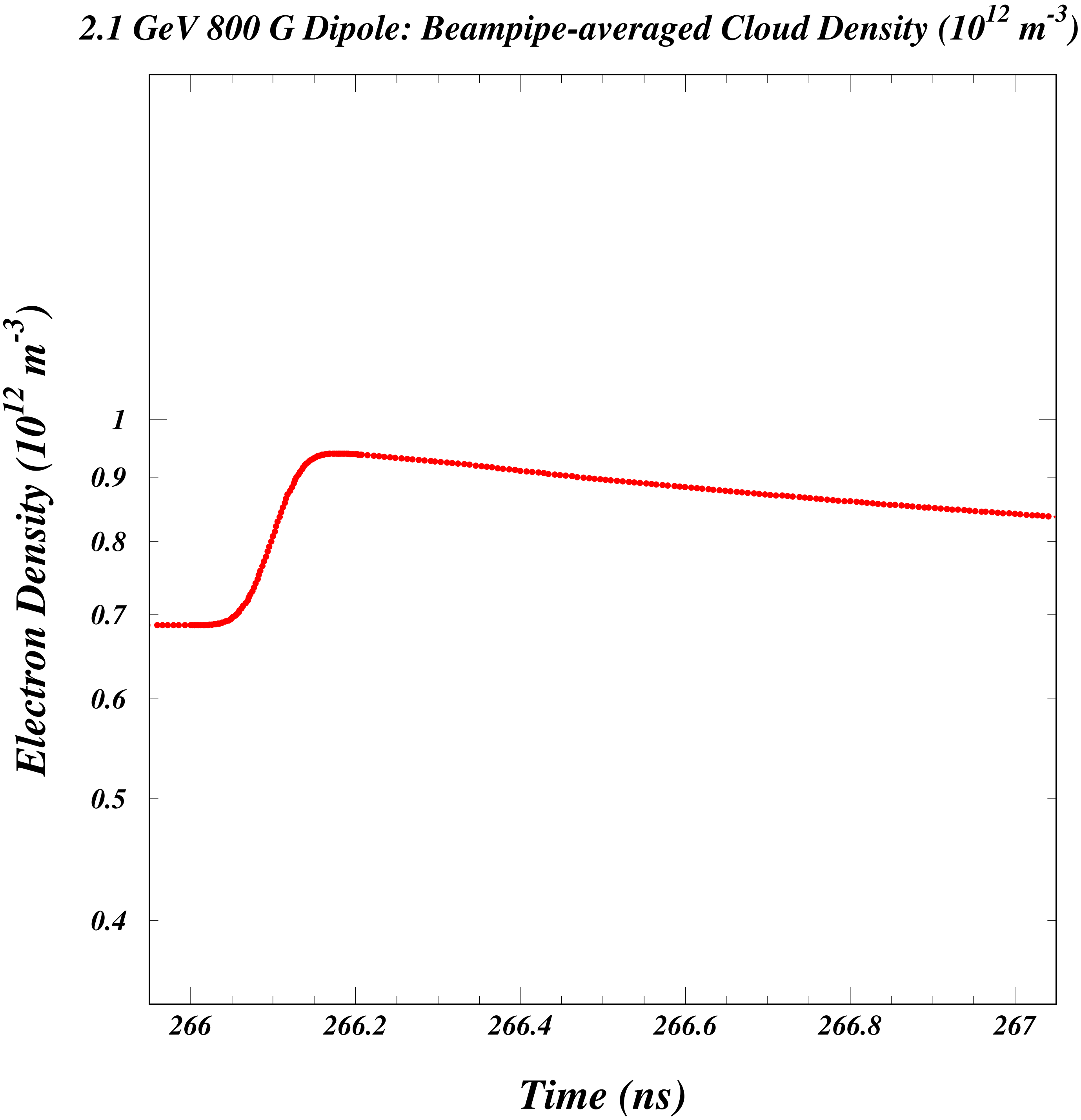
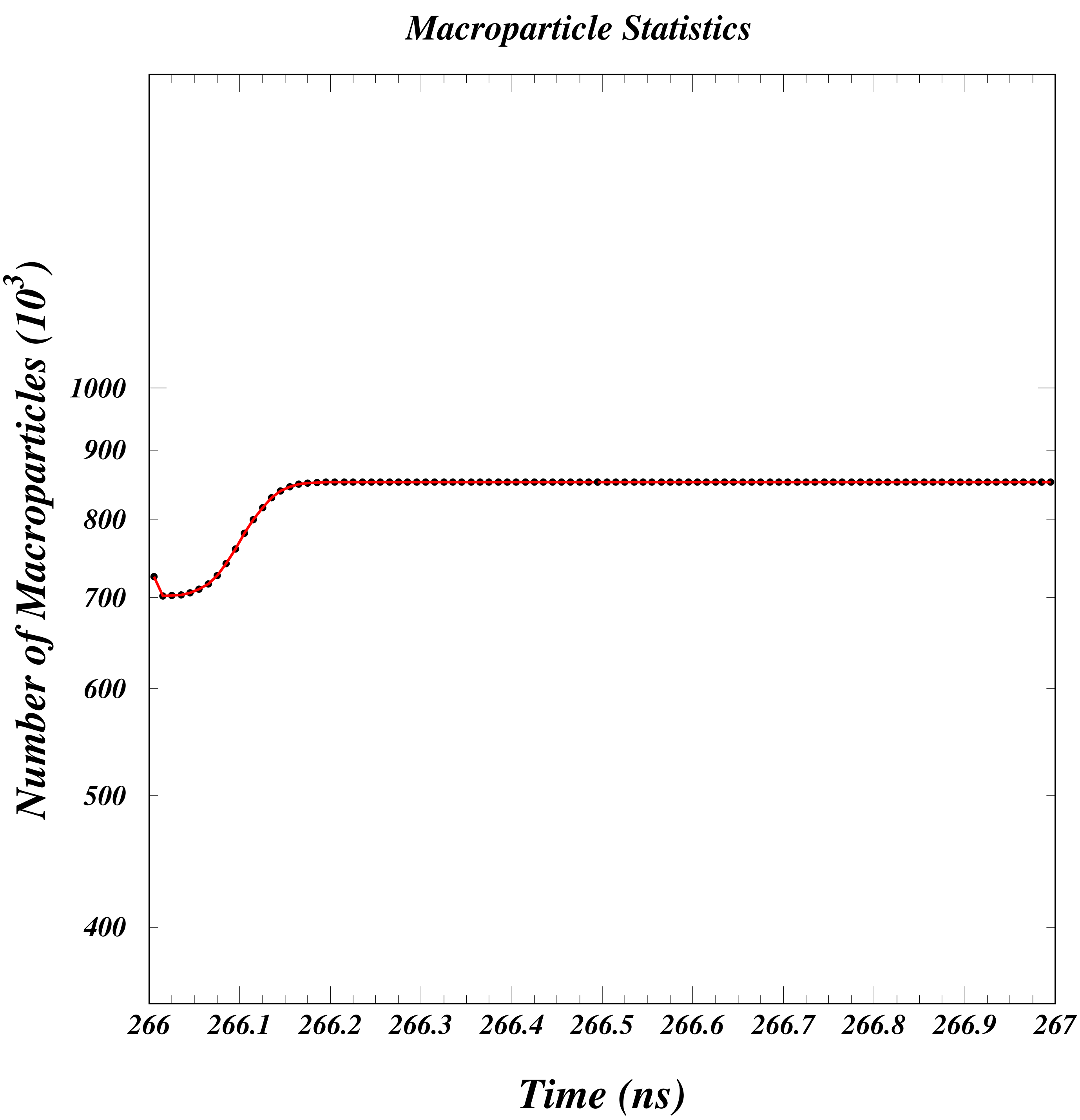
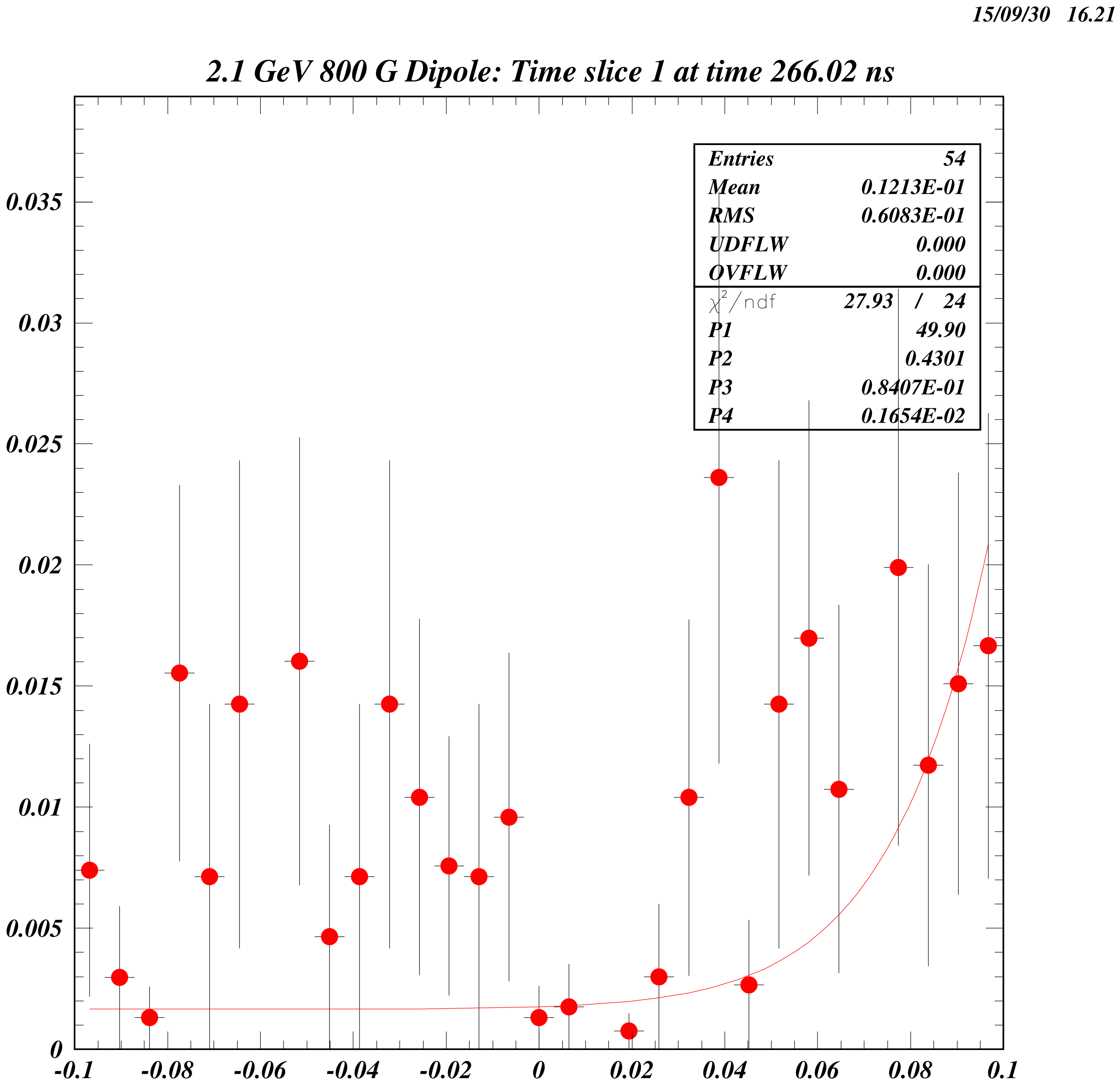
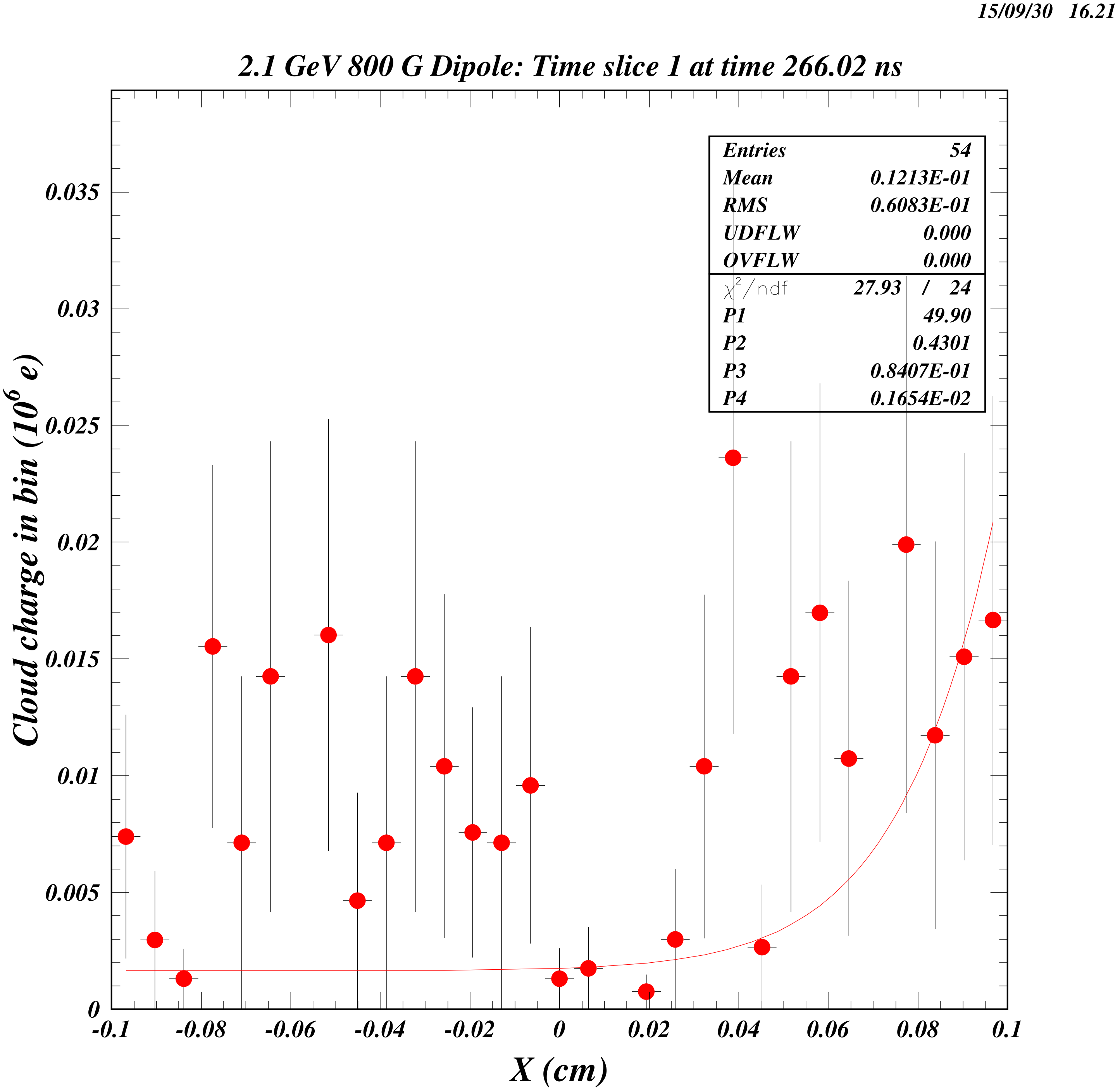
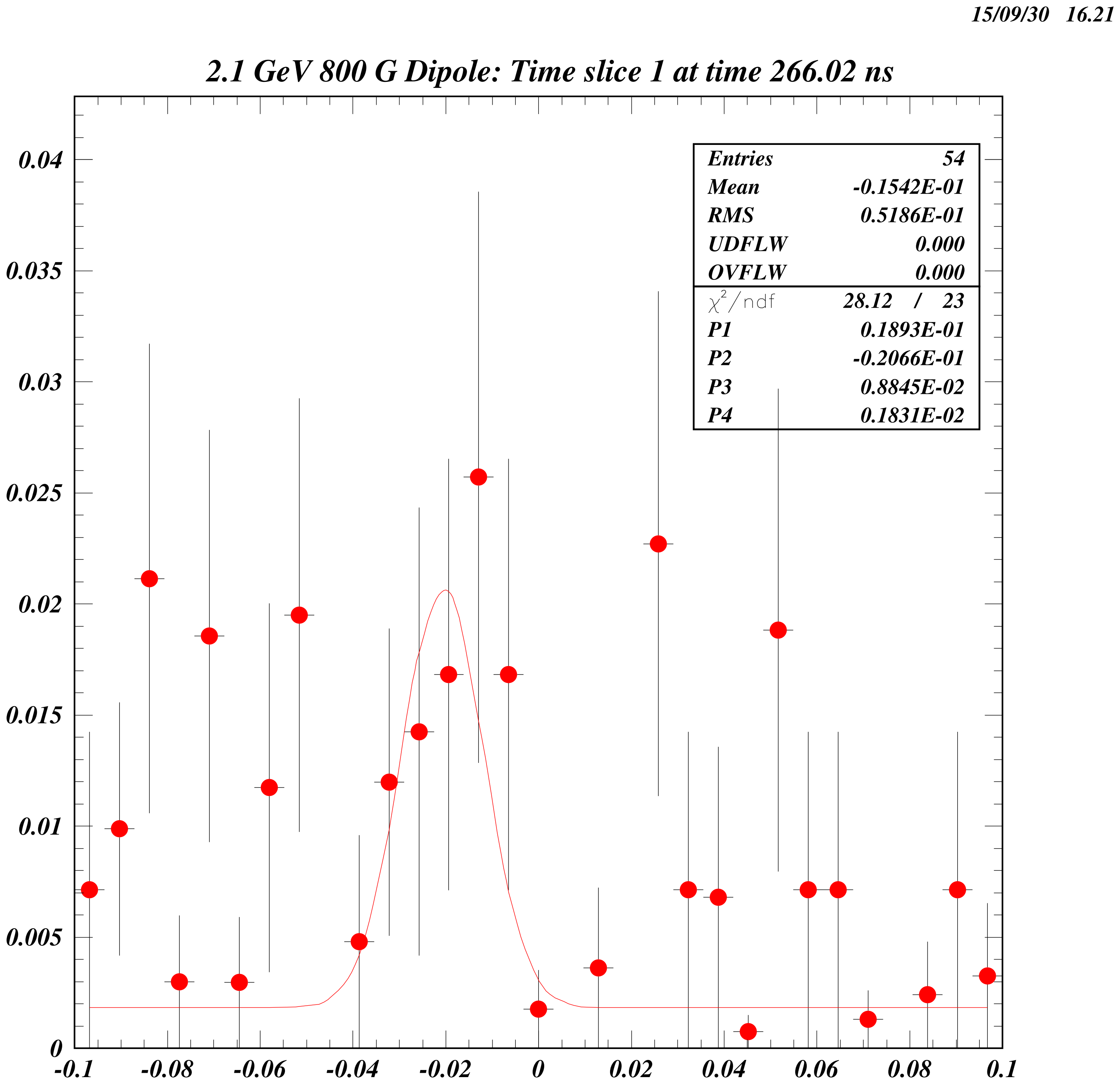

2.1 GeV 800 G Dipole: Beampipe-averaged Cloud Density (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
1
0.9
0.8
0.7
0.6
0.5
0.4
266
266.2
266.4
266.6
266.8
267
Time (ns)

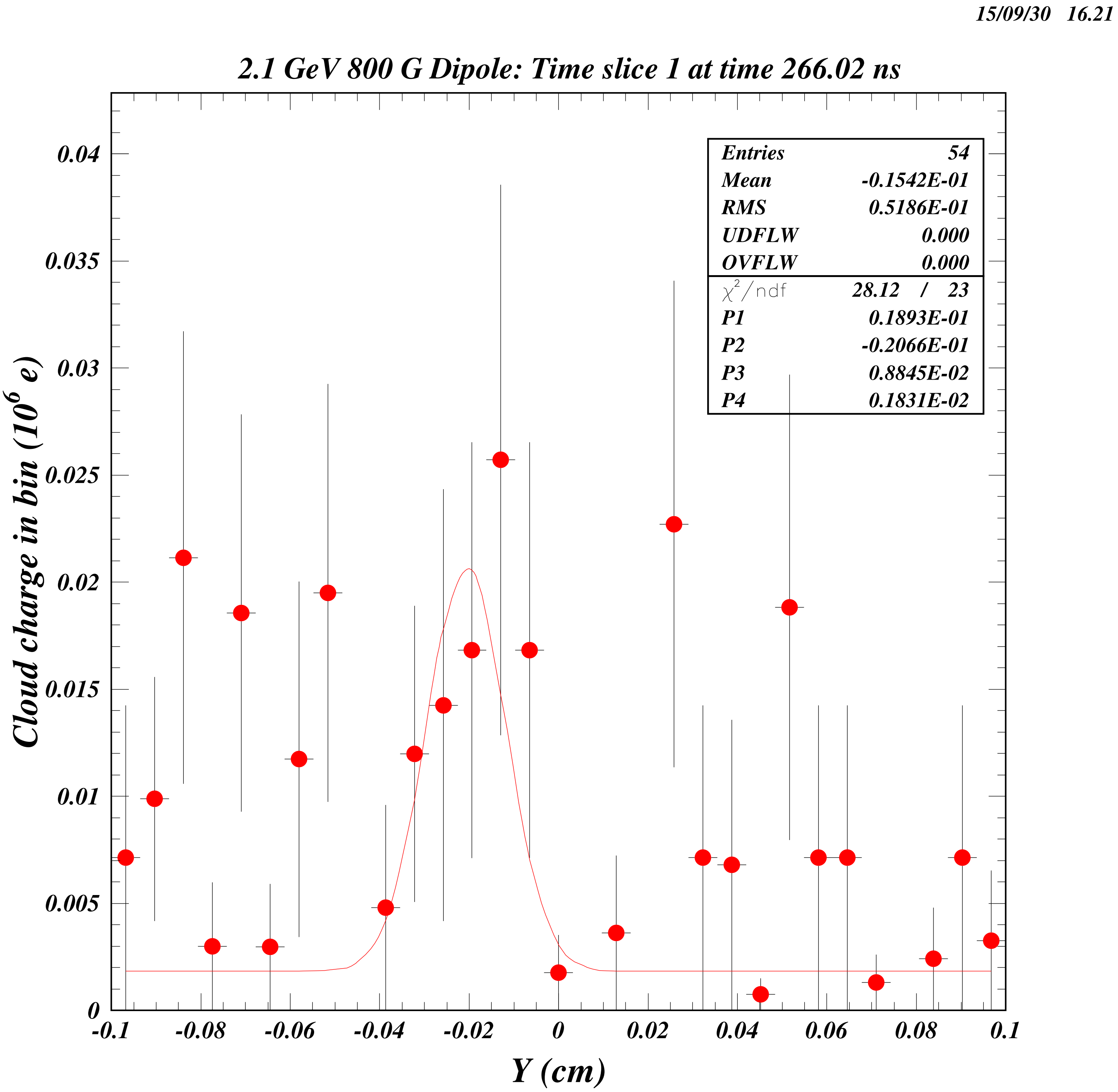

Macroparticle Statistics
Number of Macroparticles (10^3)
1000
900
800
700
600
500
400
266
266.1
266.2
266.3
266.4
266.5
266.6
266.7
266.8
266.9
267
Time (ns)


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 1 at time 266.02 ns
Entries 54
Mean 0.1213E-01
RMS 0.6083E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 27.93 / 24
P1 49.90
P2 0.4301
P3 0.8407E-01
P4 0.1654E-02
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1



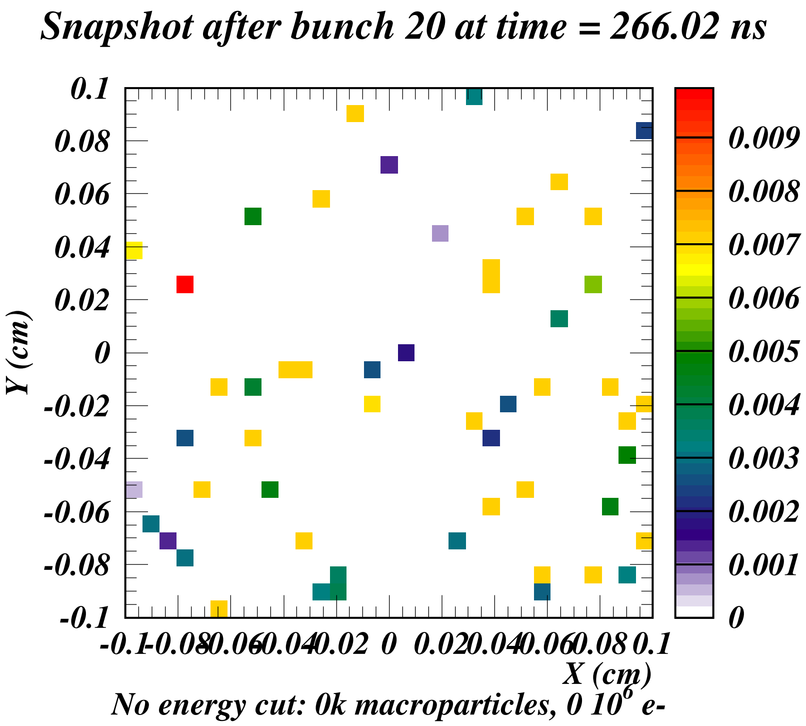
15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 1 at time 266.02 ns
Entries 54
Mean 0.1213E-01
RMS 0.6083E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 27.93 / 24
P1 49.90
P2 0.4301
P3 0.8407E-01
P4 0.1654E-02
Cloud charge in bin (10⁶ e)
X (cm)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 1 at time 266.02 ns
Entries 54
Mean -0.1542E-01
RMS 0.5186E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 28.12 / 23
P1 0.1893E-01
P2 -0.2066E-01
P3 0.8845E-02
P4 0.1831E-02
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1



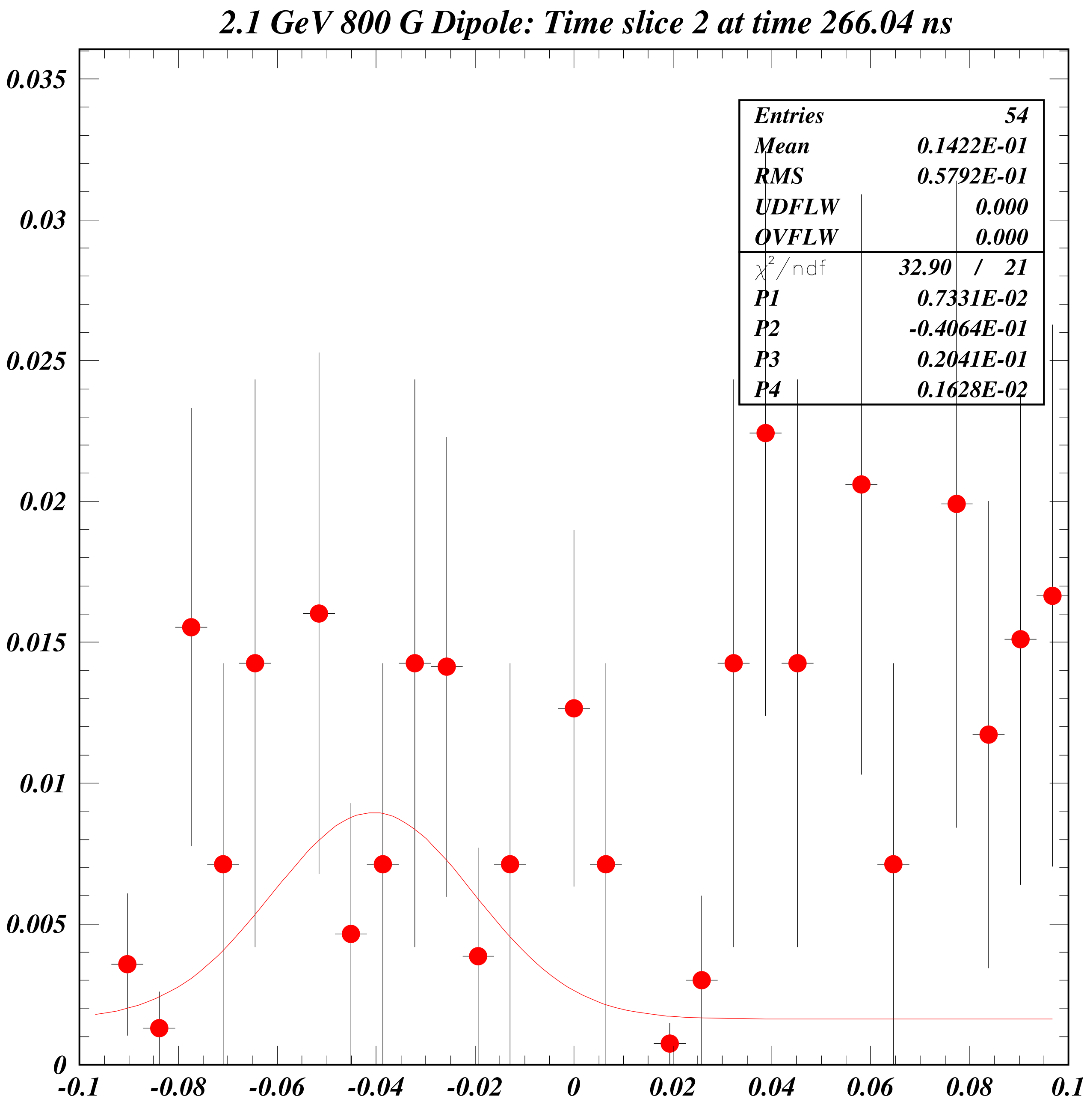
15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 1 at time 266.02 ns
Entries 54
Mean -0.1542E-01
RMS 0.5186E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 28.12 / 23
P1 0.1893E-01
P2 -0.2066E-01
P3 0.8845E-02
P4 0.1831E-02
Cloud charge in bin (10⁶ e)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
Y (cm)

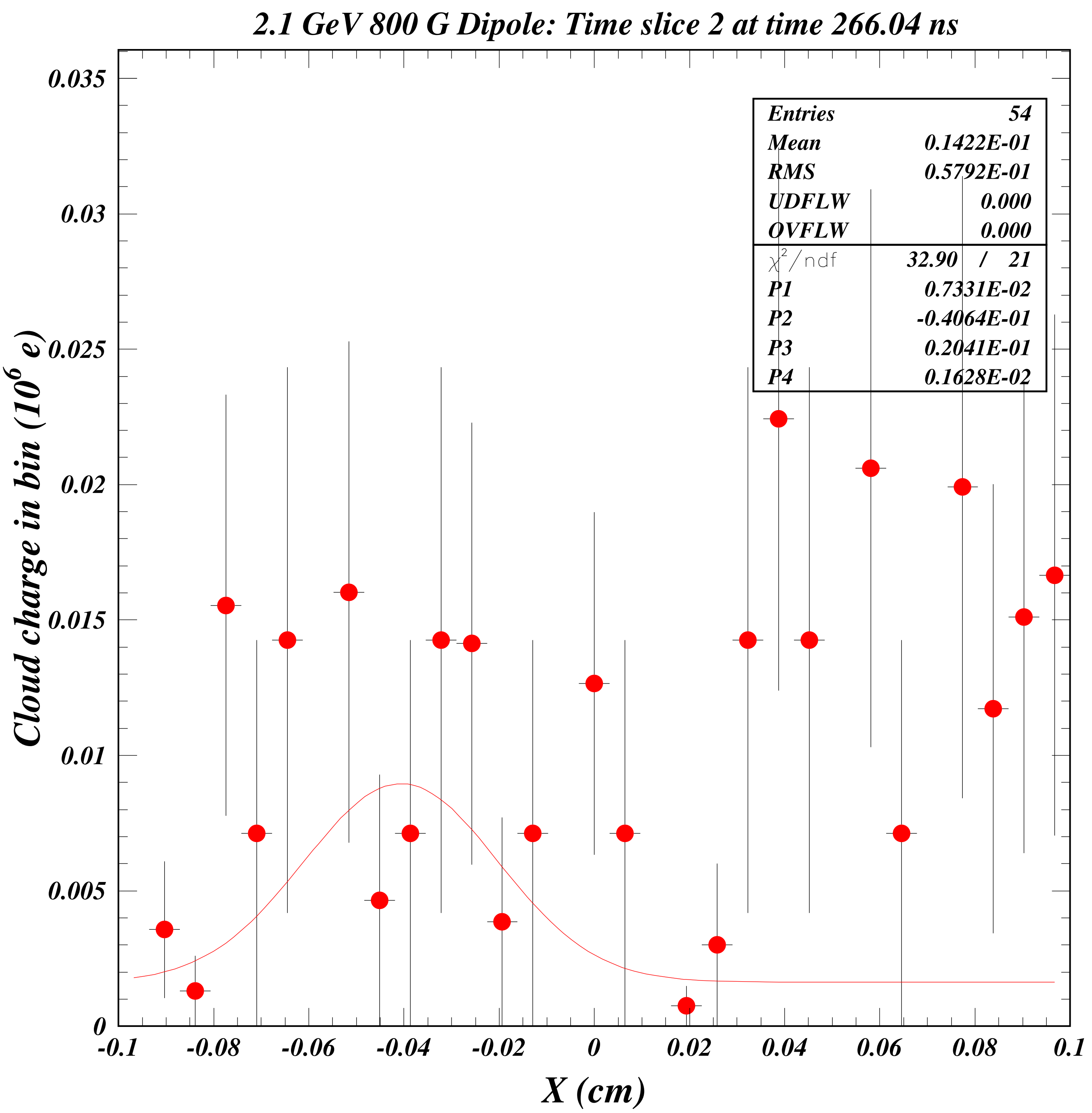
15/09/30 16.21



Snapshot after bunch 20 at time = 266.02 ns
Y (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
X (cm)
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
No energy cut: 0k macroparticles, 0 10^6 e-

15/09/30 16.21

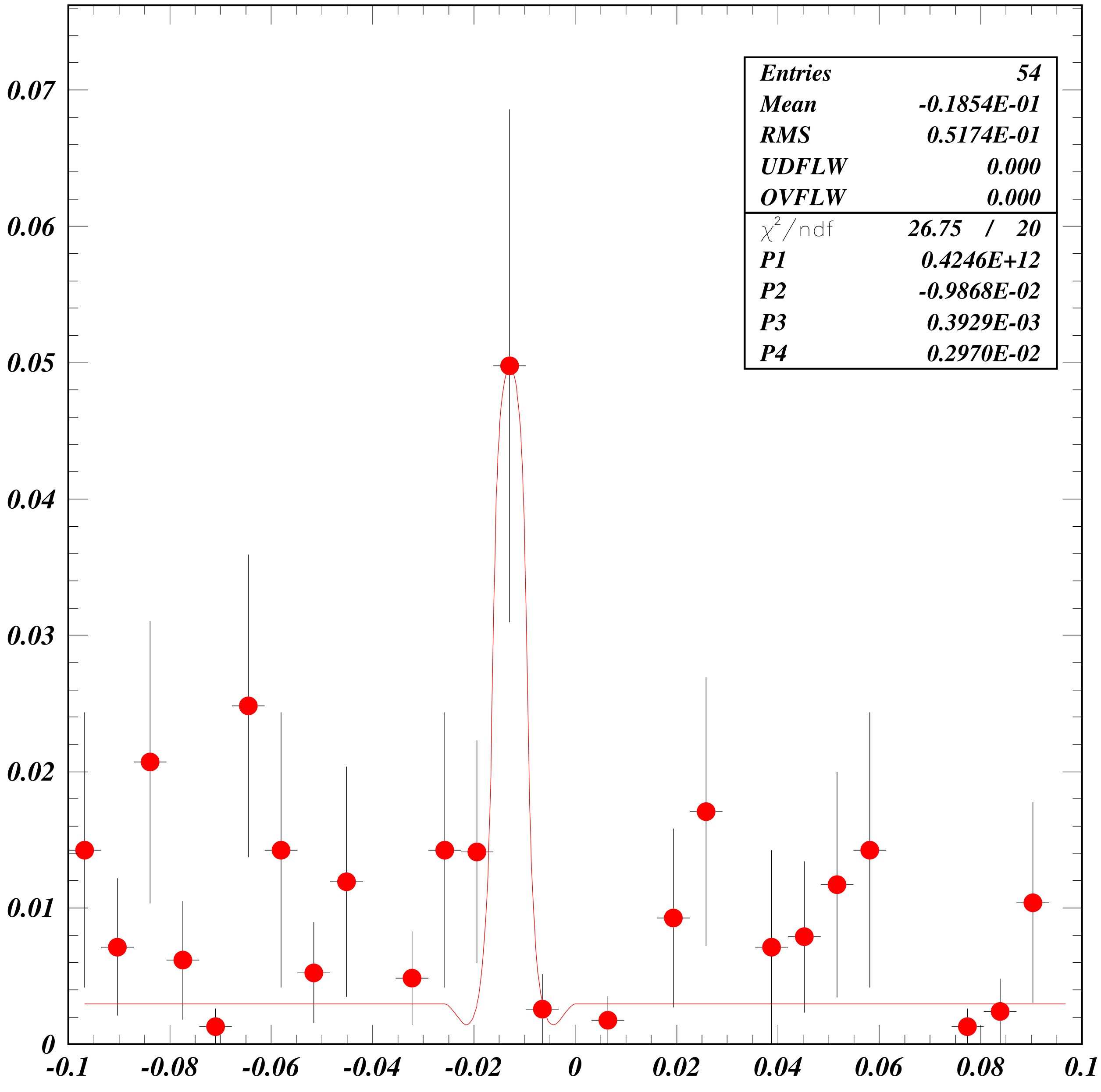

2.1 GeV 800 G Dipole: Time slice 2 at time 266.04 ns
Entries 54
Mean 0.1422E-01
RMS 0.5792E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 32.90 / 21
P1 0.7331E-02
P2 -0.4064E-01
P3 0.2041E-01
P4 0.1628E-02
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1



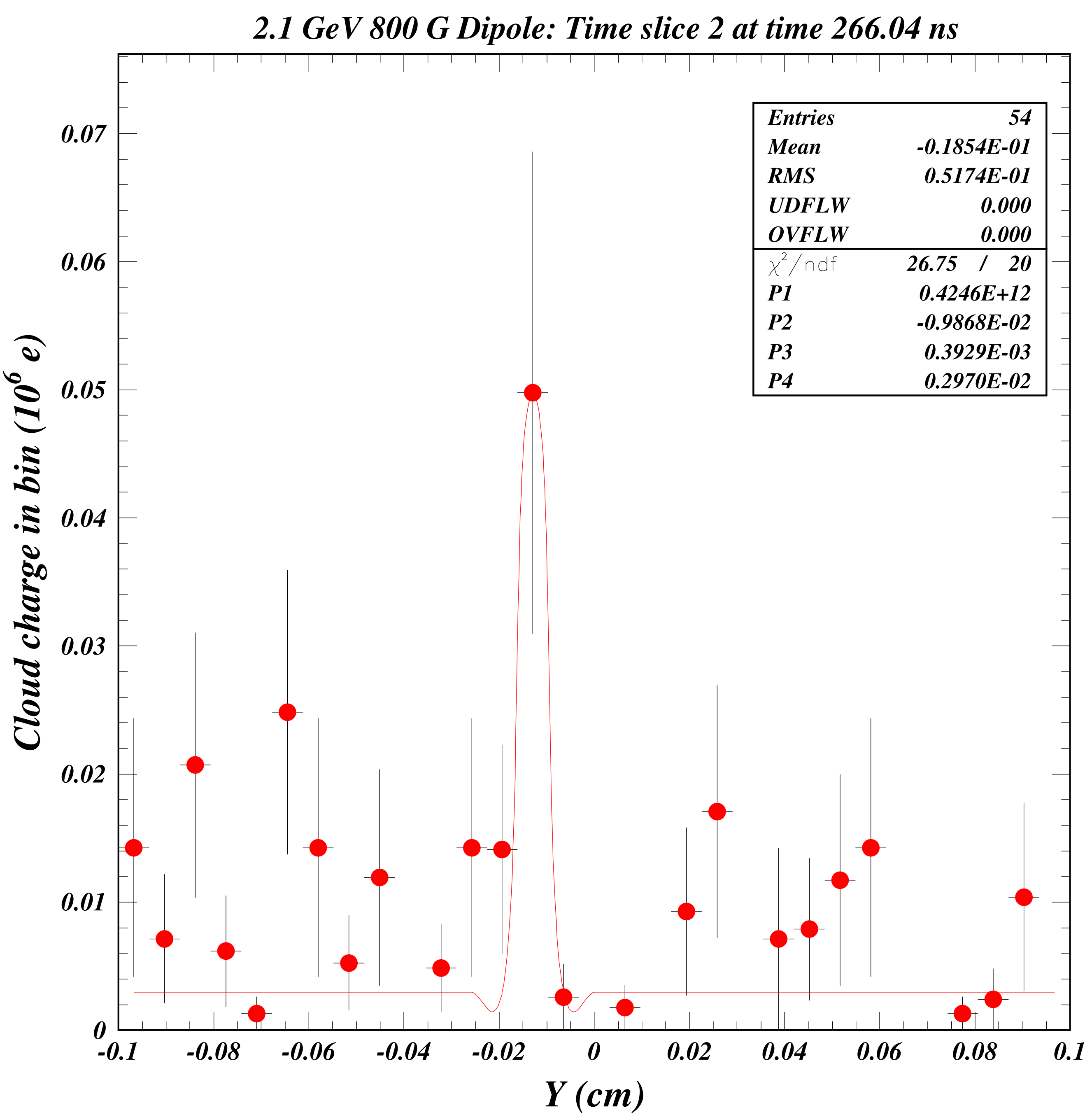
2.1 GeV 800 G Dipole: Time slice 2 at time 266.04 ns
Entries 54
Mean 0.1422E-01
RMS 0.5792E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 32.90 / 21
P1 0.7331E-02
P2 -0.4064E-01
P3 0.2041E-01
P4 0.1628E-02
Cloud charge in bin (10⁶ e)
X (cm)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

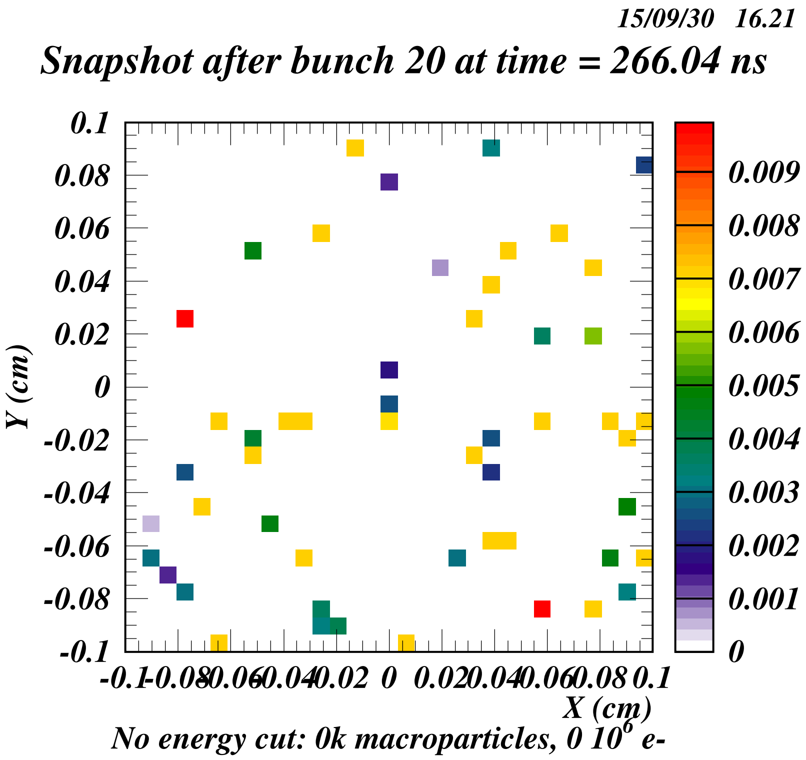
15/09/30 16.21

2.1 GeV 800 G Dipole: Time slice 2 at time 266.04 ns

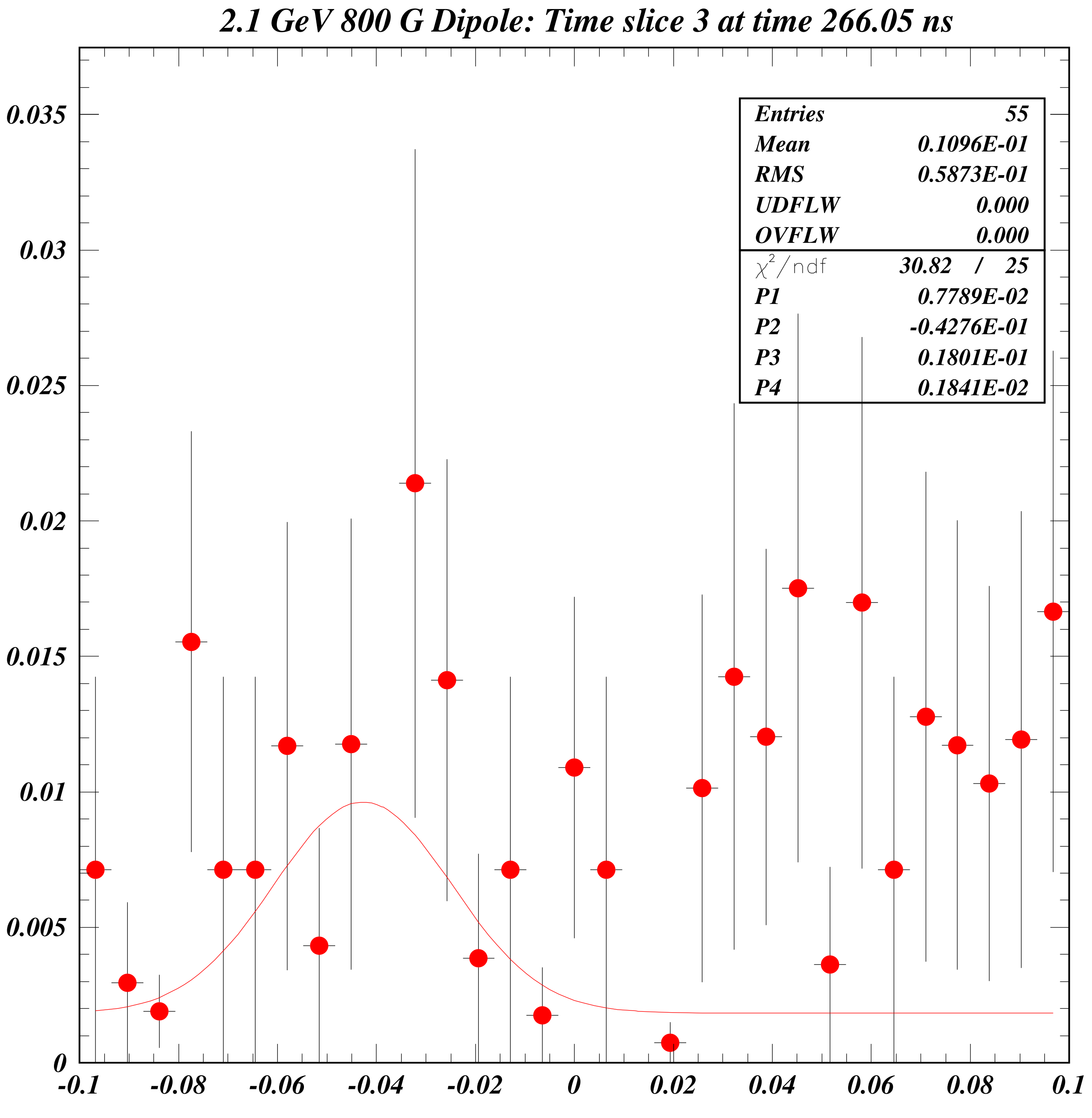


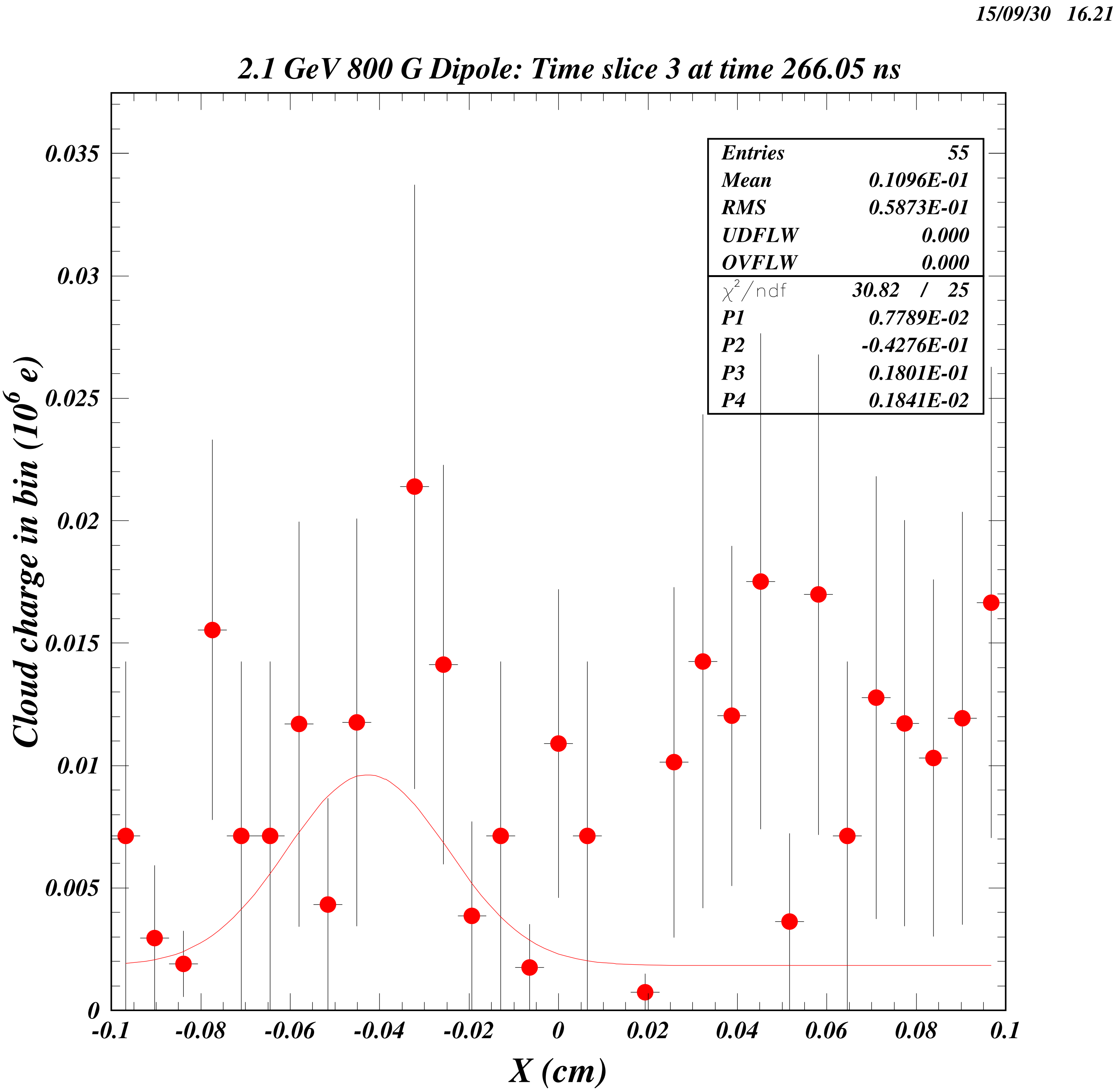
15/09/30 16.21


2.1 GeV 800 G Dipole: Time slice 2 at time 266.04 ns
Entries 54
Mean -0.1854E-01
RMS 0.5174E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 26.75 / 20
P1 0.4246E+12
P2 -0.9868E-02
P3 0.3929E-03
P4 0.2970E-02
Cloud charge in bin (10^6 e)
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
Y (cm)

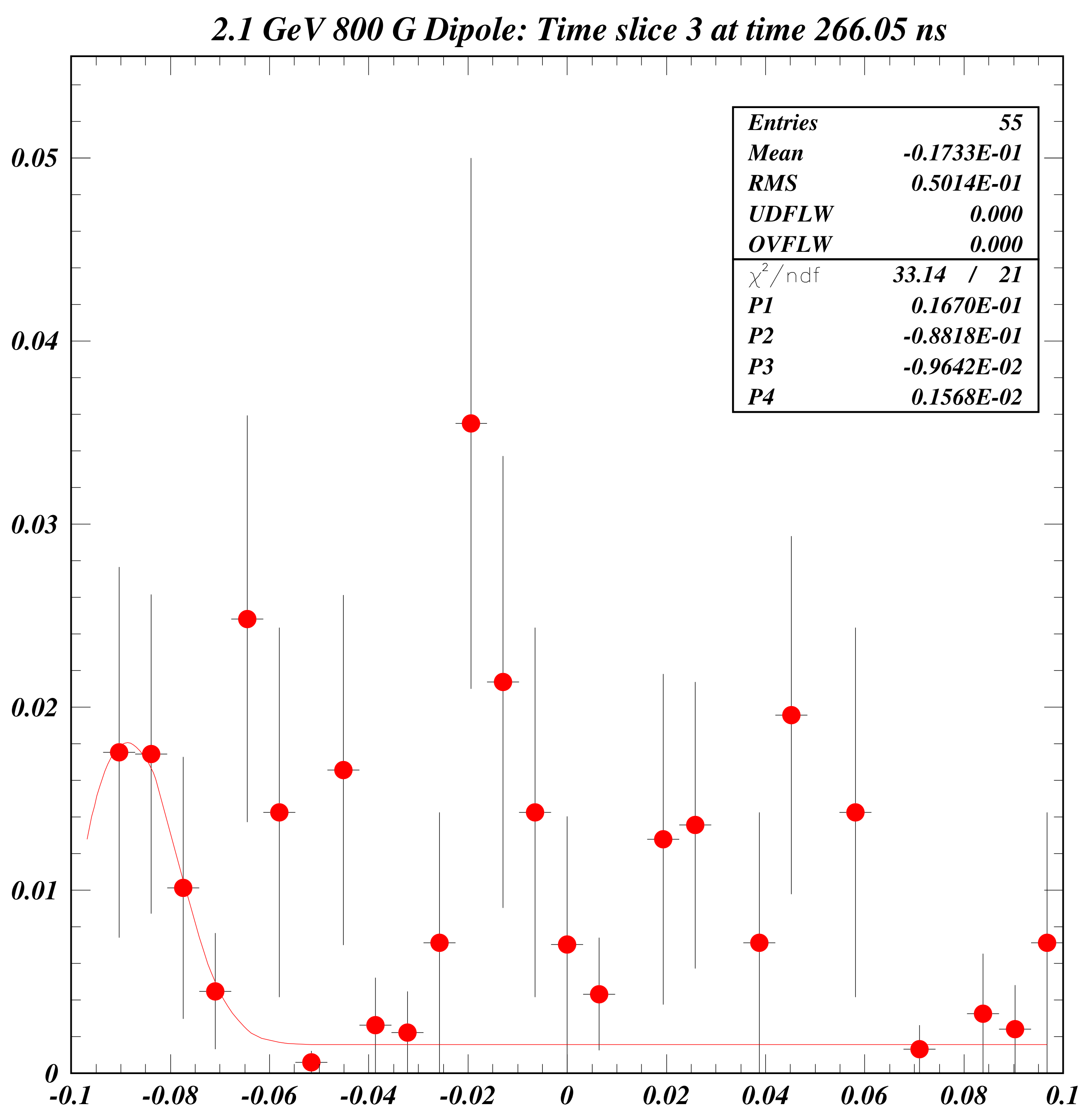

15/09/30 16.21
Snapshot after bunch 20 at time = 266.04 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
No energy cut: 0k macroparticles, 0 10^6 e-

15/09/30 16.21

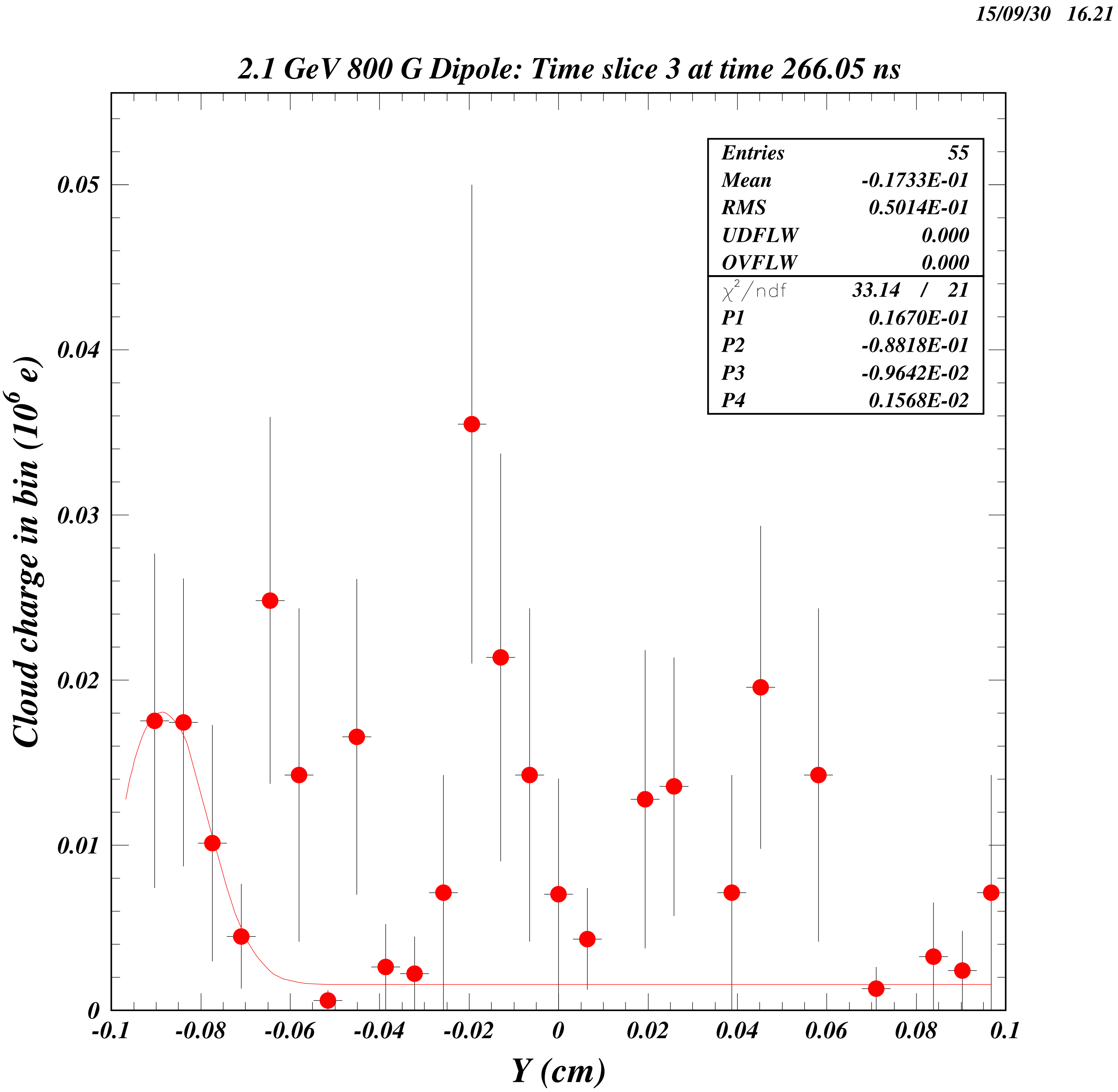

2.1 GeV 800 G Dipole: Time slice 3 at time 266.05 ns
Entries 55
Mean 0.1096E-01
RMS 0.5873E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 30.82 / 25
P1 0.7789E-02
P2 -0.4276E-01
P3 0.1801E-01
P4 0.1841E-02
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 3 at time 266.05 ns
Entries 55
Mean 0.1096E-01
RMS 0.5873E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 30.82 / 25
P1 0.7789E-02
P2 -0.4276E-01
P3 0.1801E-01
P4 0.1841E-02
Cloud charge in bin (10⁶ e)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
X (cm)

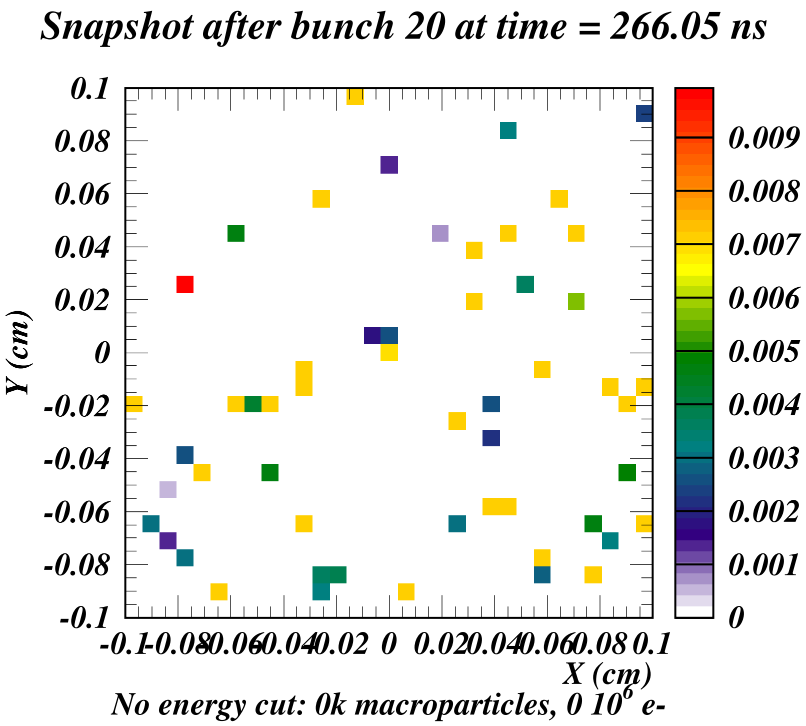
15/09/30 16.21



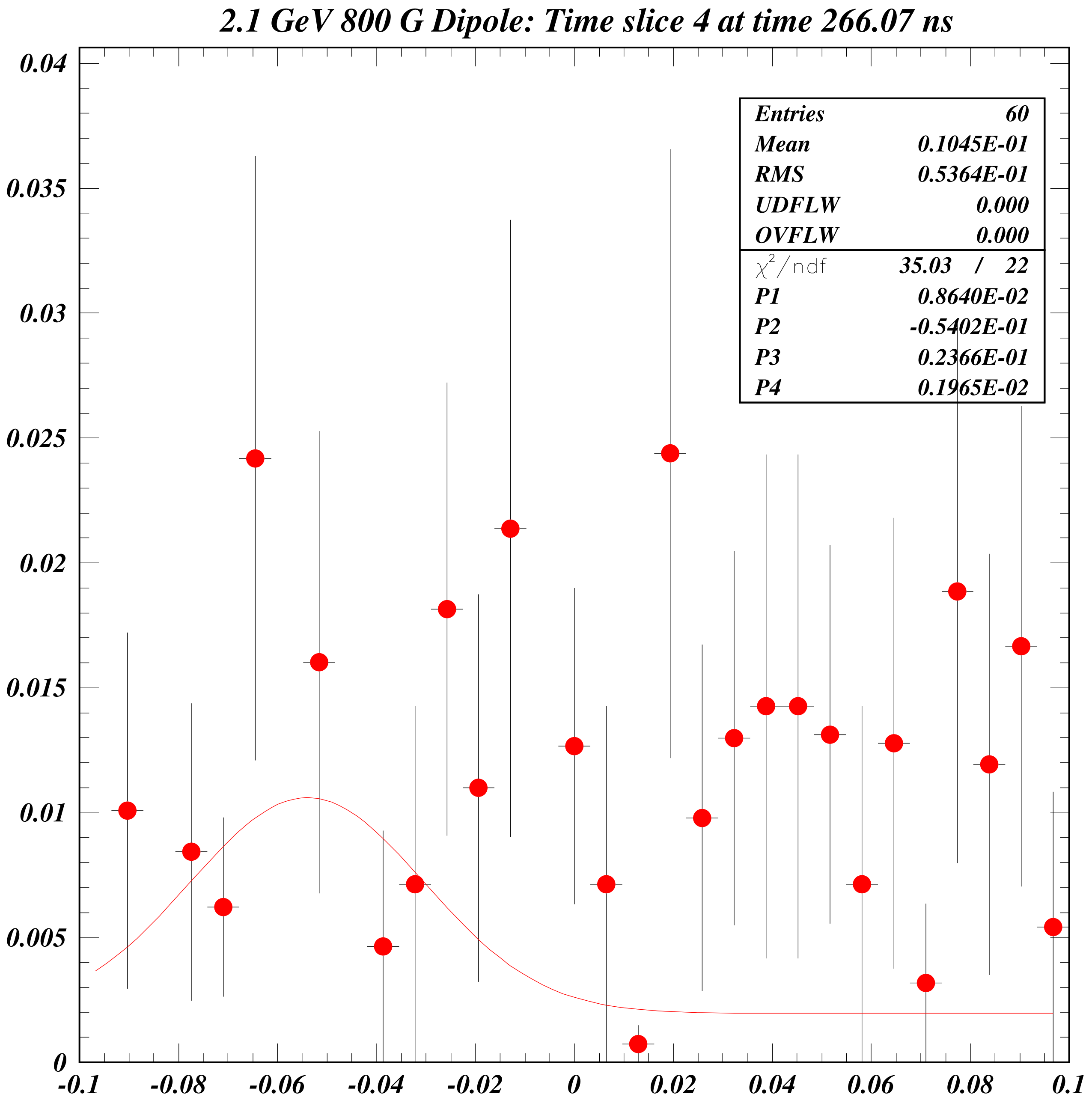
2.1 GeV 800 G Dipole: Time slice 3 at time 266.05 ns
Entries 55
Mean -0.1733E-01
RMS 0.5014E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 33.14 / 21
P1 0.1670E-01
P2 -0.8818E-01
P3 -0.9642E-02
P4 0.1568E-02
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 3 at time 266.05 ns
Entries 55
Mean -0.1733E-01
RMS 0.5014E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 33.14 / 21
P1 0.1670E-01
P2 -0.8818E-01
P3 -0.9642E-02
P4 0.1568E-02
Cloud charge in bin (10⁶ e)
0
0.01
0.02
0.03
0.04
0.05
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
Y (cm)

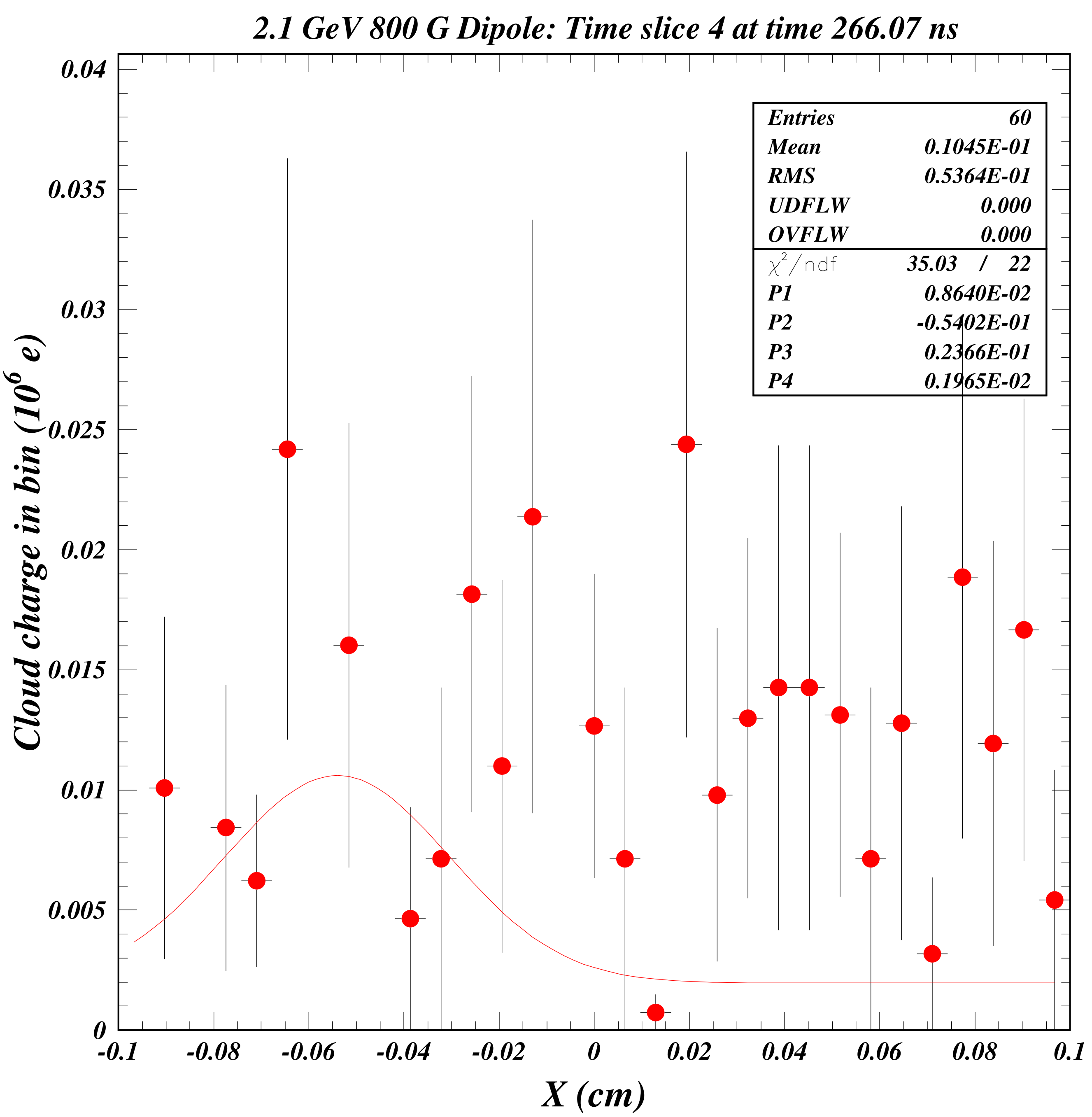
15/09/30 16.21


Snapshot after bunch 20 at time = 266.05 ns
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Y (cm)
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
X (cm)
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
No energy cut: 0k macroparticles, 0 10^6 e-

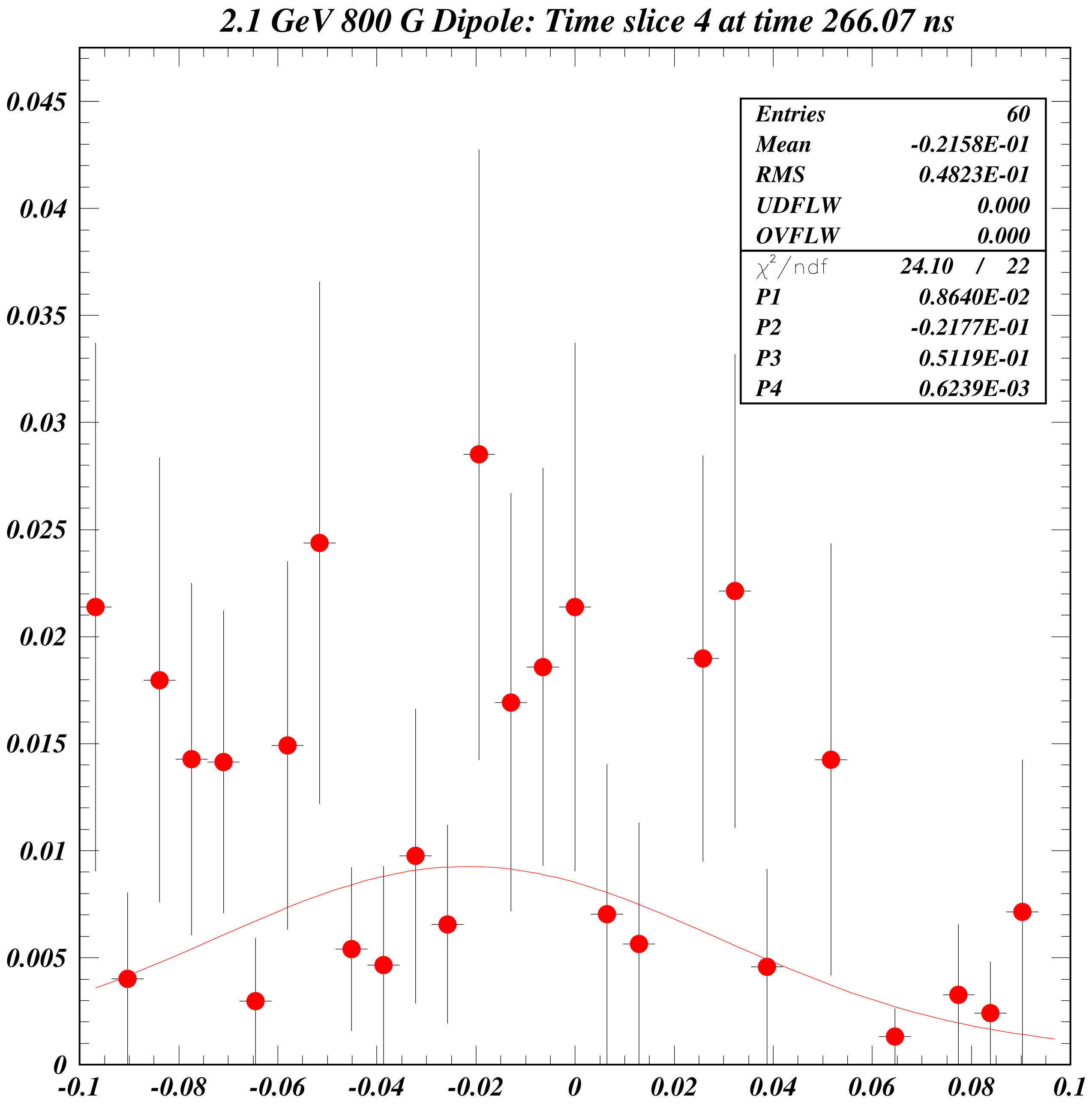
15/09/30 16.21

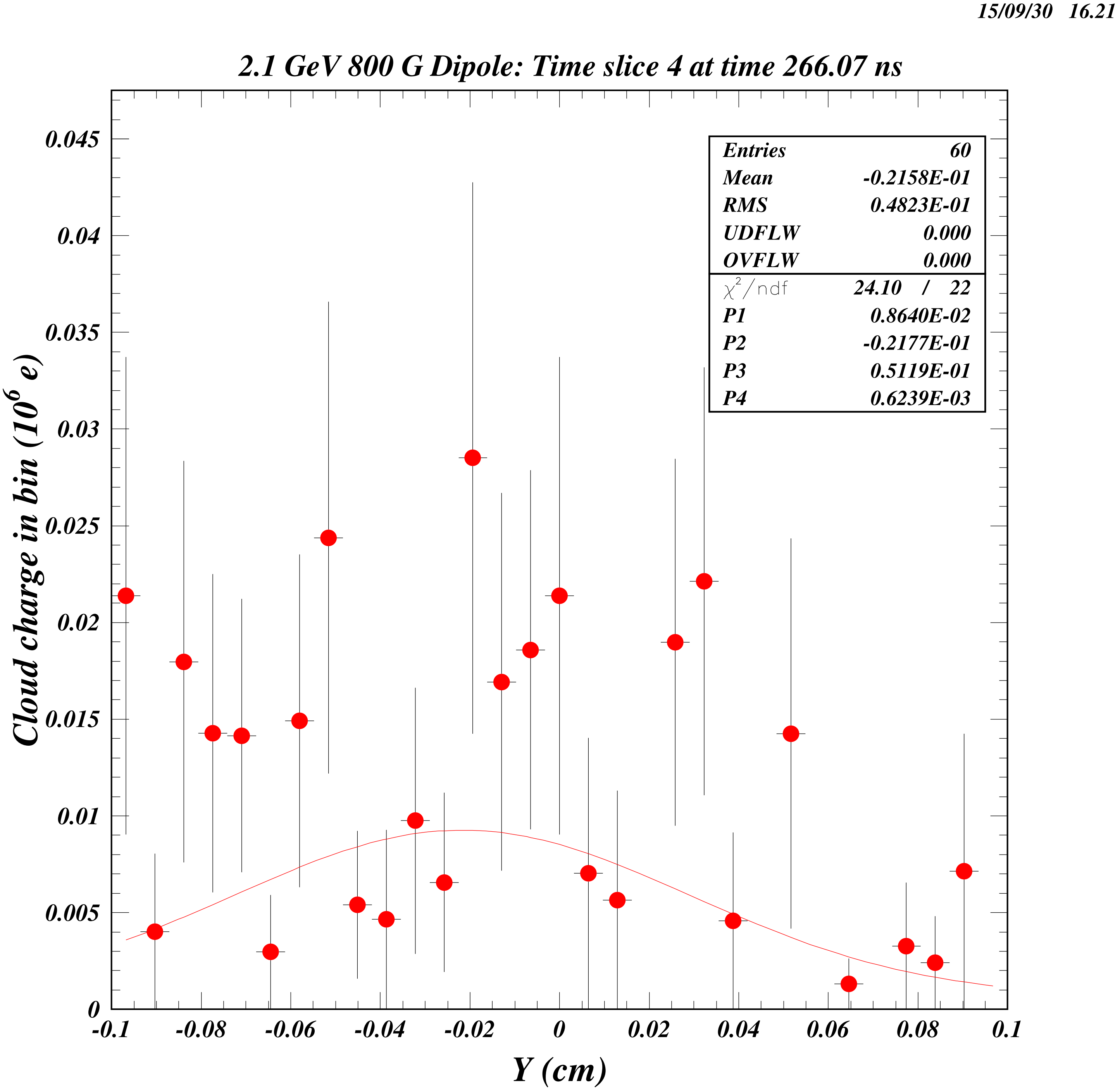


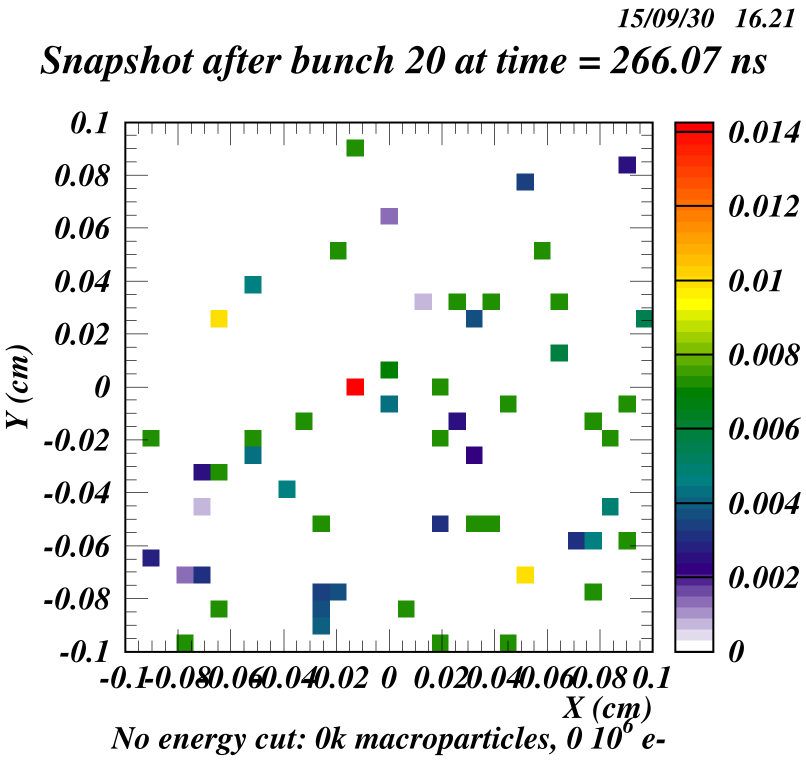
2.1 GeV 800 G Dipole: Time slice 4 at time 266.07 ns
Entries 60
Mean 0.1045E-01
RMS 0.5364E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 35.03 / 22
P1 0.8640E-02
P2 -0.5402E-01
P3 0.2366E-01
P4 0.1965E-02
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


2.1 GeV 800 G Dipole: Time slice 4 at time 266.07 ns
Entries 60
Mean 0.1045E-01
RMS 0.5364E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 35.03 / 22
P1 0.8640E-02
P2 -0.5402E-01
P3 0.2366E-01
P4 0.1965E-02
Cloud charge in bin (10⁶ e)
X (cm)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

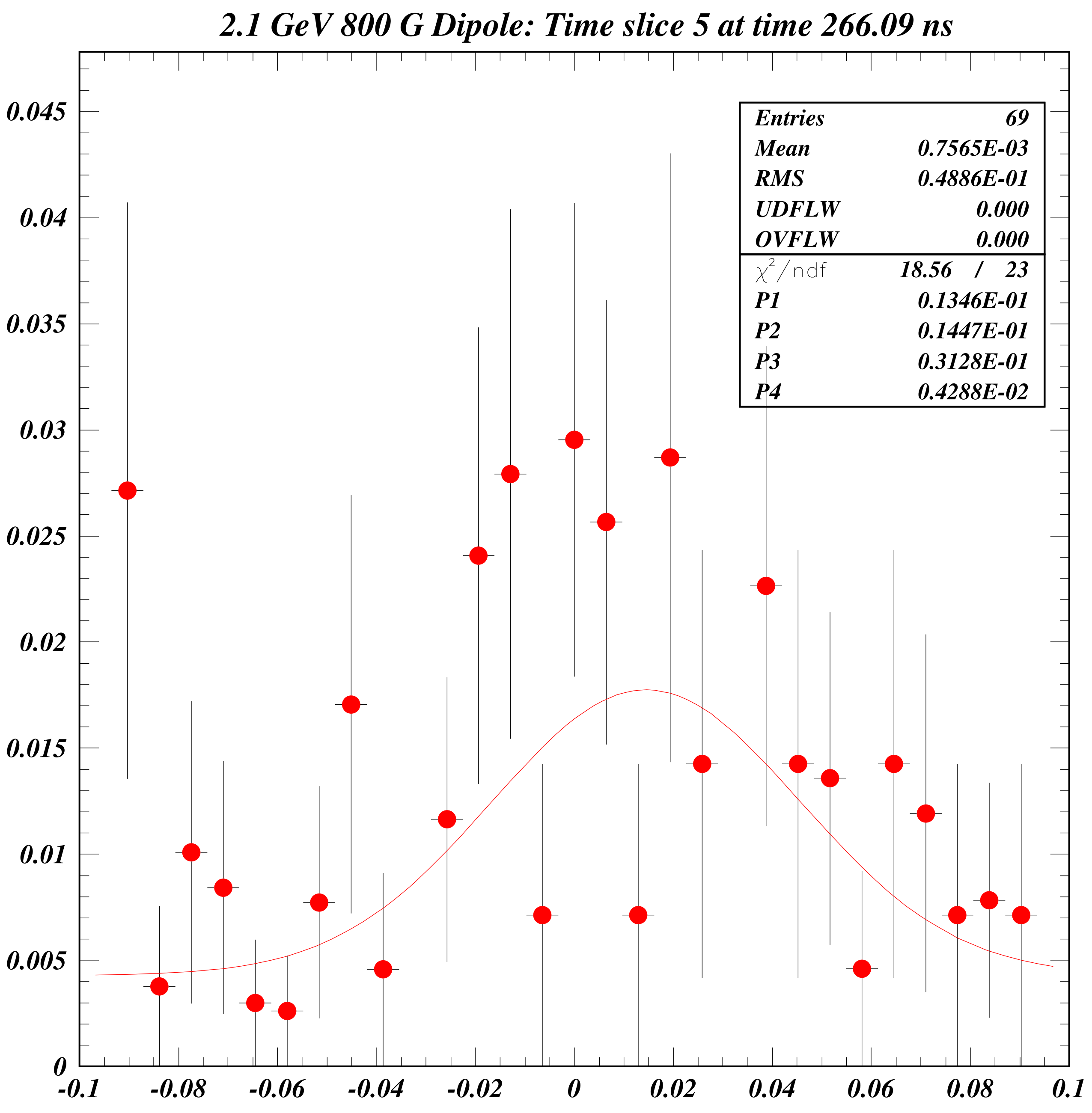
15/09/30 16.21

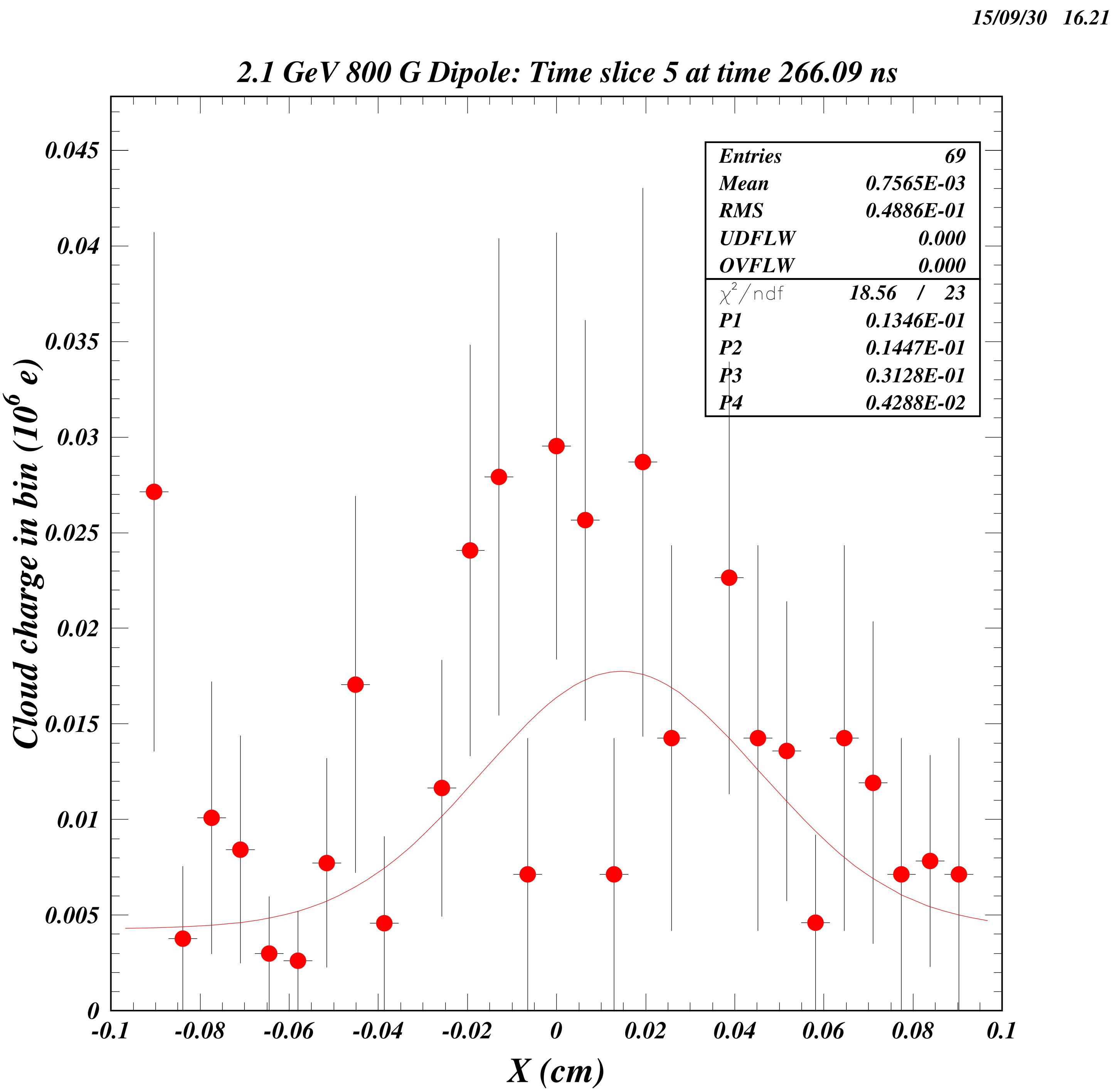

2.1 GeV 800 G Dipole: Time slice 4 at time 266.07 ns
Entries 60
Mean -0.2158E-01
RMS 0.4823E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 24.10 / 22
P1 0.8640E-02
P2 -0.2177E-01
P3 0.5119E-01
P4 0.6239E-03
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 4 at time 266.07 ns
Entries 60
Mean -0.2158E-01
RMS 0.4823E-01
UDFLW 0.000
OVFLW 0.000
χ^2/ndf 24.10 / 22
P1 0.8640E-02
P2 -0.2177E-01
P3 0.5119E-01
P4 0.6239E-03
Cloud charge in bin (10^6 e)
Y (cm)


15/09/30 16.21
Snapshot after bunch 20 at time = 266.07 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.014
0.012
0.01
0.008
0.006
0.004
0.002
No energy cut: 0k macroparticles, 0 10^6 e-

15/09/30 16.21

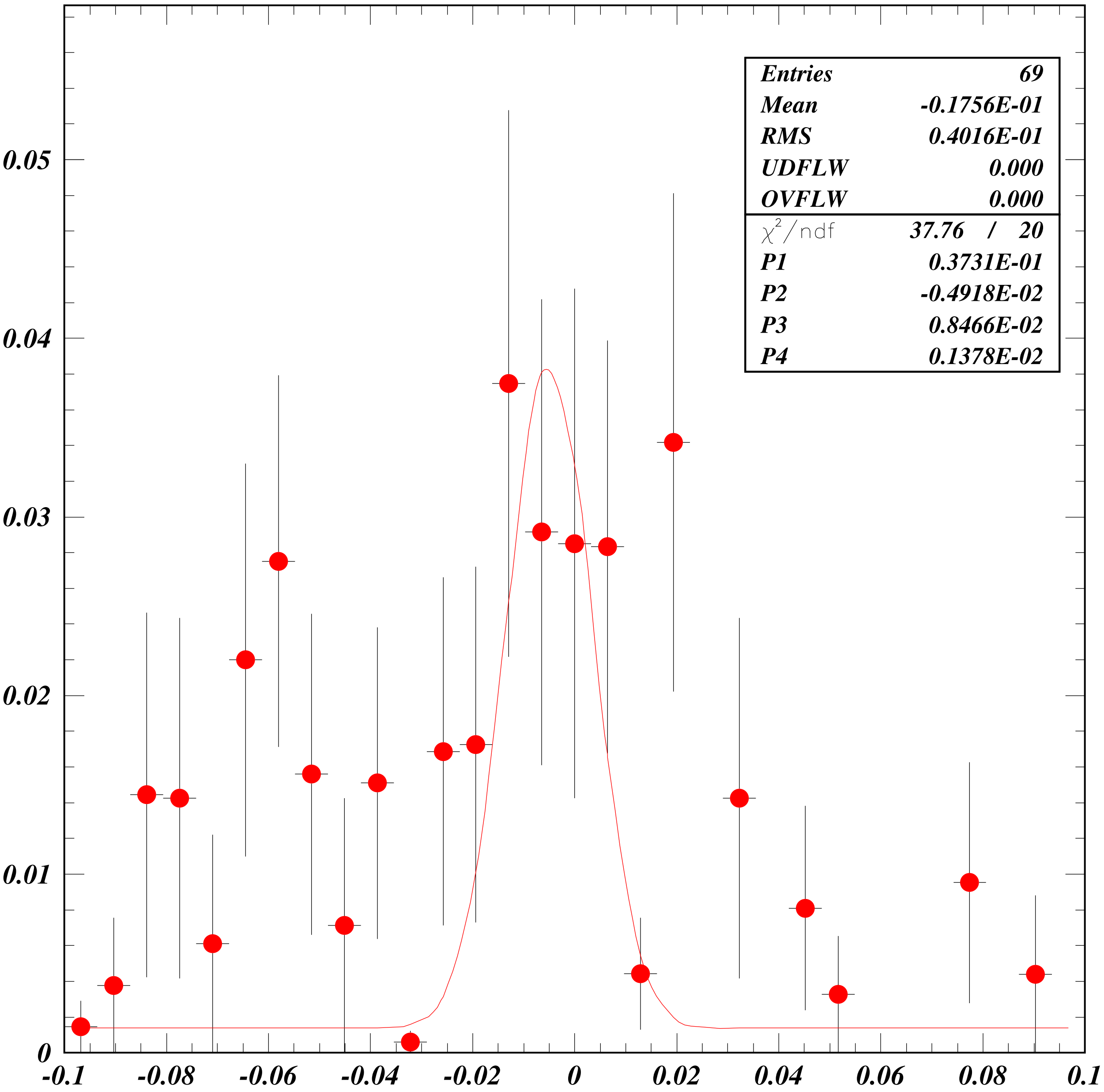

2.1 GeV 800 G Dipole: Time slice 5 at time 266.09 ns
Entries 69
Mean 0.7565E-03
RMS 0.4886E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 18.56 / 23
P1 0.1346E-01
P2 0.1447E-01
P3 0.3128E-01
P4 0.4288E-02
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
-0.1 -0.08 -0.06 -0.04 -0.02 0 0.02 0.04 0.06 0.08 0.1

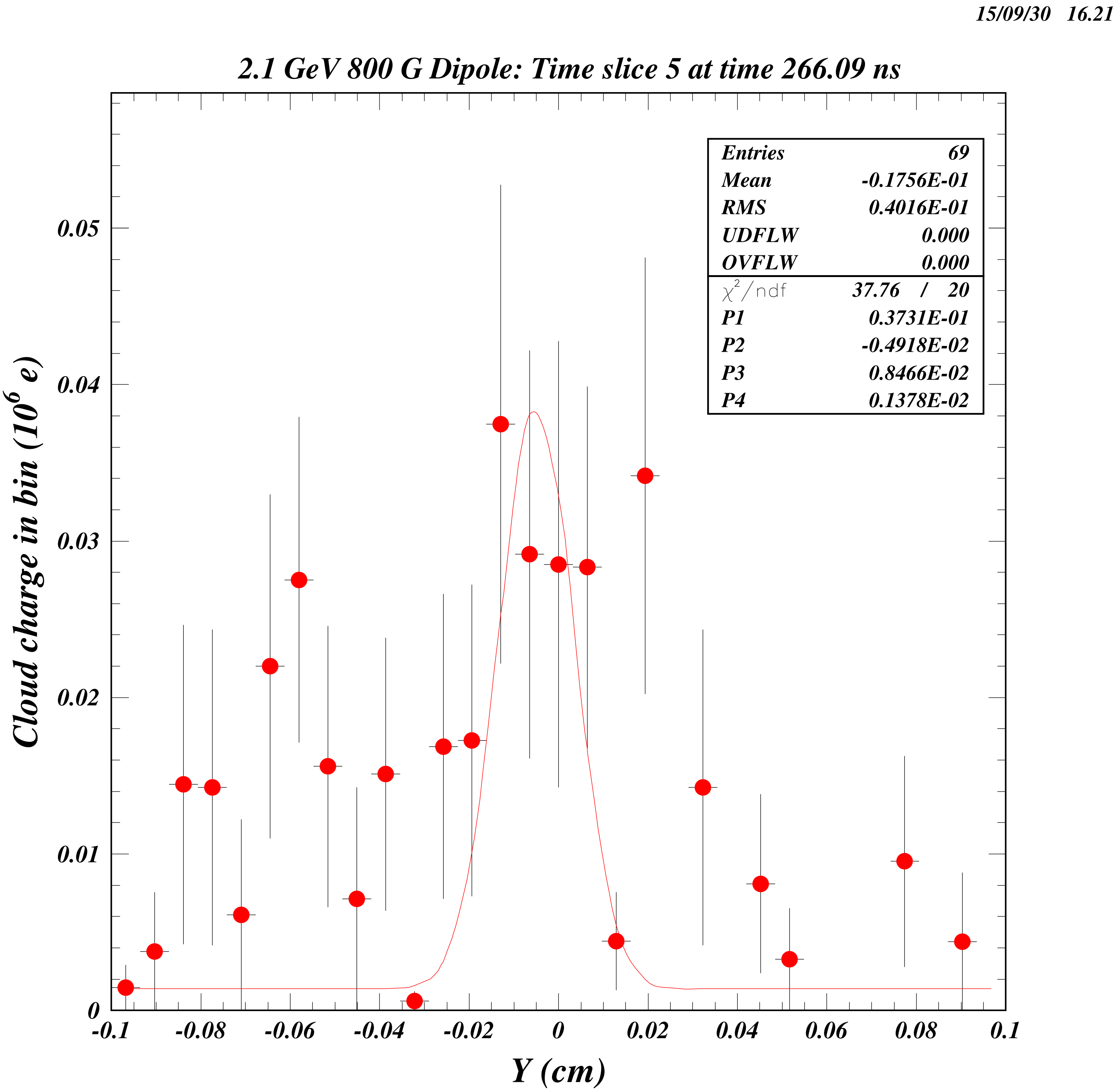


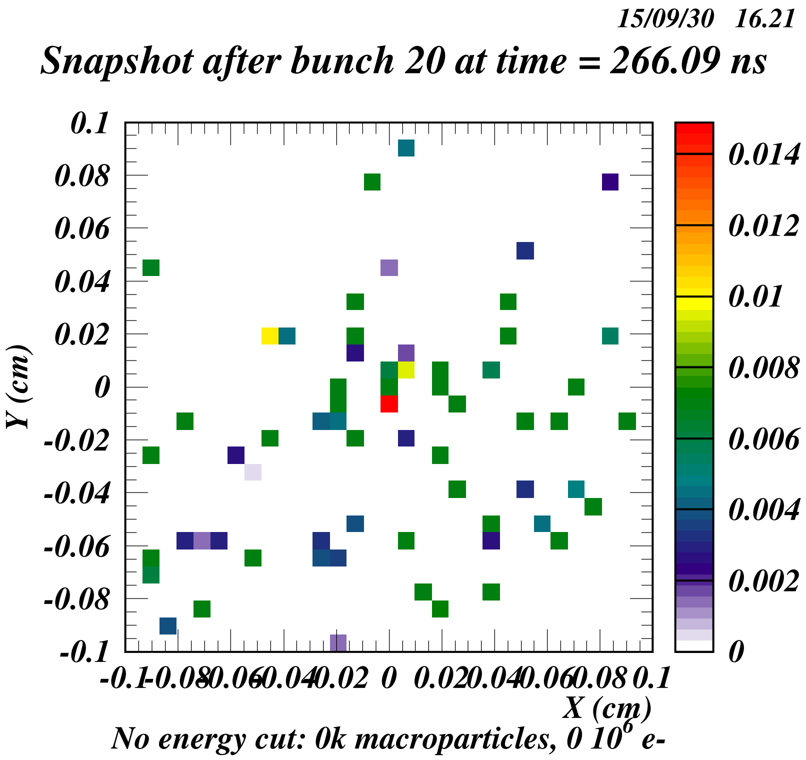
15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 5 at time 266.09 ns
Entries 69
Mean 0.7565E-03
RMS 0.4886E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 18.56 / 23
P1 0.1346E-01
P2 0.1447E-01
P3 0.3128E-01
P4 0.4288E-02
Cloud charge in bin (10⁶ e)
X (cm)

15/09/30 16.21

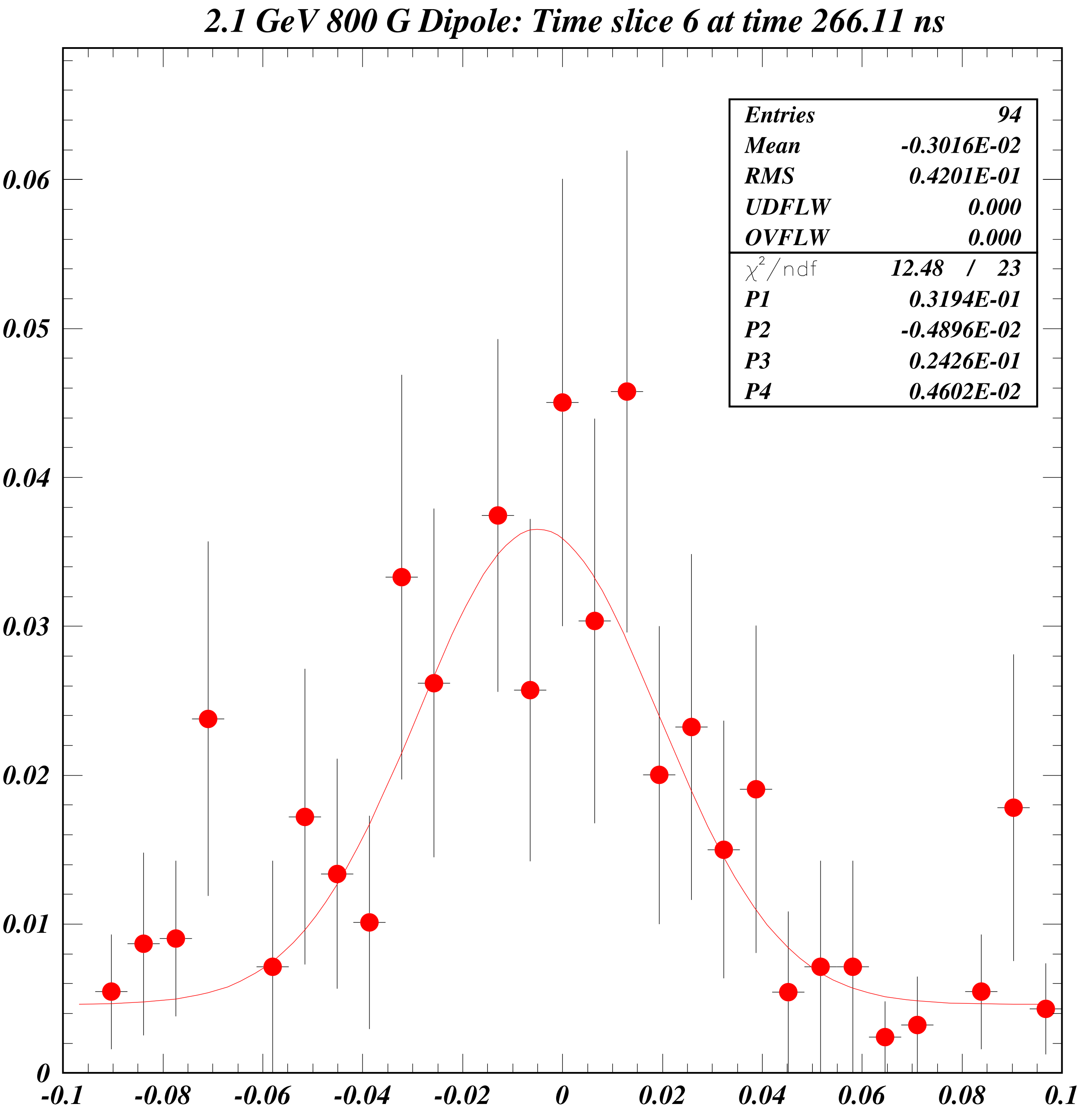
2.1 GeV 800 G Dipole: Time slice 5 at time 266.09 ns

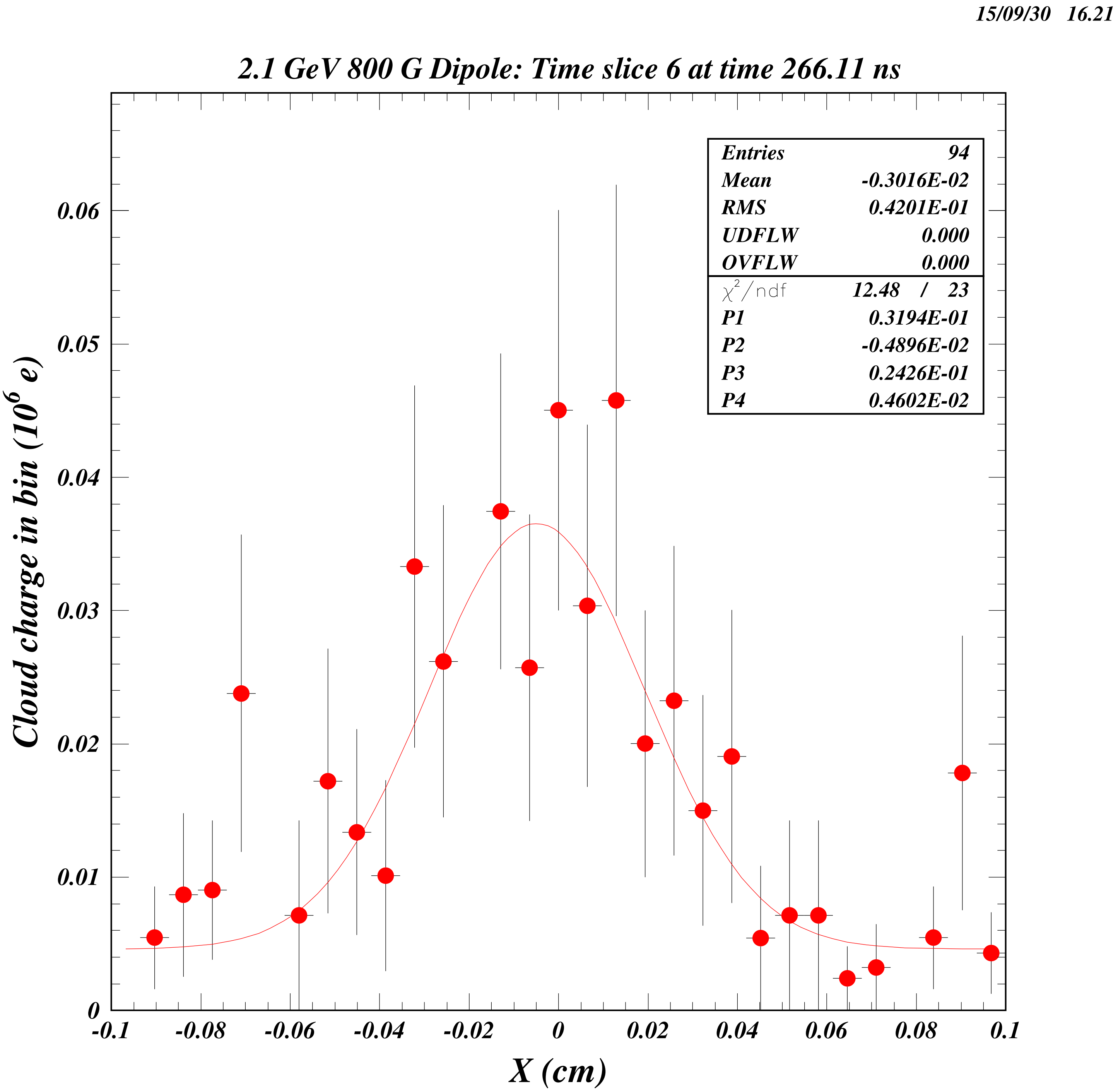


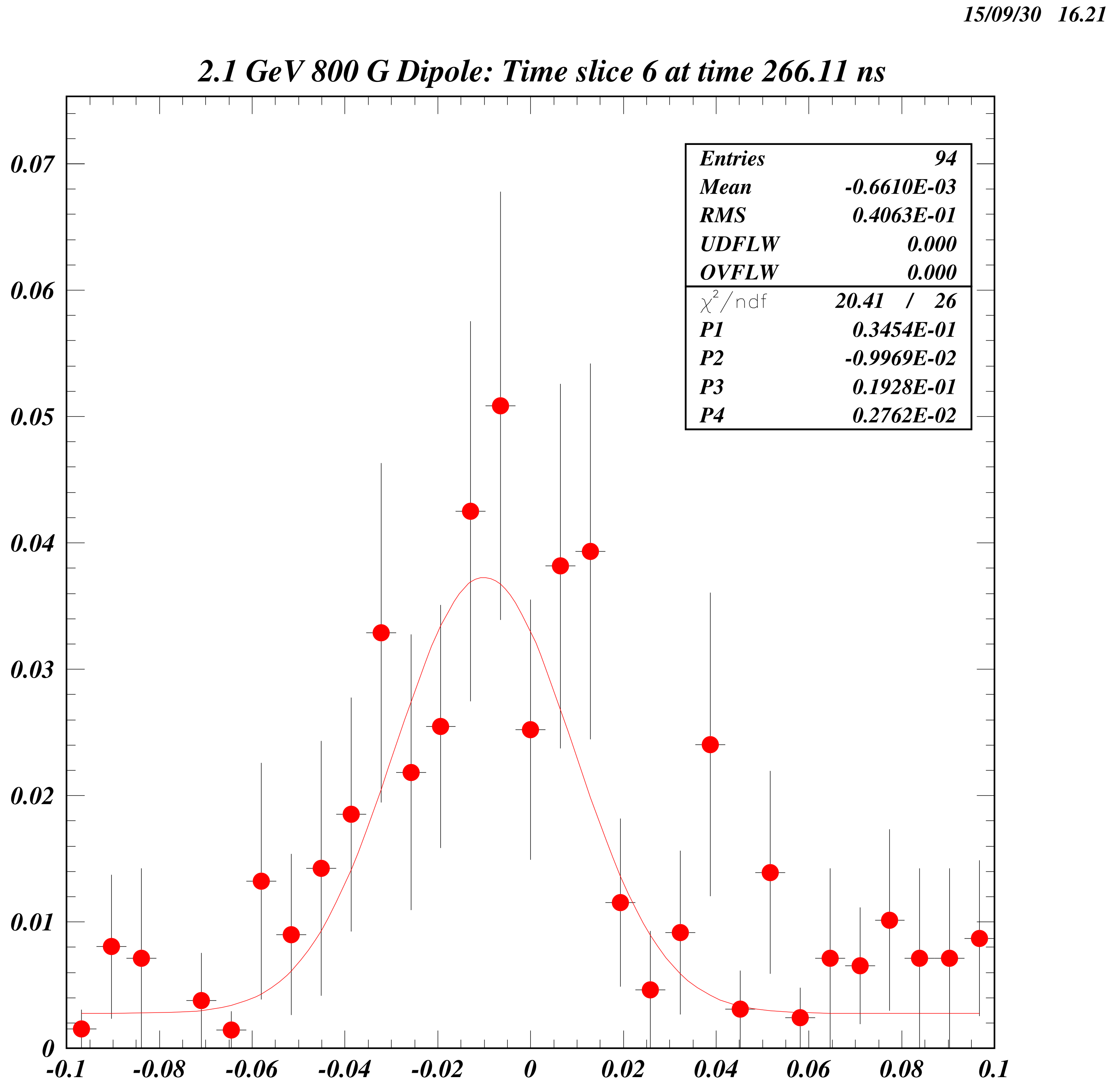

15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 5 at time 266.09 ns
Entries 69
Mean -0.1756E-01
RMS 0.4016E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 37.76 / 20
P1 0.3731E-01
P2 -0.4918E-02
P3 0.8466E-02
P4 0.1378E-02
Cloud charge in bin (10⁶ e)
Y (cm)
0
0.01
0.02
0.03
0.04
0.05
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
Snapshot after bunch 20 at time = 266.09 ns
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Y (cm)
-0.1 -0.08 -0.06 -0.04 -0.02 0 0.02 0.04 0.06 0.08 0.1
X (cm)
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
No energy cut: 0k macroparticles, 0 10^6 e-

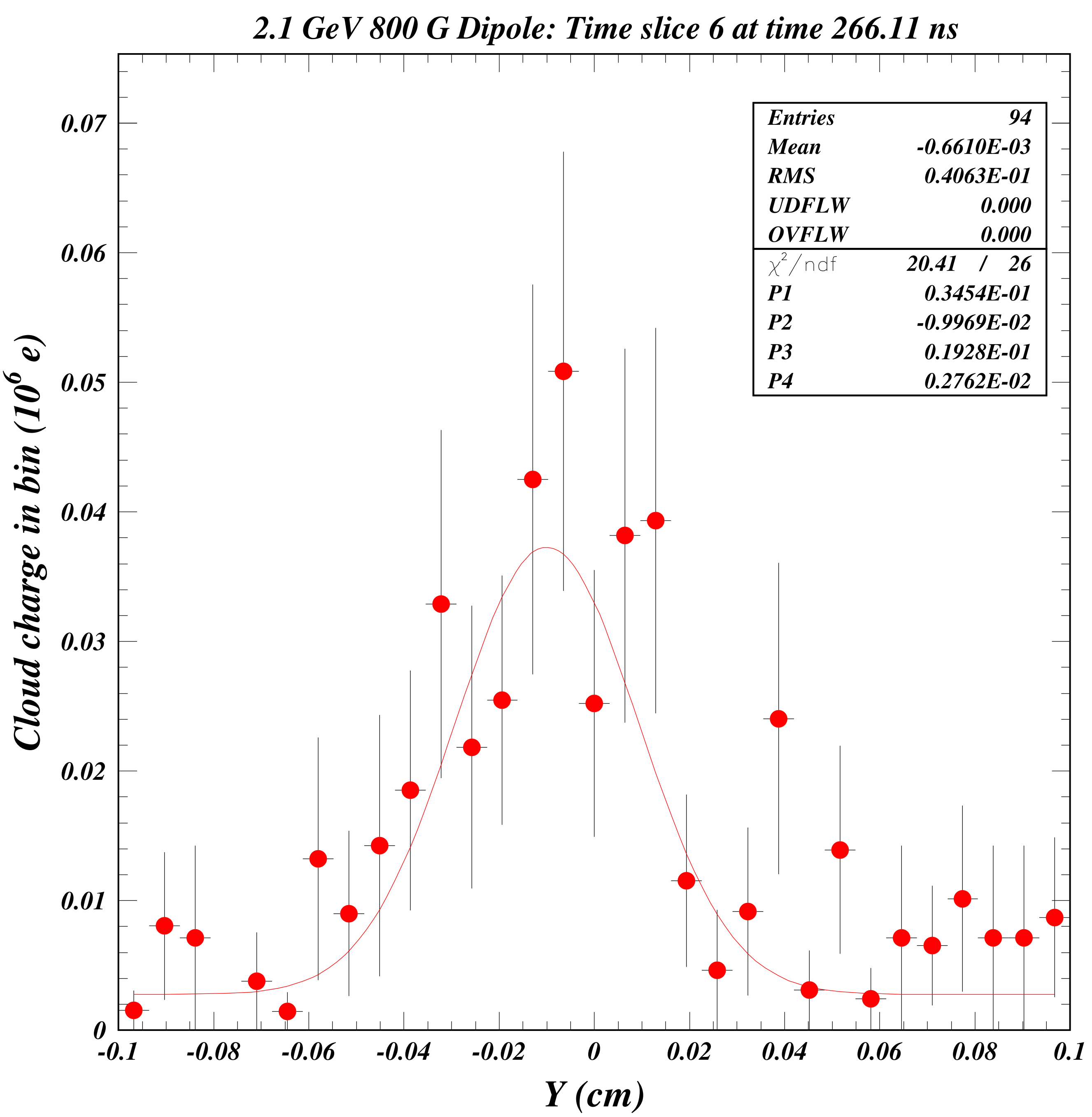
15/09/30 16.21


2.1 GeV 800 G Dipole: Time slice 6 at time 266.11 ns
Entries 94
Mean -0.3016E-02
RMS 0.4201E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 12.48 / 23
P1 0.3194E-01
P2 -0.4896E-02
P3 0.2426E-01
P4 0.4602E-02
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

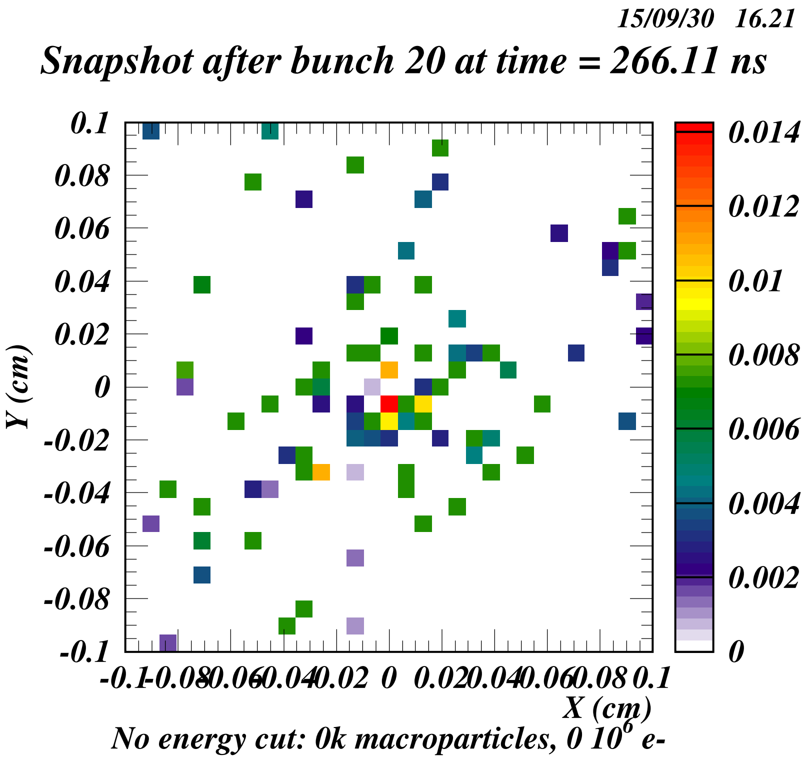

15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 6 at time 266.11 ns
Entries 94
Mean -0.3016E-02
RMS 0.4201E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 12.48 / 23
P1 0.3194E-01
P2 -0.4896E-02
P3 0.2426E-01
P4 0.4602E-02
Cloud charge in bin (10⁶ e)
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
X (cm)


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 6 at time 266.11 ns
Entries 94
Mean -0.6610E-03
RMS 0.4063E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 20.41 / 26
P1 0.3454E-01
P2 -0.9969E-02
P3 0.1928E-01
P4 0.2762E-02
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

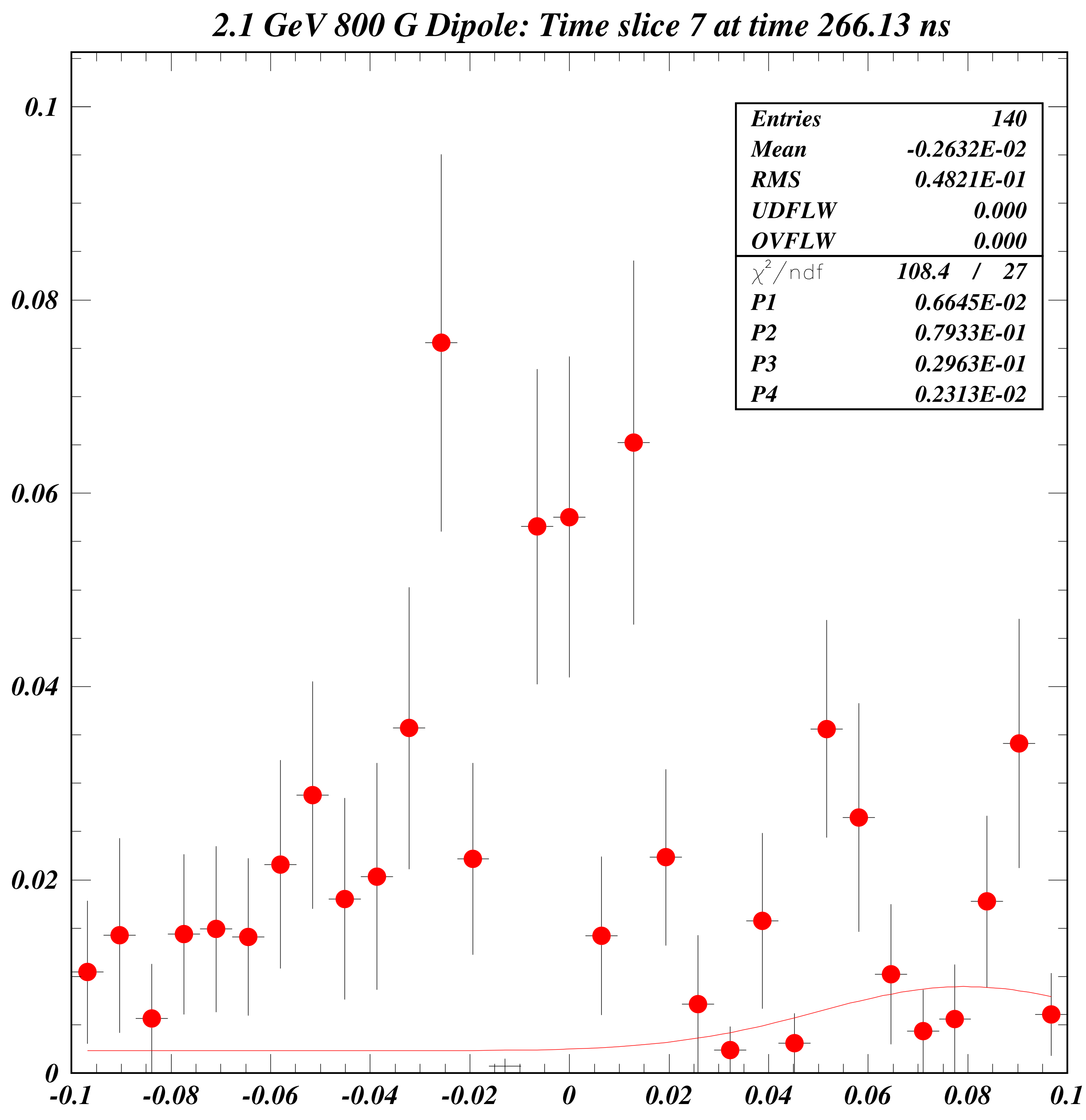
15/09/30 16.21

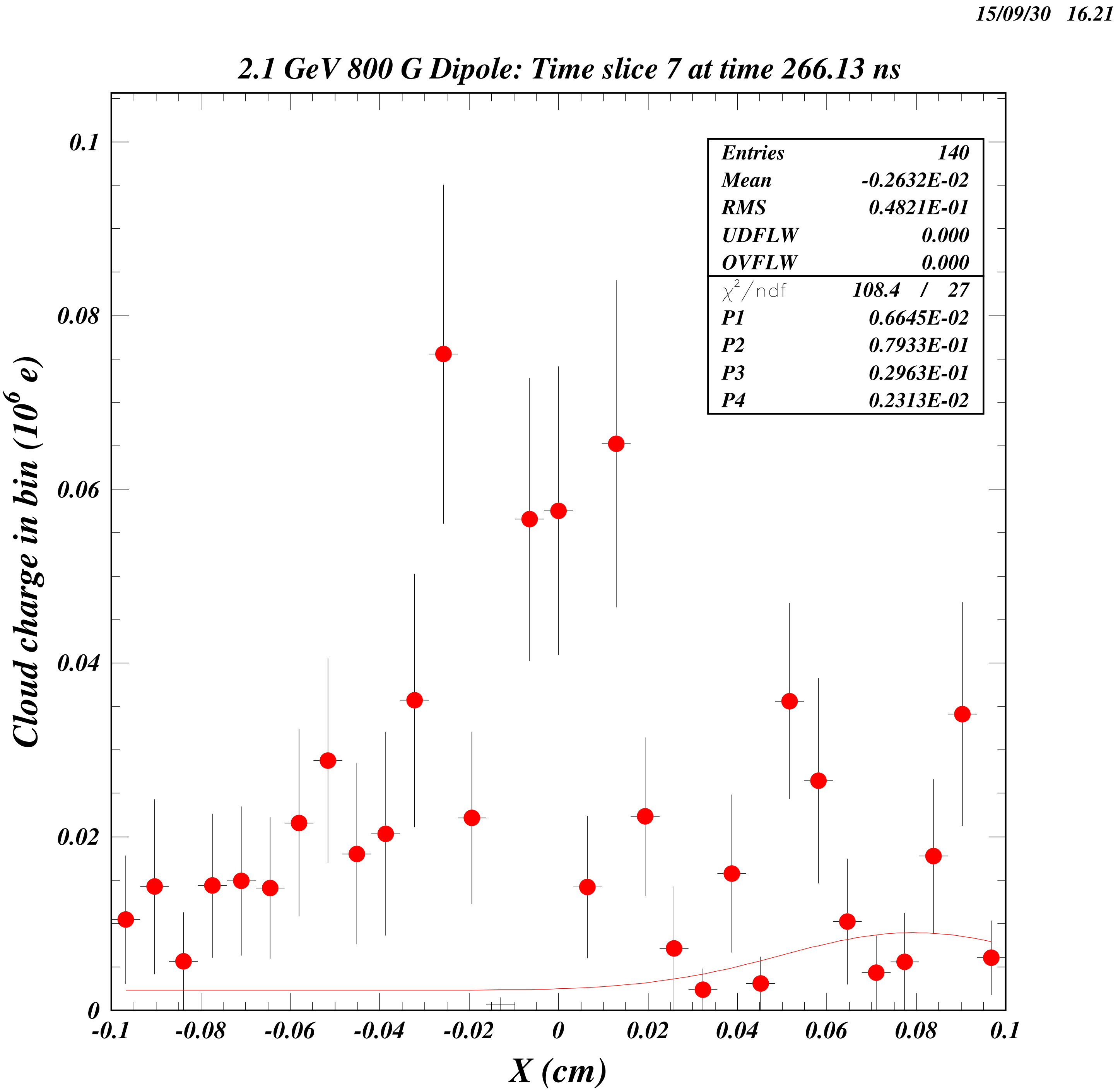


2.1 GeV 800 G Dipole: Time slice 6 at time 266.11 ns
Entries 94
Mean -0.6610E-03
RMS 0.4063E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 20.41 / 26
P1 0.3454E-01
P2 -0.9969E-02
P3 0.1928E-01
P4 0.2762E-02
Cloud charge in bin (10⁶ e)
Y (cm)
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
Snapshot after bunch 20 at time = 266.11 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.014
0.012
0.01
0.008
0.006
0.004
0.002
No energy cut: 0k macroparticles, 0 10^6 e-

15/09/30 16.21


2.1 GeV 800 G Dipole: Time slice 7 at time 266.13 ns
Entries 140
Mean -0.2632E-02
RMS 0.4821E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 108.4 / 27
P1 0.6645E-02
P2 0.7933E-01
P3 0.2963E-01
P4 0.2313E-02
0.1
0.08
0.06
0.04
0.02
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 7 at time 266.13 ns
Entries 140
Mean -0.2632E-02
RMS 0.4821E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 108.4 / 27
P1 0.6645E-02
P2 0.7933E-01
P3 0.2963E-01
P4 0.2313E-02
Cloud charge in bin (10⁶ e)
X (cm)
0
0.02
0.04
0.06
0.08
0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

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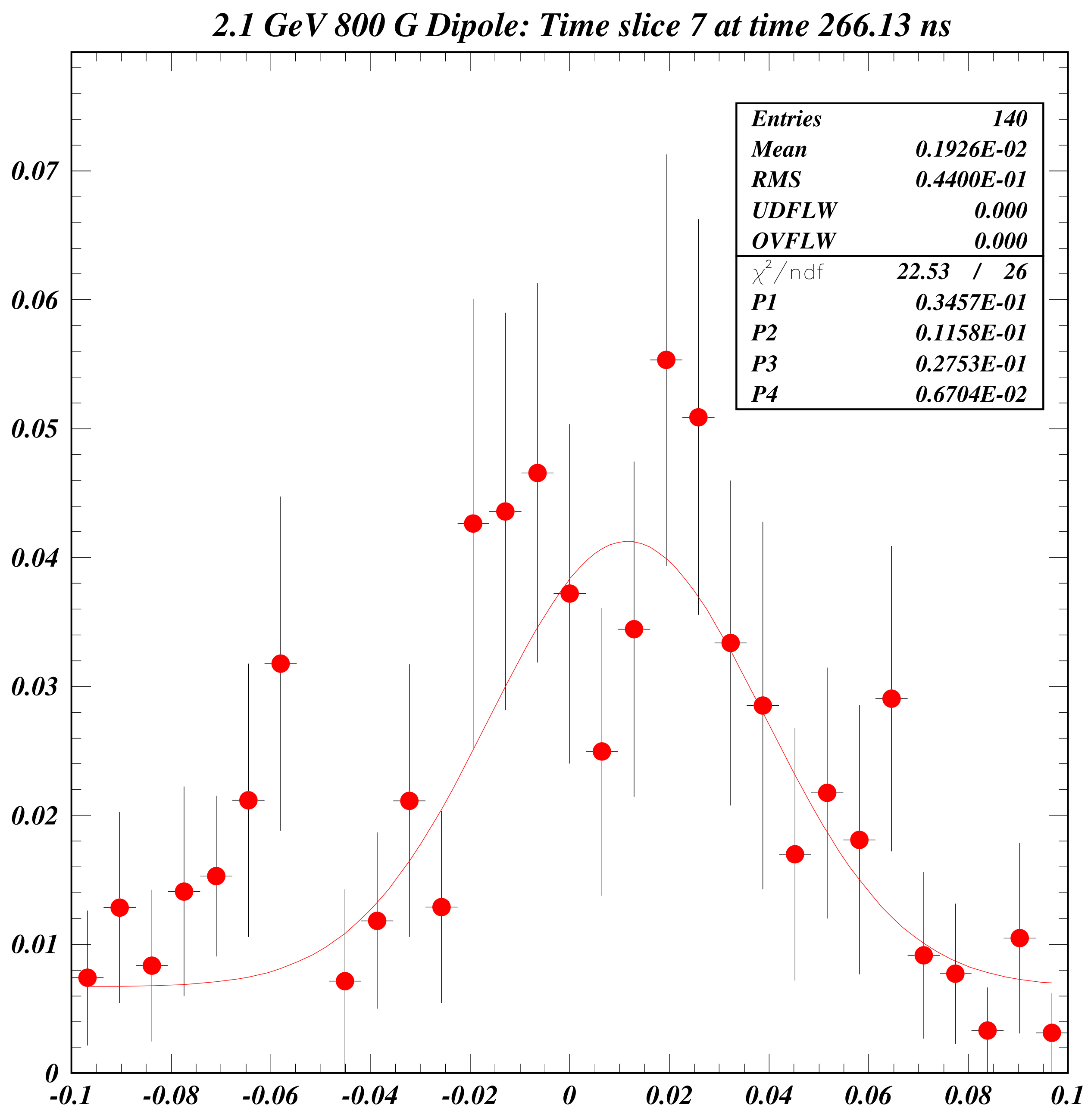
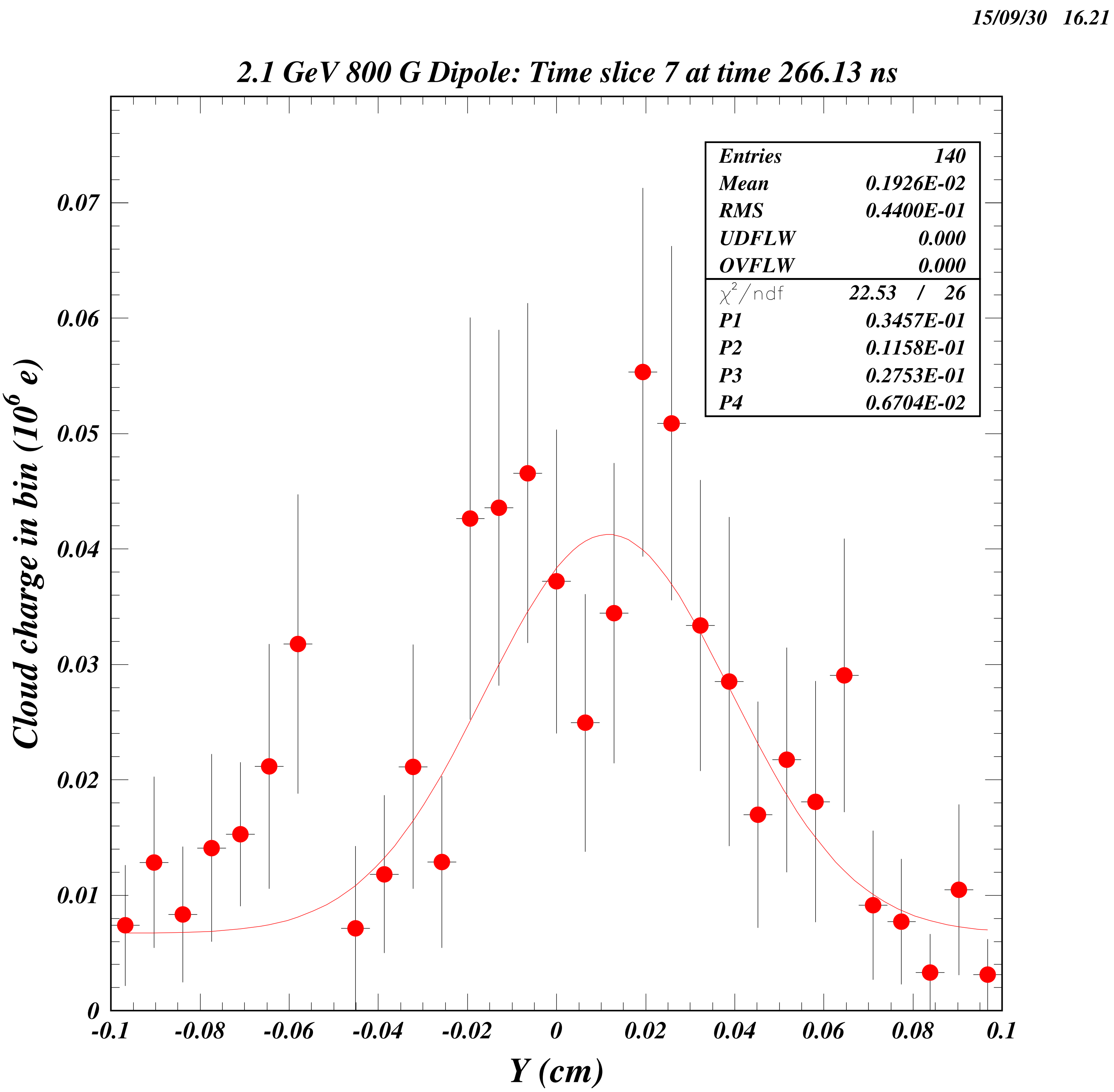
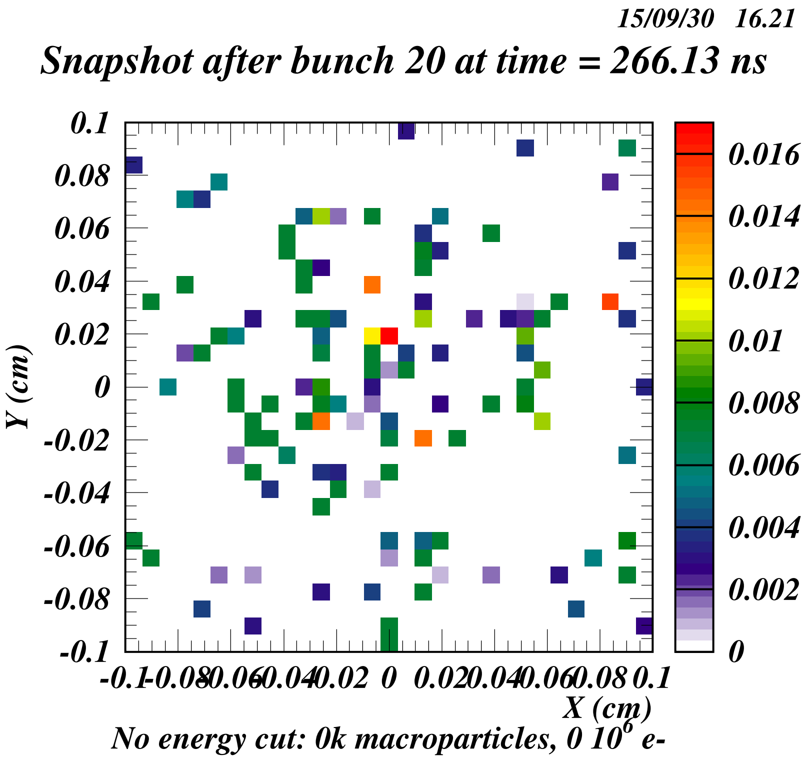
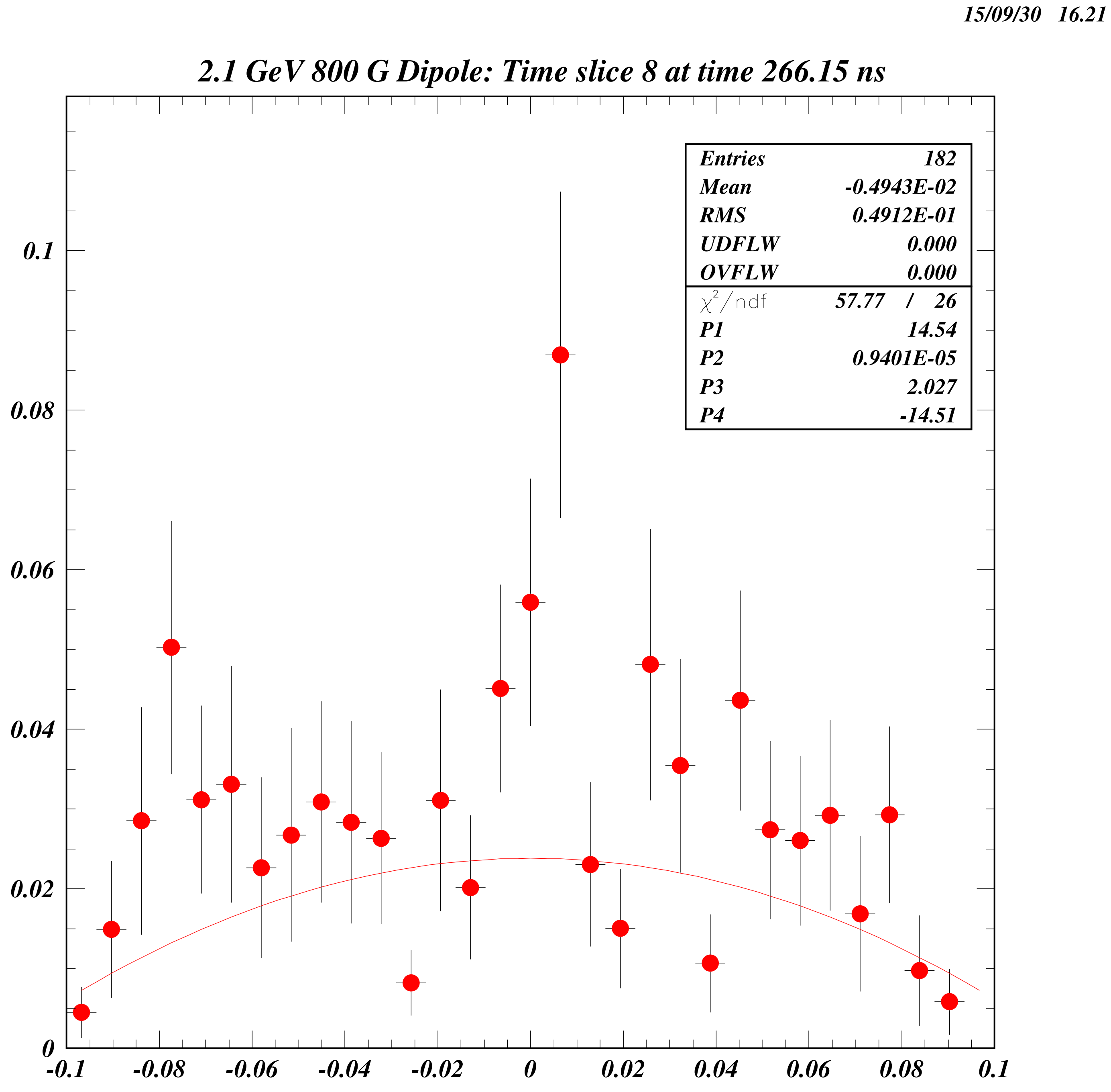


2.1 GeV 800 G Dipole: Time slice 7 at time 266.13 ns
Entries 140
Mean 0.1926E-02
RMS 0.4400E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 22.53 / 26
P1 0.3457E-01
P2 0.1158E-01
P3 0.2753E-01
P4 0.6704E-02
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

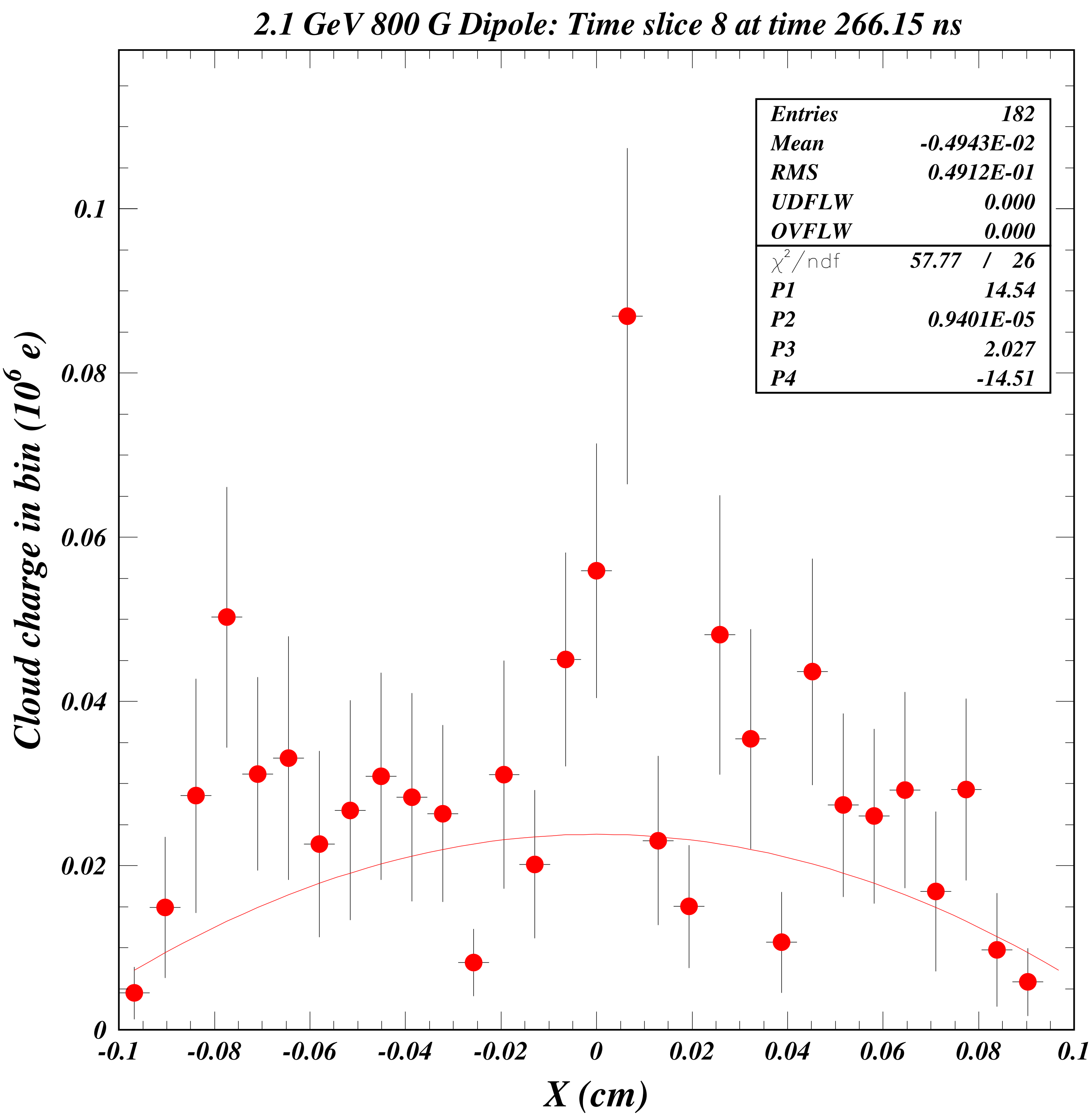

15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 7 at time 266.13 ns
Entries 140
Mean 0.1926E-02
RMS 0.4400E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 22.53 / 26
P1 0.3457E-01
P2 0.1158E-01
P3 0.2753E-01
P4 0.6704E-02
Cloud charge in bin (10⁶ e)
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1
Y (cm)

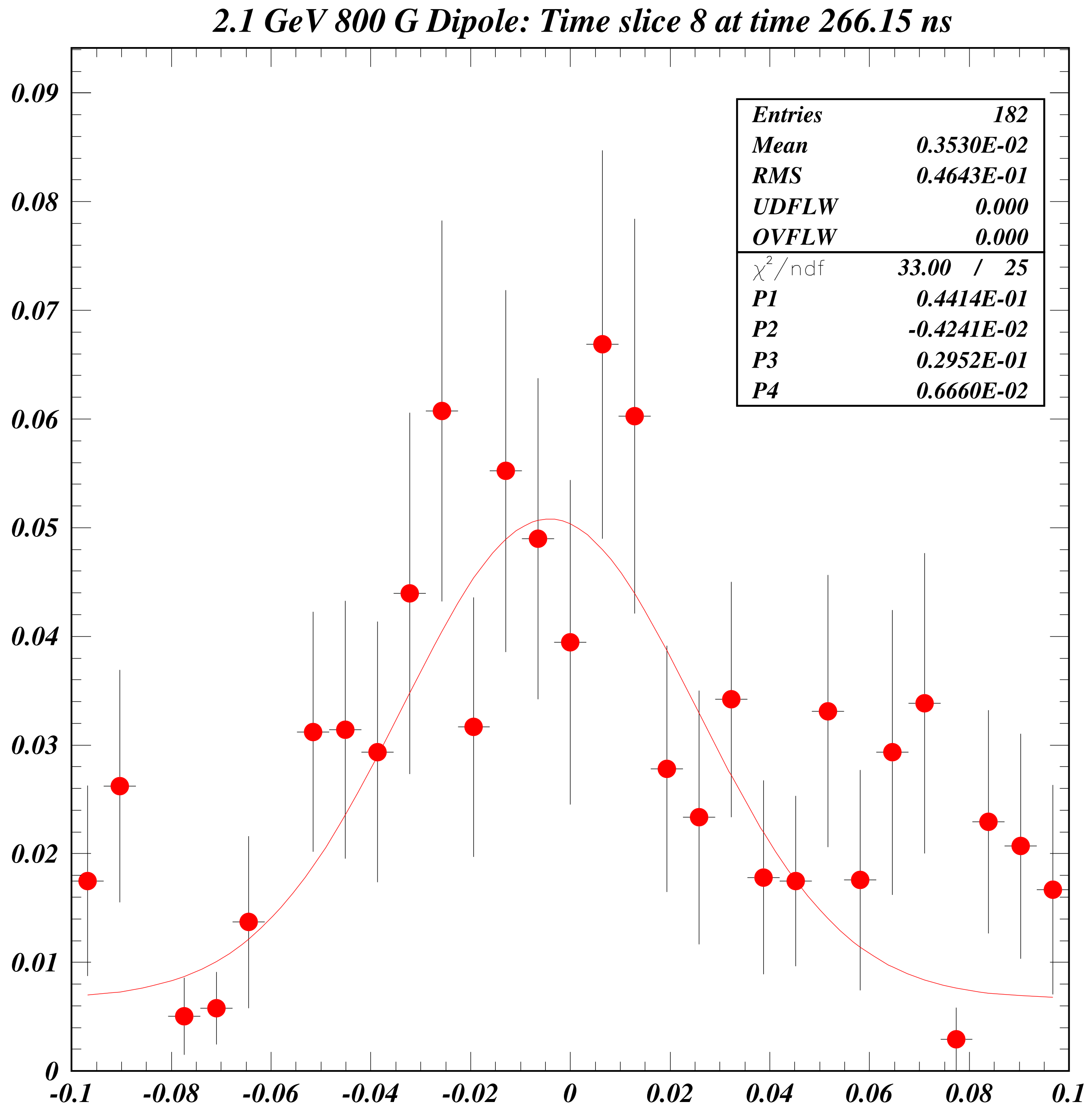

15/09/30 16.21
Snapshot after bunch 20 at time = 266.13 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
No energy cut: 0k macroparticles, 0 10^6 e-



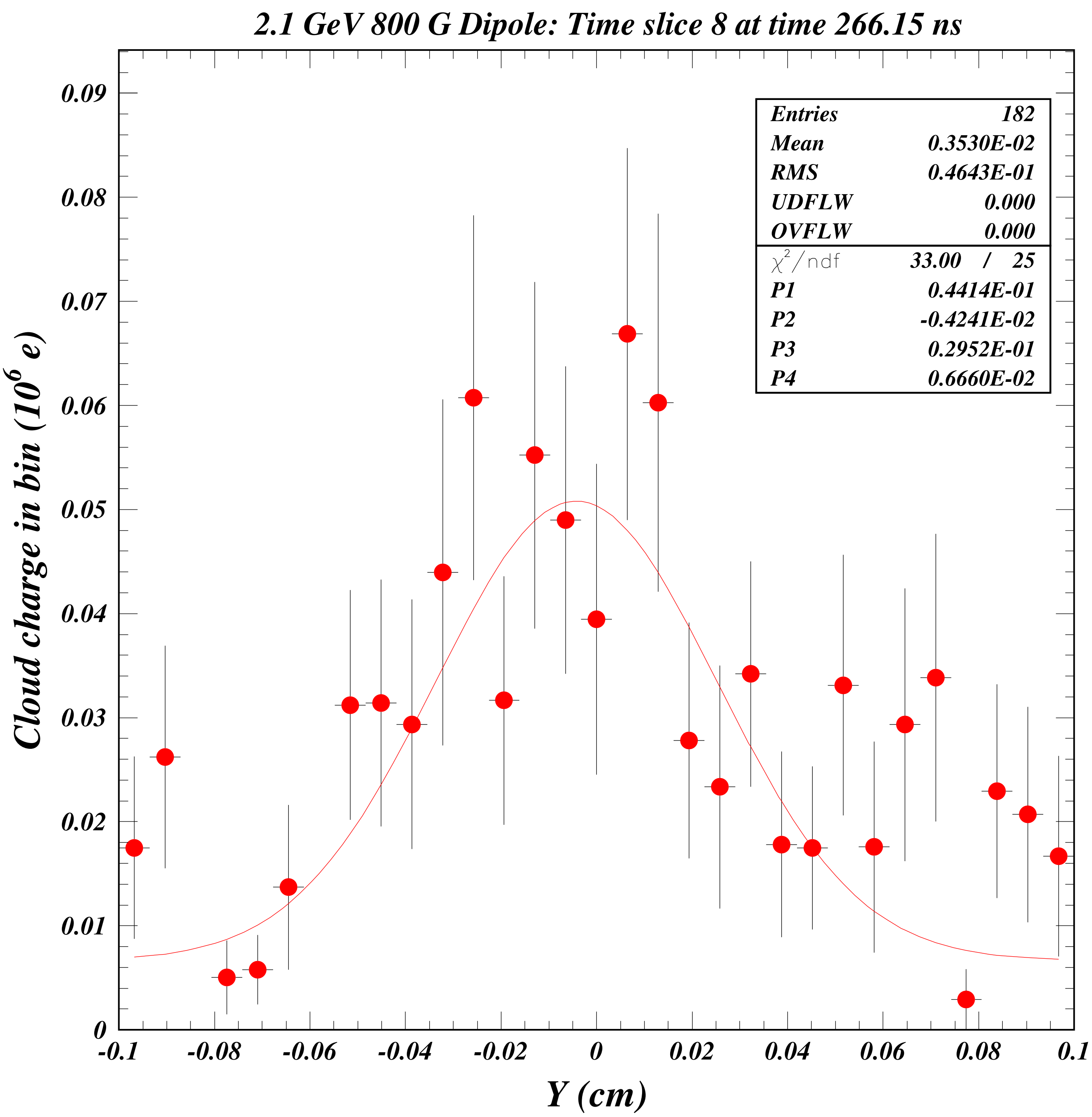
15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 8 at time 266.15 ns
Entries 182
Mean -0.4943E-02
RMS 0.4912E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 57.77 / 26
P1 14.54
P2 0.9401E-05
P3 2.027
P4 -14.51
0.1
0.08
0.06
0.04
0.02
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

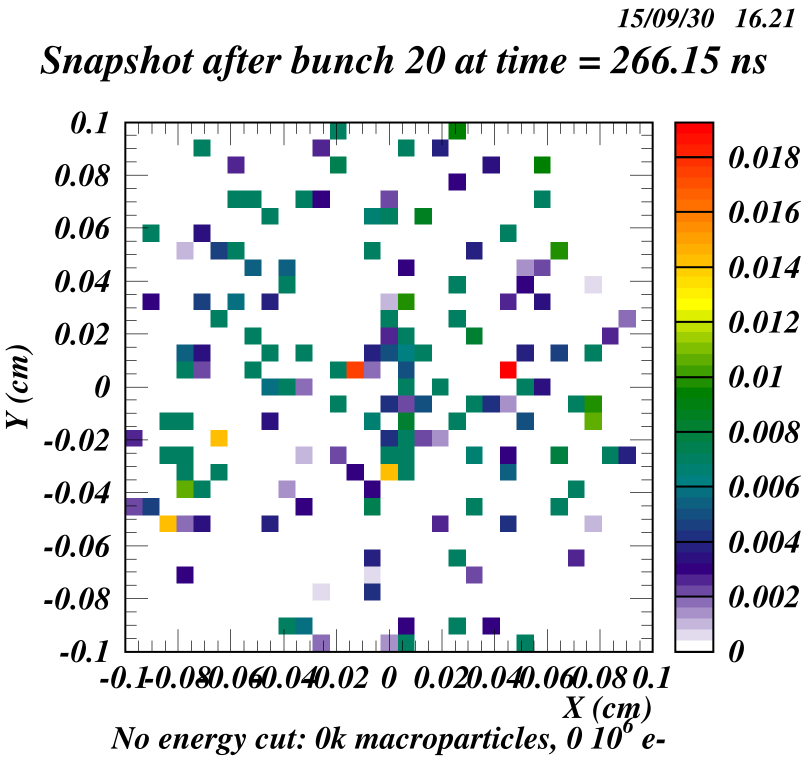
15/09/30 16.21


2.1 GeV 800 G Dipole: Time slice 8 at time 266.15 ns
Entries 182
Mean -0.4943E-02
RMS 0.4912E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 57.77 / 26
P1 14.54
P2 0.9401E-05
P3 2.027
P4 -14.51
Cloud charge in bin (10⁶ e)
X (cm)
0
0.02
0.04
0.06
0.08
0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


2.1 GeV 800 G Dipole: Time slice 8 at time 266.15 ns
Entries 182
Mean 0.3530E-02
RMS 0.4643E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 33.00 / 25
P1 0.4414E-01
P2 -0.4241E-02
P3 0.2952E-01
P4 0.6660E-02
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

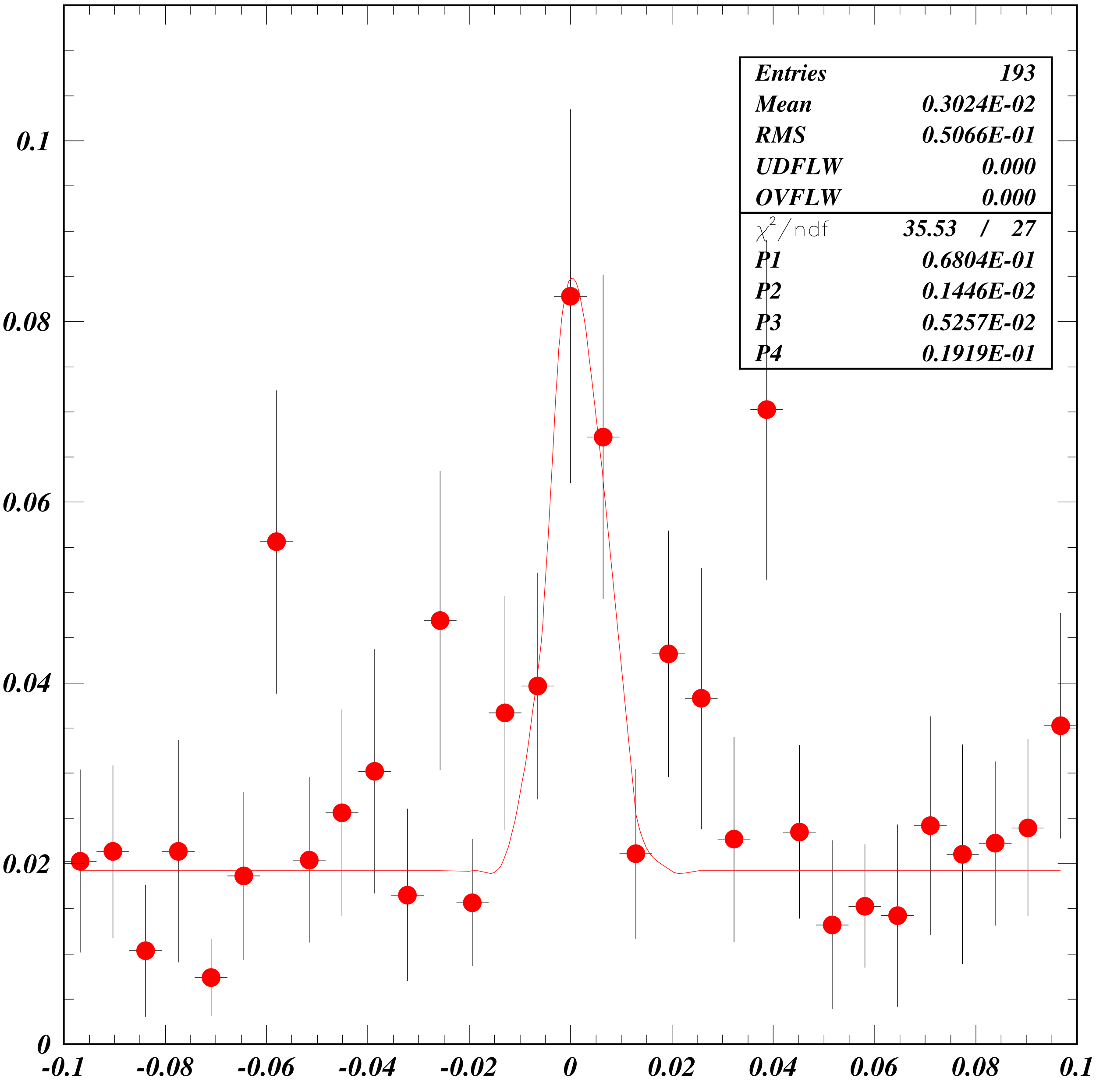
15/09/30   16.21

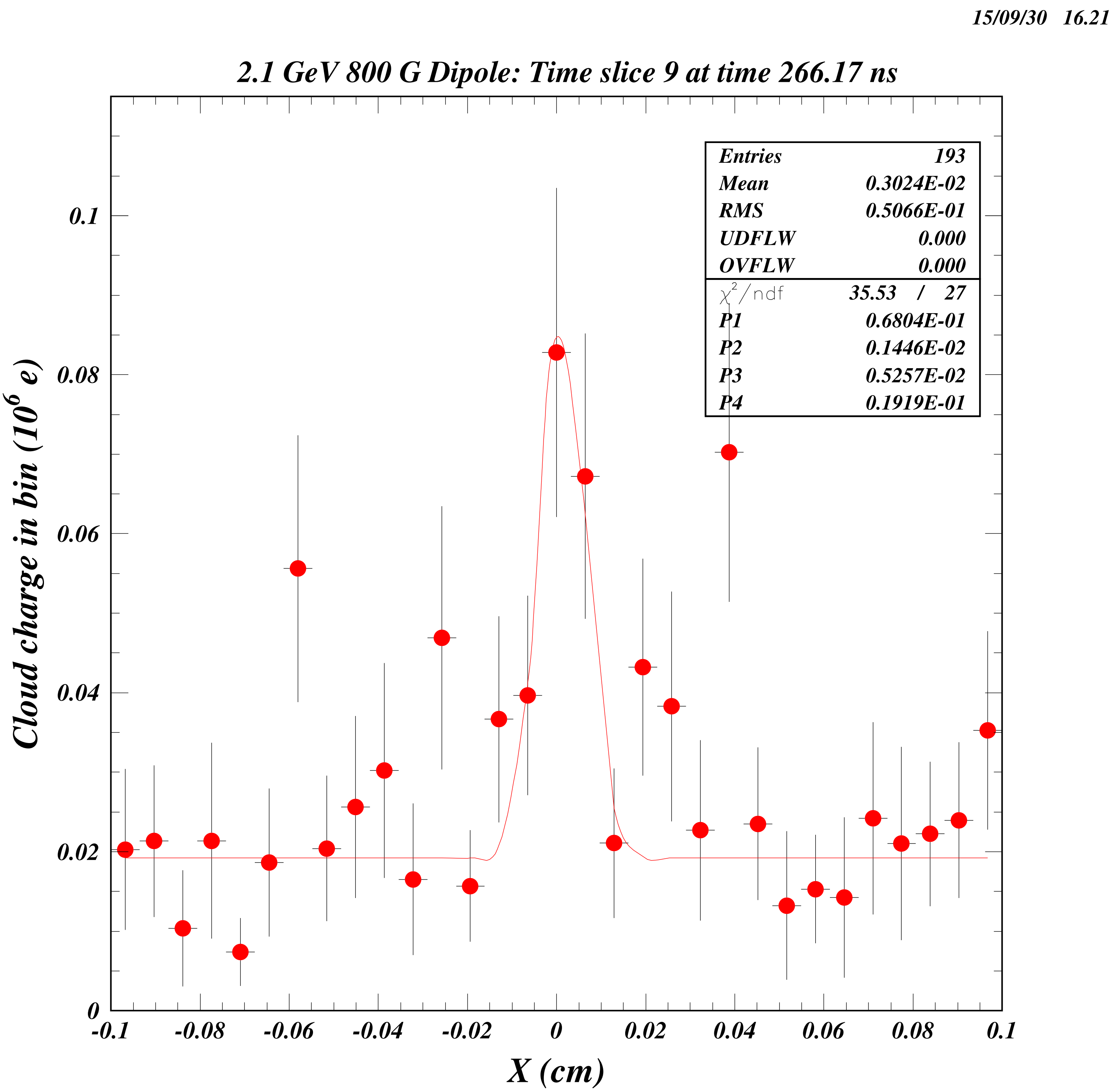

2.1 GeV 800 G Dipole: Time slice 8 at time 266.15 ns
Entries 182
Mean 0.3530E-02
RMS 0.4643E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 33.00 / 25
P1 0.4414E-01
P2 -0.4241E-02
P3 0.2952E-01
P4 0.6660E-02
Cloud charge in bin (10⁶ e)
Y (cm)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
Snapshot after bunch 20 at time = 266.15 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
No energy cut: 0k macroparticles, 0 10^6 e-

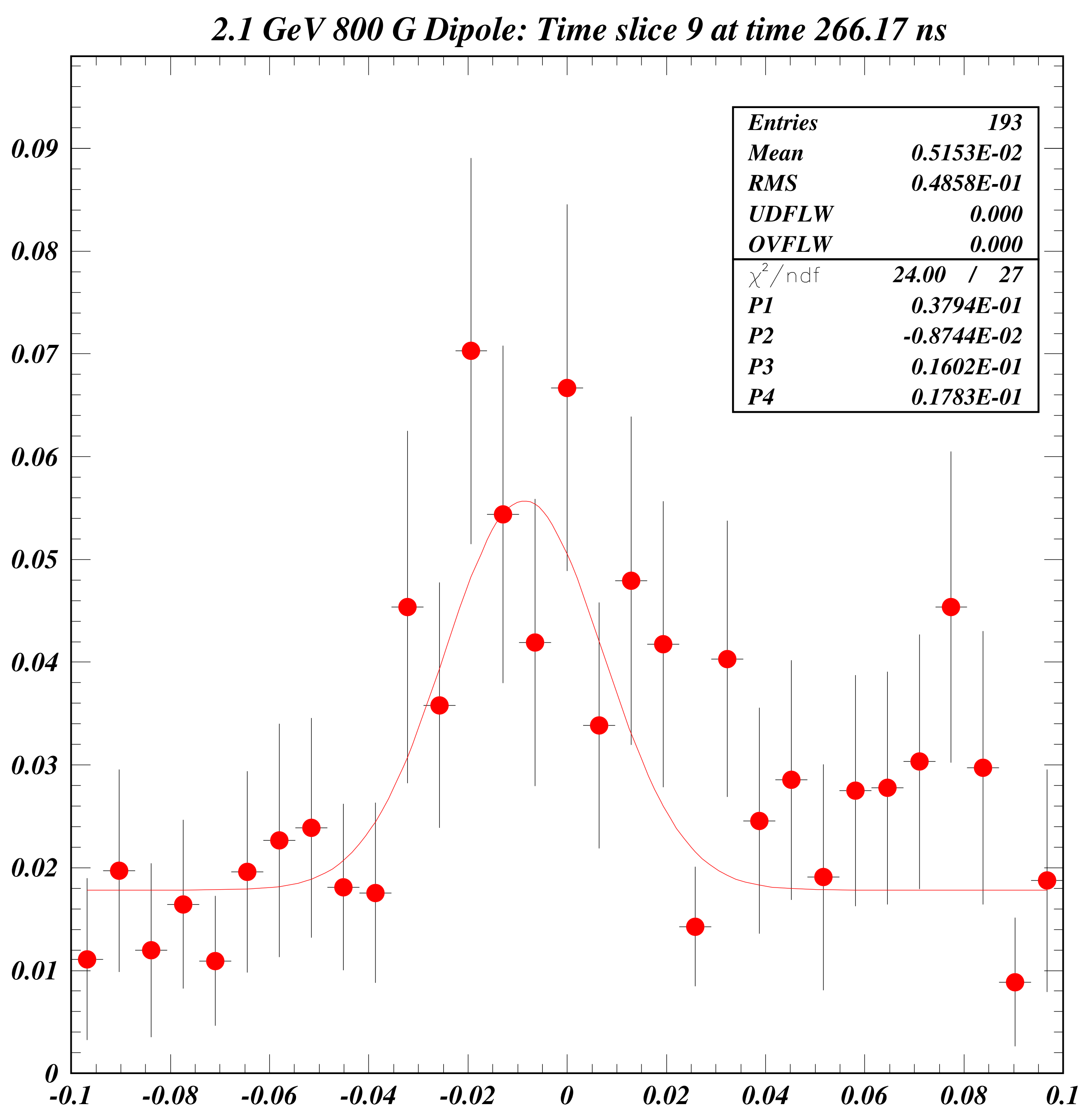
15/09/30 16.21

2.1 GeV 800 G Dipole: Time slice 9 at time 266.17 ns

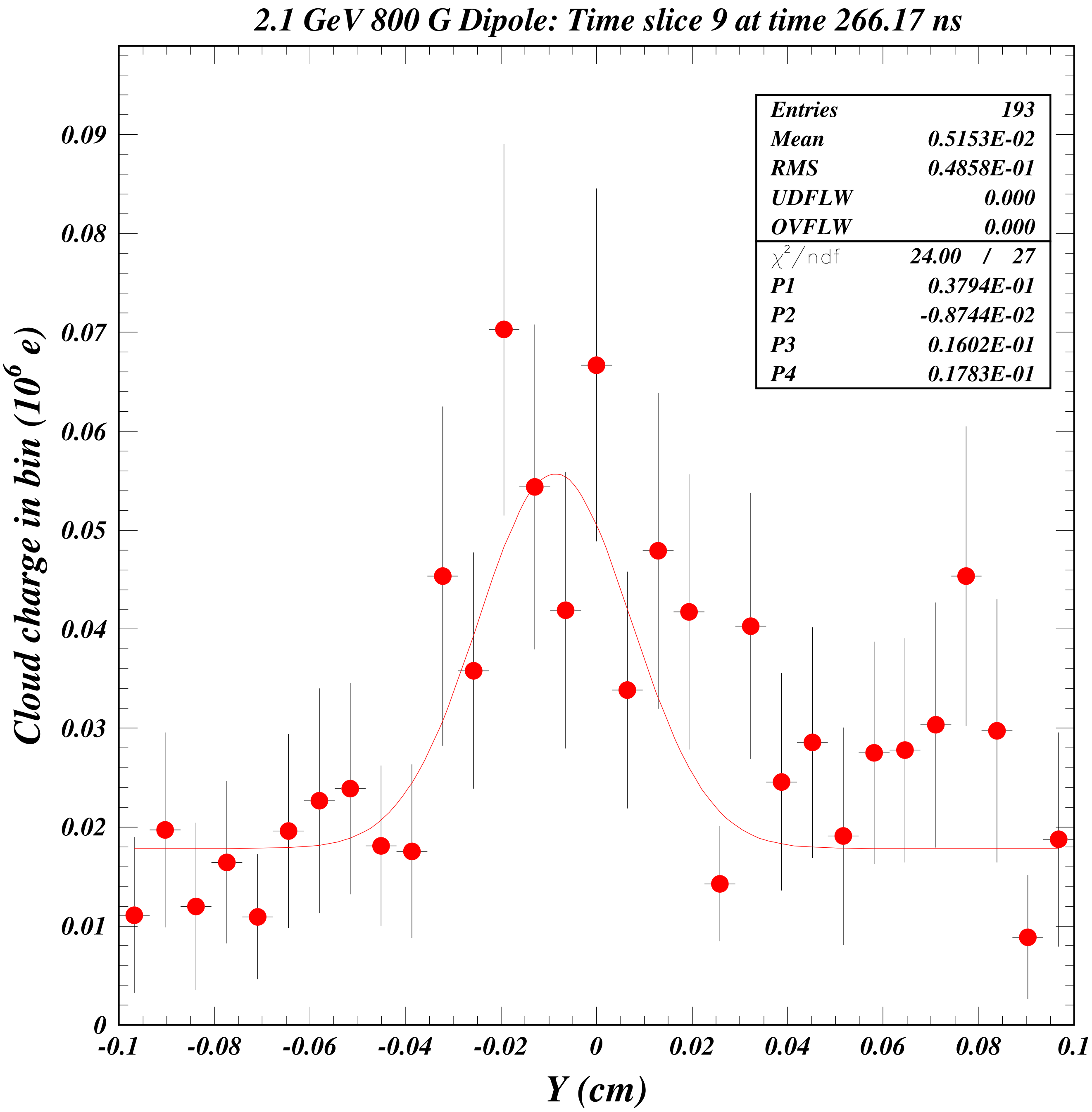



15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 9 at time 266.17 ns
Entries 193
Mean 0.3024E-02
RMS 0.5066E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 35.53 / 27
P1 0.6804E-01
P2 0.1446E-02
P3 0.5257E-02
P4 0.1919E-01
Cloud charge in bin (10⁶ e)
X (cm)
0
0.02
0.04
0.06
0.08
0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

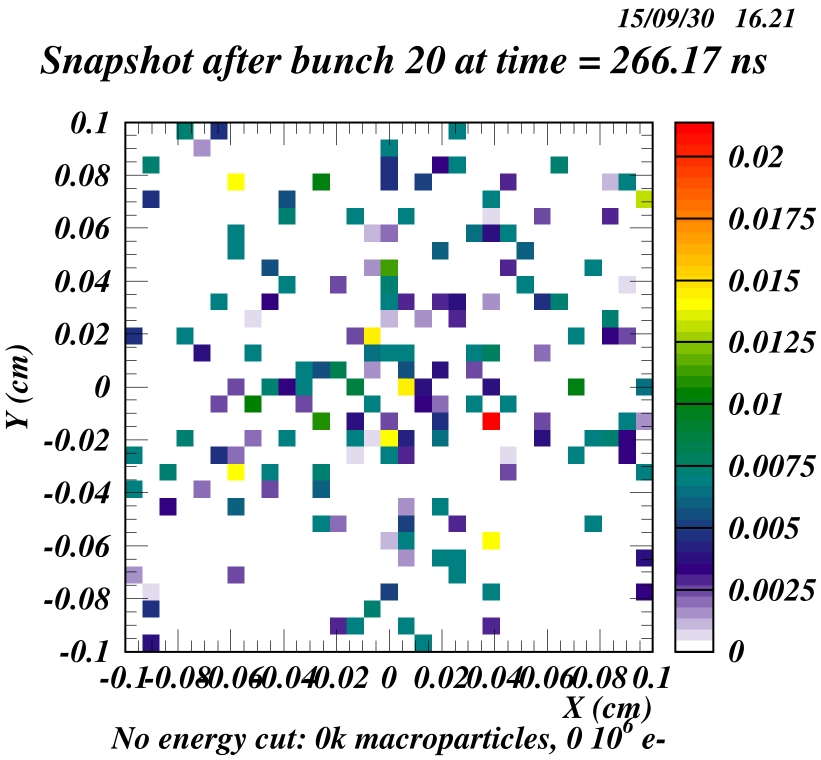
15/09/30 16.21


2.1 GeV 800 G Dipole: Time slice 9 at time 266.17 ns
Entries 193
Mean 0.5153E-02
RMS 0.4858E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 24.00 / 27
P1 0.3794E-01
P2 -0.8744E-02
P3 0.1602E-01
P4 0.1783E-01
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

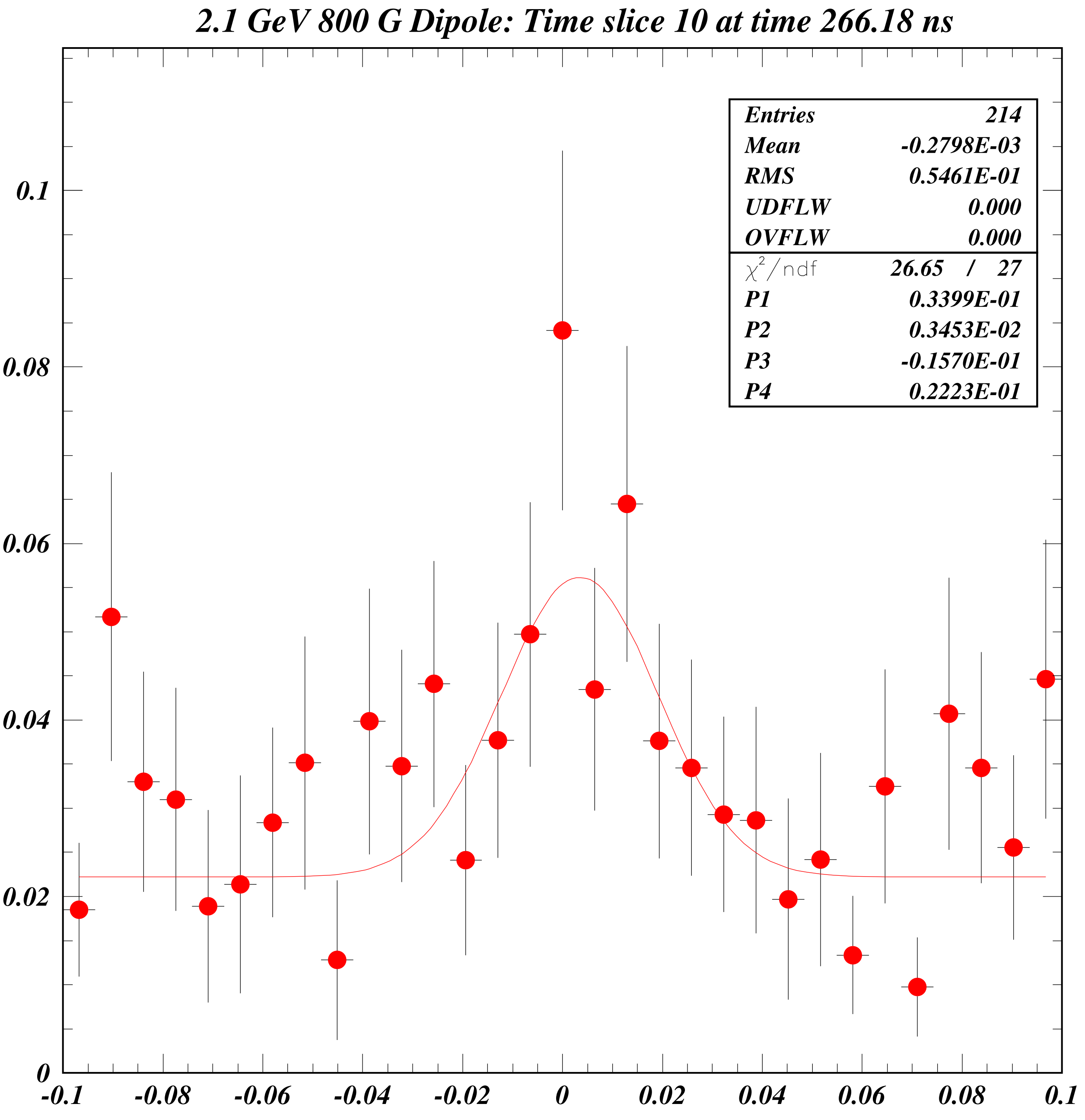
15/09/30 16.21



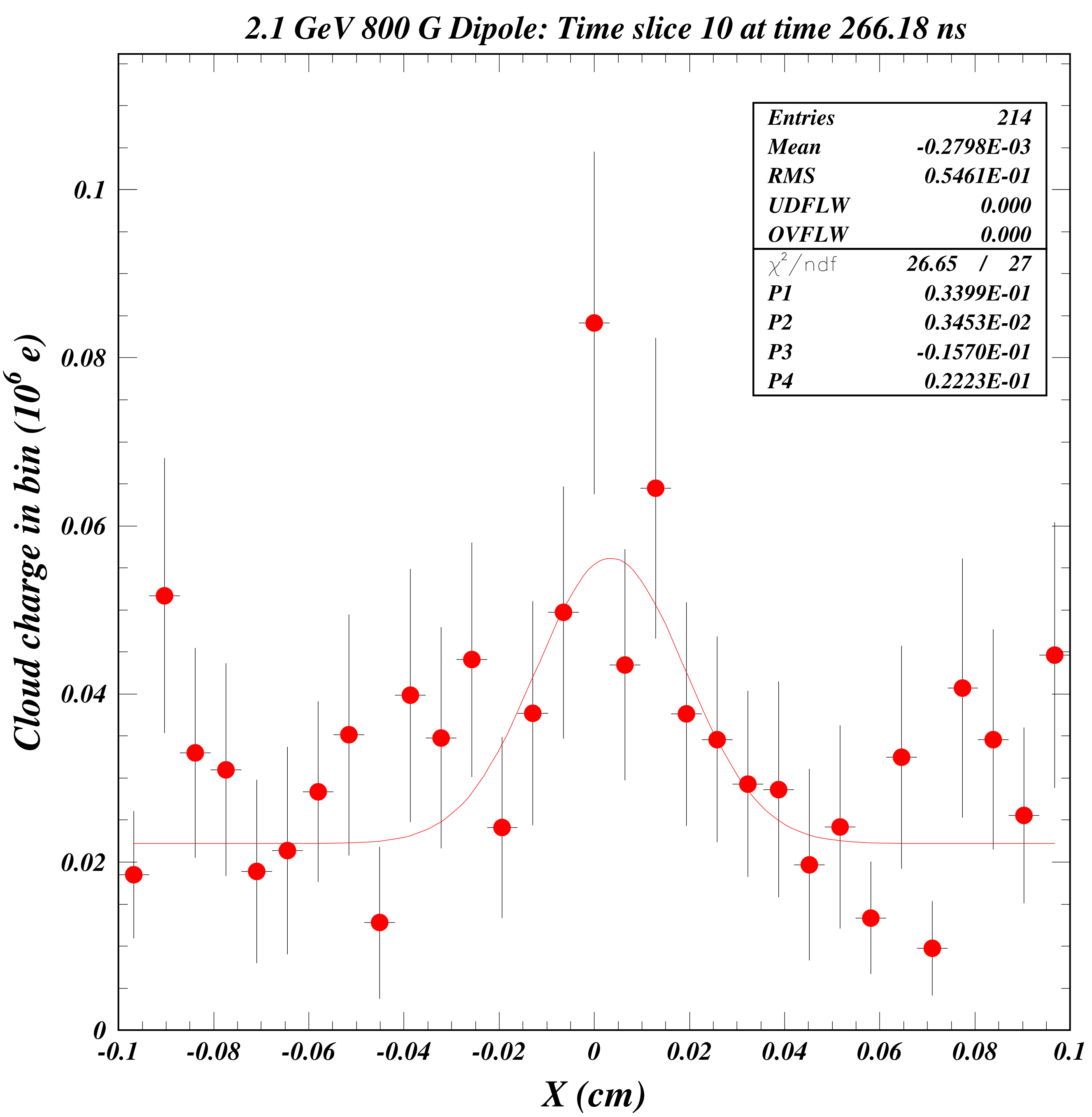
2.1 GeV 800 G Dipole: Time slice 9 at time 266.17 ns
Entries 193
Mean 0.5153E-02
RMS 0.4858E-01
UDFLW 0.000
OVFLW 0.000
χ^2/ndf 24.00 / 27
P1 0.3794E-01
P2 -0.8744E-02
P3 0.1602E-01
P4 0.1783E-01
Cloud charge in bin (10^6 e)
0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09
-0.1 -0.08 -0.06 -0.04 -0.02 0 0.02 0.04 0.06 0.08 0.1
Y (cm)


15/09/30 16.21
Snapshot after bunch 20 at time = 266.17 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
No energy cut: 0k macroparticles, 0 10^6 e-

15/09/30 16.21

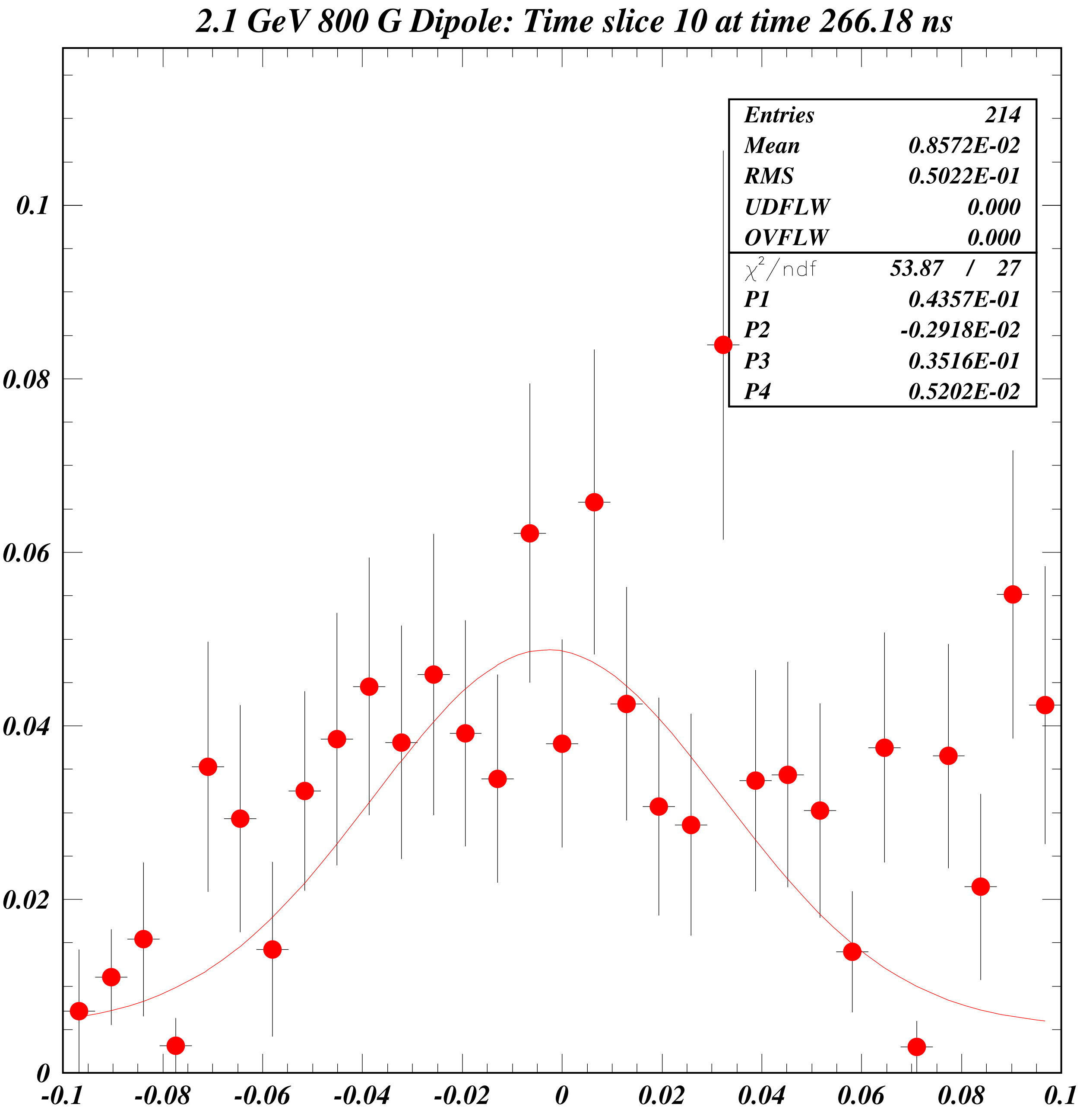

2.1 GeV 800 G Dipole: Time slice 10 at time 266.18 ns
Entries 214
Mean -0.2798E-03
RMS 0.5461E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 26.65 / 27
P1 0.3399E-01
P2 0.3453E-02
P3 -0.1570E-01
P4 0.2223E-01
0.1
0.08
0.06
0.04
0.02
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

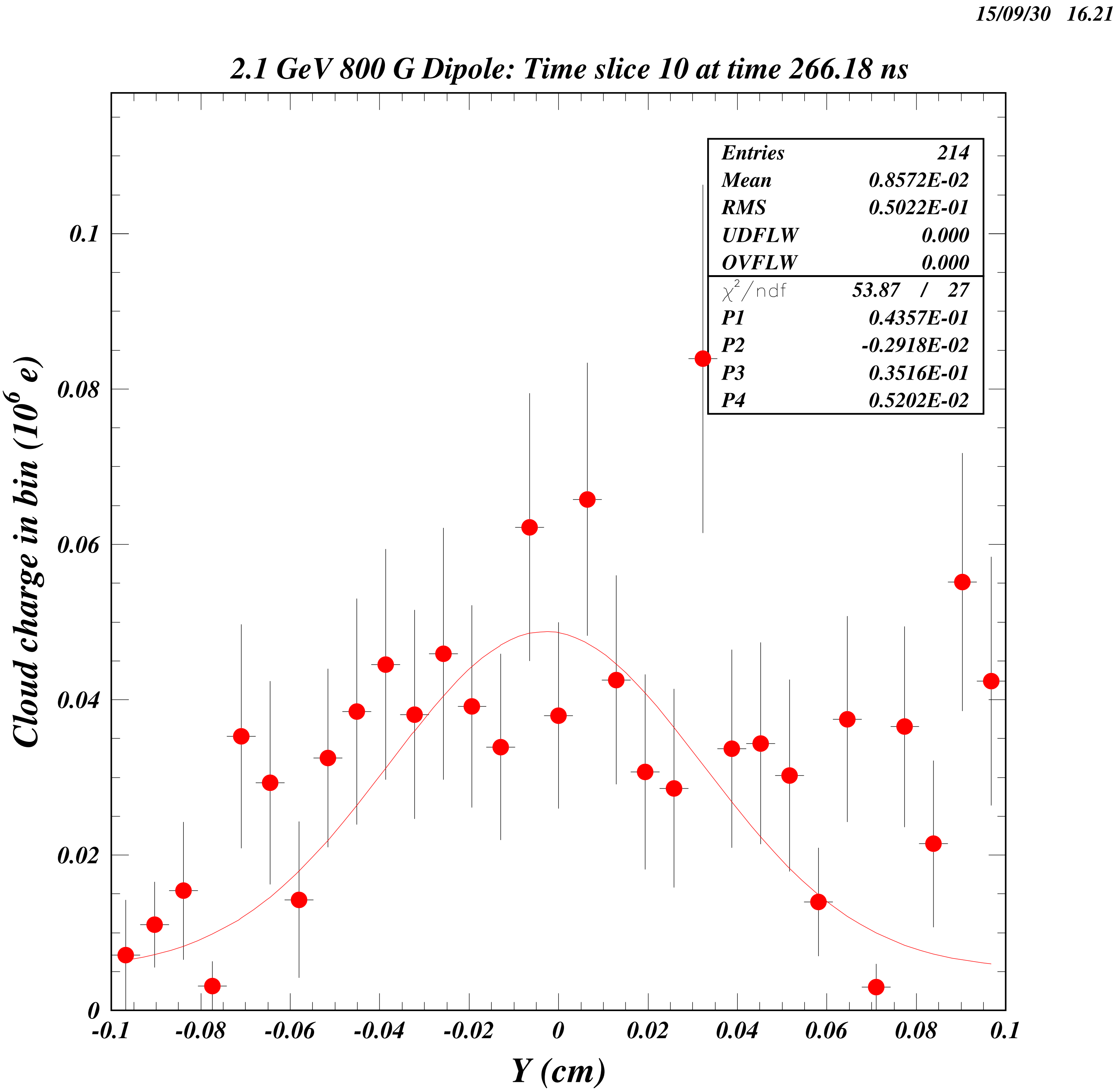
15/09/30 16.21

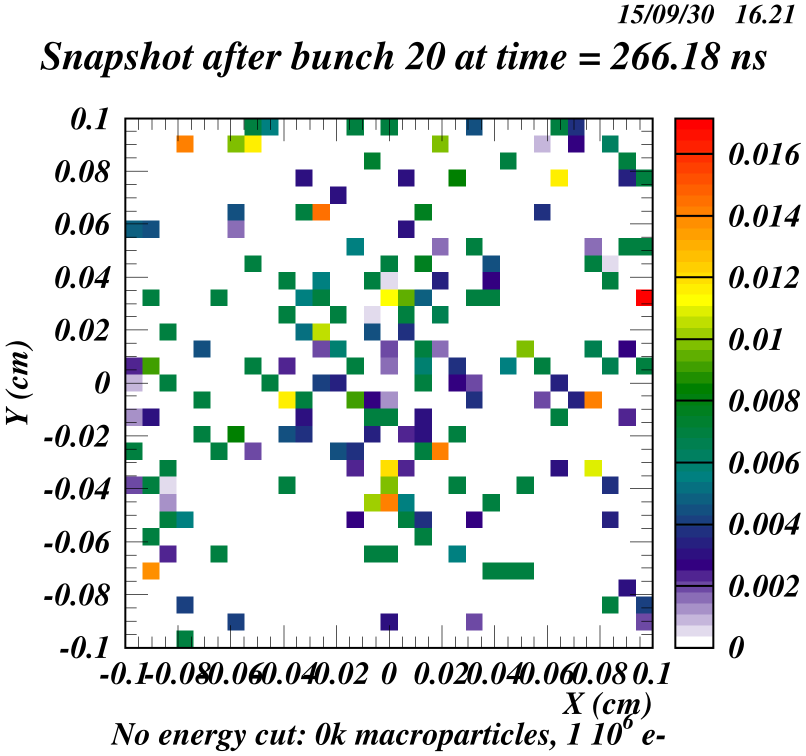


2.1 GeV 800 G Dipole: Time slice 10 at time 266.18 ns
Entries 214
Mean -0.2798E-03
RMS 0.5461E-01
UDFLW 0.000
OVFLW 0.000
χ^2/ndf 26.65 / 27
P1 0.3399E-01
P2 0.3453E-02
P3 -0.1570E-01
P4 0.2223E-01
Cloud charge in bin (10^6 e)
X (cm)
0
0.02
0.04
0.06
0.08
0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

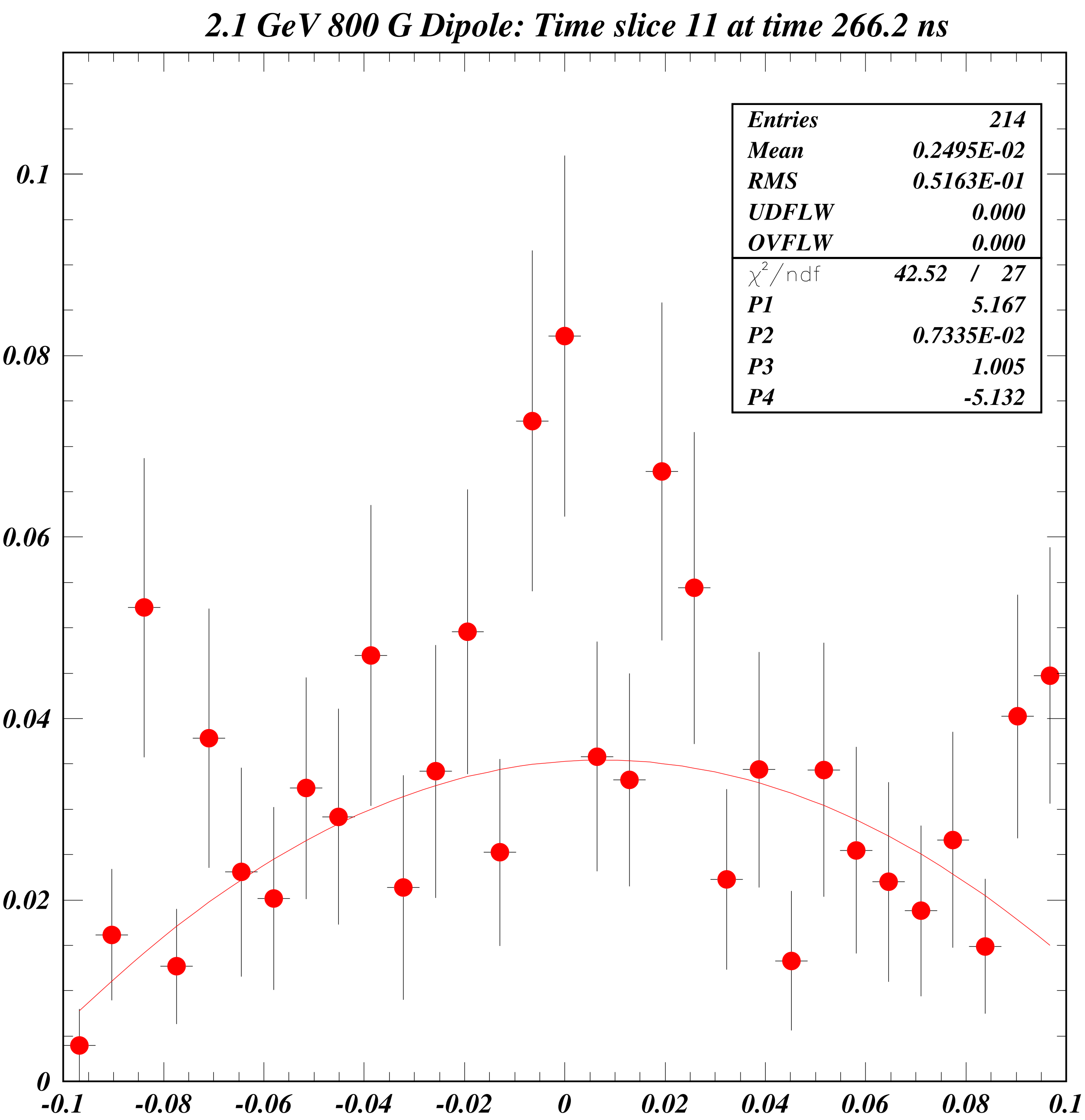
15/09/30 16.21

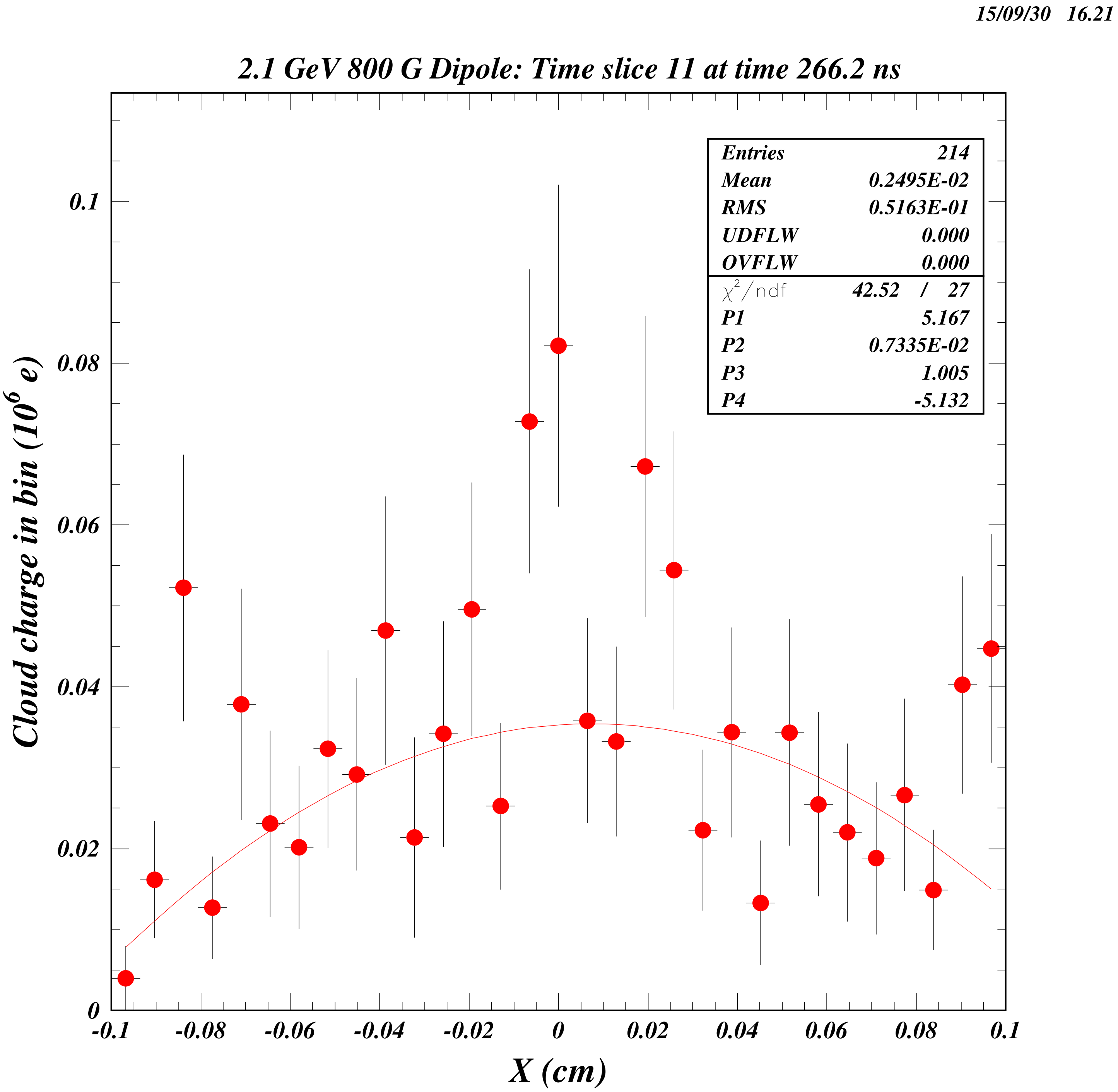

2.1 GeV 800 G Dipole: Time slice 10 at time 266.18 ns
Entries 214
Mean 0.8572E-02
RMS 0.5022E-01
UDFLW 0.000
OVFLW 0.000
χ^2/ndf 53.87 / 27
P1 0.4357E-01
P2 -0.2918E-02
P3 0.3516E-01
P4 0.5202E-02
0.1
0.08
0.06
0.04
0.02
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 10 at time 266.18 ns
Entries 214
Mean 0.8572E-02
RMS 0.5022E-01
UDFLW 0.000
OVFLW 0.000
χ^2/ndf 53.87 / 27
P1 0.4357E-01
P2 -0.2918E-02
P3 0.3516E-01
P4 0.5202E-02
Cloud charge in bin (10^6 e)
Y (cm)
0
0.02
0.04
0.06
0.08
0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

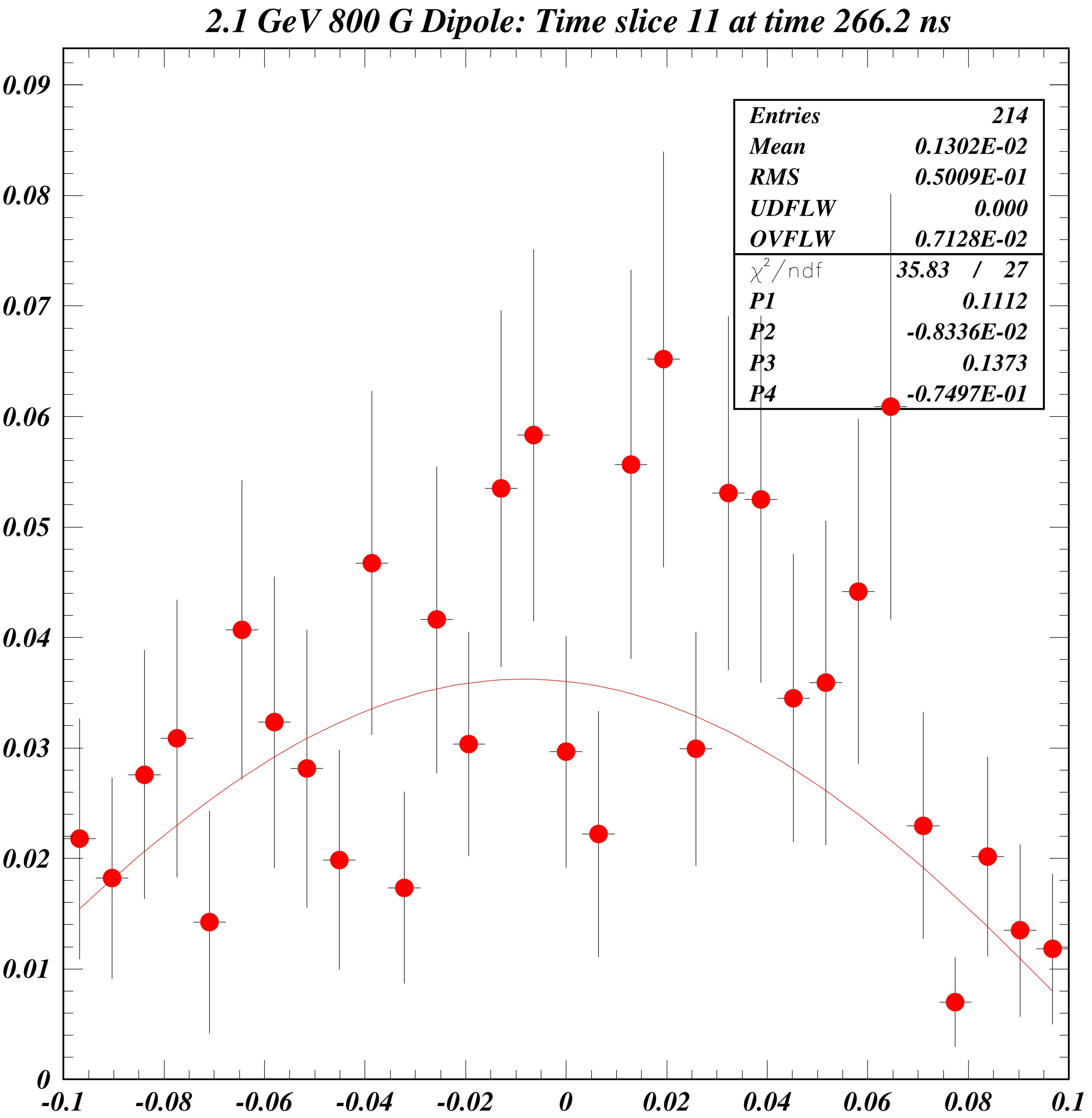

15/09/30 16.21
Snapshot after bunch 20 at time = 266.18 ns
Y (cm)
X (cm)
No energy cut: 0k macroparticles, 1 10^6 e-

15/09/30 16.21

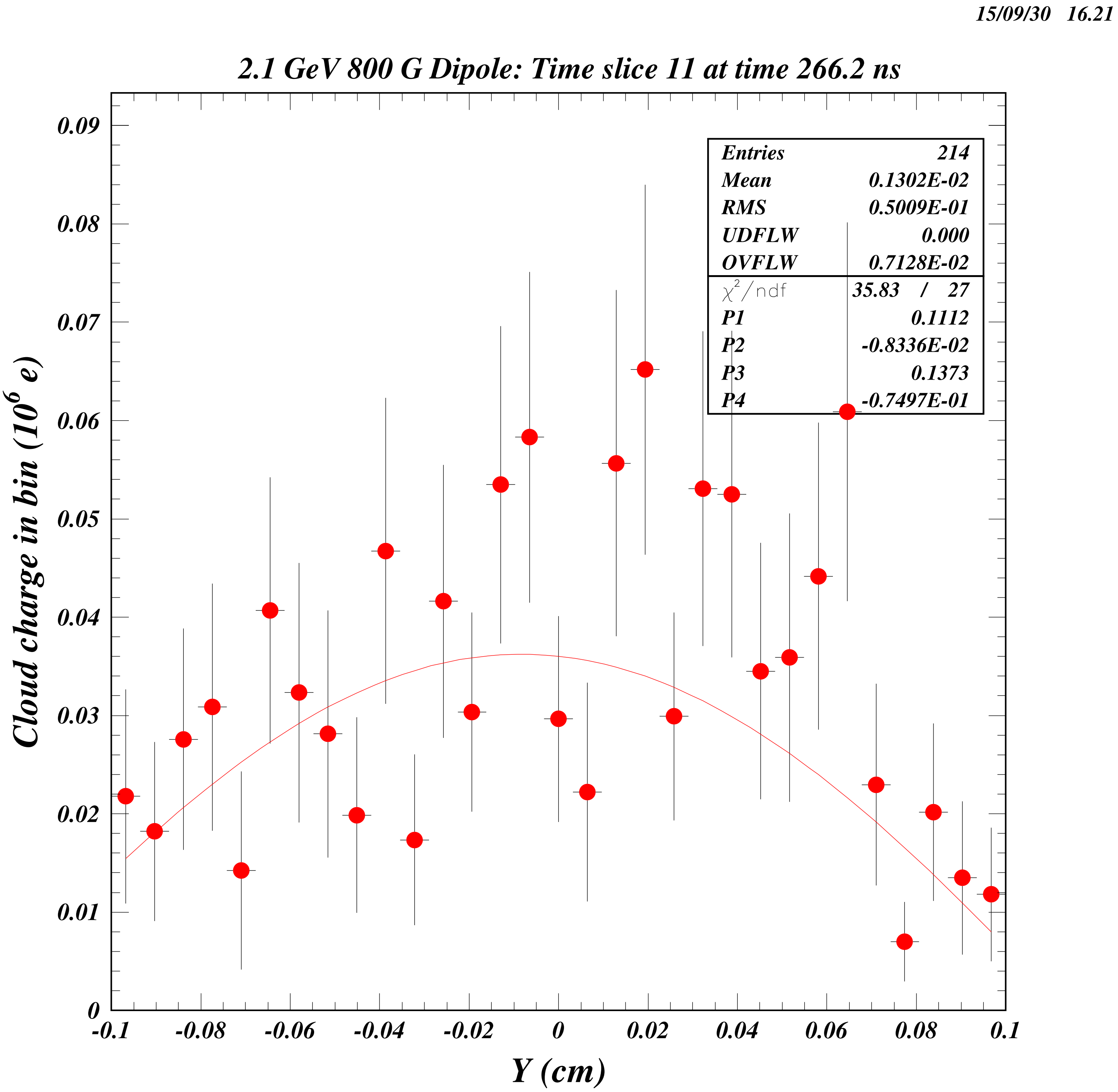

2.1 GeV 800 G Dipole: Time slice 11 at time 266.2 ns
Entries 214
Mean 0.2495E-02
RMS 0.5163E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 42.52 / 27
P1 5.167
P2 0.7335E-02
P3 1.005
P4 -5.132
0.1
0.08
0.06
0.04
0.02
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1


15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 11 at time 266.2 ns
Entries 214
Mean 0.2495E-02
RMS 0.5163E-01
UDFLW 0.000
OVFLW 0.000
χ²/ndf 42.52 / 27
P1 5.167
P2 0.7335E-02
P3 1.005
P4 -5.132
Cloud charge in bin (10⁶ e)
X (cm)
0
0.02
0.04
0.06
0.08
0.1
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1

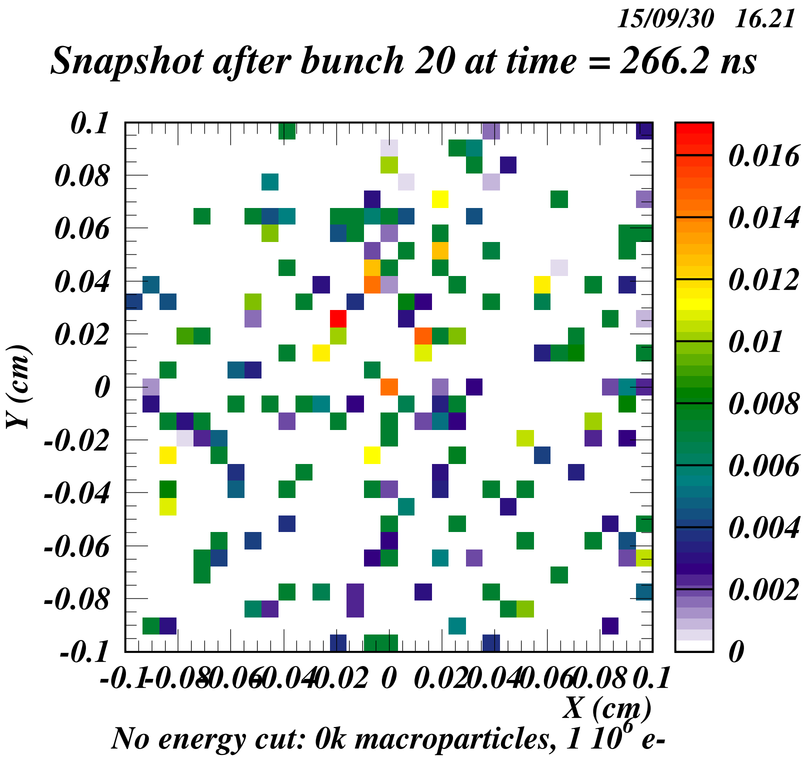
15/09/30 16.21



2.1 GeV 800 G Dipole: Time slice 11 at time 266.2 ns
Entries 214
Mean 0.1302E-02
RMS 0.5009E-01
UDFLW 0.000
OVFLW 0.7128E-02
χ²/ndf 35.83 / 27
P1 0.1112
P2 -0.8336E-02
P3 0.1373
P4 -0.7497E-01
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08
0.1



15/09/30 16.21
2.1 GeV 800 G Dipole: Time slice 11 at time 266.2 ns
Entries 214
Mean 0.1302E-02
RMS 0.5009E-01
UDFLW 0.000
OVFLW 0.7128E-02
χ²/ndf 35.83 / 27
P1 0.1112
P2 -0.8336E-02
P3 0.1373
P4 -0.7497E-01
Cloud charge in bin (10⁶ e)
Y (cm)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Snapshot after bunch 20 at time = 266.2 ns
Y (cm)
X (cm)
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
No energy cut: 0k macroparticles, 1 10^6 e-

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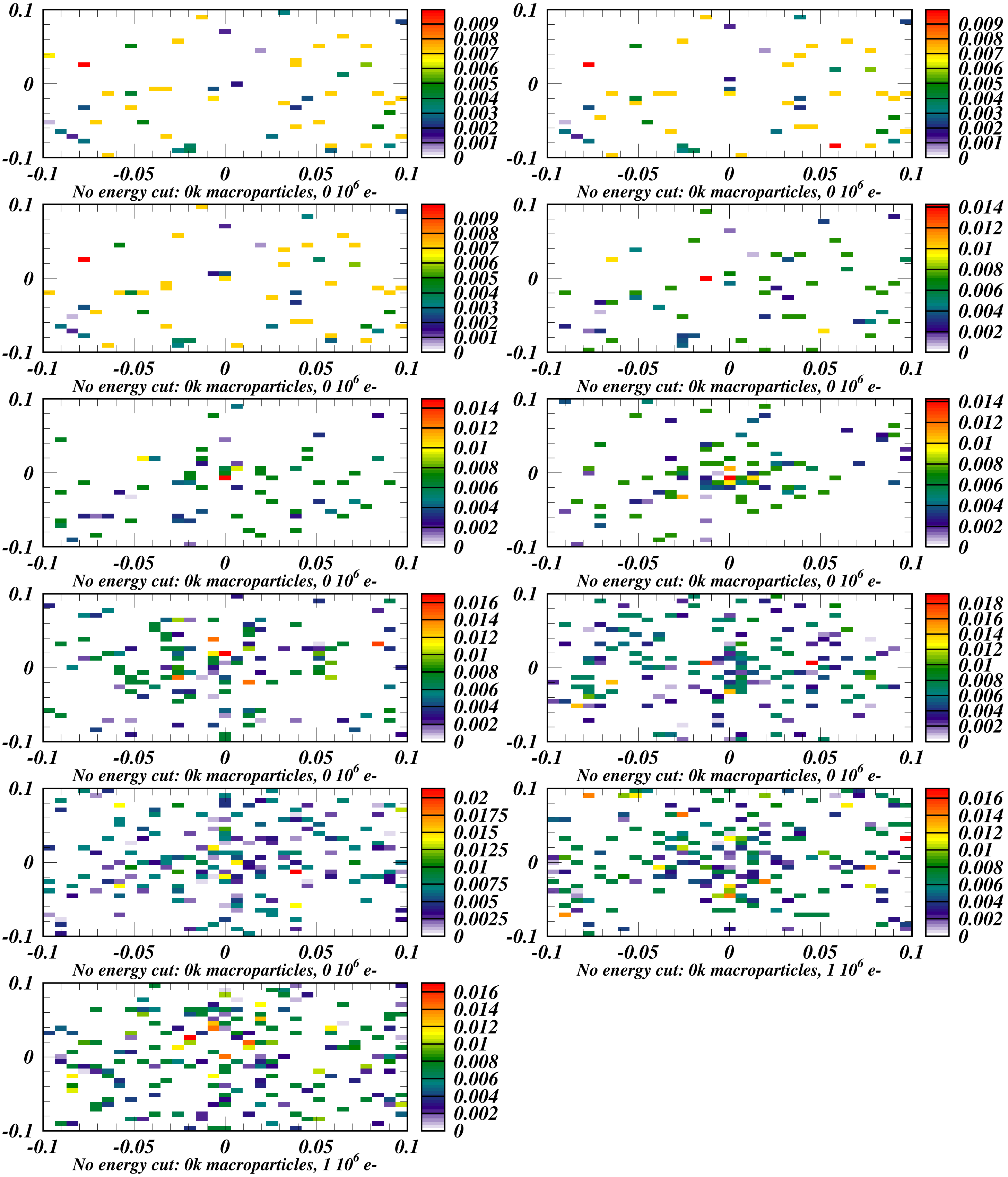
2.1 GeV 800 G Dipole: Cloud charge shapshots



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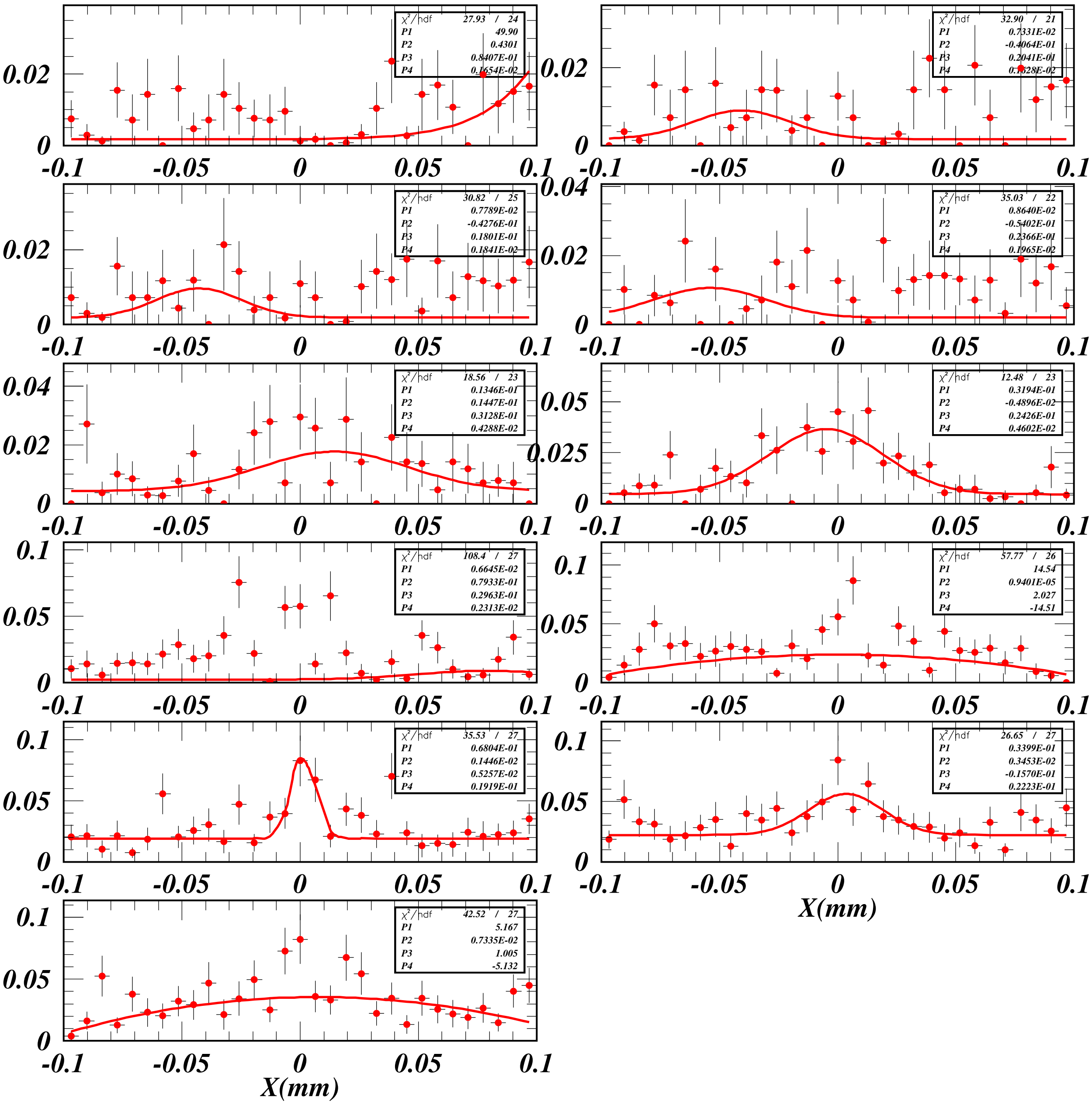
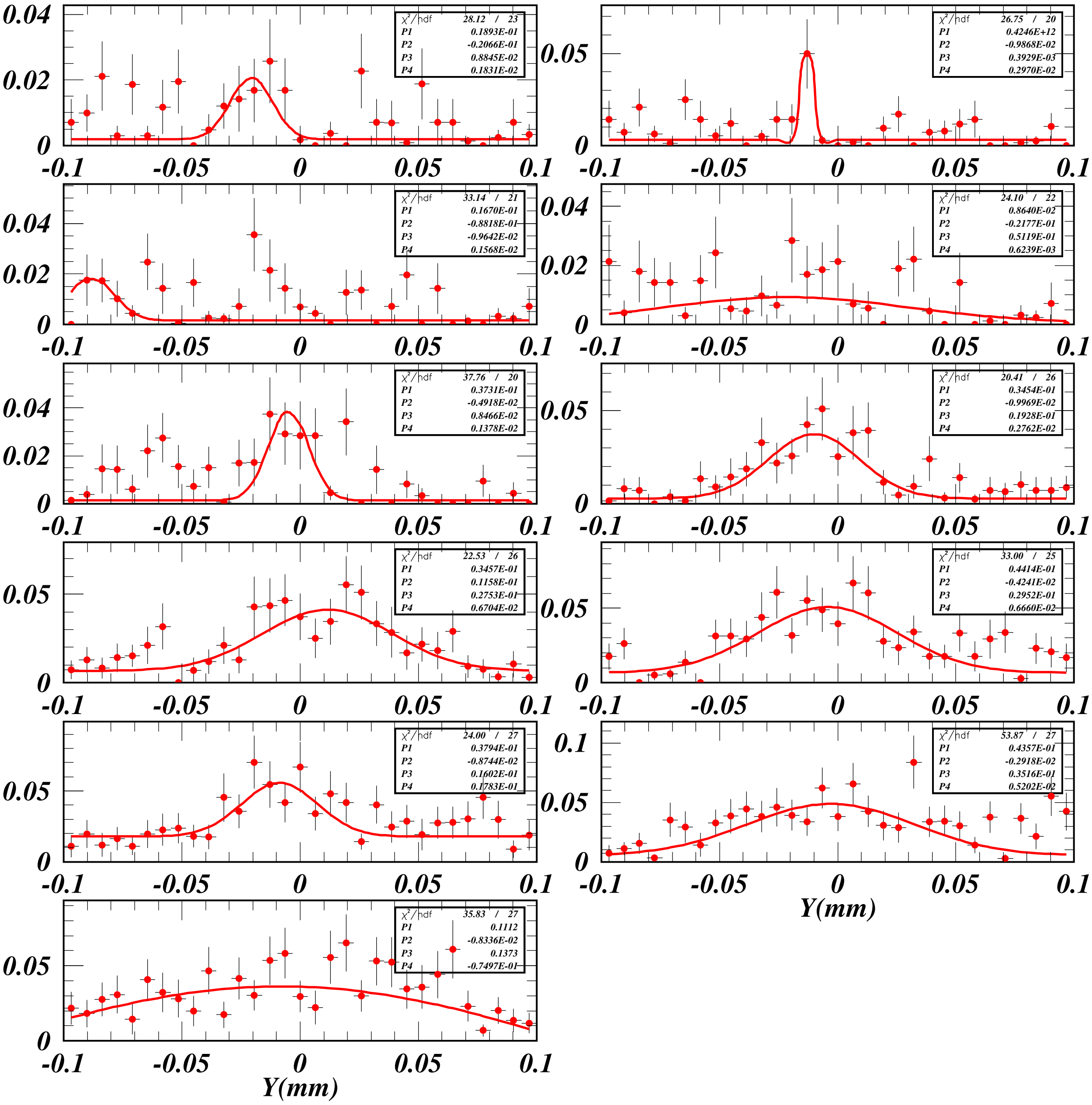
2.1 GeV 800 G Dipole: Fits to cloud charge X distribution



2.1 GeV 800 G Dipole: Fits to cloud charge Y distribution



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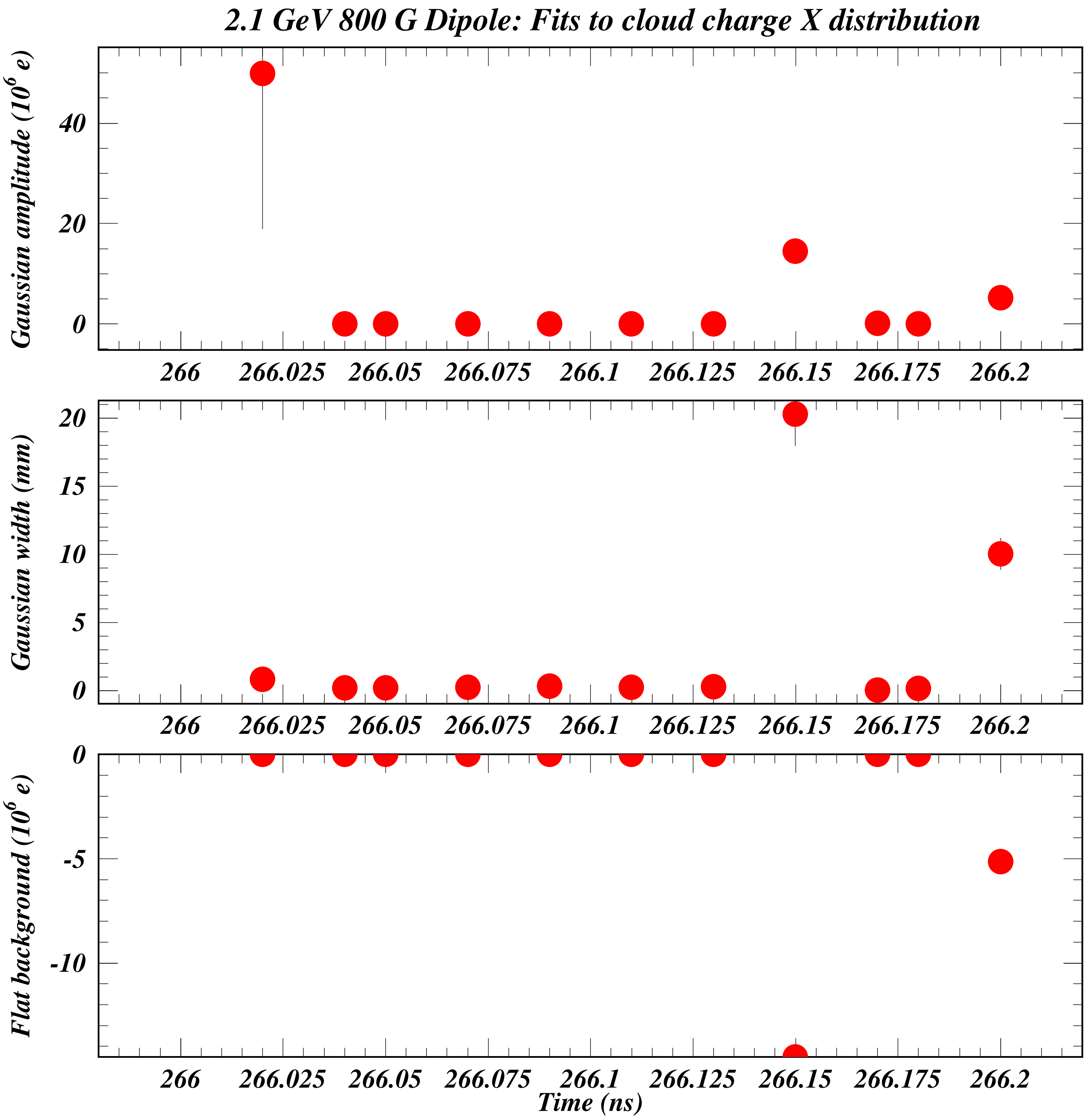

2.1 GeV 800 G Dipole: Fits to cloud charge X distribution
Gaussian amplitude (10^6 e)
Gaussian width (mm)
Flat background (10^6 e)
Time (ns)
266
266.025
266.05
266.075
266.1
266.125
266.15
266.175
266.2

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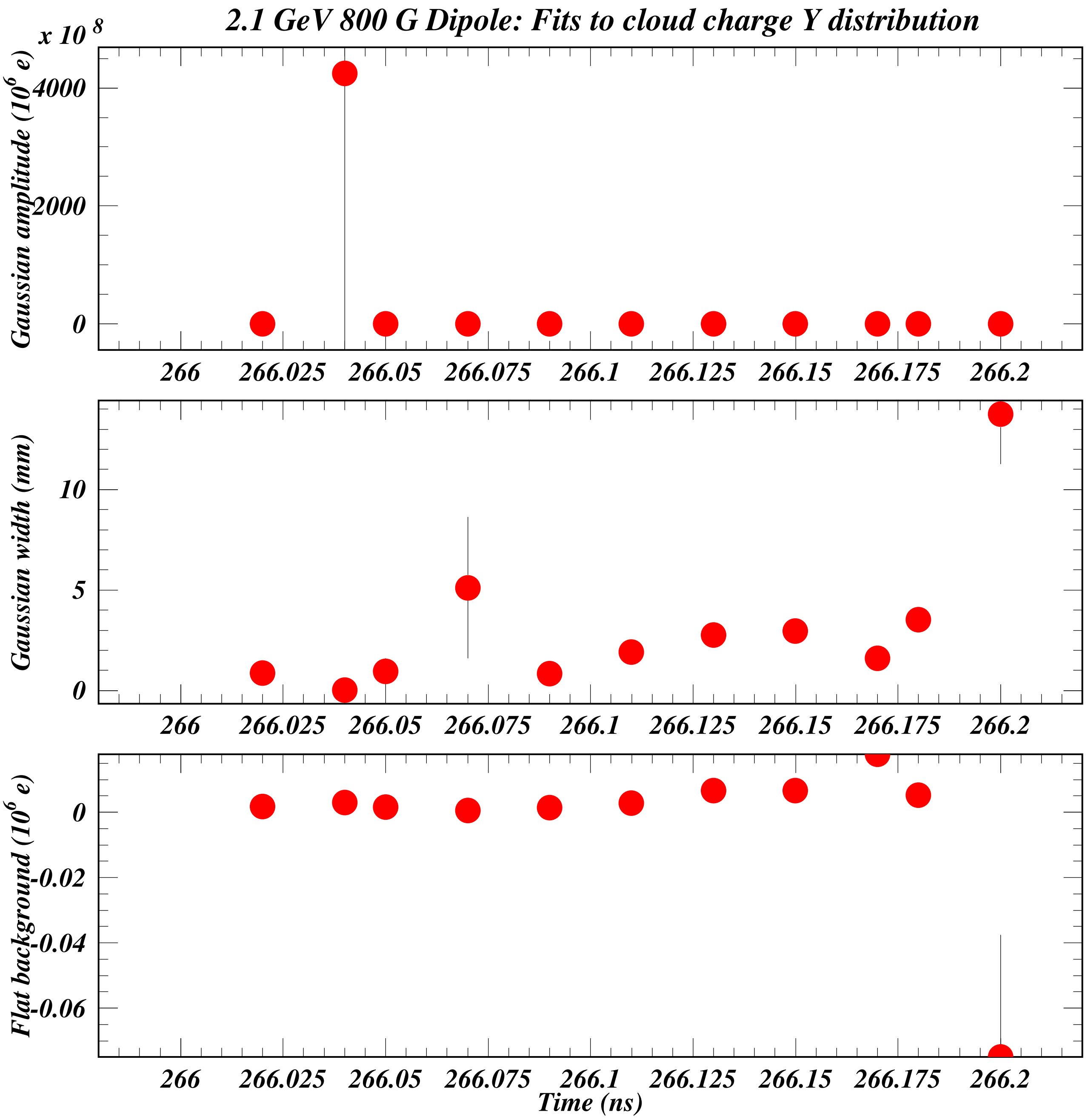

2.1 GeV 800 G Dipole: Fits to cloud charge Y distribution
x 10^8
Gaussian amplitude (10^6 e)
4000
2000
0
266
266.025
266.05
266.075
266.1
266.125
266.15
266.175
266.2
Gaussian width (mm)
10
5
0
Flat background (10^6 e)
0
-0.02
-0.04
-0.06
Time (ns)

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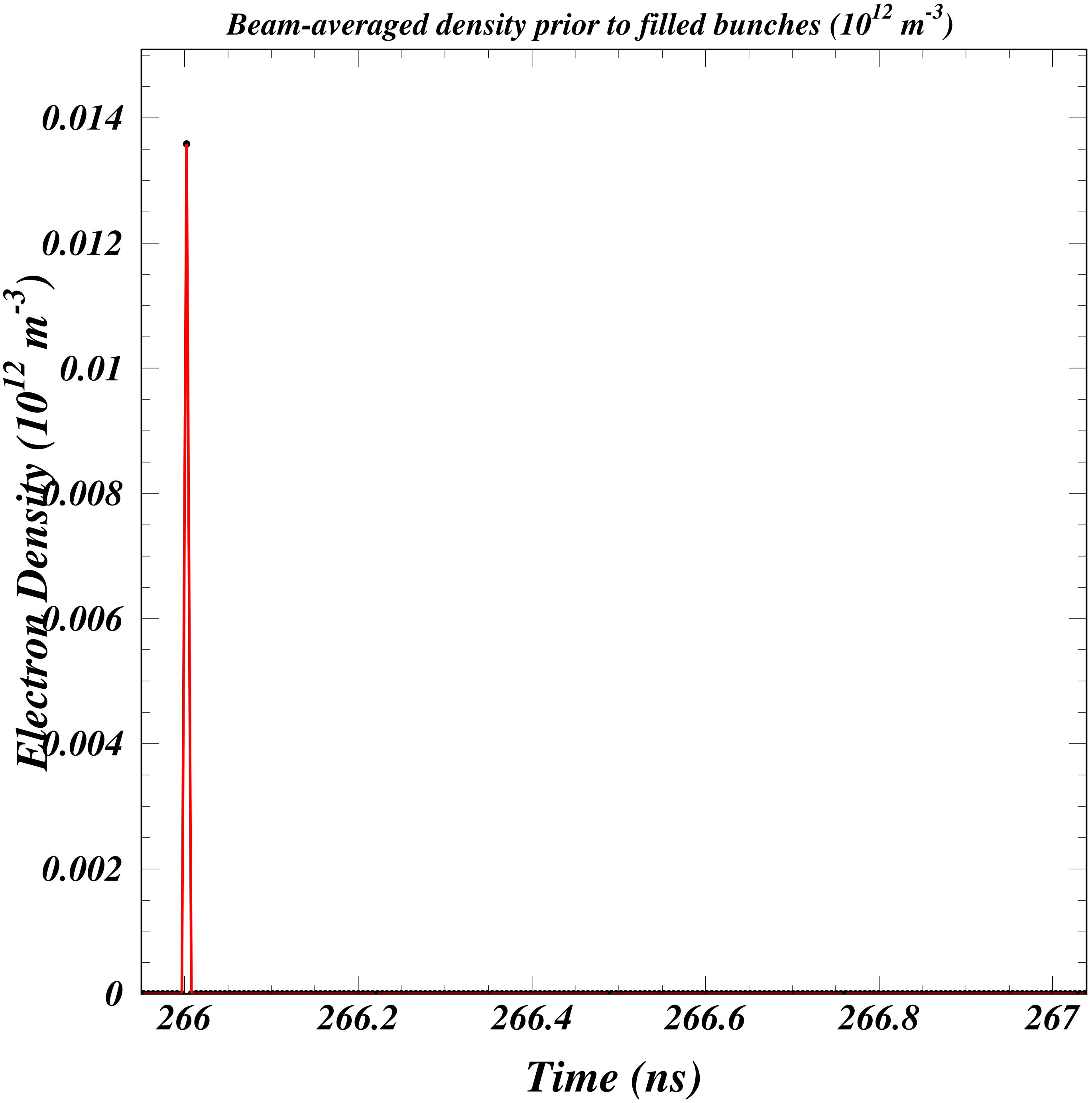
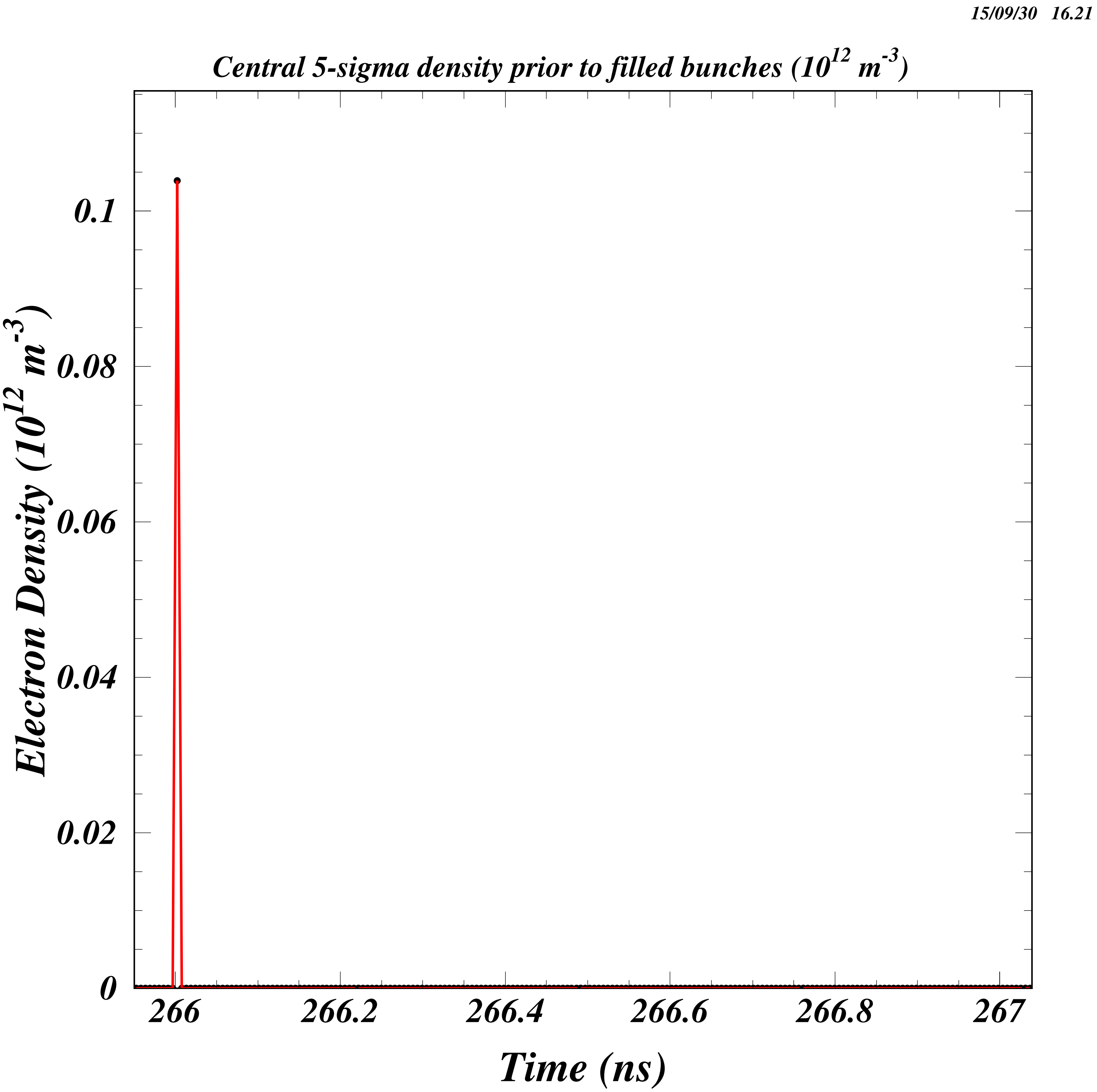
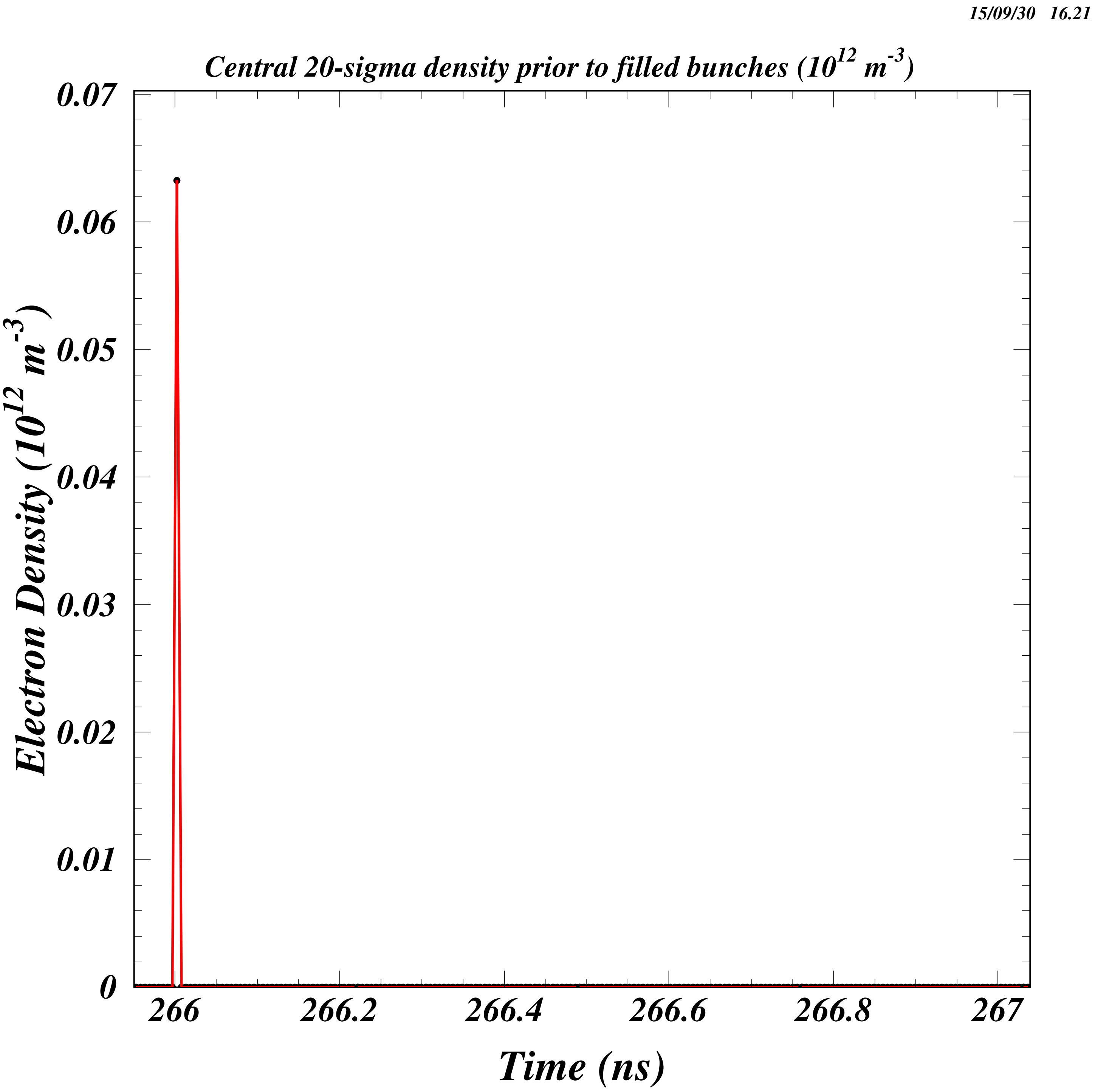


Beam-averaged density prior to filled bunches (10^{12} m^{-3})
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Electron Density (10^{12} m^{-3})
266
266.2
266.4
266.6
266.8
267
Time (ns)


15/09/30 16.21
Central 5-sigma density prior to filled bunches (10^12 m^-3)
Electron Density (10^12 m^-3)
0
0.02
0.04
0.06
0.08
0.1
266
266.2
266.4
266.6
266.8
267
Time (ns)



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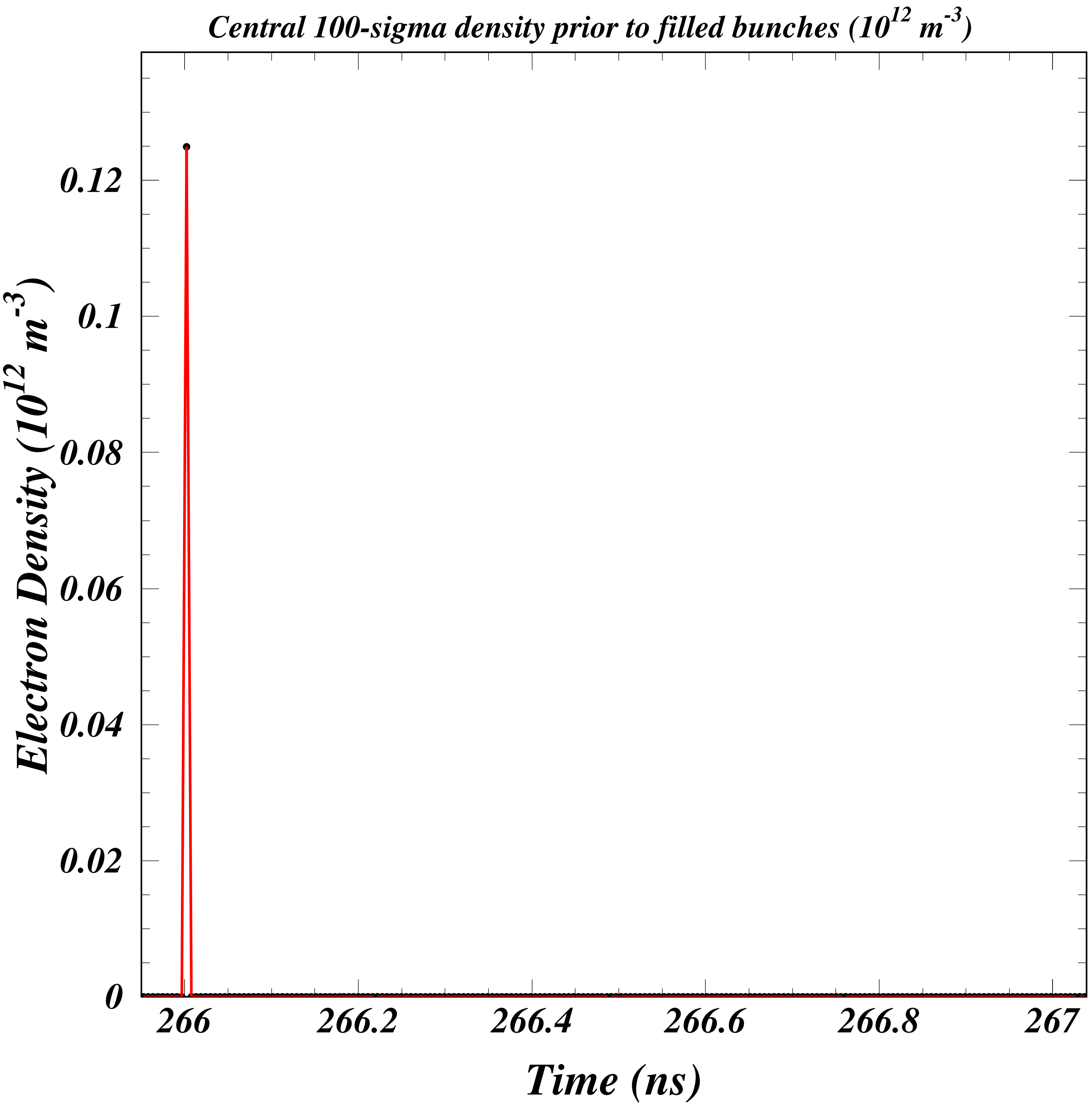
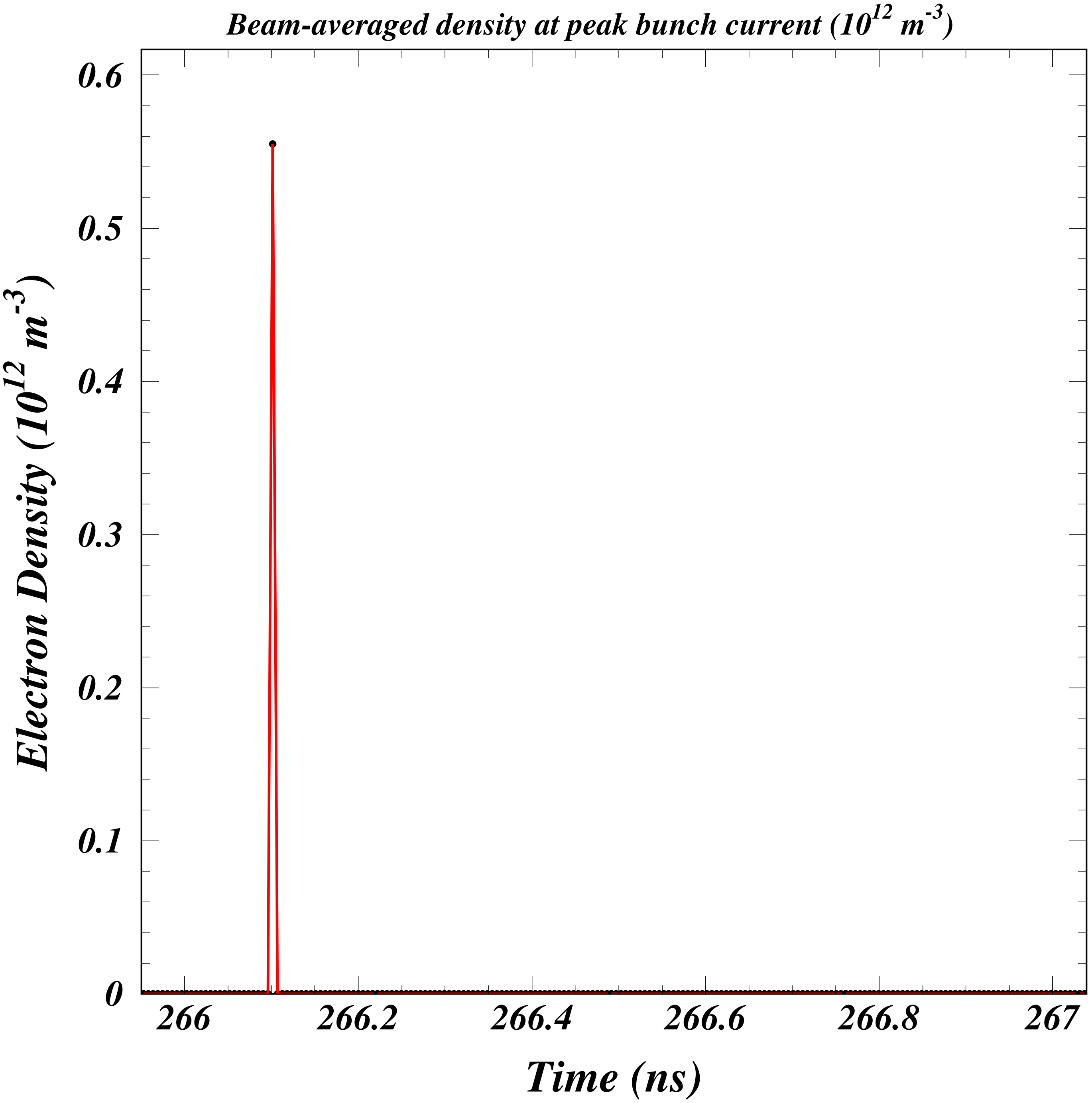
Central 20-sigma density prior to filled bunches (10^{12} m^{-3})
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Electron Density (10^{12} m^{-3})
266
266.2
266.4
266.6
266.8
267
Time (ns)

15/09/30 16.21



Central 100-sigma density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.12
0.1
0.08
0.06
0.04
0.02
0
266
266.2
266.4
266.6
266.8
267
Time (ns)


Beam-averaged density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.6
0.5
0.4
0.3
0.2
0.1
0
266
266.2
266.4
266.6
266.8
267
Time (ns)

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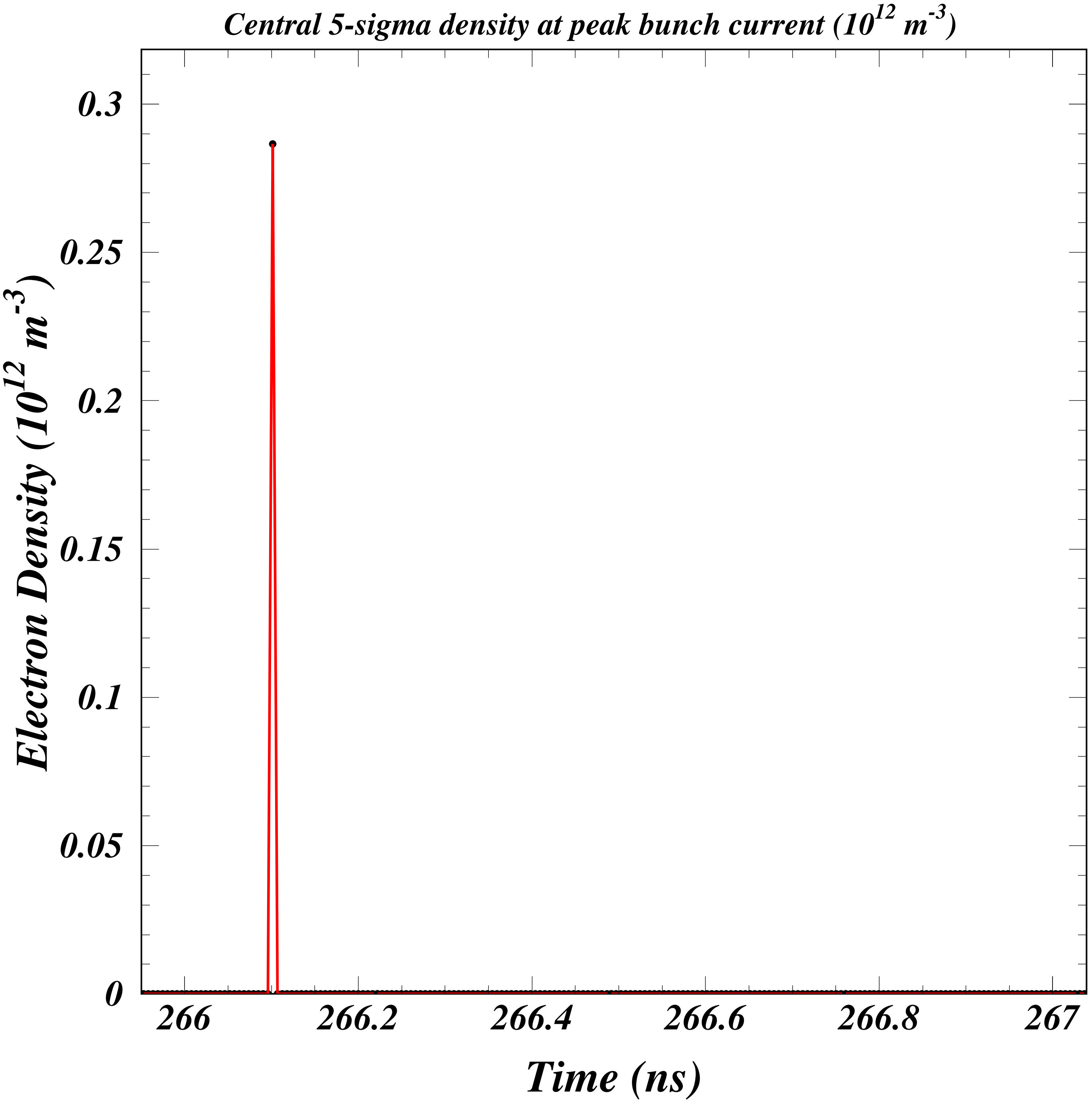
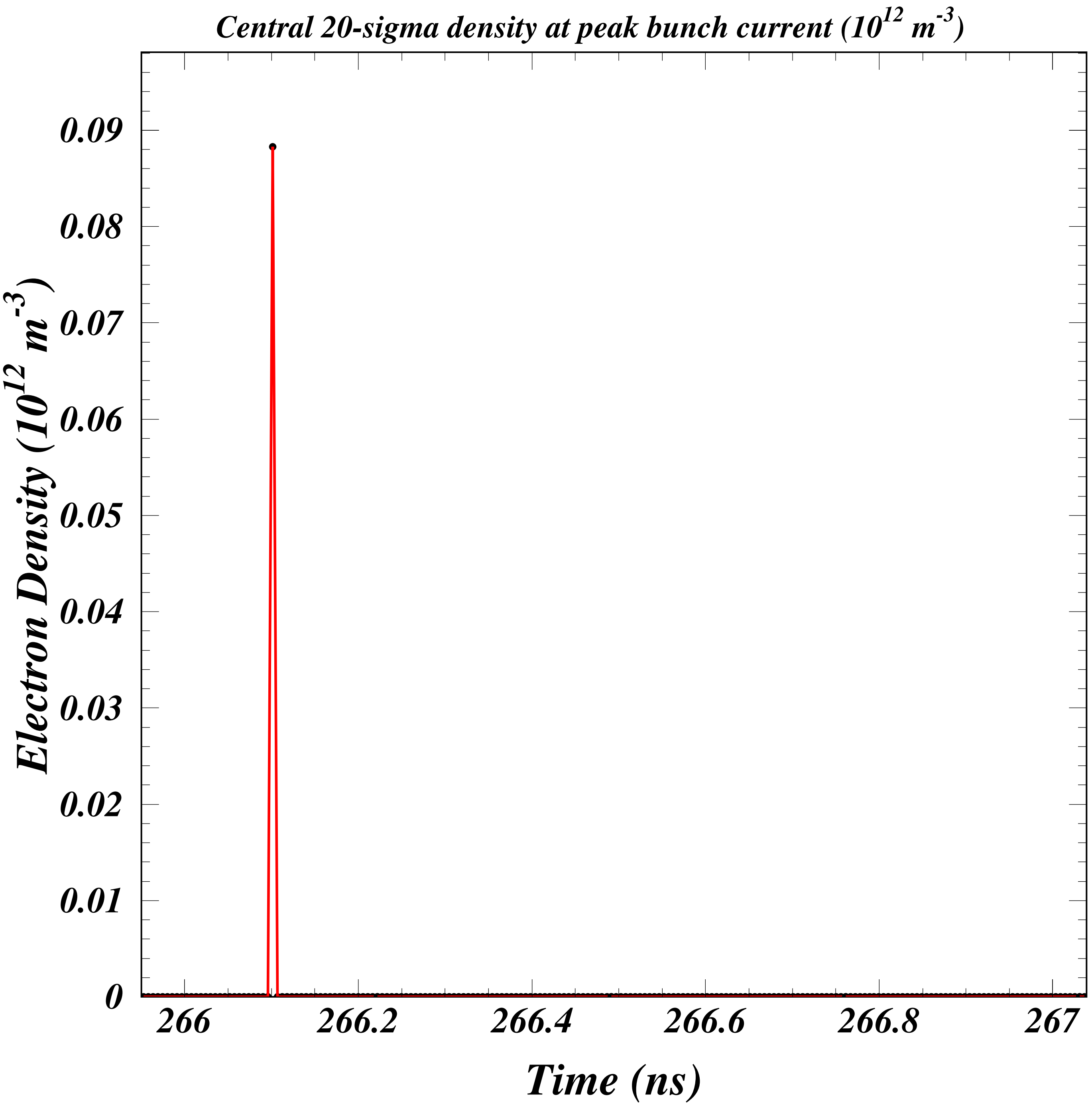
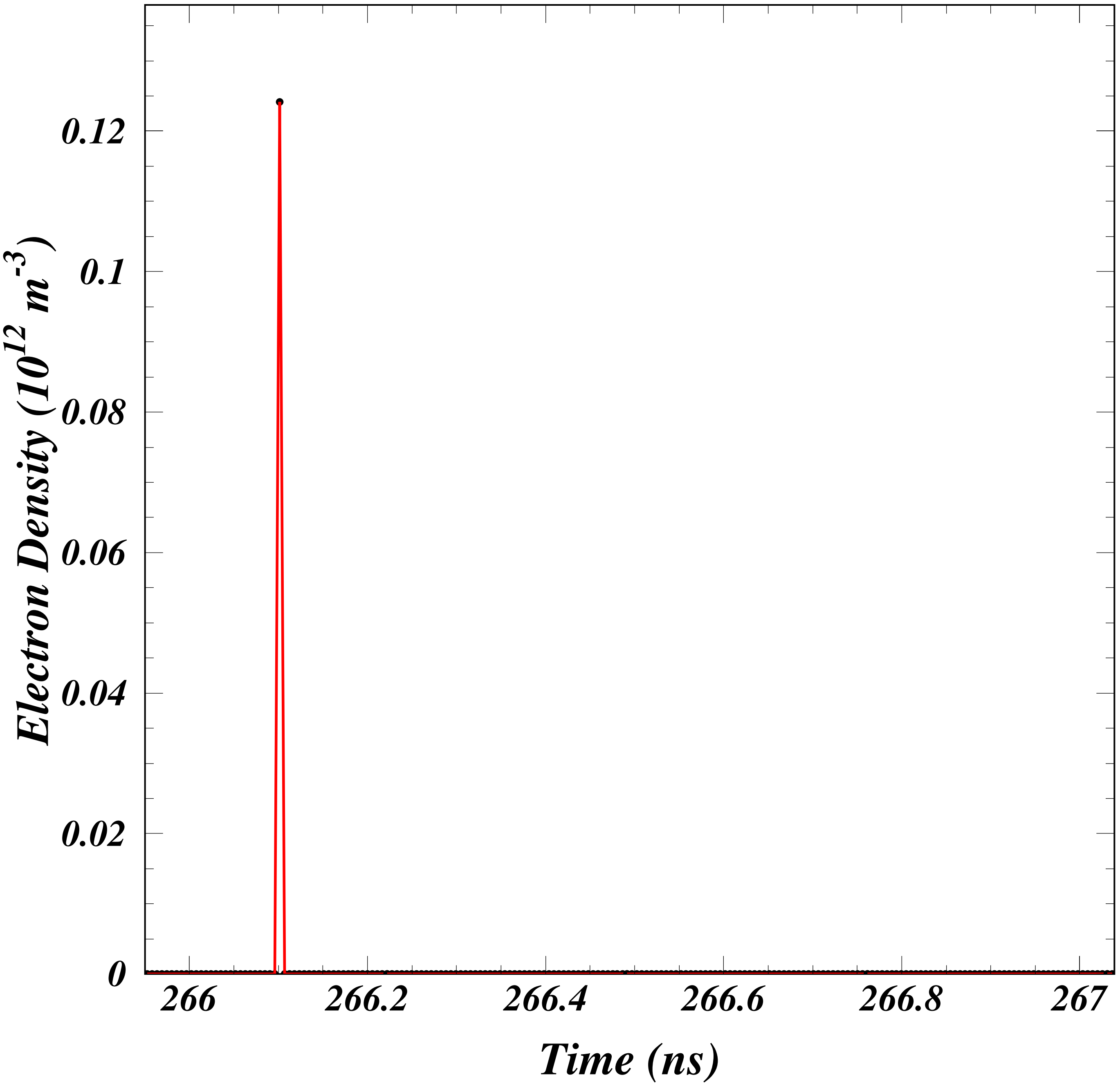

Central 5-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.05
0.1
0.15
0.2
0.25
0.3
266
266.2
266.4
266.6
266.8
267
Time (ns)

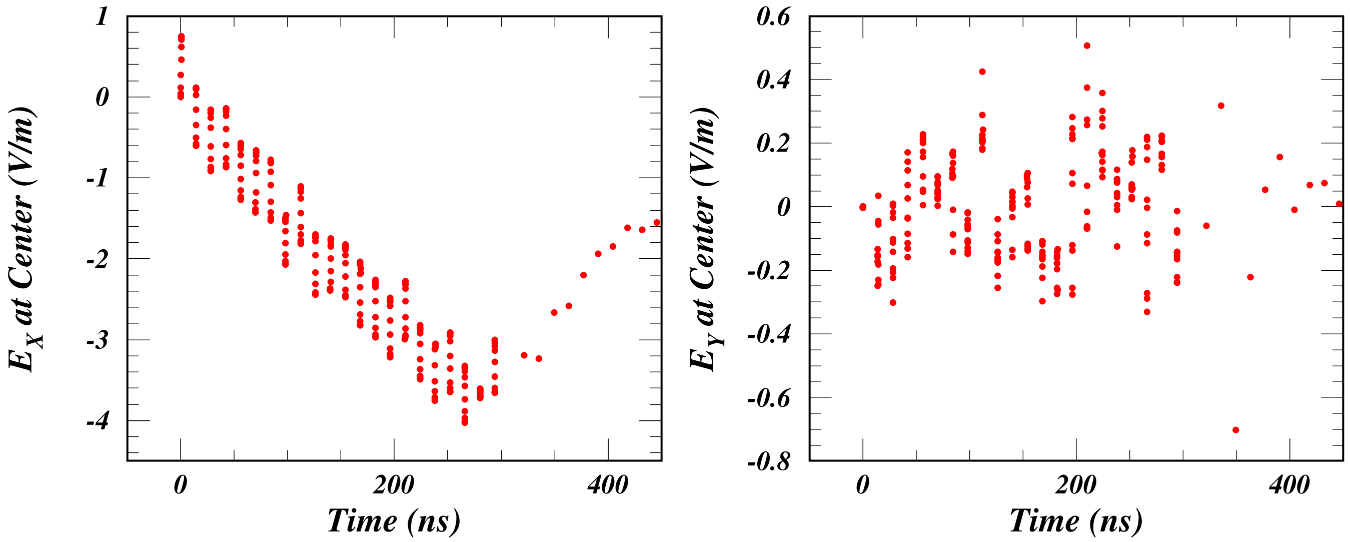
15/09/30 16.21


Central 20-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
266
266.2
266.4
266.6
266.8
267
Time (ns)

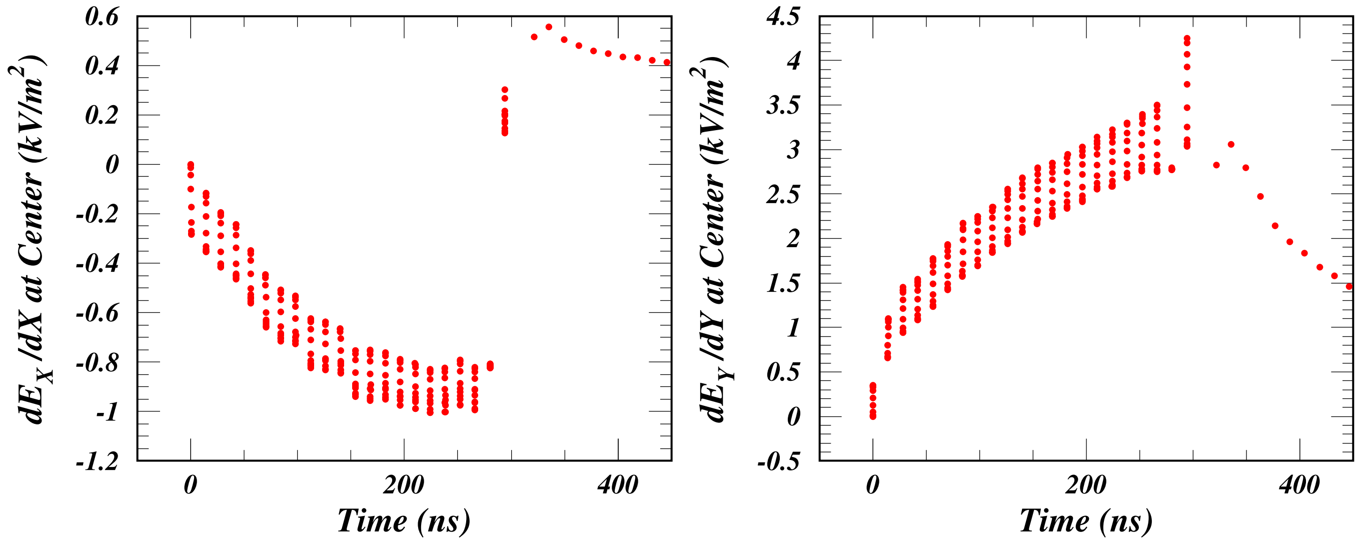
15/09/30 16.21

Central 100-sigma density at peak bunch current (10^{12} m^{-3})



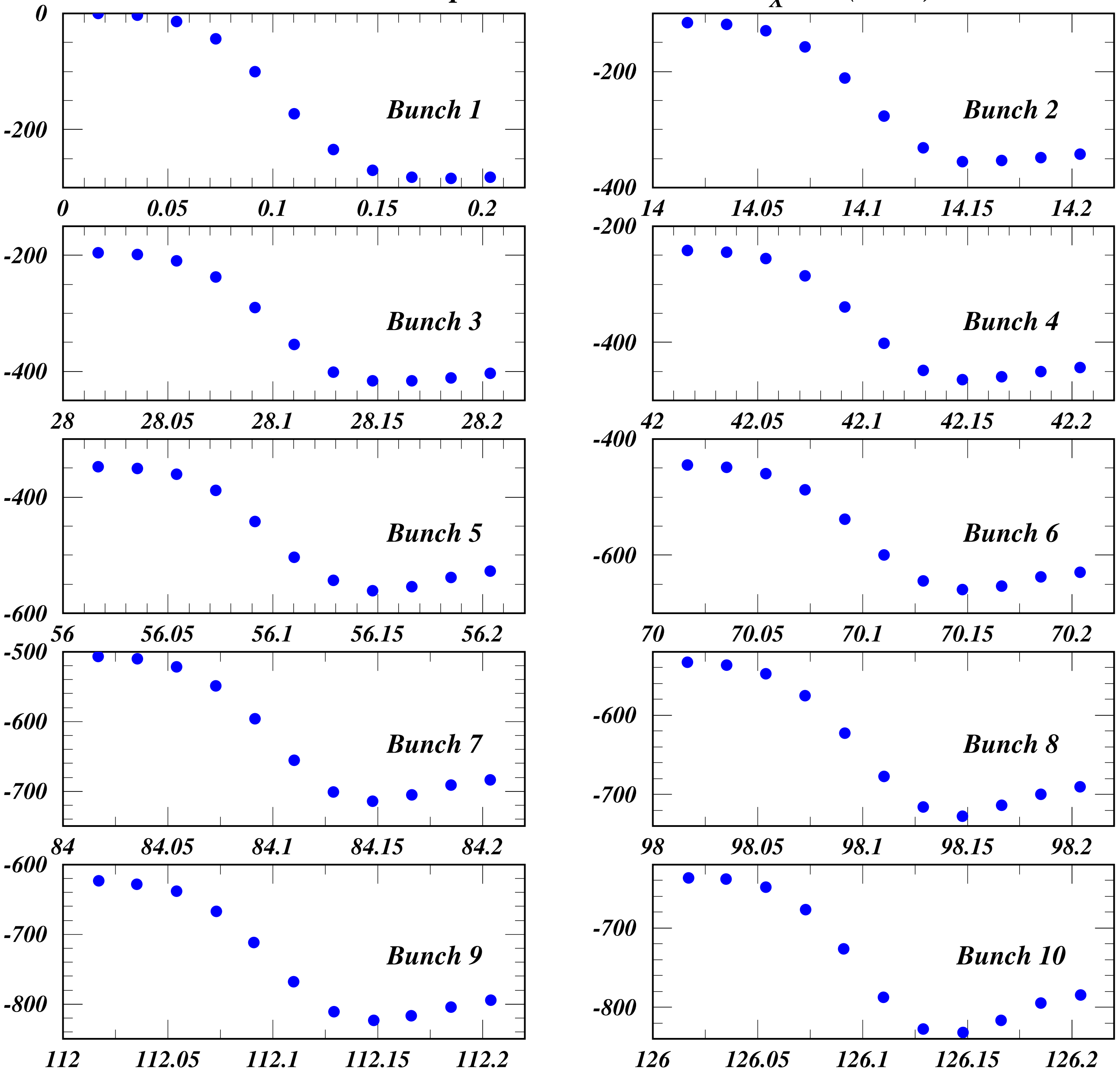


1
0
-1
-2
-3
-4
E_X at Center (V/m)
0
200
400
Time (ns)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
E_Y at Center (V/m)
0
200
400
Time (ns)

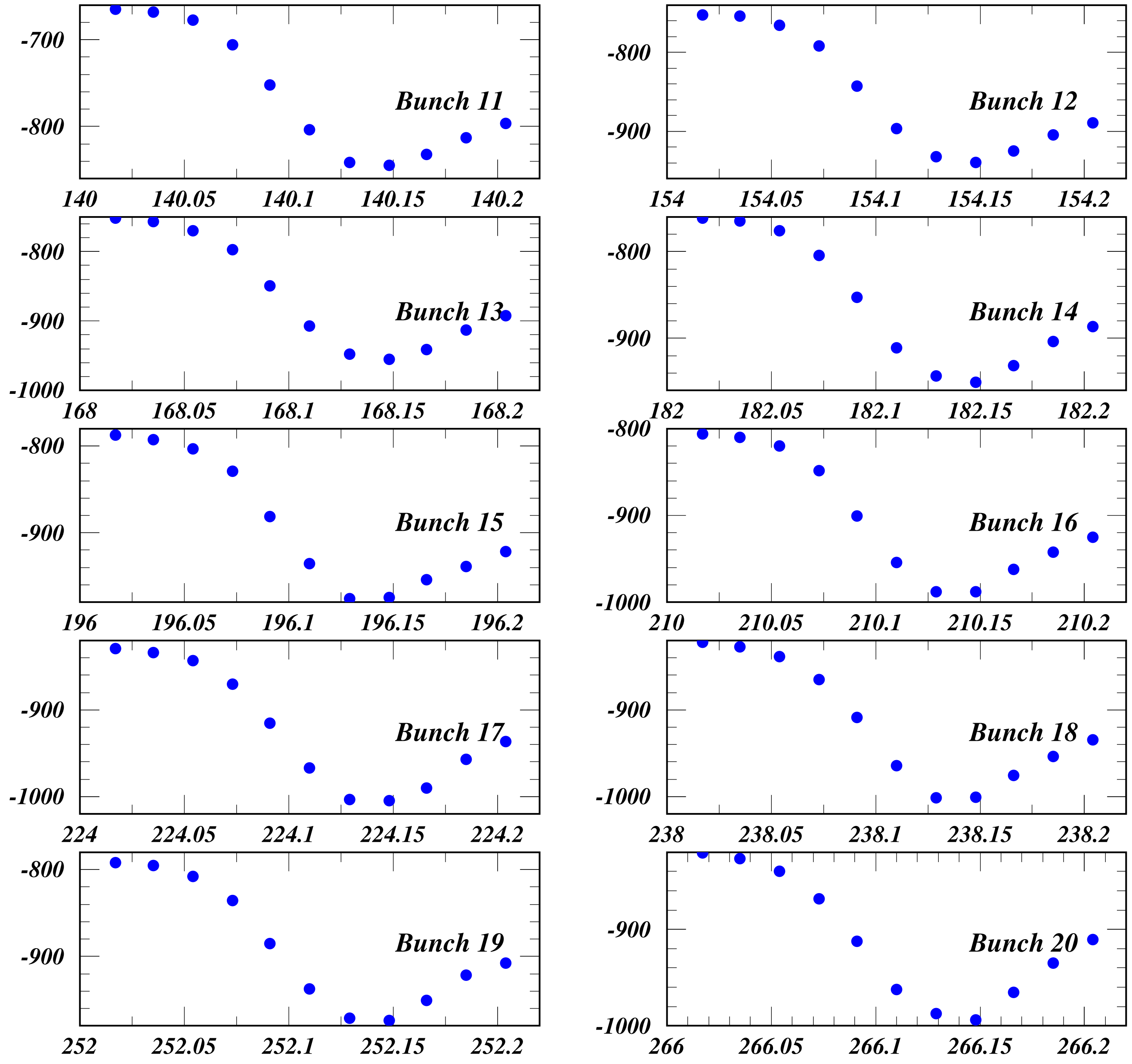


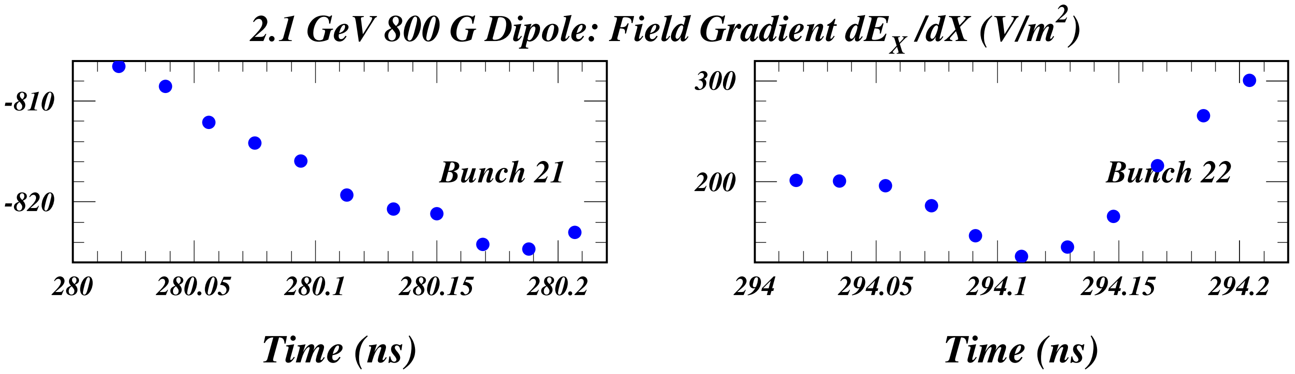
dE_X/dX at Center (kV/m^2)
Time (ns)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
0
200
400
dE_Y/dY at Center (kV/m^2)
Time (ns)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
0
200
400

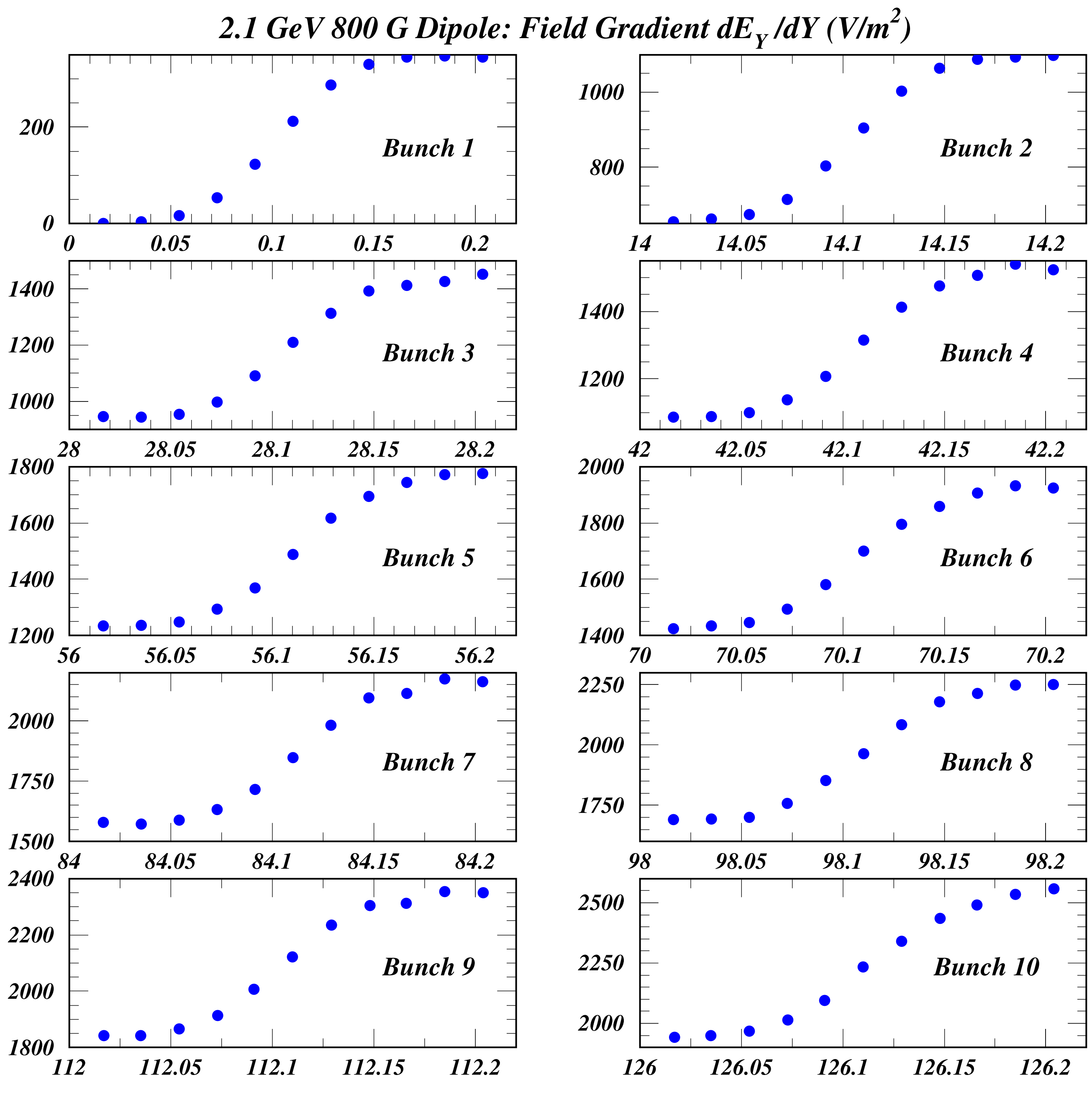
2.1 GeV 800 G Dipole: Field Gradient dE_X/dX (V/m^2)



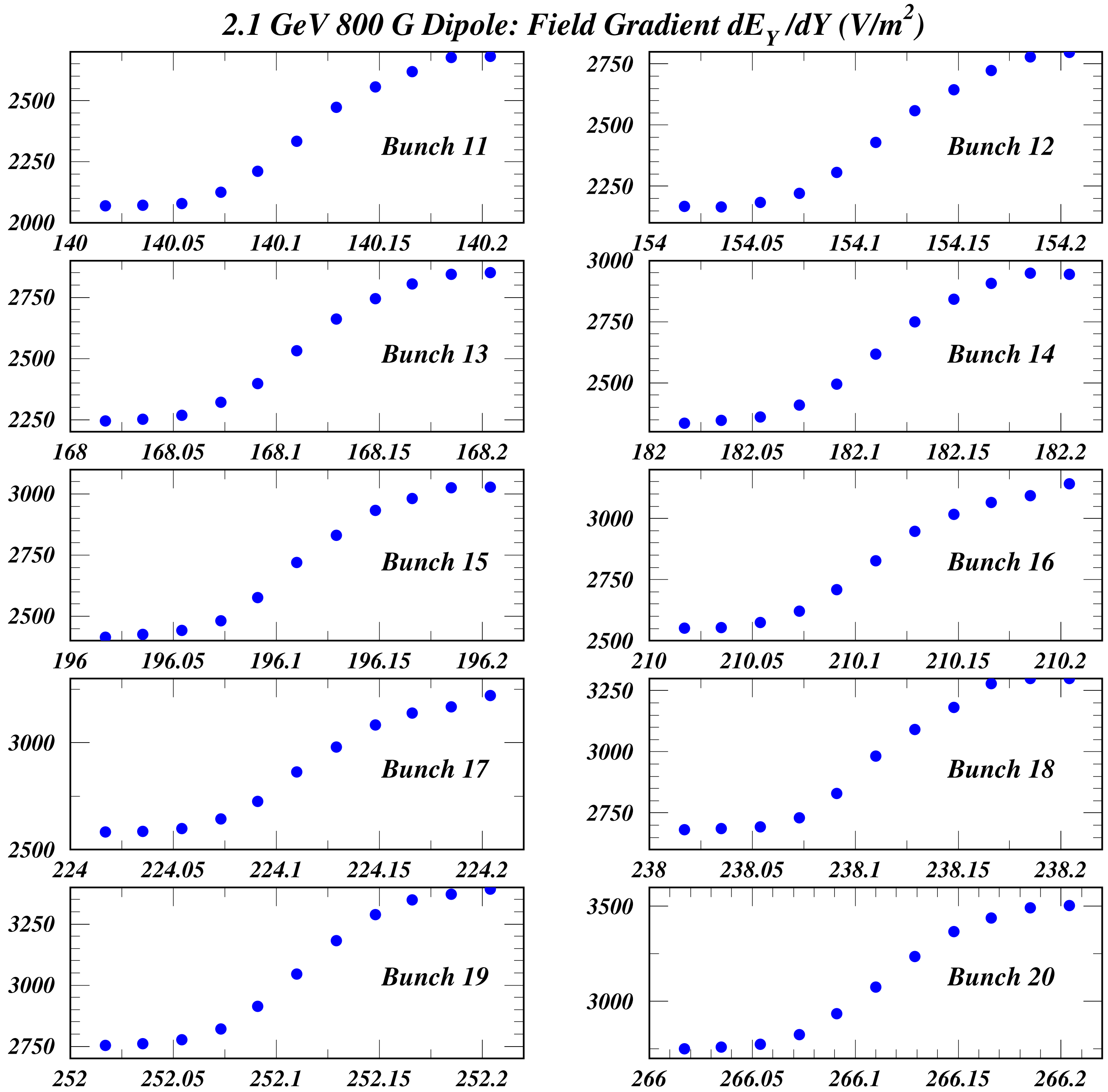
2.1 GeV 800 G Dipole: Field Gradient dE_X/dX (V/m^2)

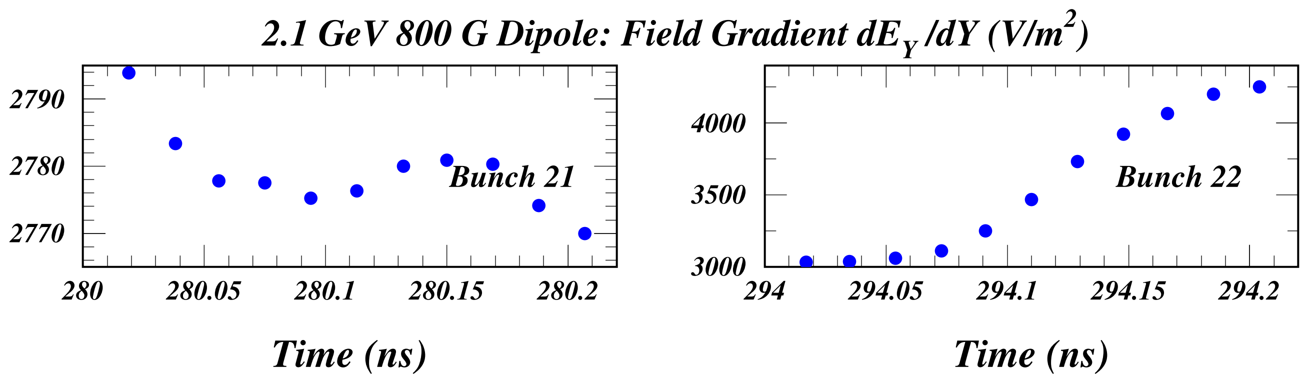



2.1 GeV 800 G Dipole: Field Gradient dE_X /dX (V/m^2)
-810
-820
Bunch 21
280
280.05
280.1
280.15
280.2
Time (ns)
300
200
Bunch 22
294
294.05
294.1
294.15
294.2
Time (ns)

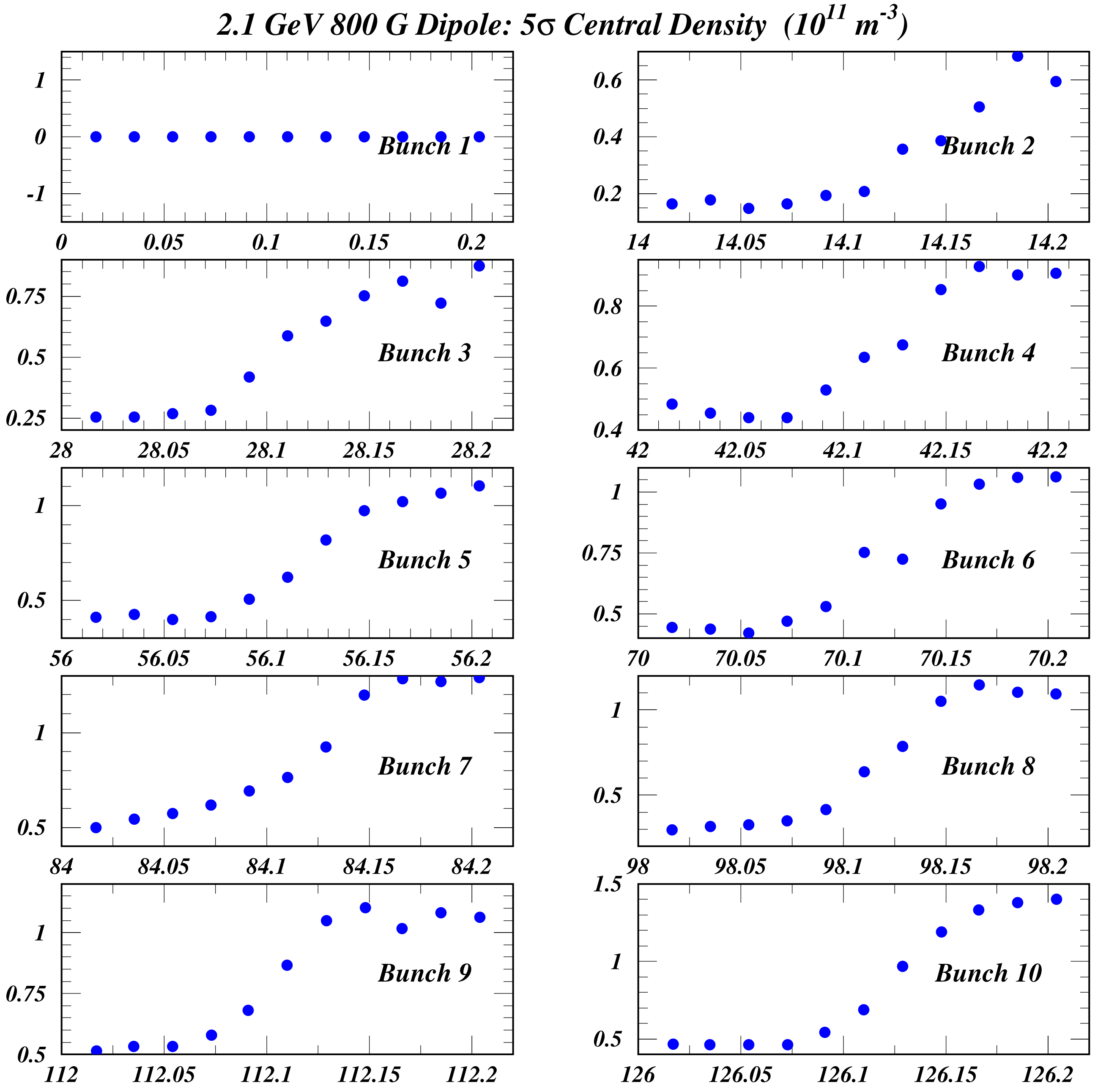


2.1 GeV 800 G Dipole: Field Gradient dE$_Y$ /dY (V/m^2)
Bunch 1
Bunch 2
Bunch 3
Bunch 4
Bunch 5
Bunch 6
Bunch 7
Bunch 8
Bunch 9
Bunch 10


2.1 GeV 800 G Dipole: Field Gradient dE_Y/dY (V/m^2)
Bunch 11
Bunch 12
Bunch 13
Bunch 14
Bunch 15
Bunch 16
Bunch 17
Bunch 18
Bunch 19
Bunch 20

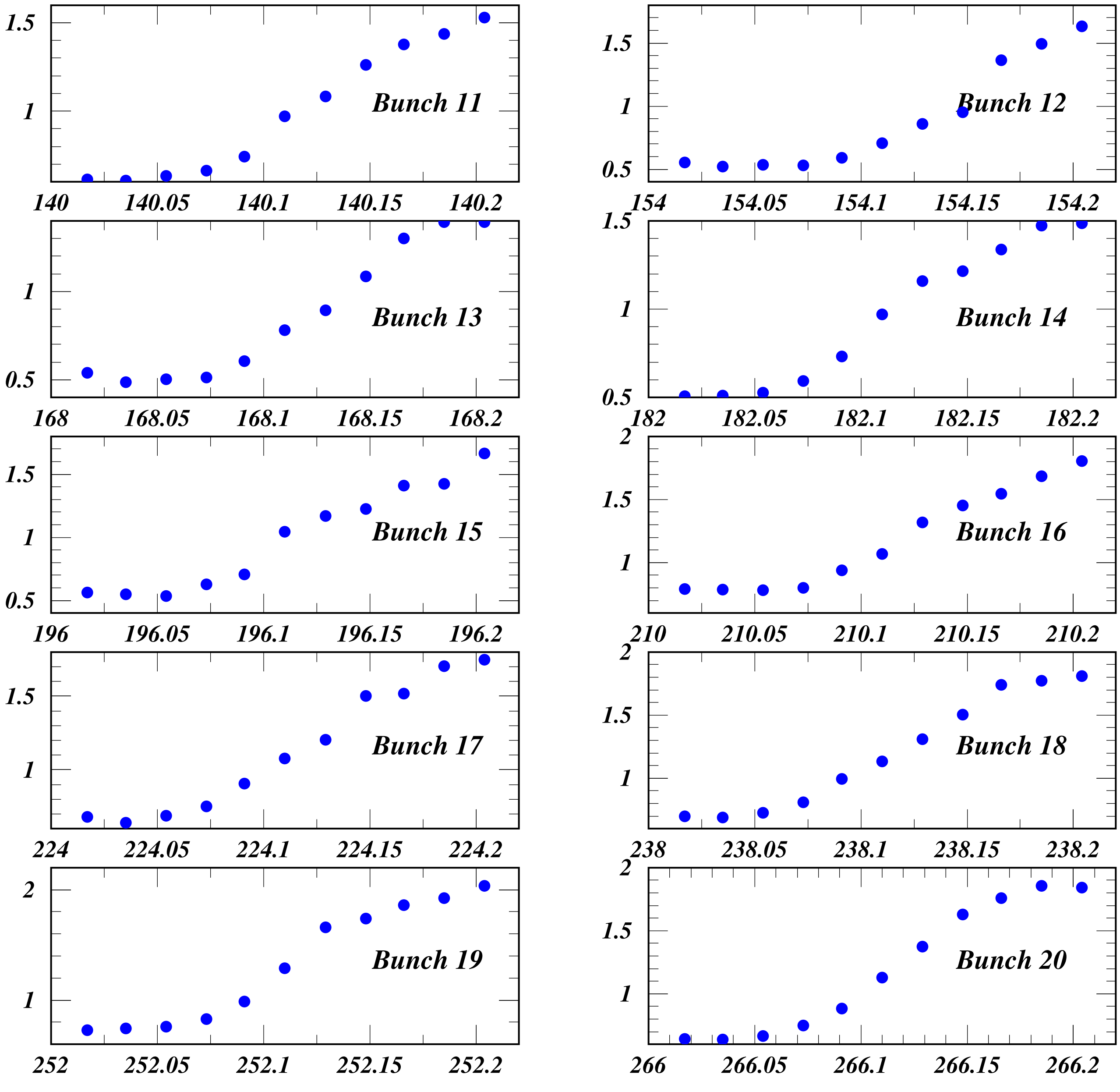


2.1 GeV 800 G Dipole: Field Gradient dE_Y/dY (V/m^2)
2790
2780
2770
Bunch 21
280
280.05
280.1
280.15
280.2
Time (ns)
4000
3500
3000
Bunch 22
294
294.05
294.1
294.15
294.2
Time (ns)

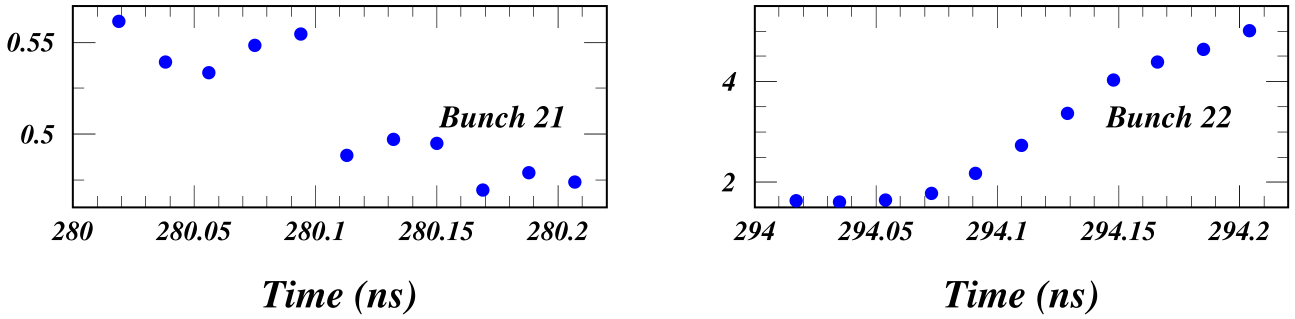


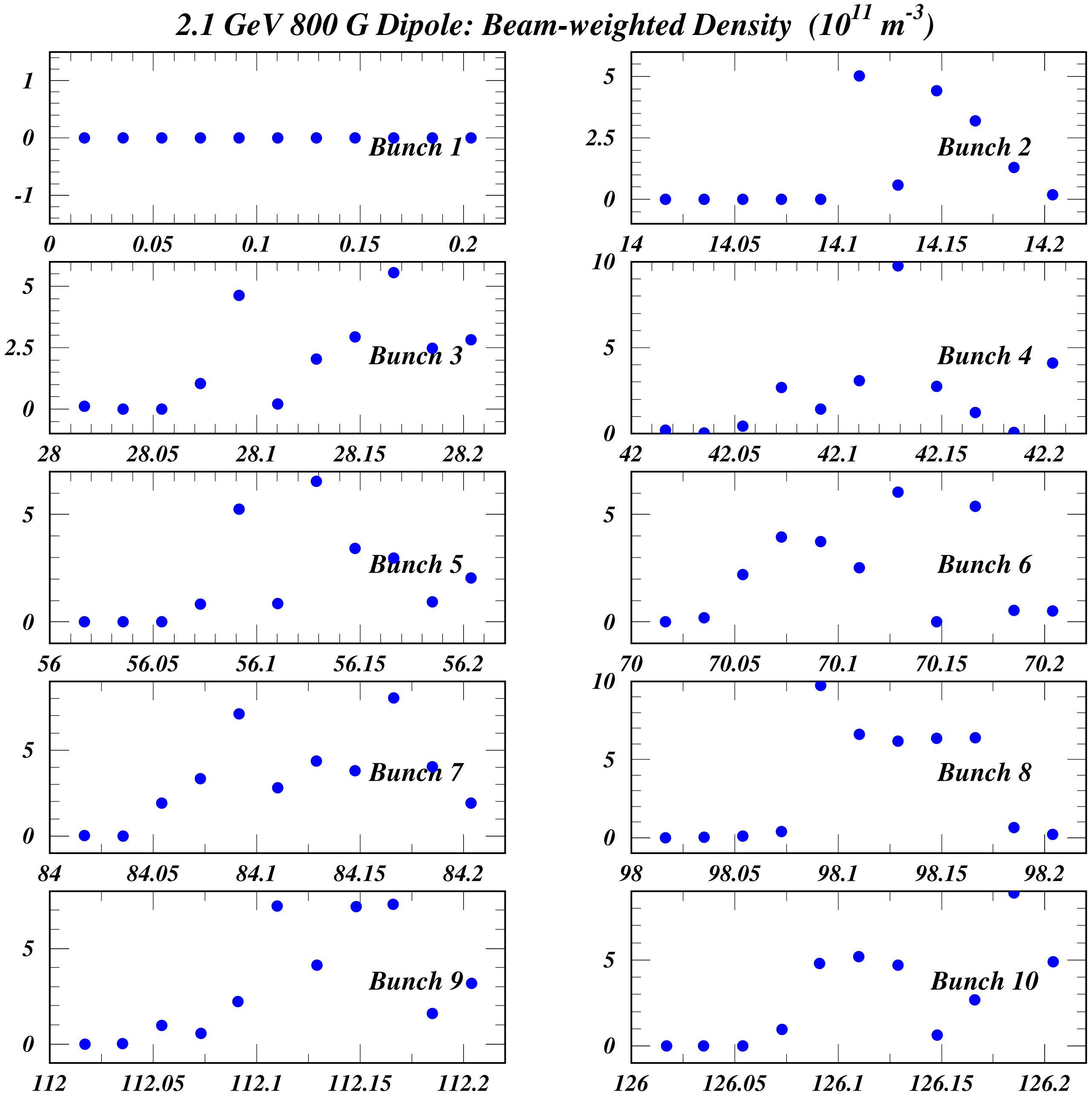
2.1 GeV 800 G Dipole: 5σ Central Density (10^11 m^-3)
Bunch 1
Bunch 2
Bunch 3
Bunch 4
Bunch 5
Bunch 6
Bunch 7
Bunch 8
Bunch 9
Bunch 10

2.1 GeV 800 G Dipole: 5σ Central Density $(10^{11}\ m^{-3})$

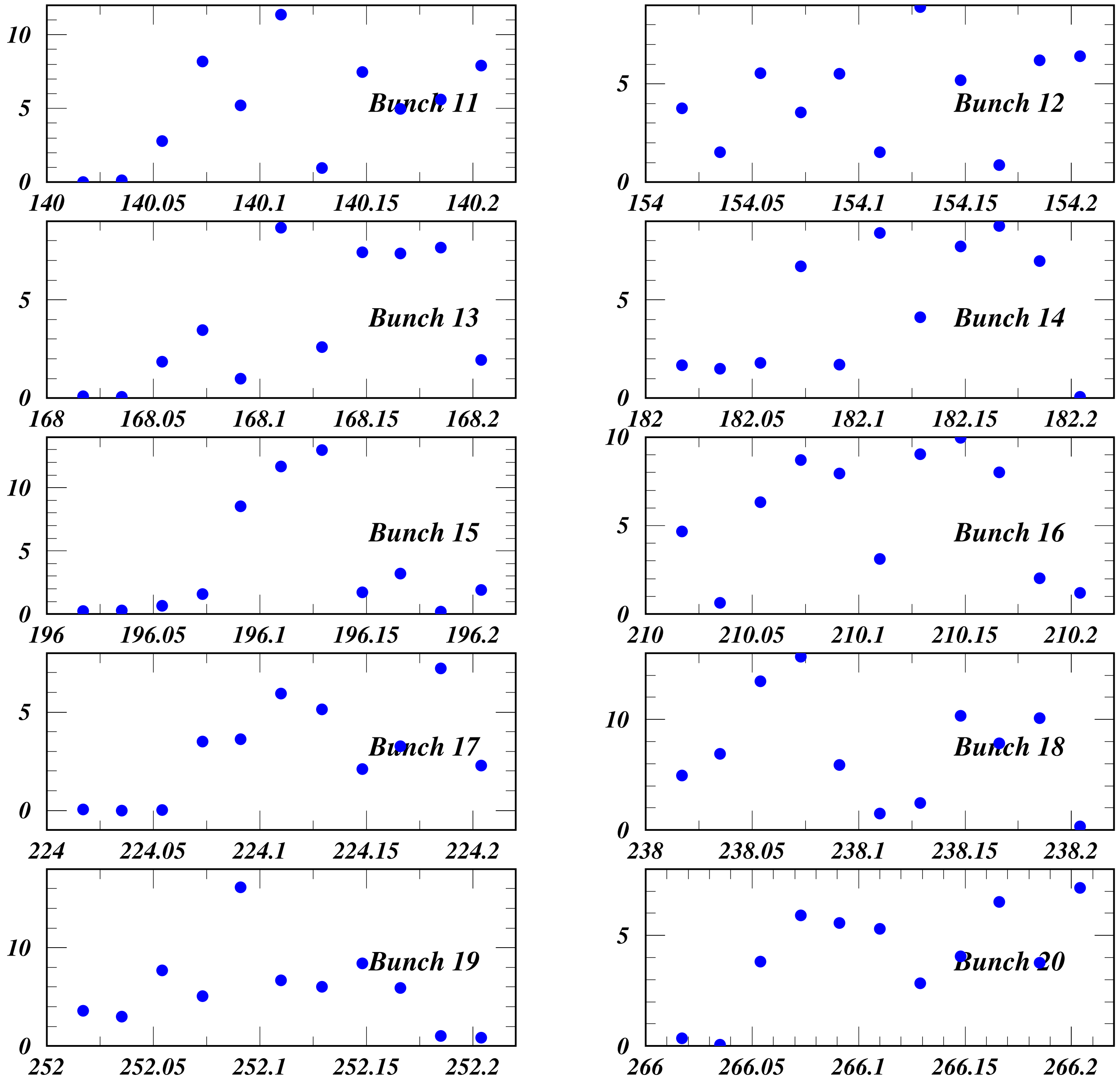


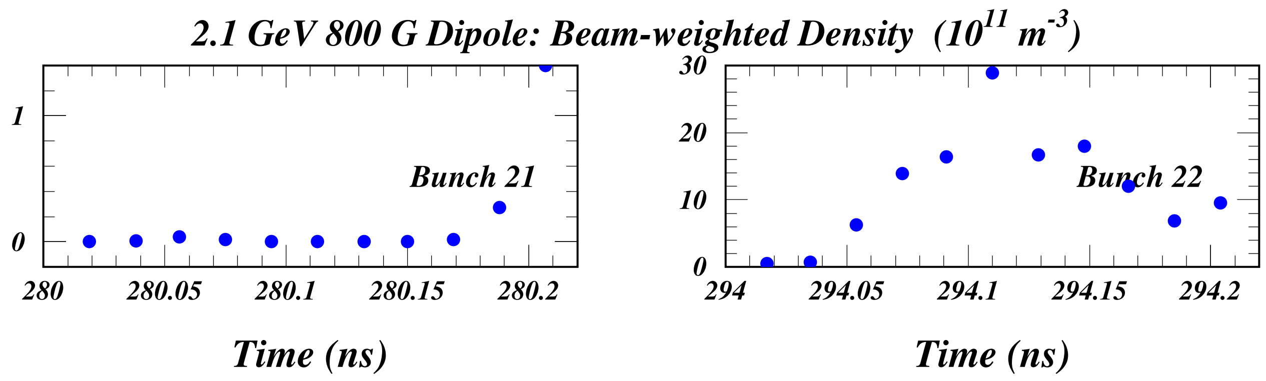
2.1 GeV 800 G Dipole: 5σ Central Density (10^{11} m^{-3})




2.1 GeV 800 G Dipole: Beam-weighted Density (10^11 m^-3)
Bunch 1
Bunch 2
Bunch 3
Bunch 4
Bunch 5
Bunch 6
Bunch 7
Bunch 8
Bunch 9
Bunch 10

2.1 GeV 800 G Dipole: Beam-weighted Density $(10^{11}\ m^{-3})$





2.1 GeV 800 G Dipole: Beam-weighted Density (10^11 m^-3)
1
0
Bunch 21
280
280.05
280.1
280.15
280.2
Time (ns)
30
20
10
0
Bunch 22
294
294.05
294.1
294.15
294.2
Time (ns)