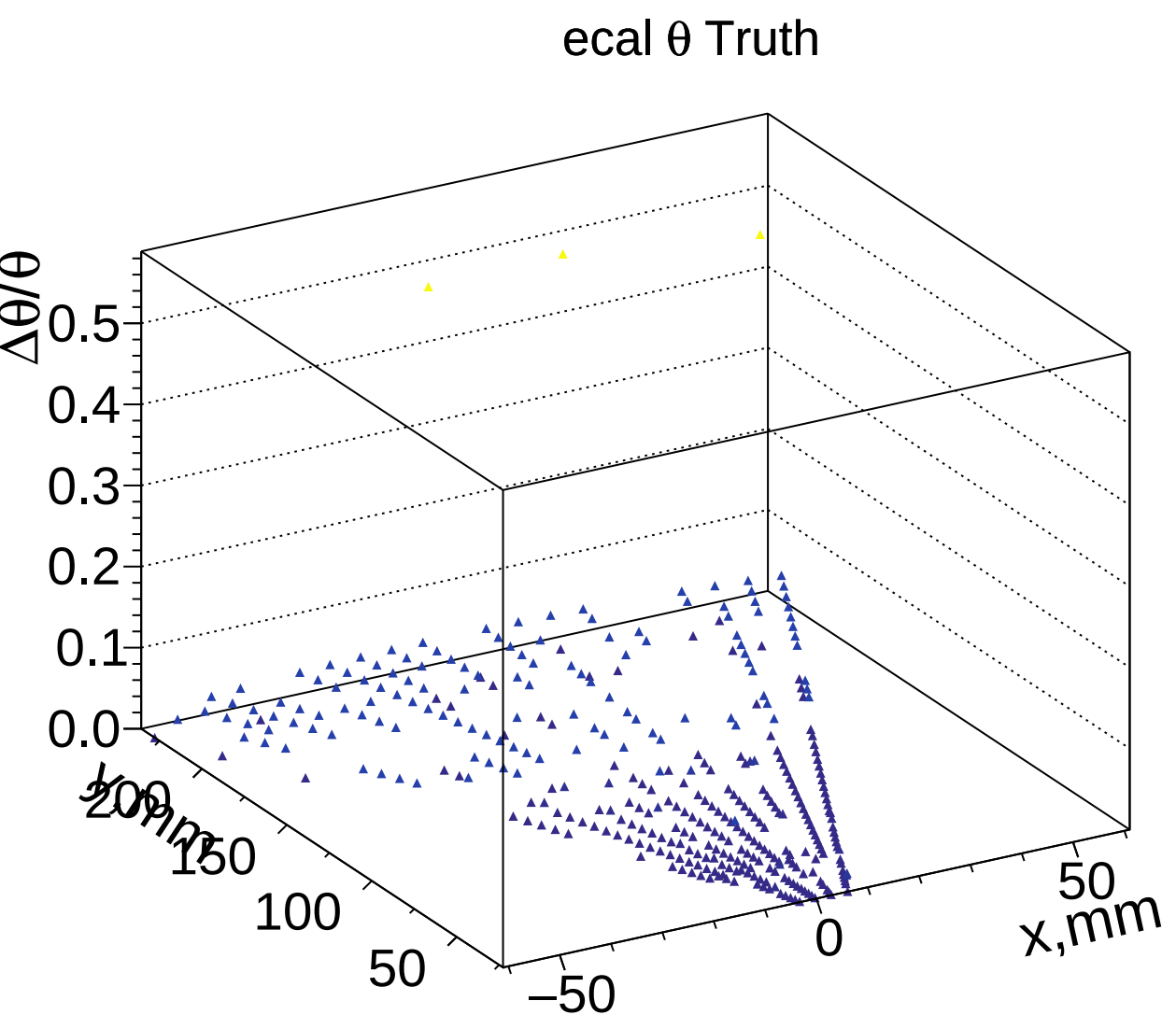
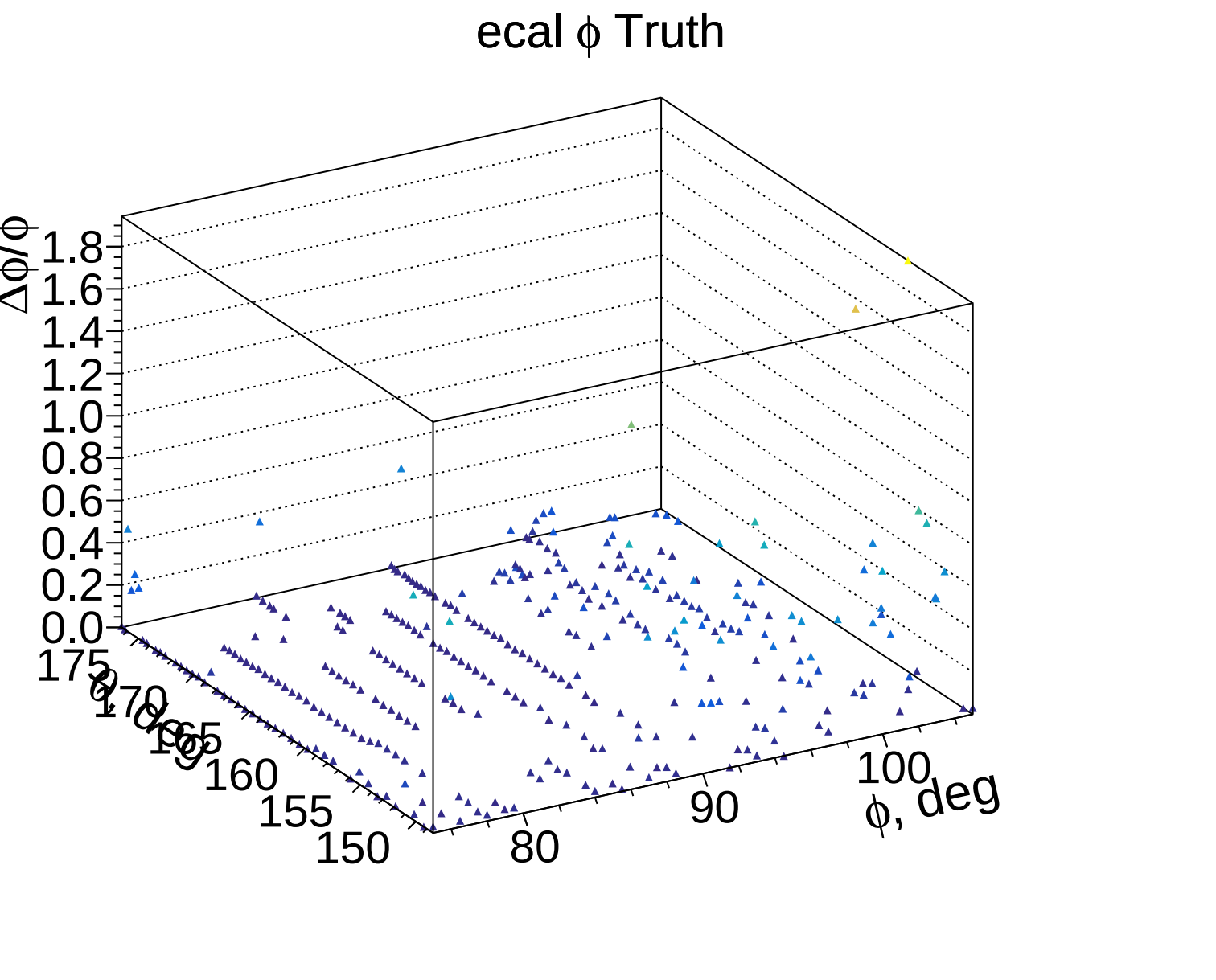
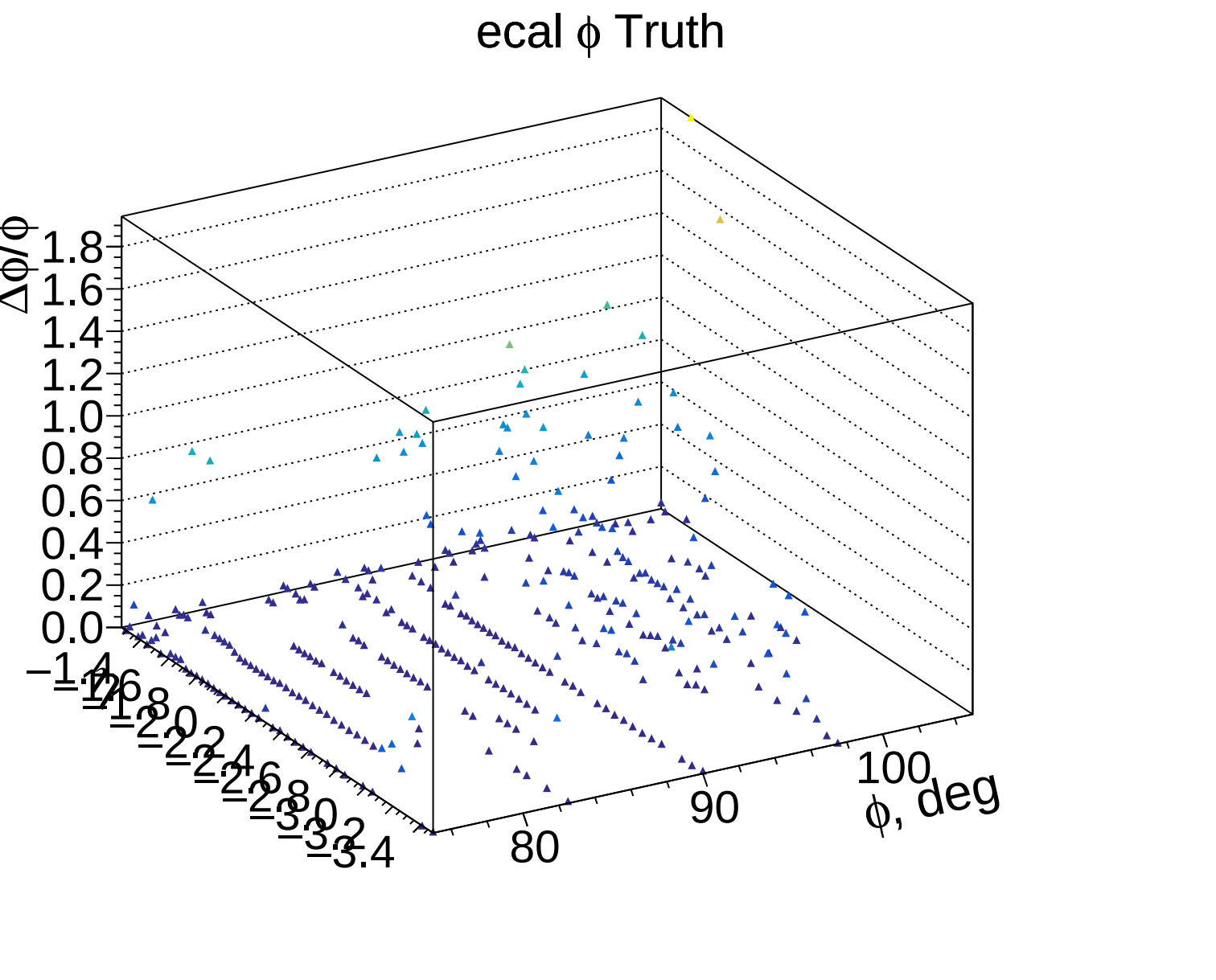
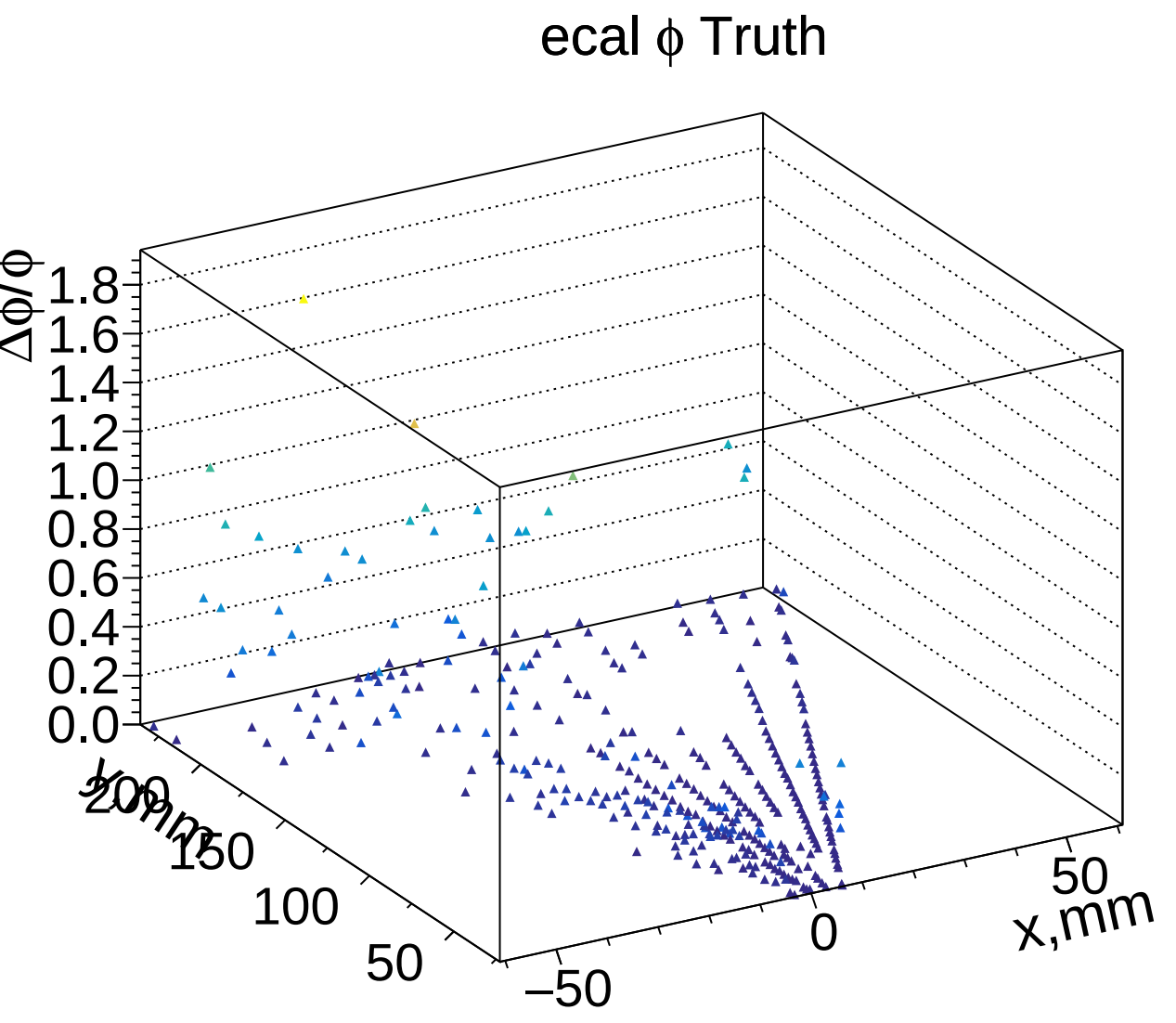
0.4
0.3
0.2
0.1
0.0
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


ecal θ Truth
Δθ/θ
0.5
0.4
0.3
0.2
0.1
0.0
y,mm
200
150
100
50
–50
0
50
x,mm


ecal ϕ Truth
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
175
170
165
160
155
150
80
90
100
ϕ, deg


ecal ϕ Truth
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
−1.4
−1.6
−1.8
−2.0
−2.2
−2.4
−2.6
−2.8
−3.0
−3.2
−3.4
80
90
100
ϕ, deg


ecal ϕ Truth
Δϕ/ϕ
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
y,mm
200
150
100
50
x,mm
–50
0
50