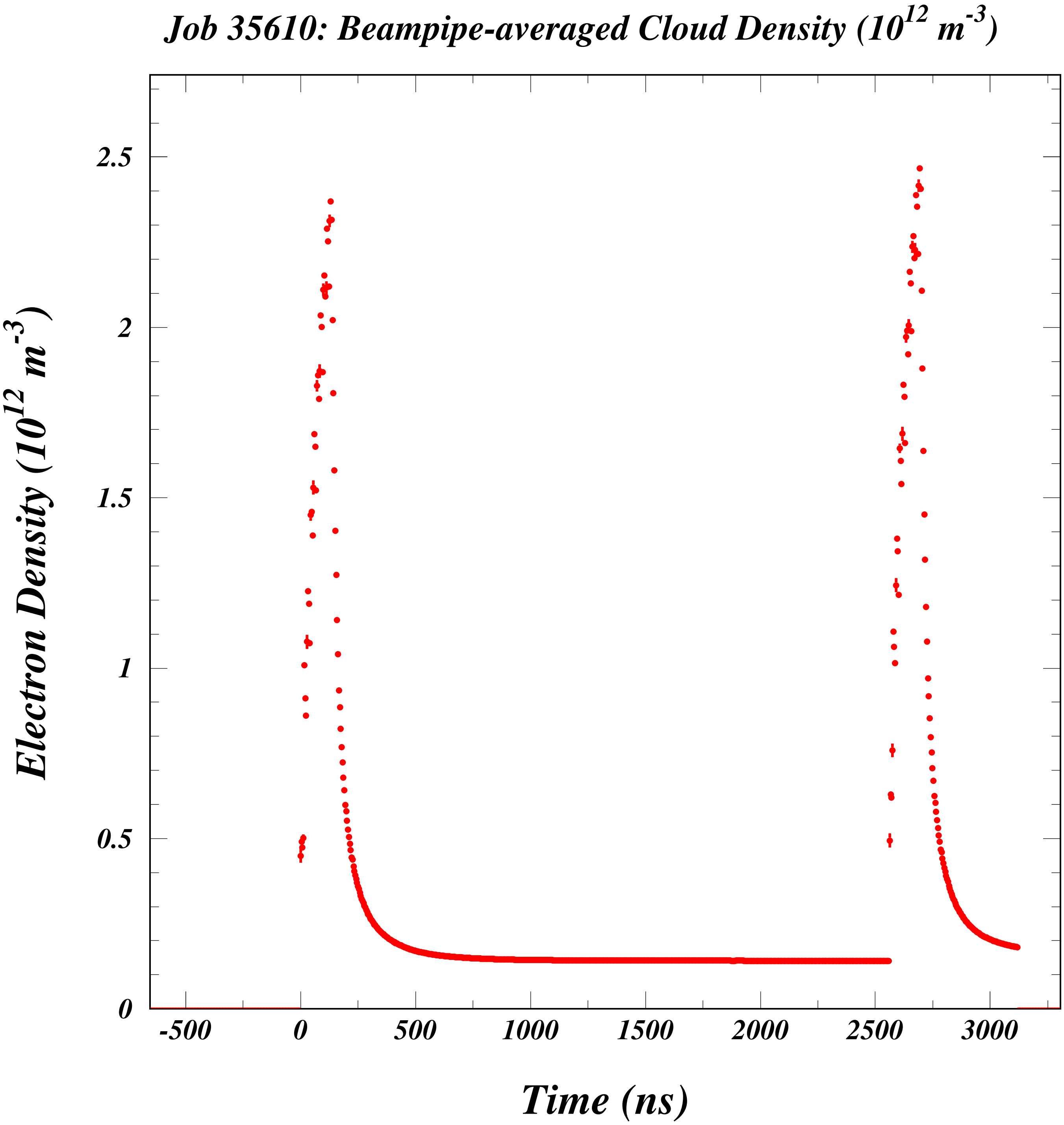
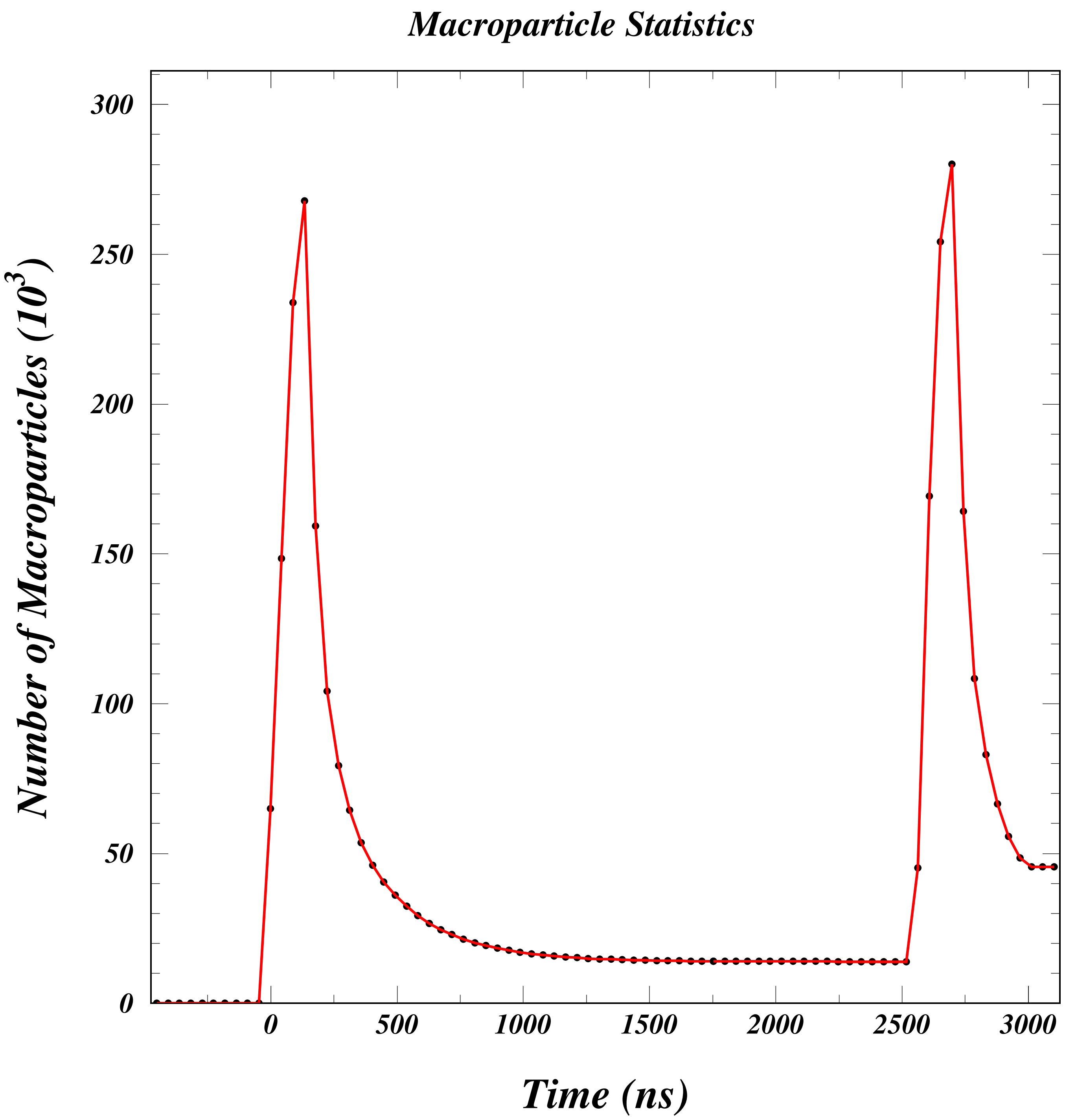
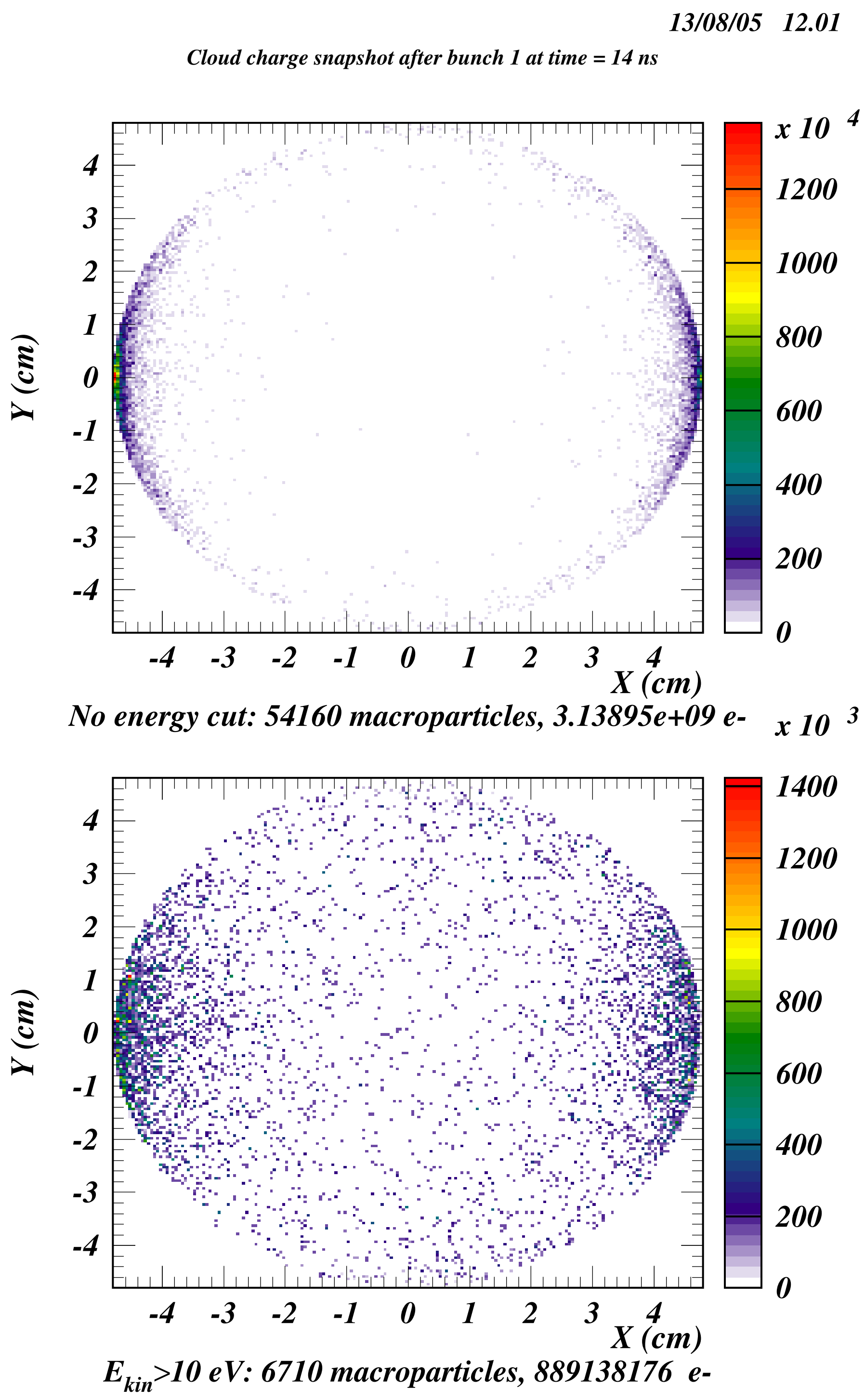
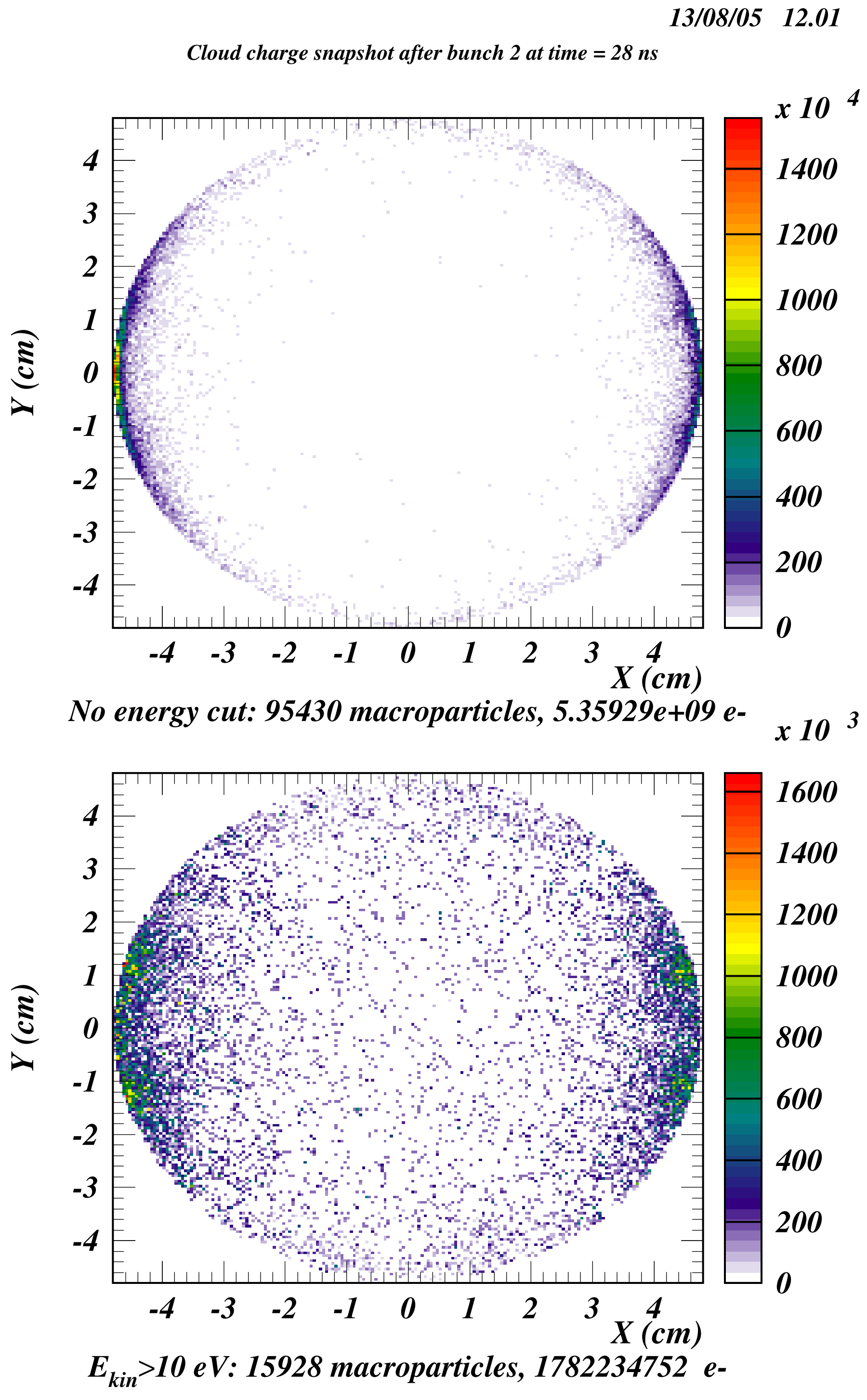

Job 35610: Beampipe-averaged Cloud Density (10^12 m^-3)
Electron Density (10^12 m^-3)
0
0.5
1
1.5
2
2.5
-500
0
500
1000
1500
2000
2500
3000
Time (ns)



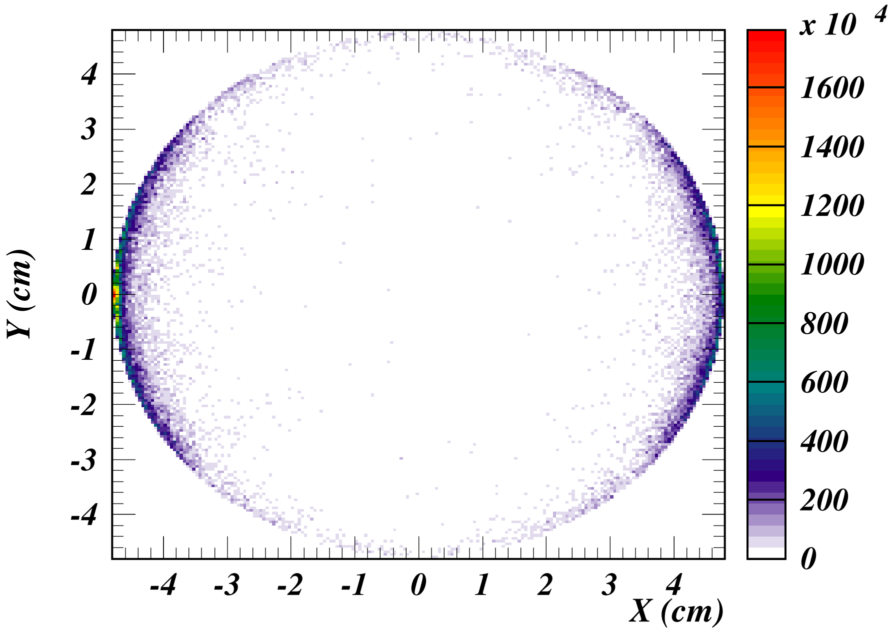
Macroparticle Statistics
Number of Macroparticles (10^3)
Time (ns)
0
50
100
150
200
250
300
0
500
1000
1500
2000
2500
3000


13/08/05 12.01
Cloud charge snapshot after bunch 1 at time = 14 ns
Y (cm)
X (cm)
x 10 4
No energy cut: 54160 macroparticles, 3.13895e+09 e-
x 10 3
E_kin>10 eV: 6710 macroparticles, 889138176 e-

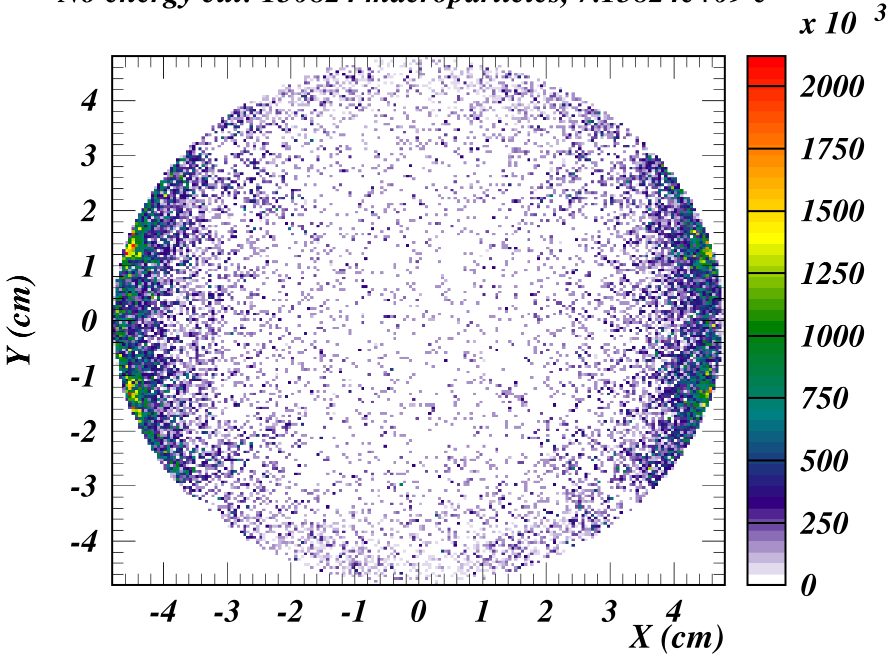

13/08/05 12.01
Cloud charge snapshot after bunch 2 at time = 28 ns
x 10 4
Y (cm)
X (cm)
No energy cut: 95430 macroparticles, 5.35929e+09 e-
x 10 3
Y (cm)
X (cm)
E$_{kin}$>10 eV: 15928 macroparticles, 1782234752 e-

13/08/05 12.01

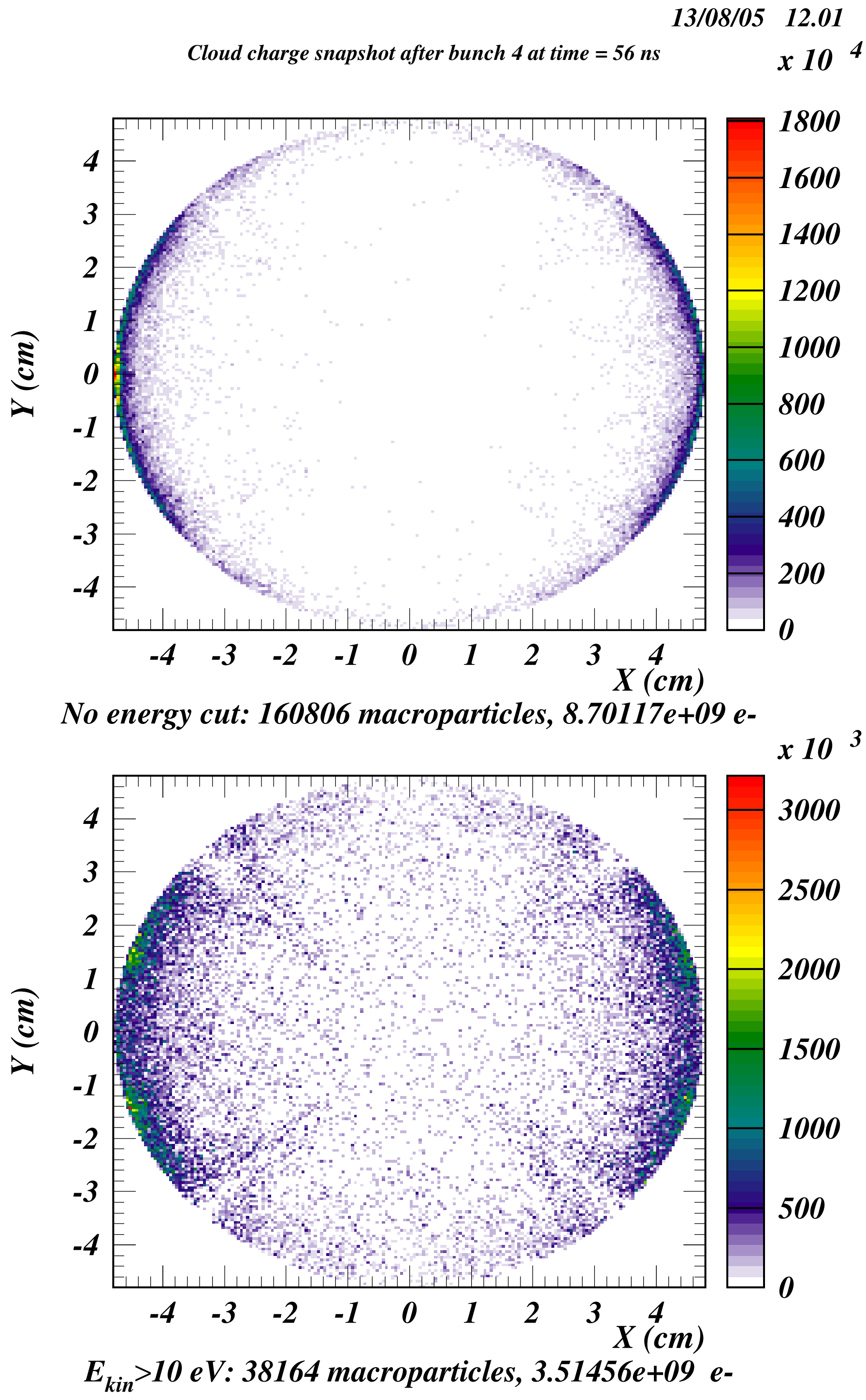
Cloud charge snapshot after bunch 3 at time = 42 ns



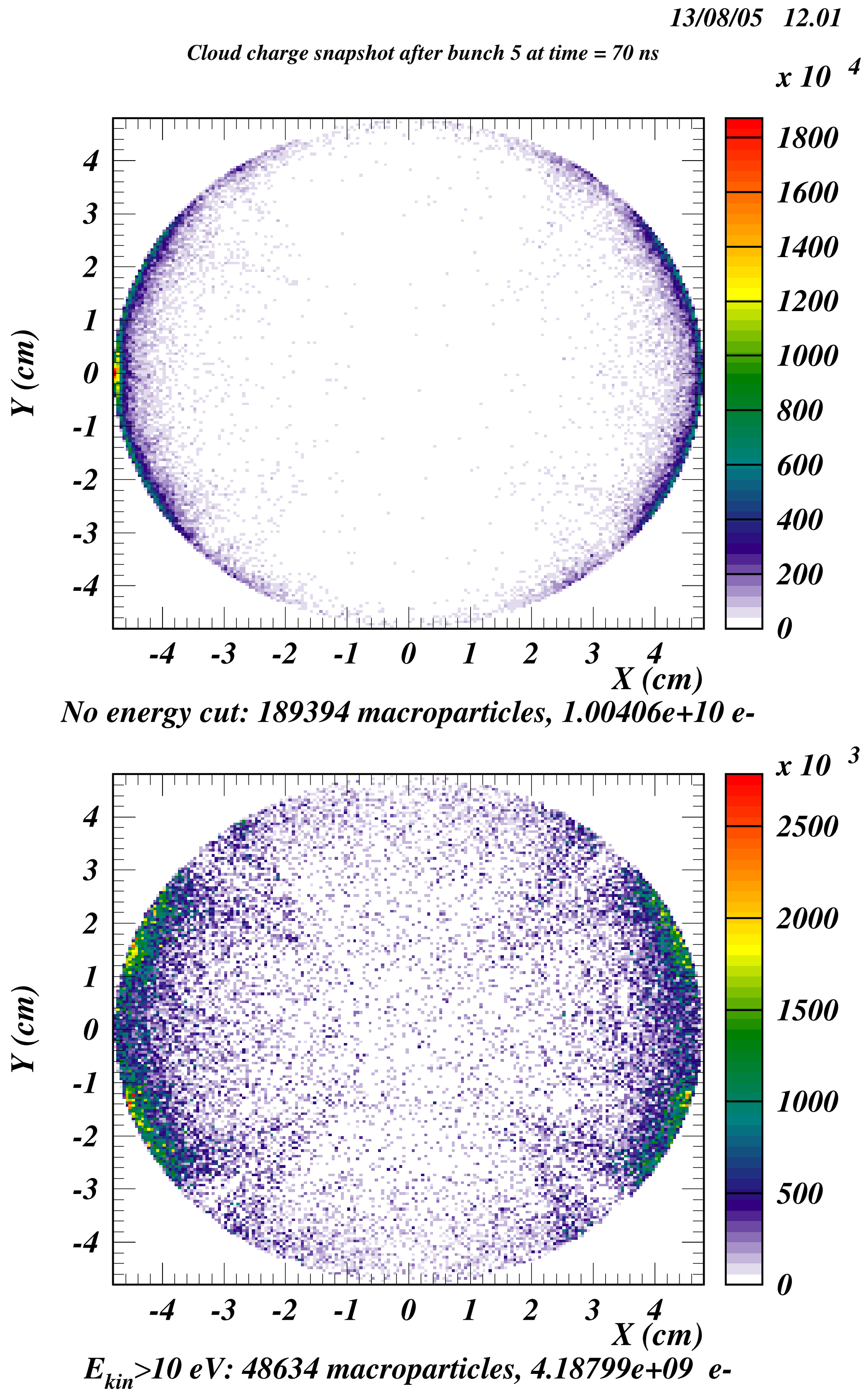
No energy cut: 130824 macroparticles, 7.15824e+09 e-

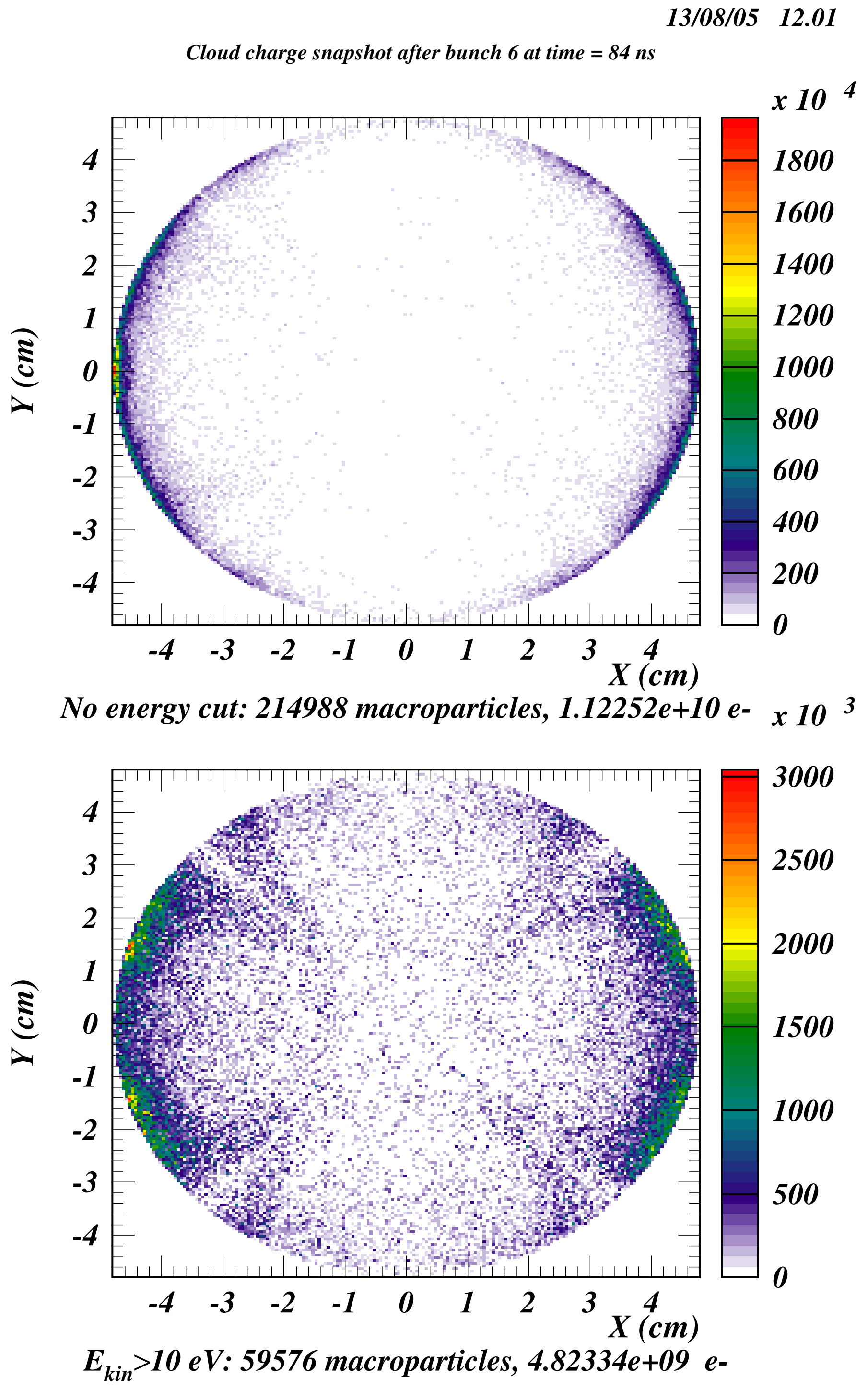


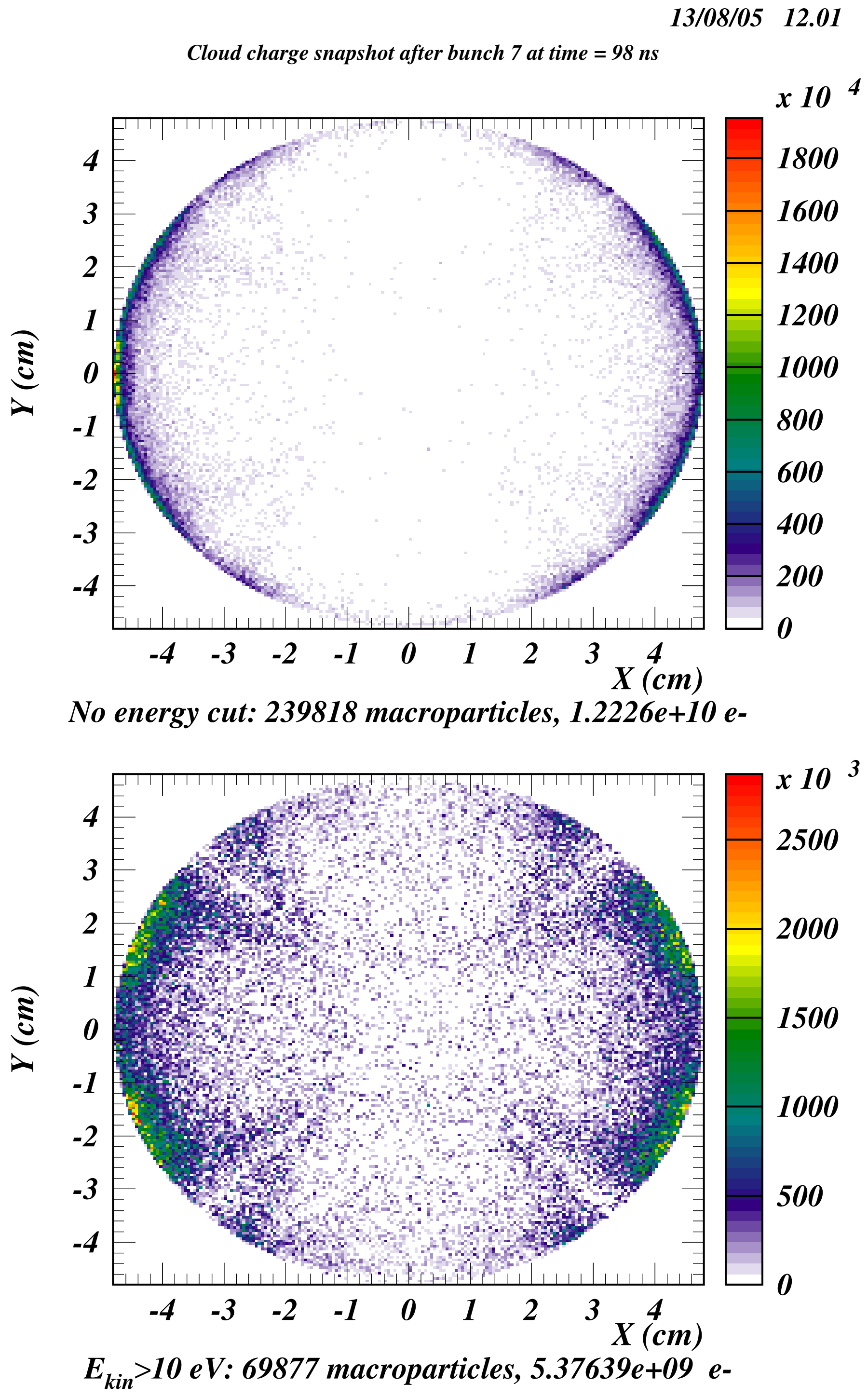
E_{kin}>10 eV: 26940 macroparticles, 2.67844e+09 e-



13/08/05 12.01
Cloud charge snapshot after bunch 4 at time = 56 ns
x 10 4
1800
1600
1400
1200
1000
800
600
400
200
0
Y (cm)
X (cm)
No energy cut: 160806 macroparticles, 8.70117e+09 e-
x 10 3
3000
2500
2000
1500
1000
500
0
Y (cm)
X (cm)
E kin >10 eV: 38164 macroparticles, 3.51456e+09 e-

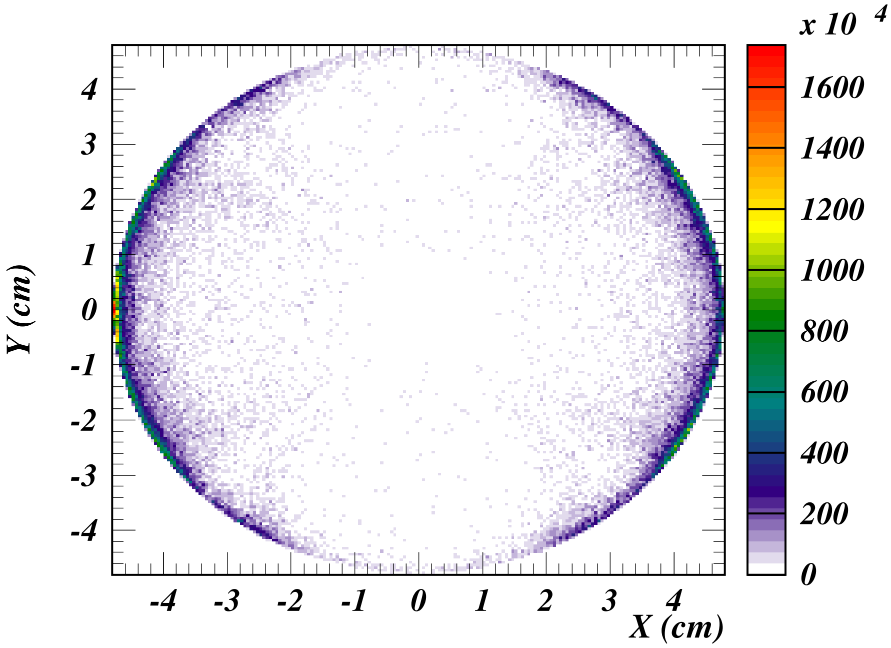

13/08/05 12.01
Cloud charge snapshot after bunch 5 at time = 70 ns
x 10 4
1800
1600
1400
1200
1000
800
600
400
200
0
Y (cm)
X (cm)
No energy cut: 189394 macroparticles, 1.00406e+10 e-
x 10 3
2500
2000
1500
1000
500
0
Y (cm)
X (cm)
E_kin>10 eV: 48634 macroparticles, 4.18799e+09 e-


13/08/05 12.01
Cloud charge snapshot after bunch 6 at time = 84 ns
x 10^4
1800
1600
1400
1200
1000
800
600
400
200
0
Y (cm)
X (cm)
No energy cut: 214988 macroparticles, 1.12252e+10 e-
x 10^3
3000
2500
2000
1500
1000
500
0
Y (cm)
X (cm)
E_kin>10 eV: 59576 macroparticles, 4.82334e+09 e-

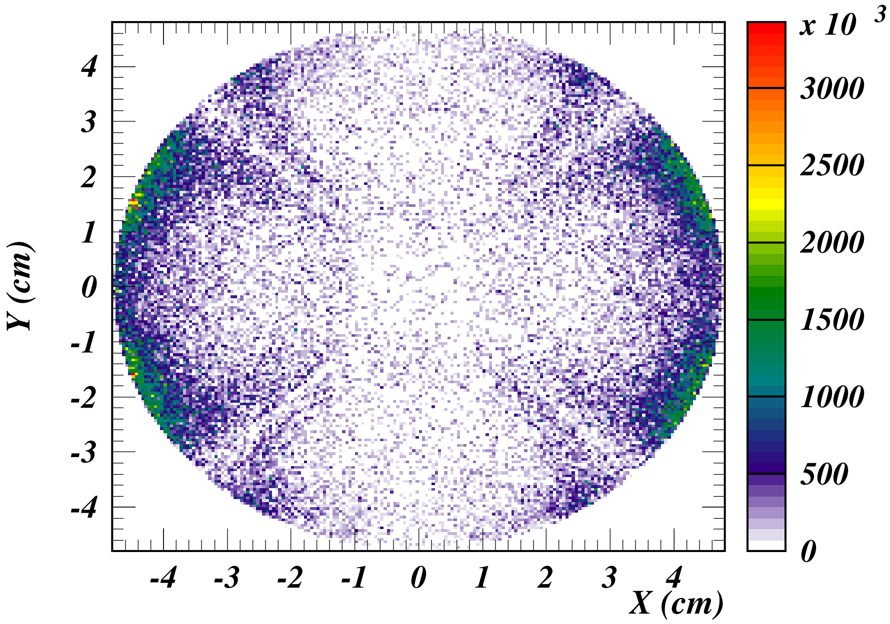

13/08/05 12.01
Cloud charge snapshot after bunch 7 at time = 98 ns
x 10 4
1800
1600
1400
1200
1000
800
600
400
200
0
Y (cm)
X (cm)
No energy cut: 239818 macroparticles, 1.2226e+10 e-
x 10 3
2500
2000
1500
1000
500
0
Y (cm)
X (cm)
E_kin>10 eV: 69877 macroparticles, 5.37639e+09 e-

13/08/05   12.01

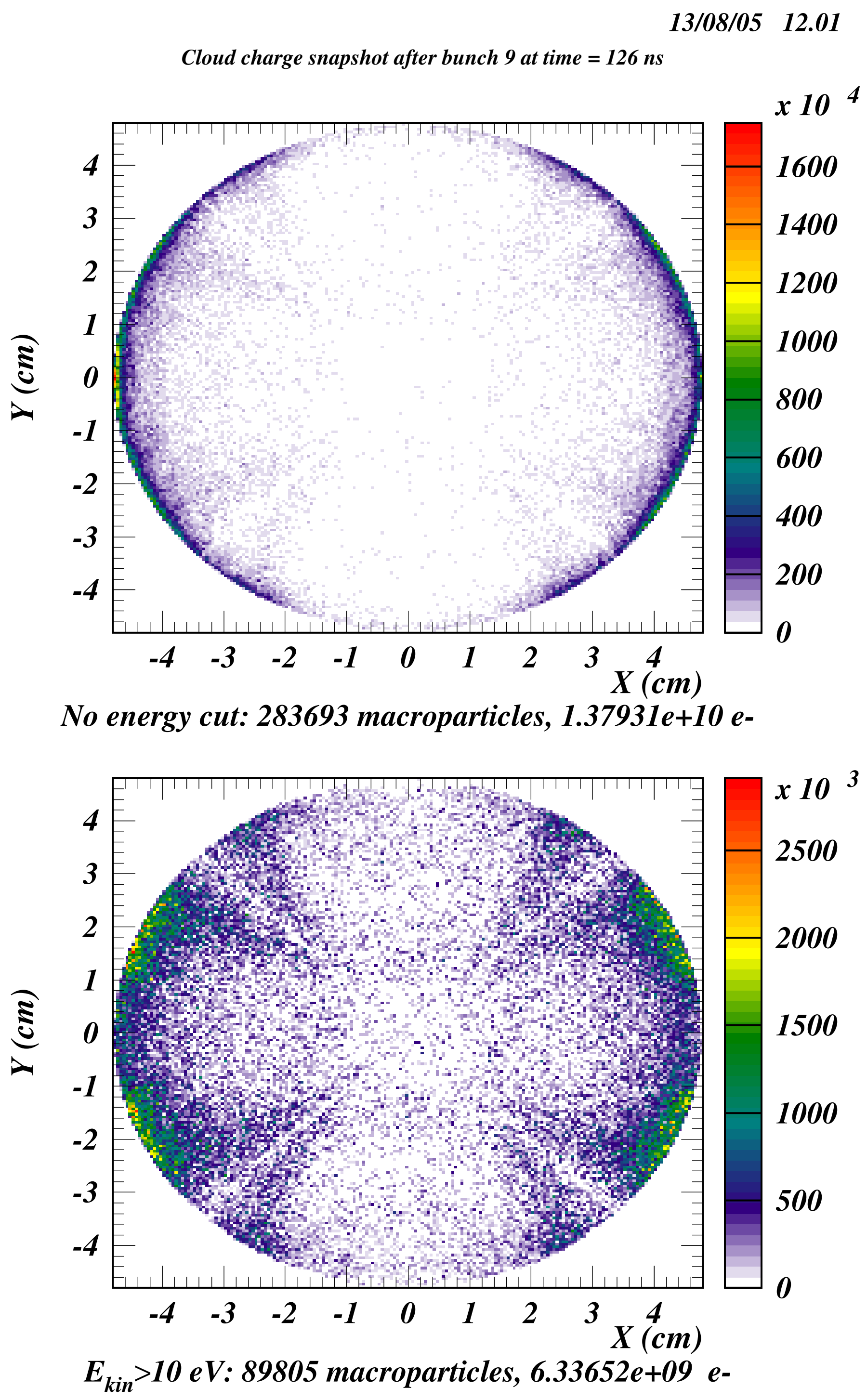
Cloud charge snapshot after bunch 8 at time = 112 ns

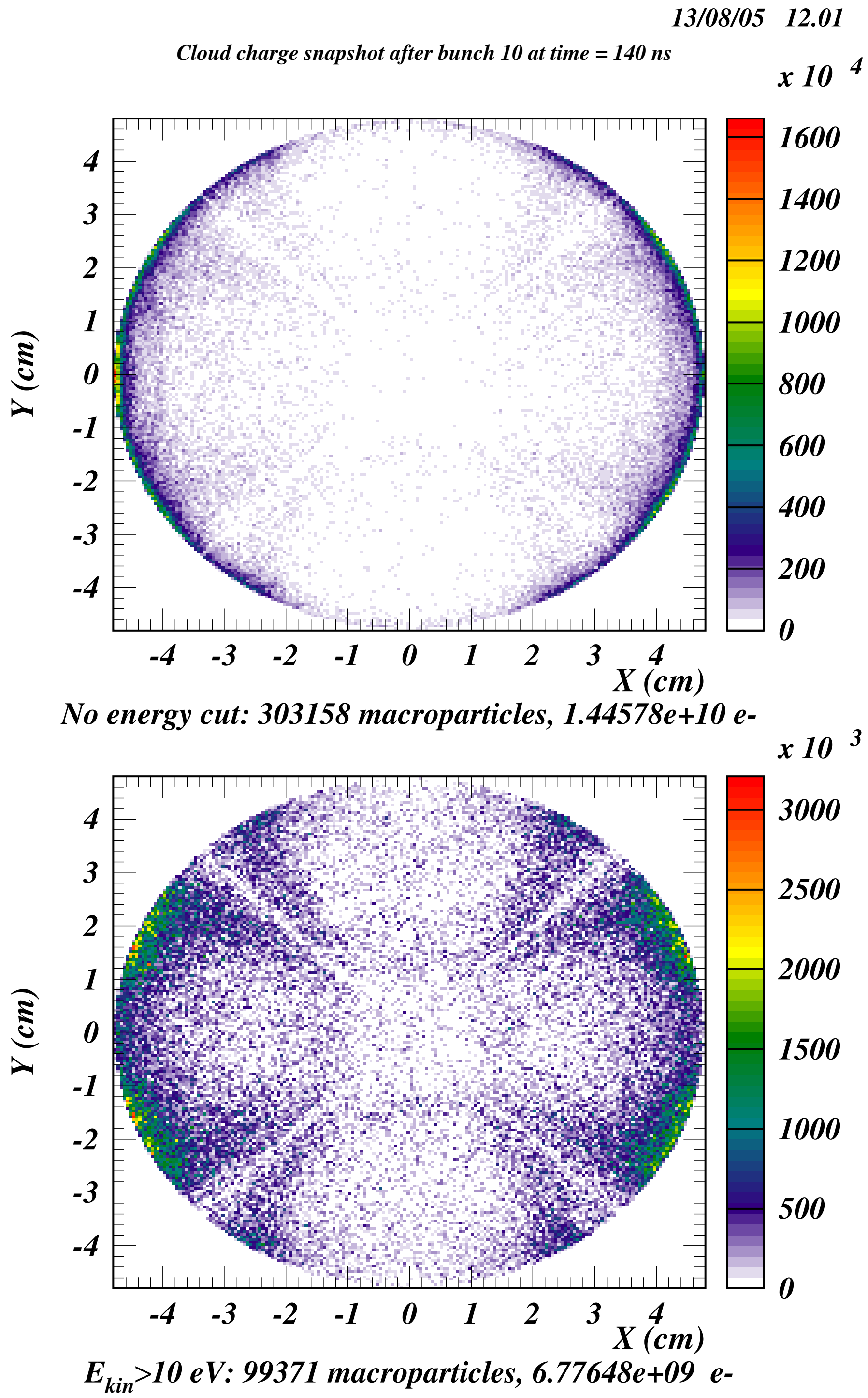


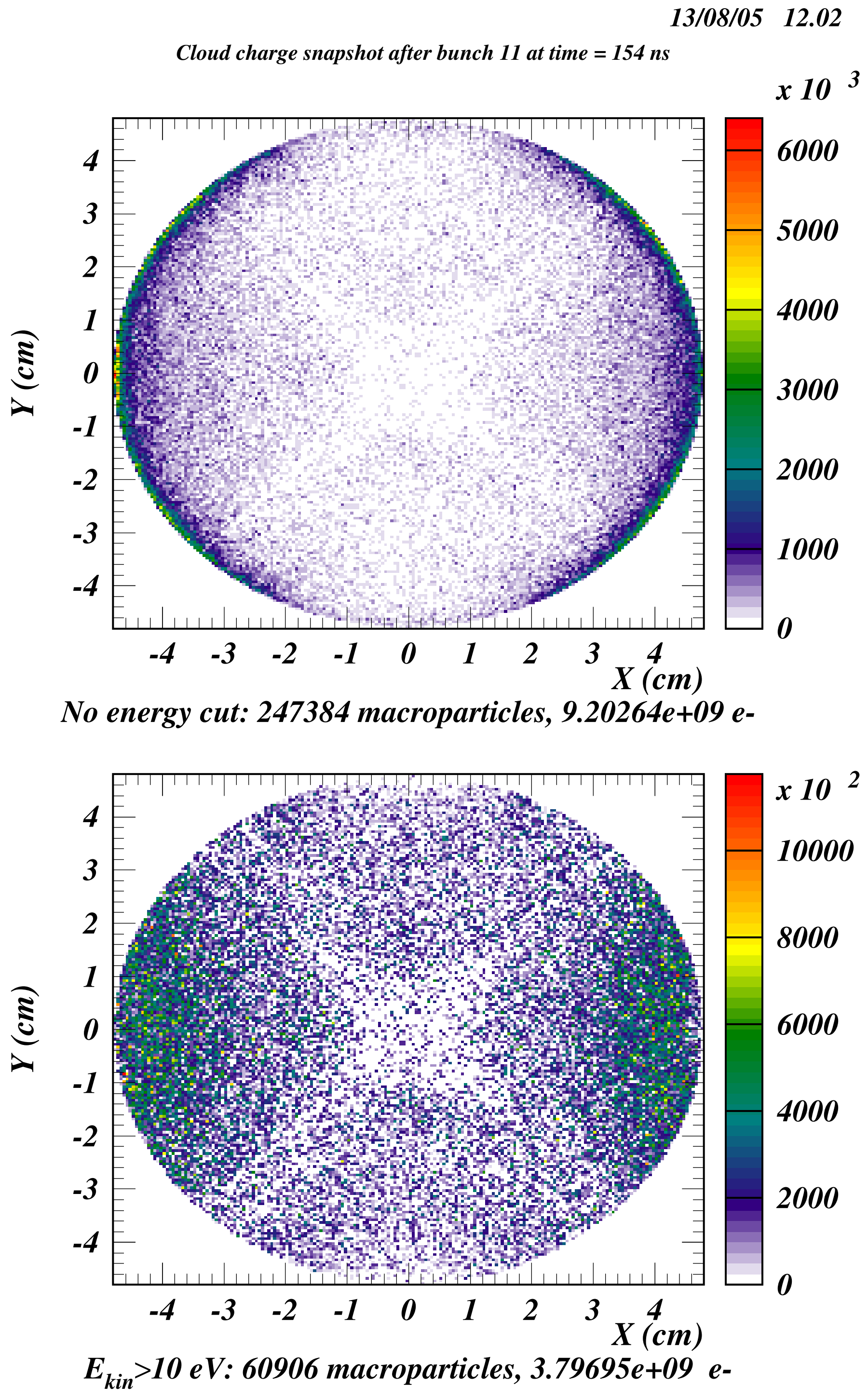
No energy cut: 262584 macroparticles, 1.30616e+10 e-



E_{kin}>10 eV: 80238 macroparticles, 5.90343e+09 e-

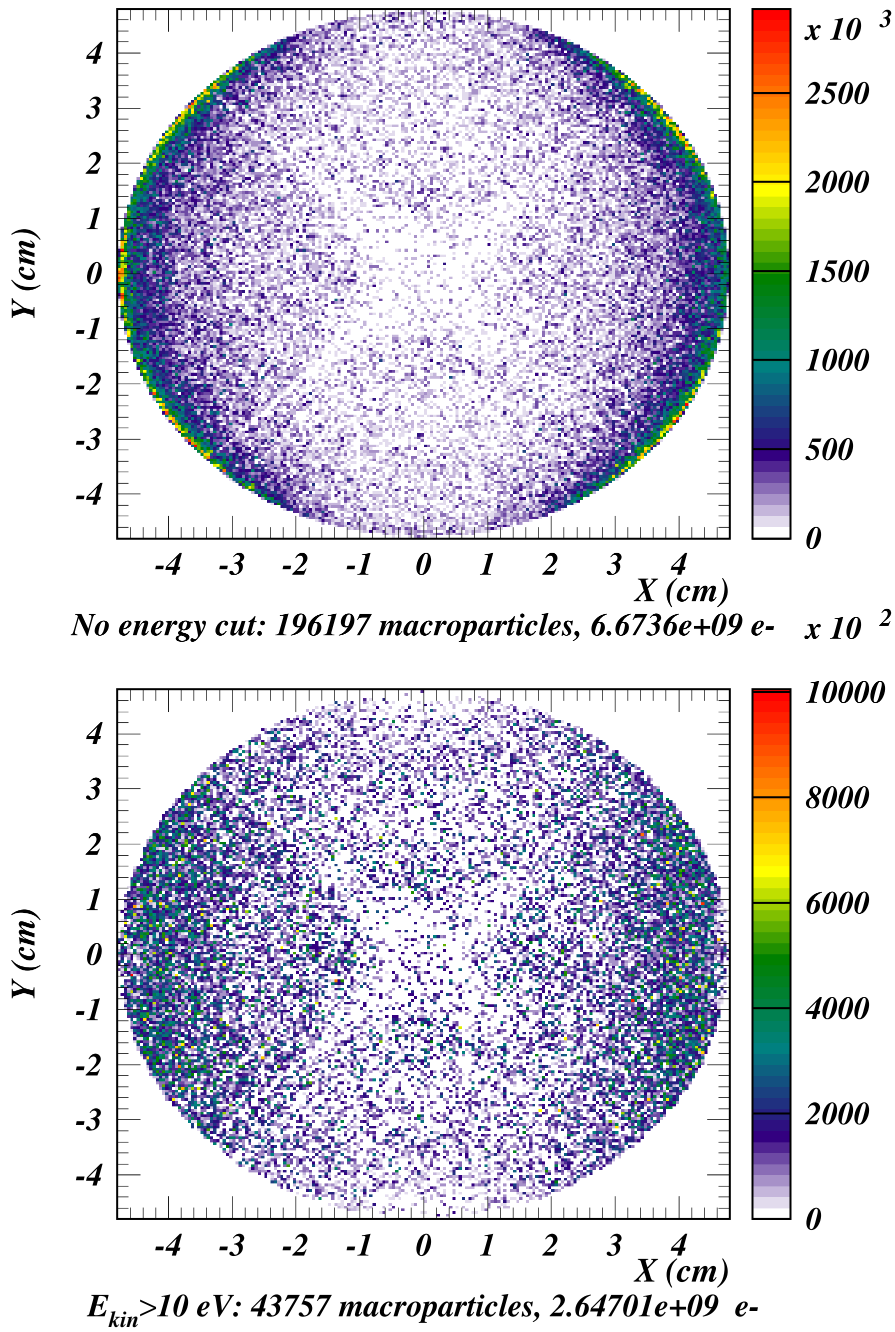

13/08/05 12.01
Cloud charge snapshot after bunch 9 at time = 126 ns
x 10 4
1600
1400
1200
1000
800
600
400
200
0
Y (cm)
4
3
2
1
0
-1
-2
-3
-4
-4 -3 -2 -1 0 1 2 3 4
X (cm)
No energy cut: 283693 macroparticles, 1.37931e+10 e-
x 10 3
2500
2000
1500
1000
500
0
Y (cm)
X (cm)
E_kin>10 eV: 89805 macroparticles, 6.33652e+09 e-

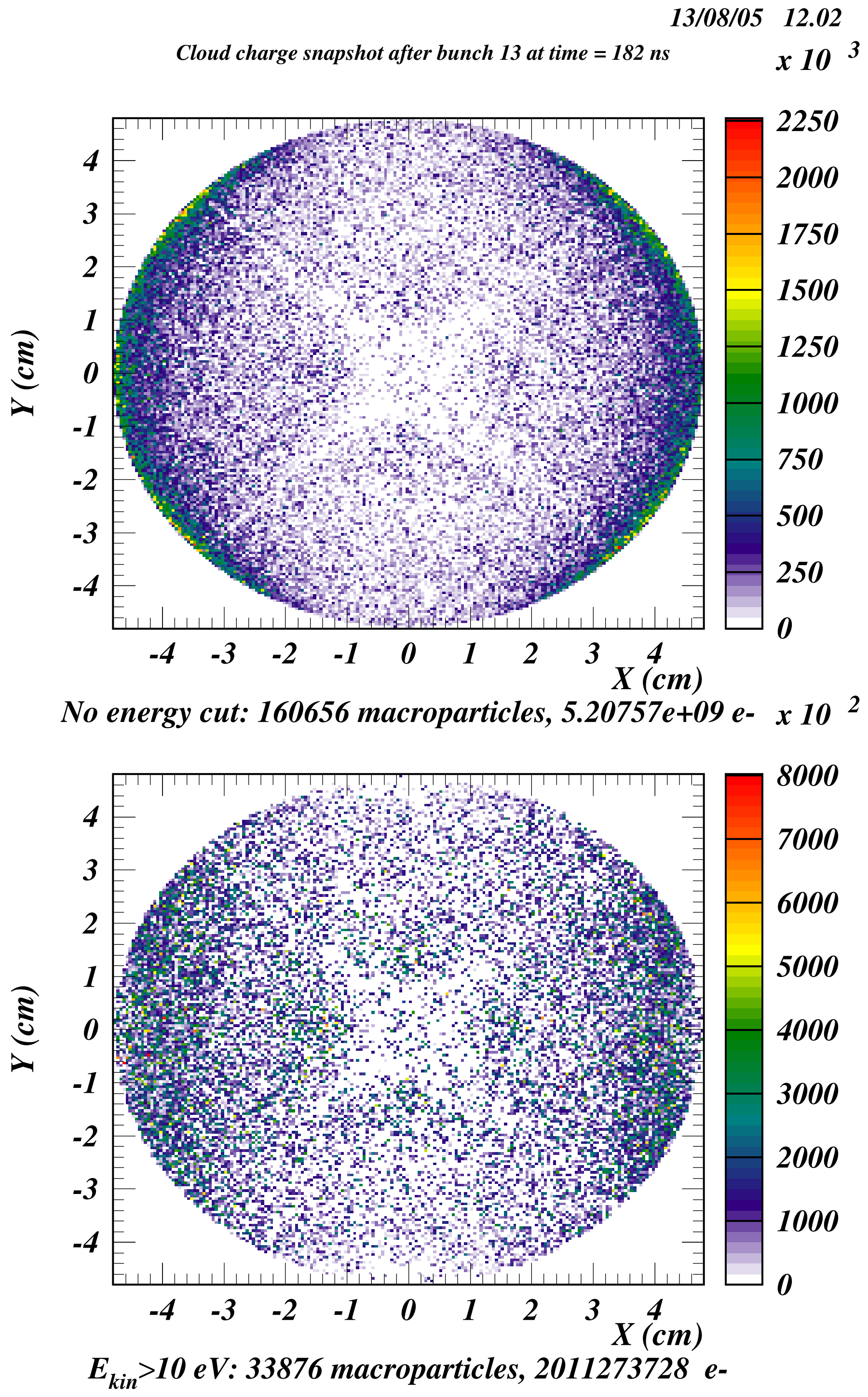

13/08/05 12.01
Cloud charge snapshot after bunch 10 at time = 140 ns
x 10 4
Y (cm)
X (cm)
No energy cut: 303158 macroparticles, 1.44578e+10 e-
x 10 3
Y (cm)
X (cm)
E_kin>10 eV: 99371 macroparticles, 6.77648e+09 e-


13/08/05 12.02
Cloud charge snapshot after bunch 11 at time = 154 ns
x 10 3
6000
5000
4000
3000
2000
1000
0
Y (cm)
X (cm)
No energy cut: 247384 macroparticles, 9.20264e+09 e-
x 10 2
10000
8000
6000
4000
2000
0
Y (cm)
X (cm)
E_kin>10 eV: 60906 macroparticles, 3.79695e+09 e-

13/08/05 12.02

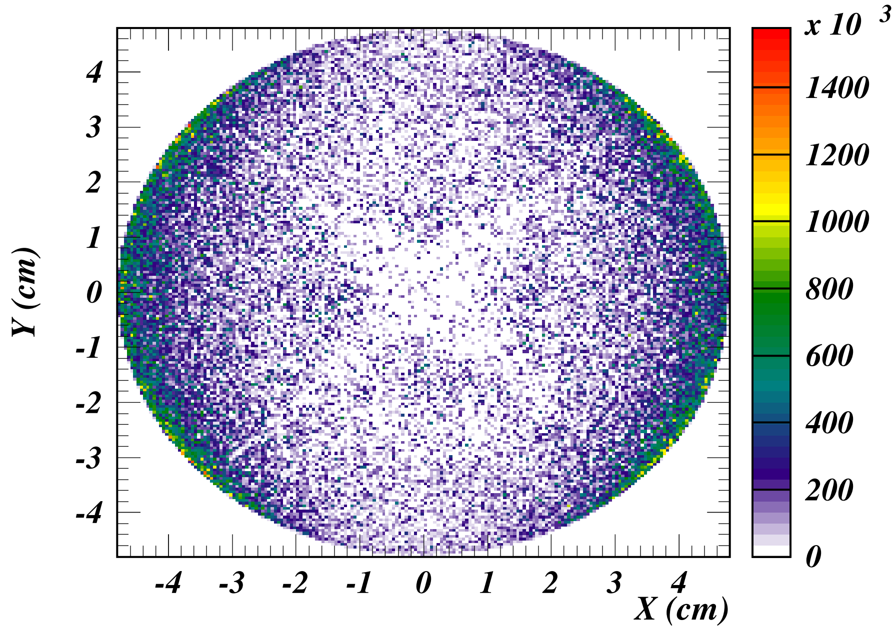
Cloud charge snapshot after bunch 12 at time = 168 ns



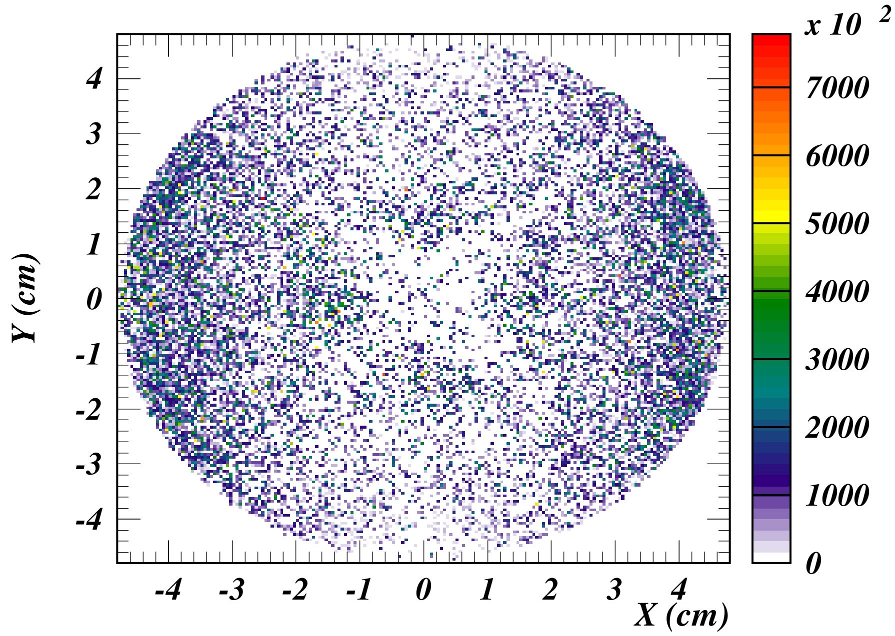

13/08/05 12.02
Cloud charge snapshot after bunch 13 at time = 182 ns
x 10 3
2250
2000
1750
1500
1250
1000
750
500
250
0
Y (cm)
X (cm)
No energy cut: 160656 macroparticles, 5.20757e+09 e-
x 10 2
8000
7000
6000
5000
4000
3000
2000
1000
0
Y (cm)
X (cm)
E kin >10 eV: 33876 macroparticles, 2011273728 e-

13/08/05 12.02

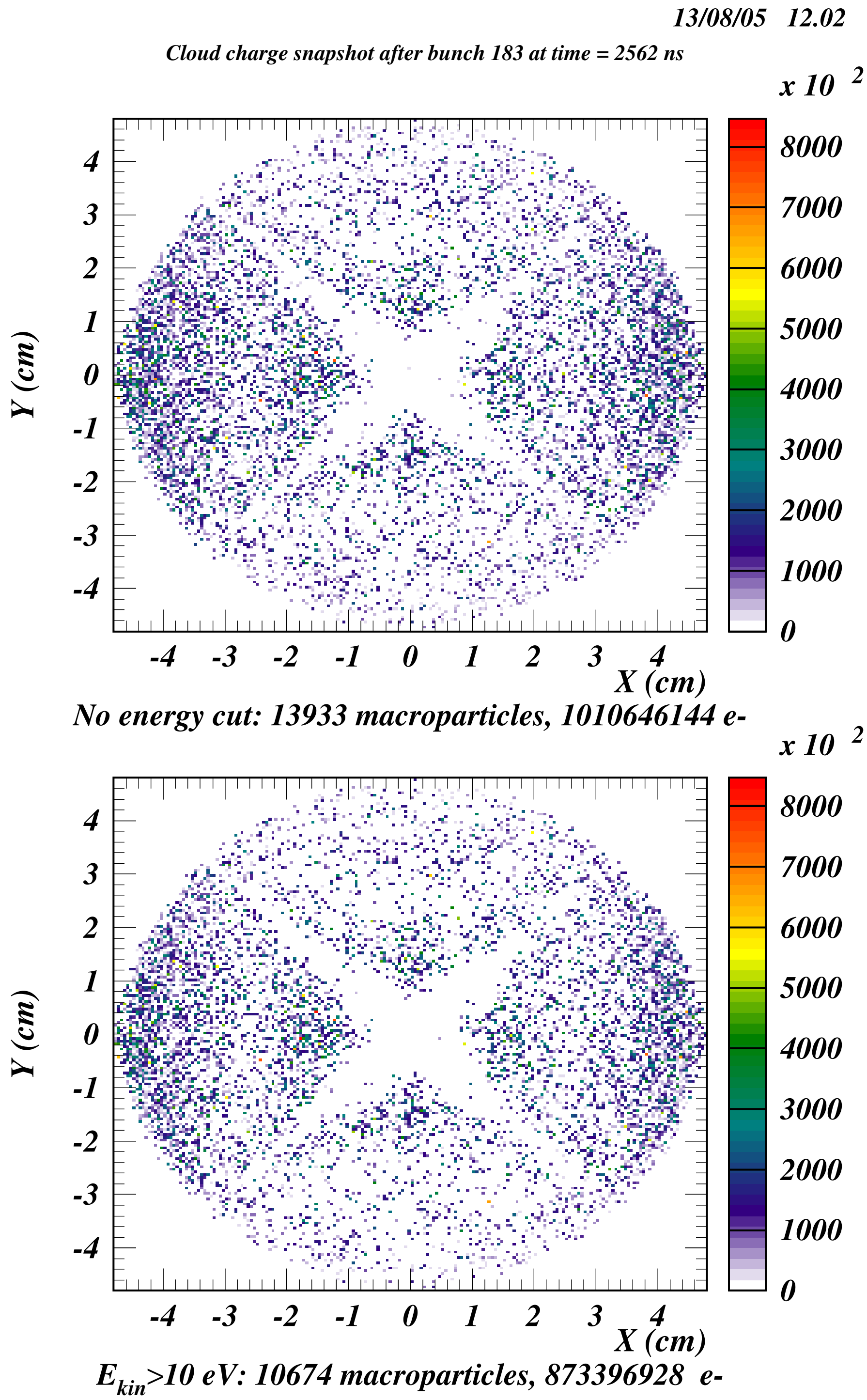
Cloud charge snapshot after bunch 14 at time = 196 ns



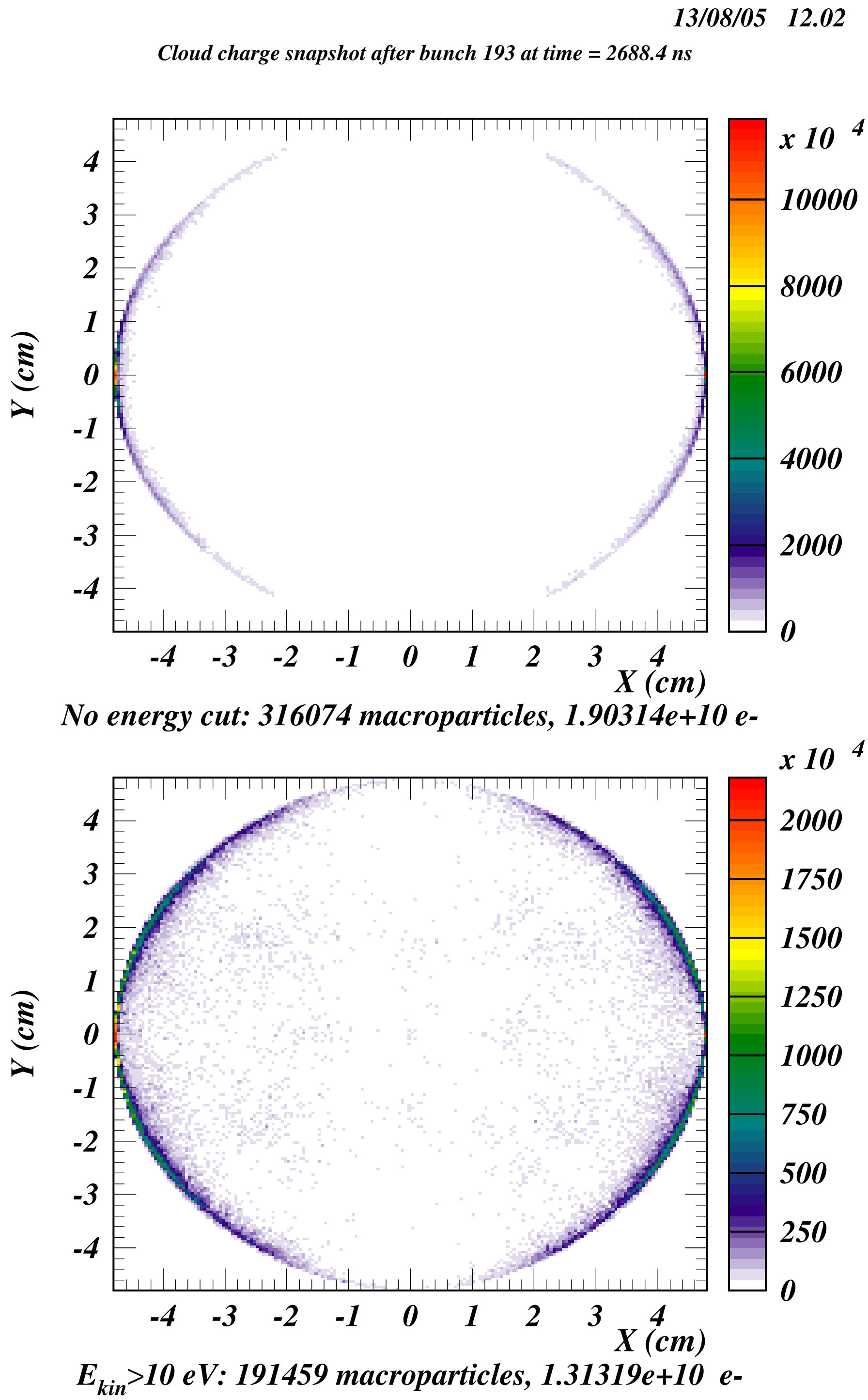
No energy cut: 136862 macroparticles, 4.27217e+09 e-



E_{kin}>10 eV: 27764 macroparticles, 1651478528 e-

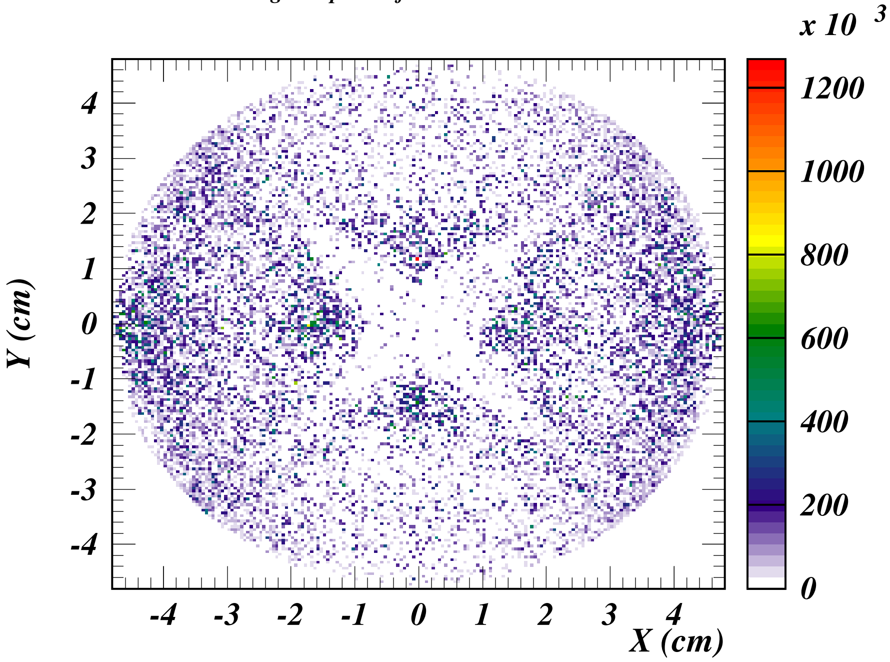


13/08/05 12.02
Cloud charge snapshot after bunch 183 at time = 2562 ns
x 10 2
8000
7000
6000
5000
4000
3000
2000
1000
0
Y (cm)
X (cm)
-4 -3 -2 -1 0 1 2 3 4
No energy cut: 13933 macroparticles, 1010646144 e-
x 10 2
8000
7000
6000
5000
4000
3000
2000
1000
0
Y (cm)
X (cm)
-4 -3 -2 -1 0 1 2 3 4
E_kin>10 eV: 10674 macroparticles, 873396928 e-

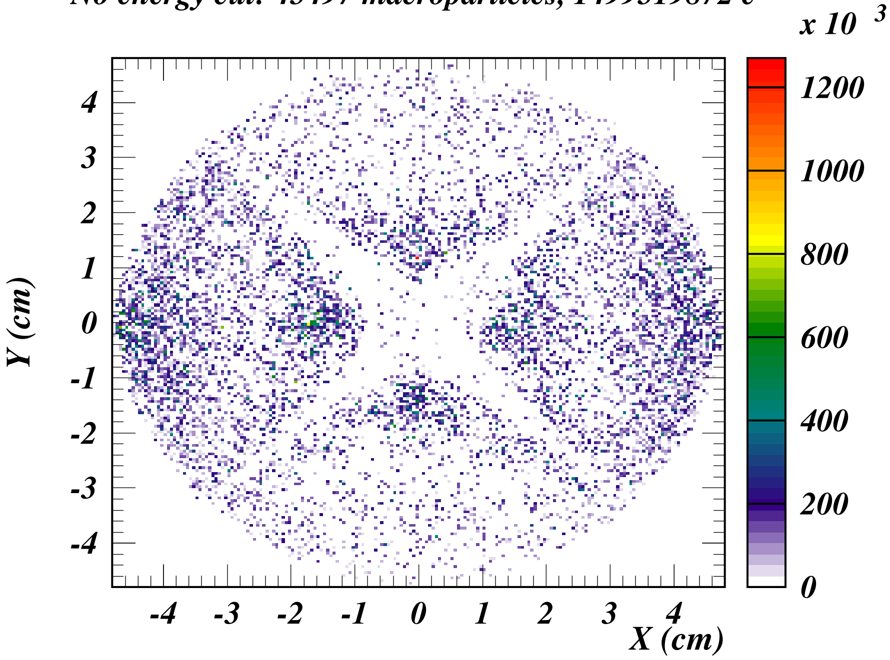

13/08/05 12.02
Cloud charge snapshot after bunch 193 at time = 2688.4 ns
Y (cm)
X (cm)
x 10^4
No energy cut: 316074 macroparticles, 1.90314e+10 e-
E_kin>10 eV: 191459 macroparticles, 1.31319e+10 e-

13/08/05 12.02

Cloud charge snapshot after bunch 214 at time = 2982 ns

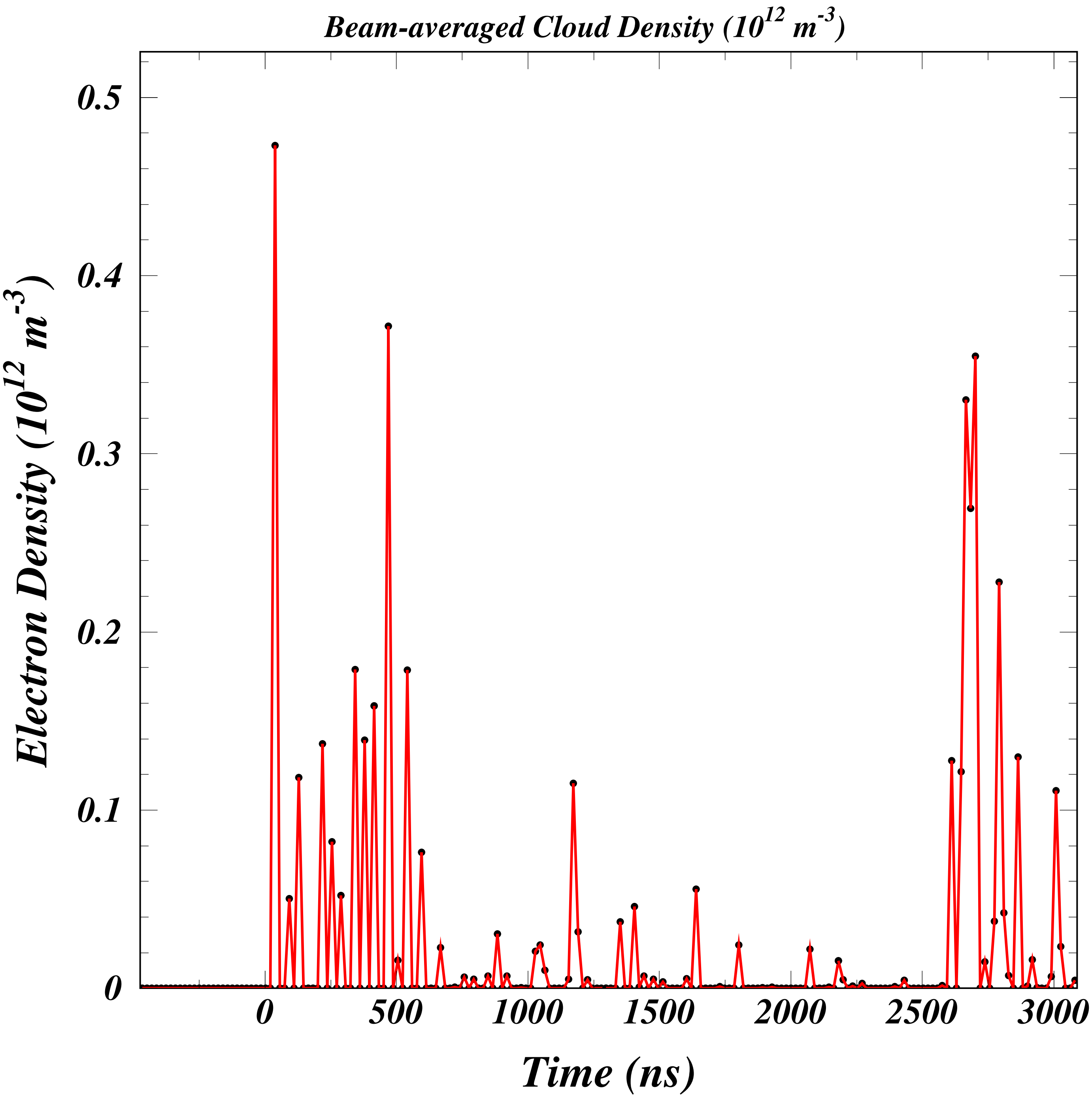


No energy cut: 45497 macroparticles, 1499519872 e-

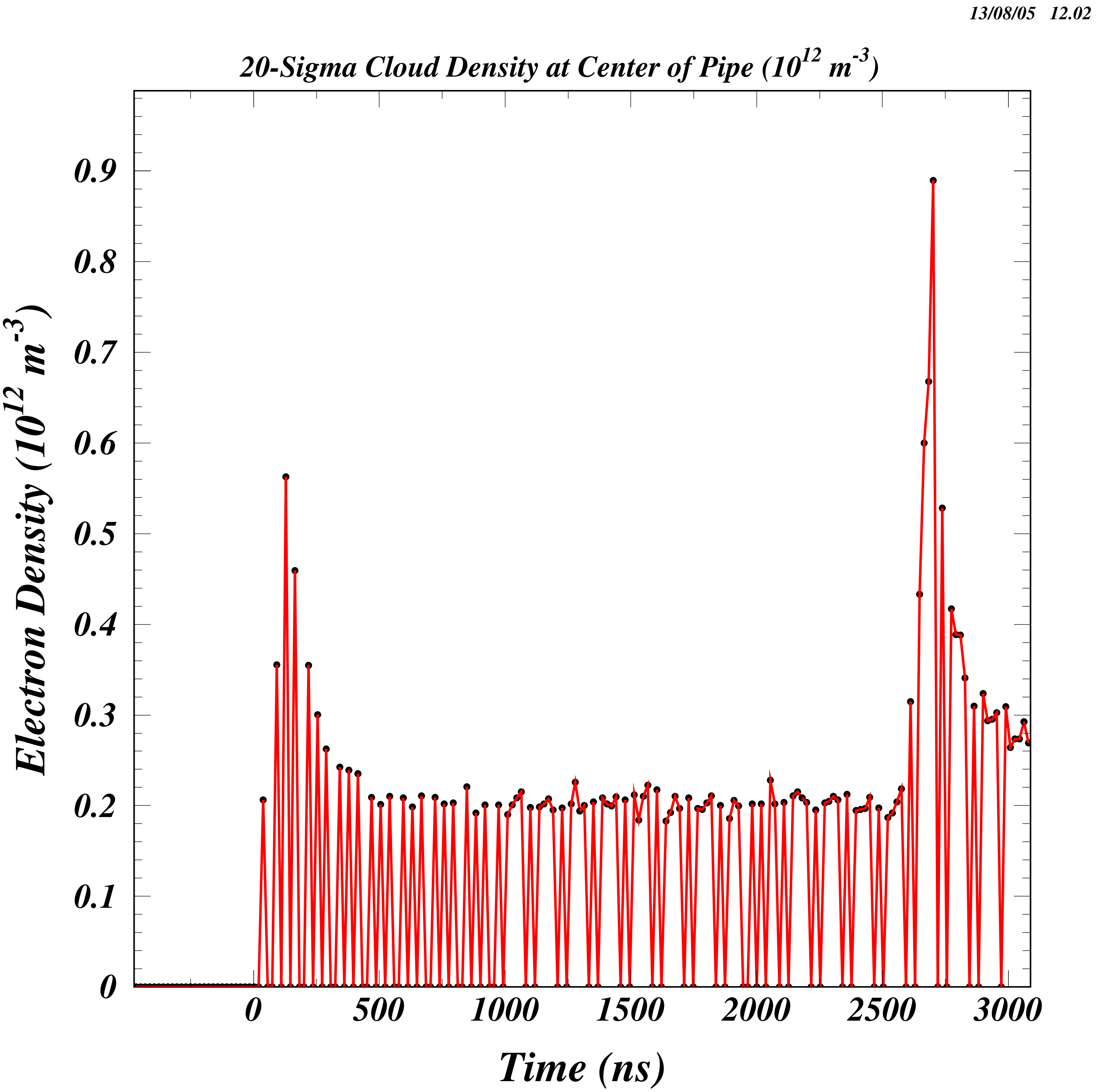


E_{kin}>10 eV: 13436 macroparticles, 1063850432 e-

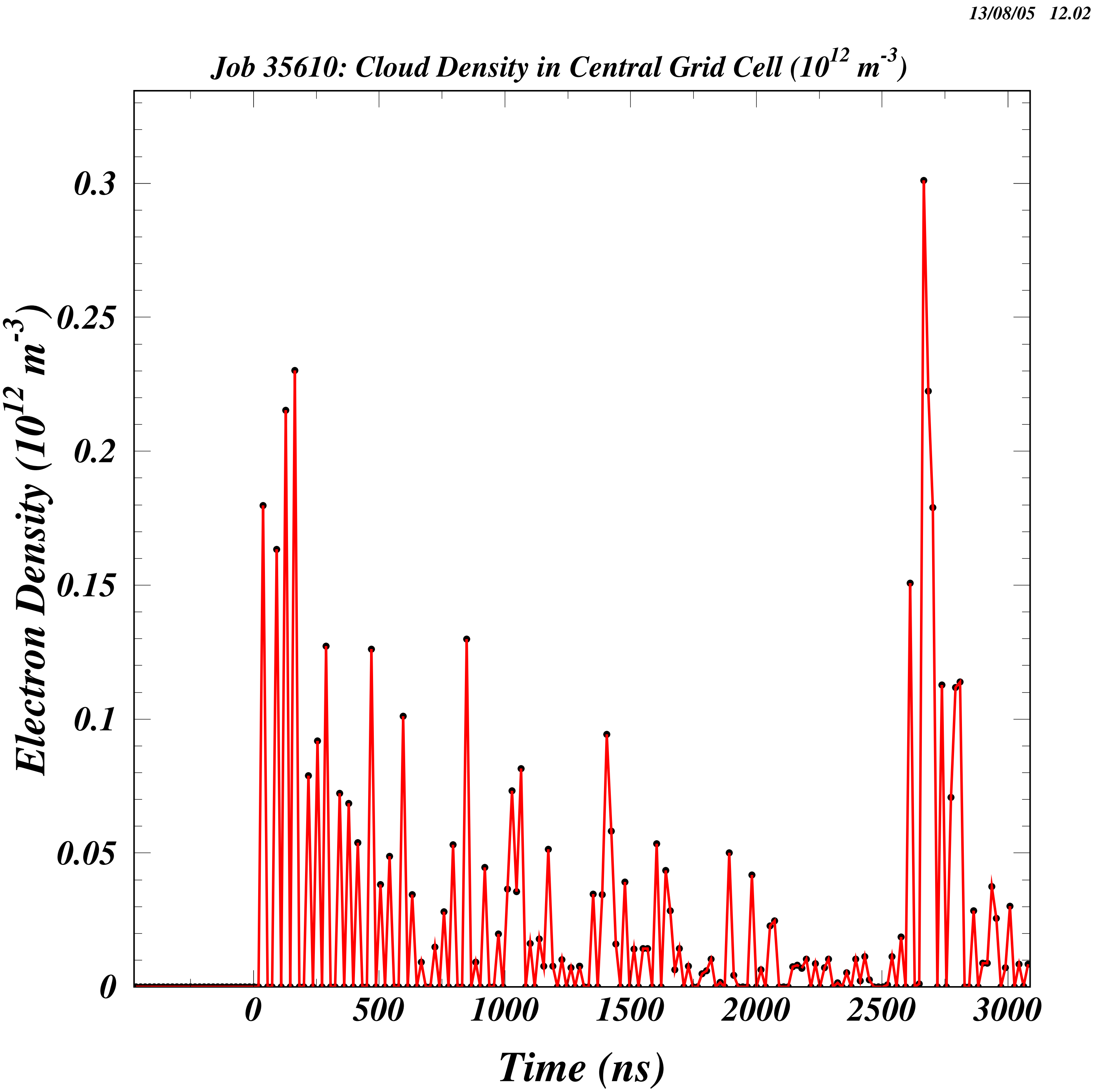
13/08/05 12.02



Beam-averaged Cloud Density (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.5
0.4
0.3
0.2
0.1
0
0
500
1000
1500
2000
2500
3000
Time (ns)



13/08/05 12.02
20-Sigma Cloud Density at Center of Pipe (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
0
500
1000
1500
2000
2500
3000
Time (ns)


13/08/05 12.02
Job 35610: Cloud Density in Central Grid Cell (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.05
0.1
0.15
0.2
0.25
0.3
0
500
1000
1500
2000
2500
3000
Time (ns)