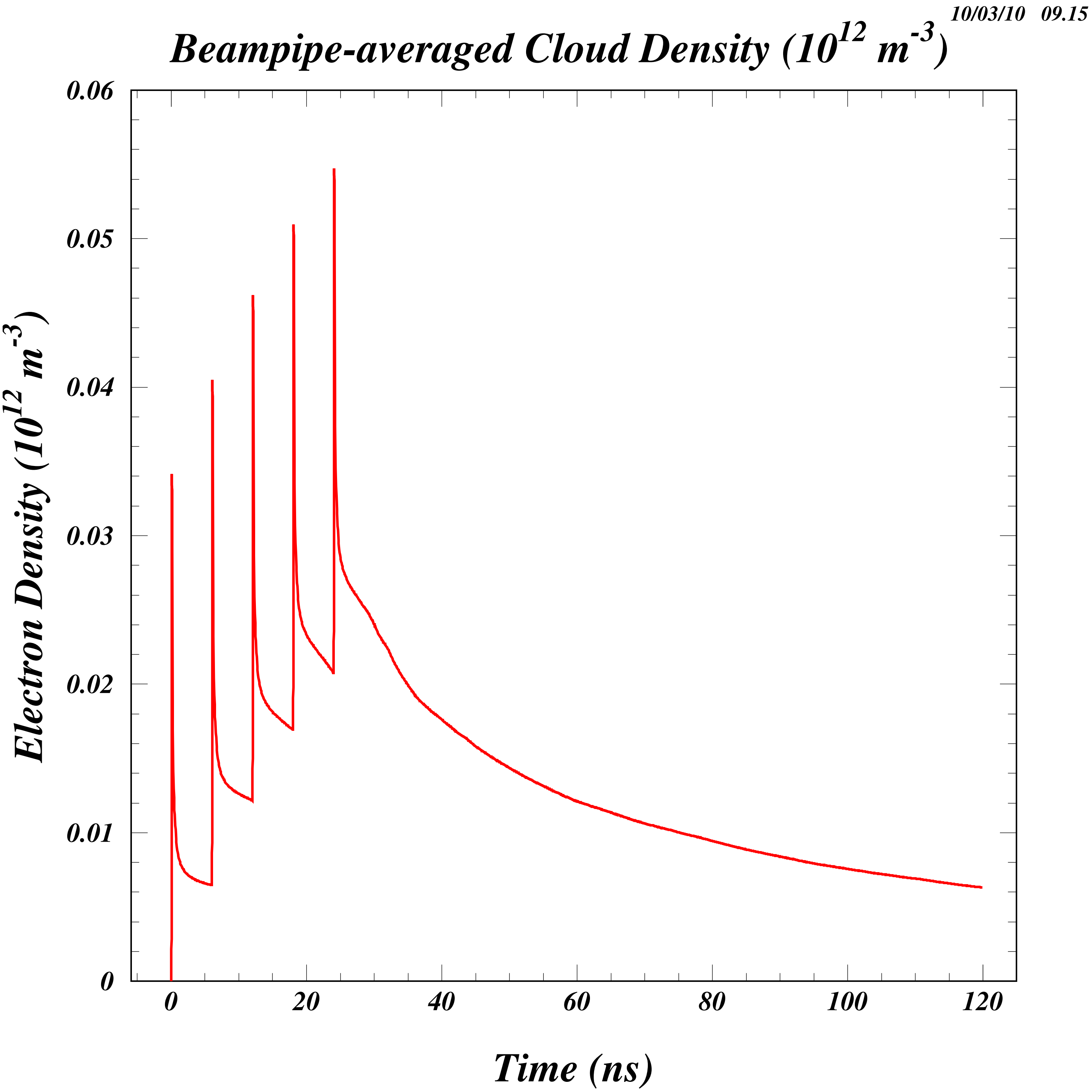
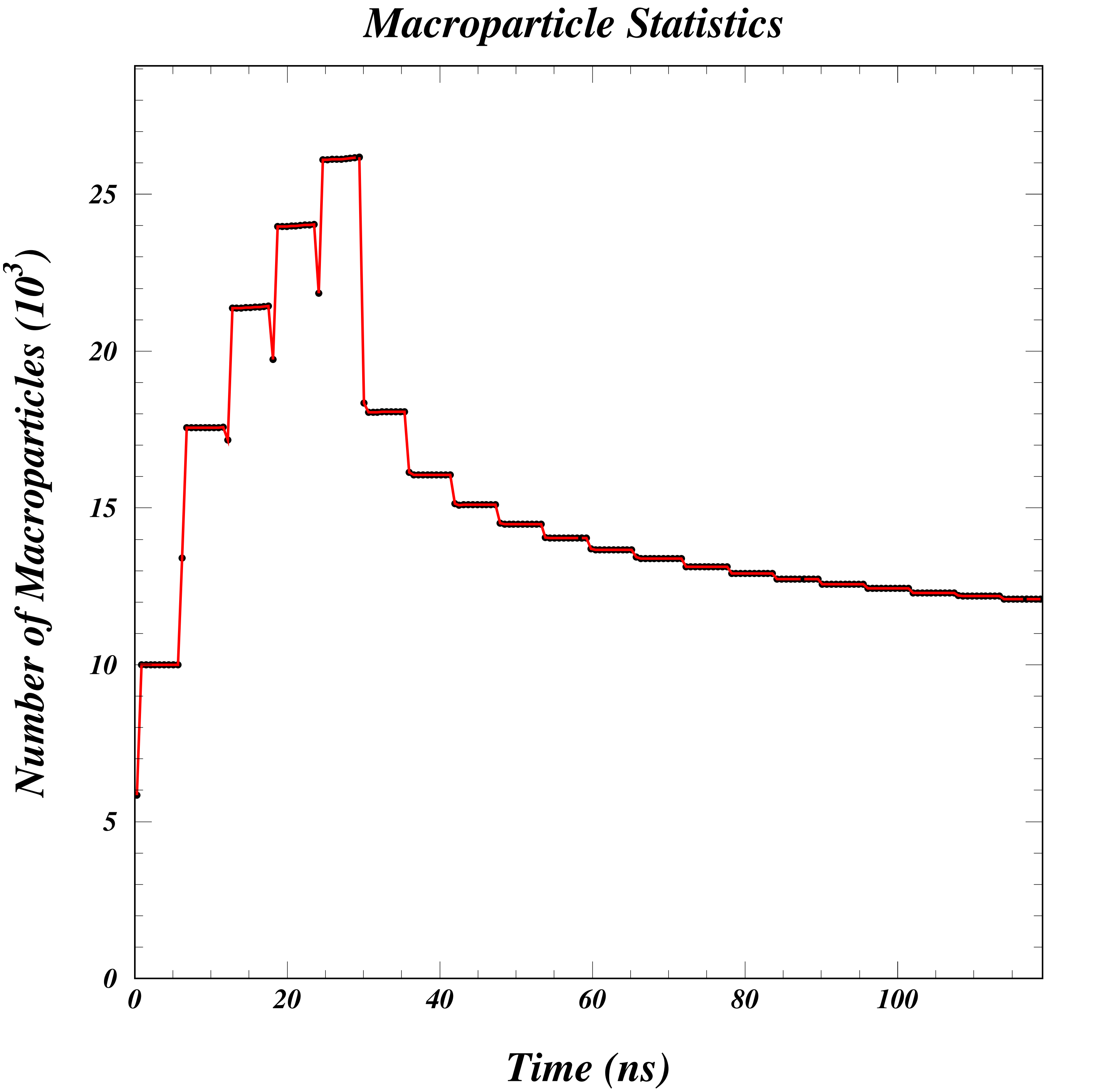
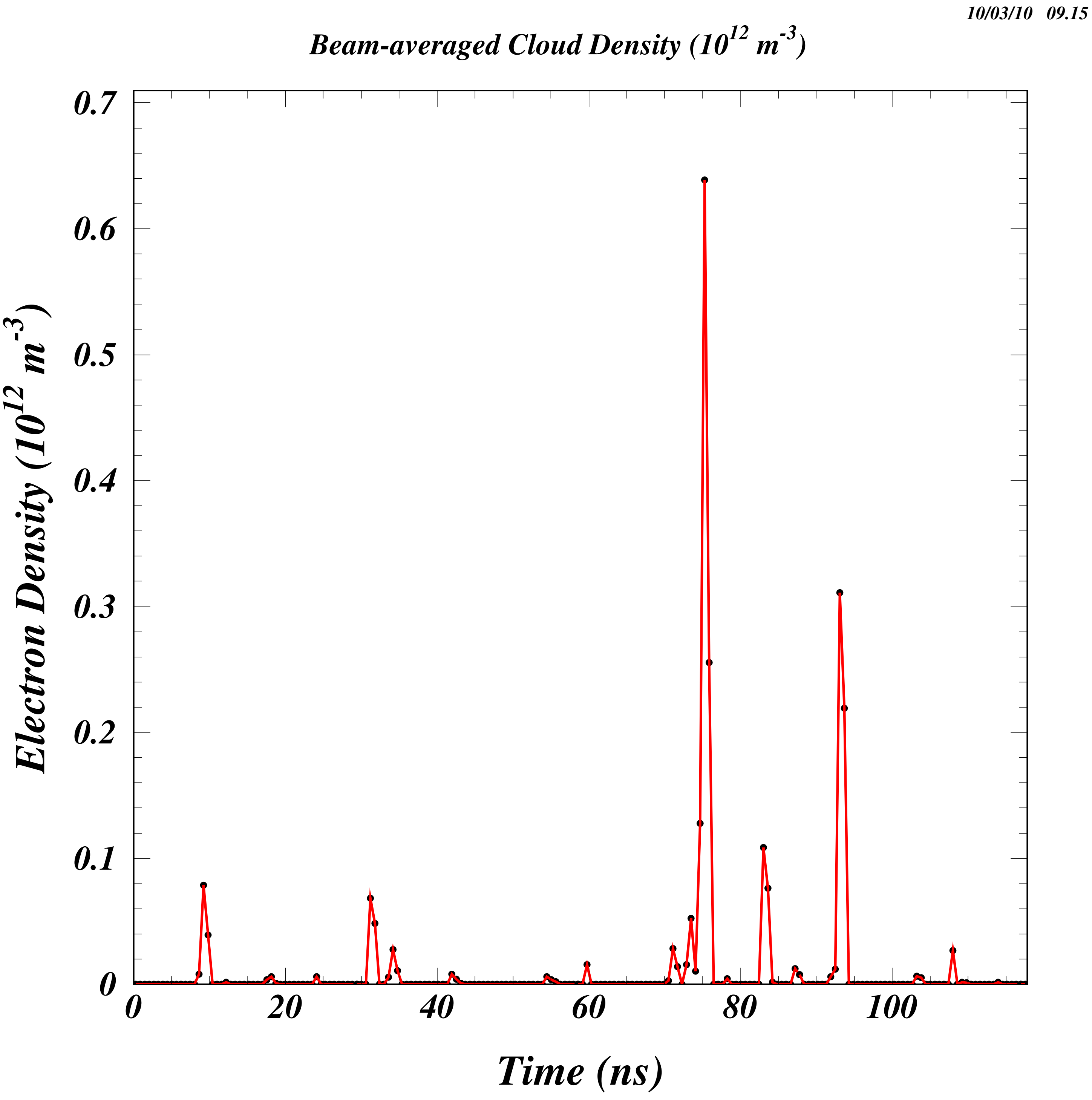
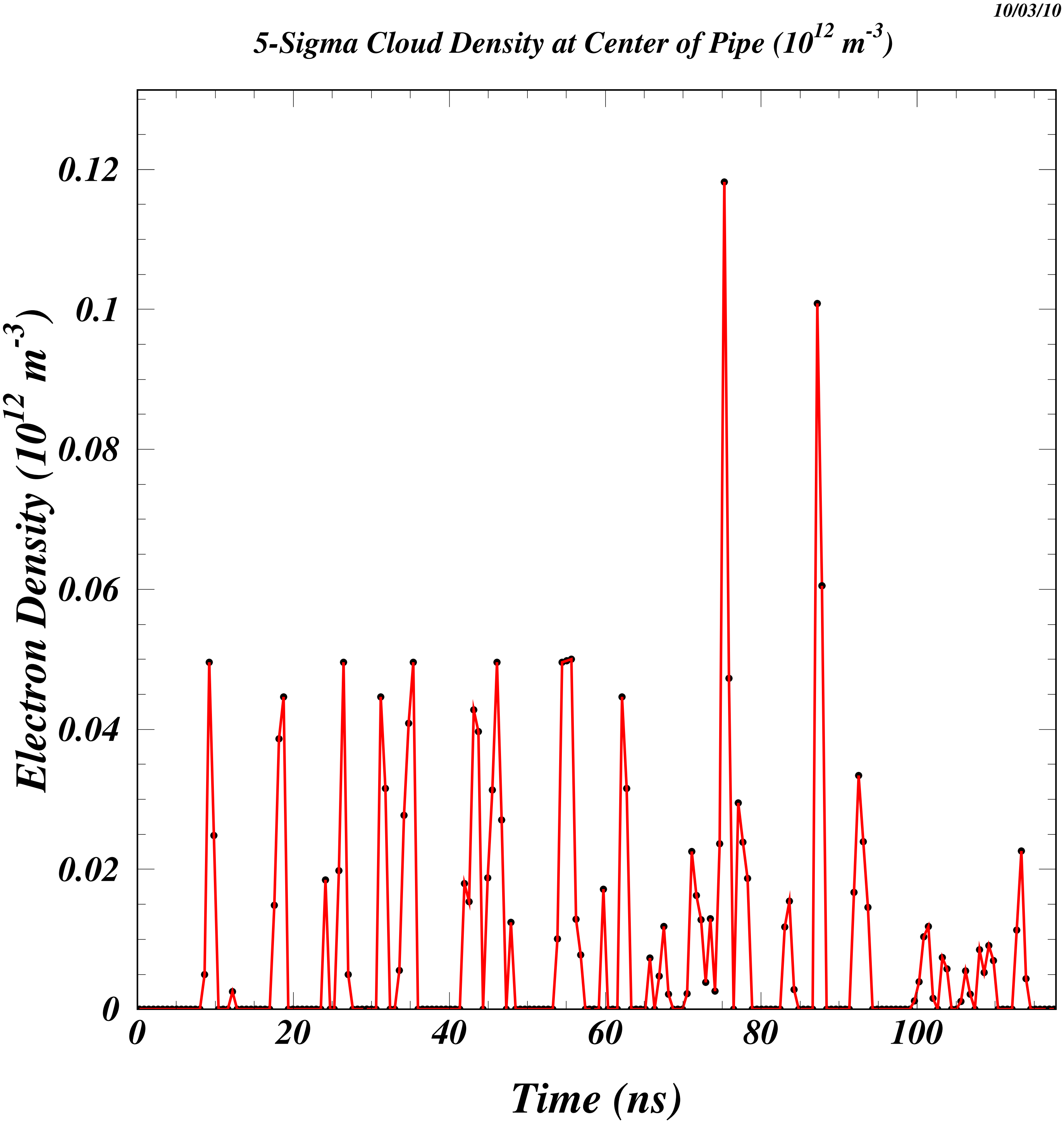

10/03/10 09.15
Beampipe-averaged Cloud Density (10^12 m^-3)
Electron Density (10^12 m^-3)
Time (ns)
0
0.01
0.02
0.03
0.04
0.05
0.06
0
20
40
60
80
100
120

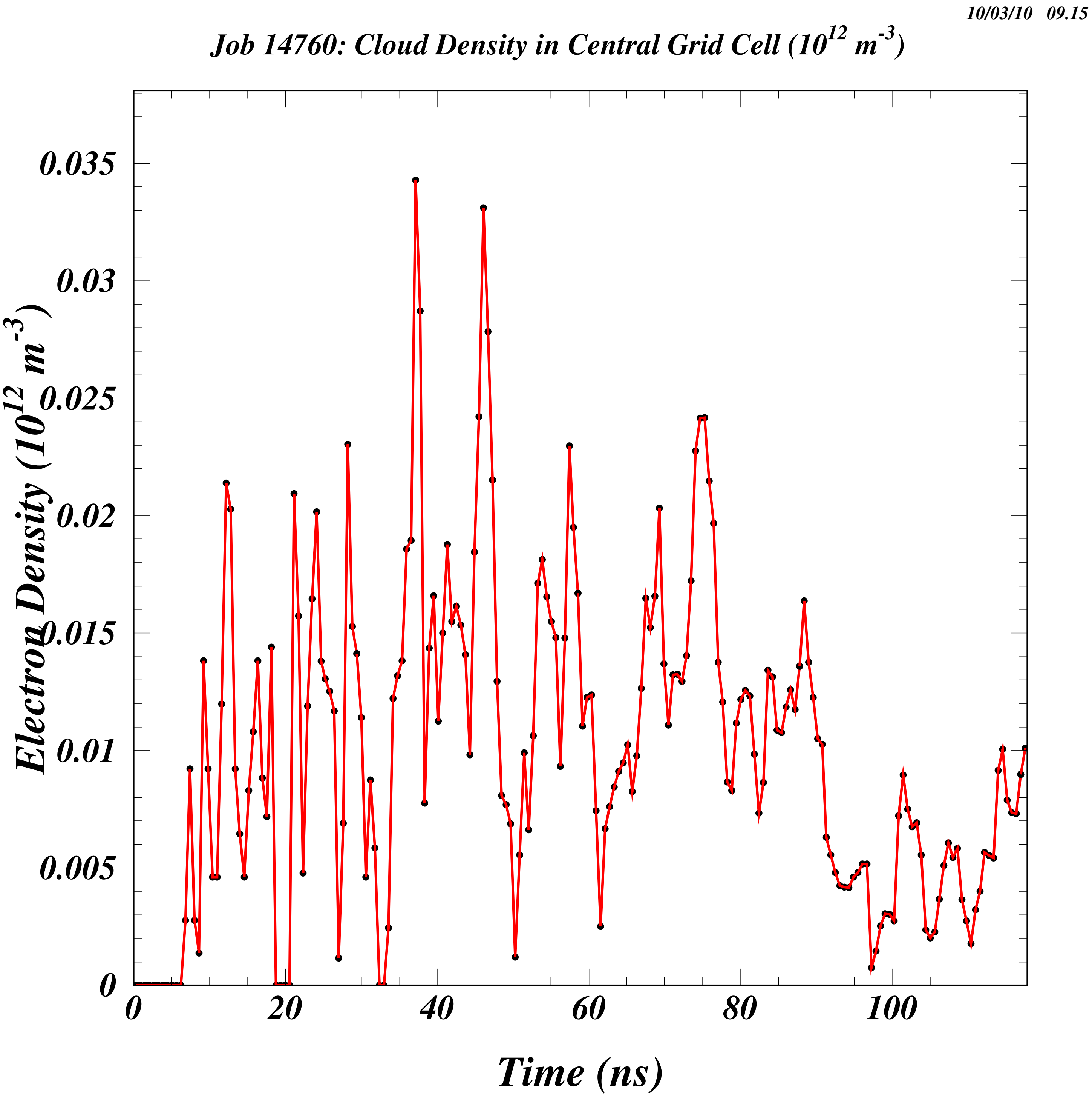

Macroparticle Statistics
Number of Macroparticles (10^3)
Time (ns)
0
5
10
15
20
25
0
20
40
60
80
100


10/03/10 09.15
Beam-averaged Cloud Density (10^12 m^-3)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Electron Density (10^12 m^-3)
0
20
40
60
80
100
Time (ns)

10/03/10 09.15

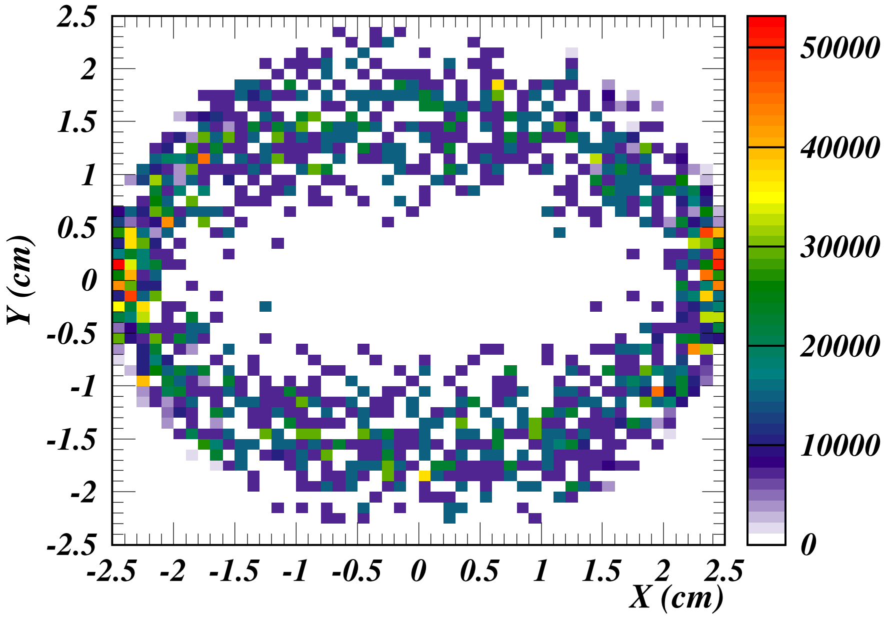


5-Sigma Cloud Density at Center of Pipe (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.12
0.1
0.08
0.06
0.04
0.02
0
0
20
40
60
80
100
Time (ns)

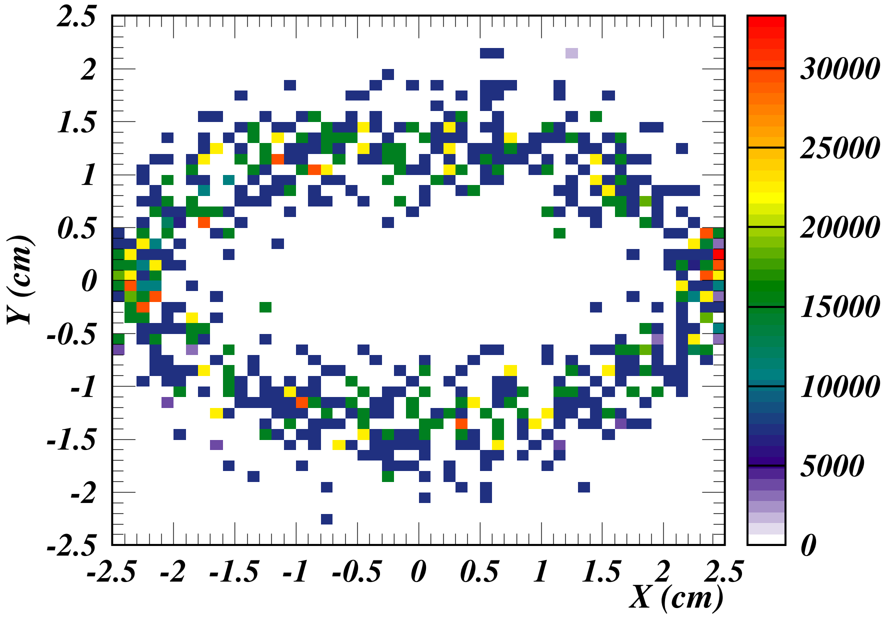

10/03/10 09.15
Job 14760: Cloud Density in Central Grid Cell (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
Time (ns)
0
0.005
0.01
0.015
0.02
0.025
0.03
0.035
0
20
40
60
80
100

10/03/10 09.15

Cloud charge snapshot after bunch 1 at time = 6 ns



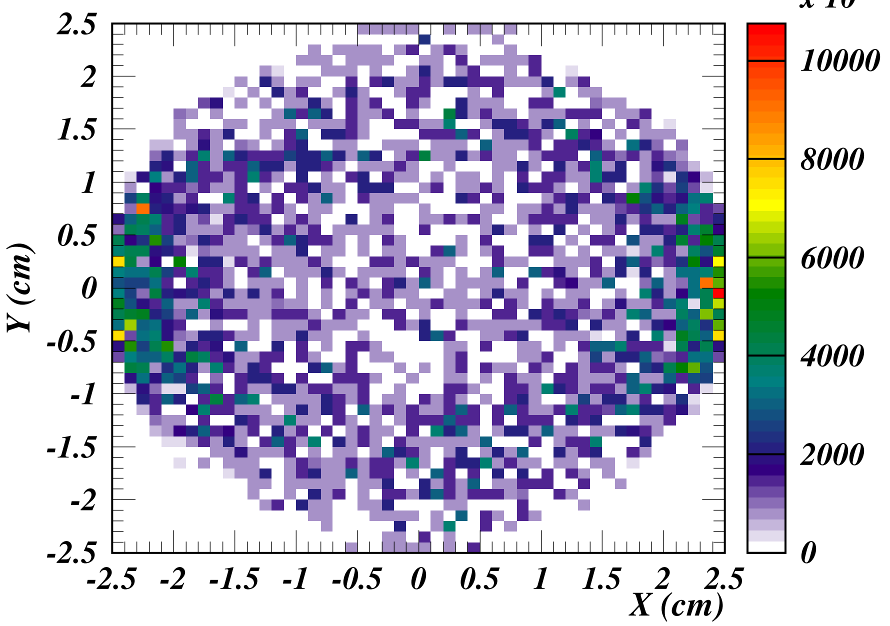
No energy cut: 9962 macroparticles, 13120490 e-



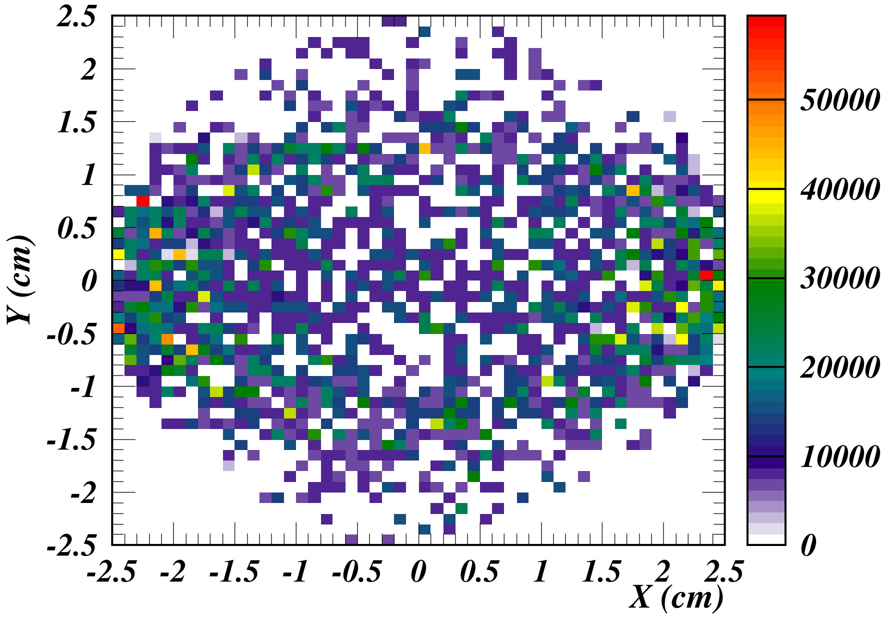
E_{kin}>10 eV: 832 macroparticles, 5.93175e+06 e-

10/03/10 09.15

Cloud charge snapshot after bunch 2 at time = 12 ns

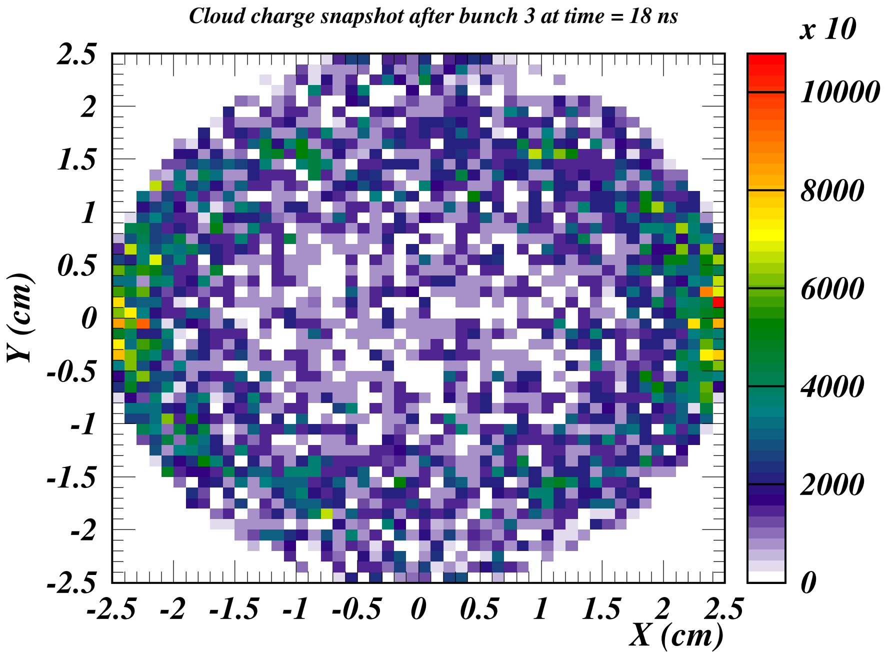


No energy cut: 17504 macroparticles, 24641572 e-

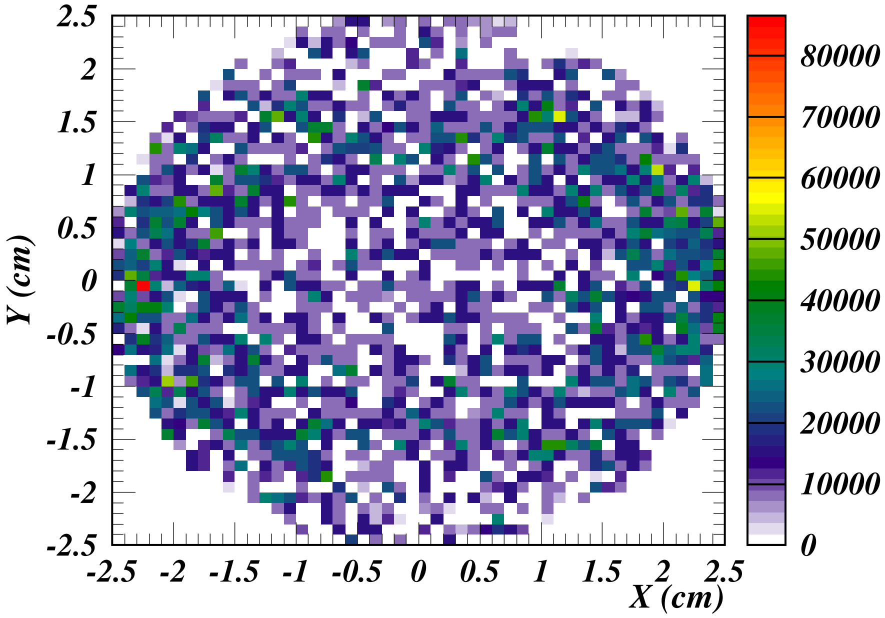


E_{kin}>10 eV: 2252 macroparticles, 15757414 e-

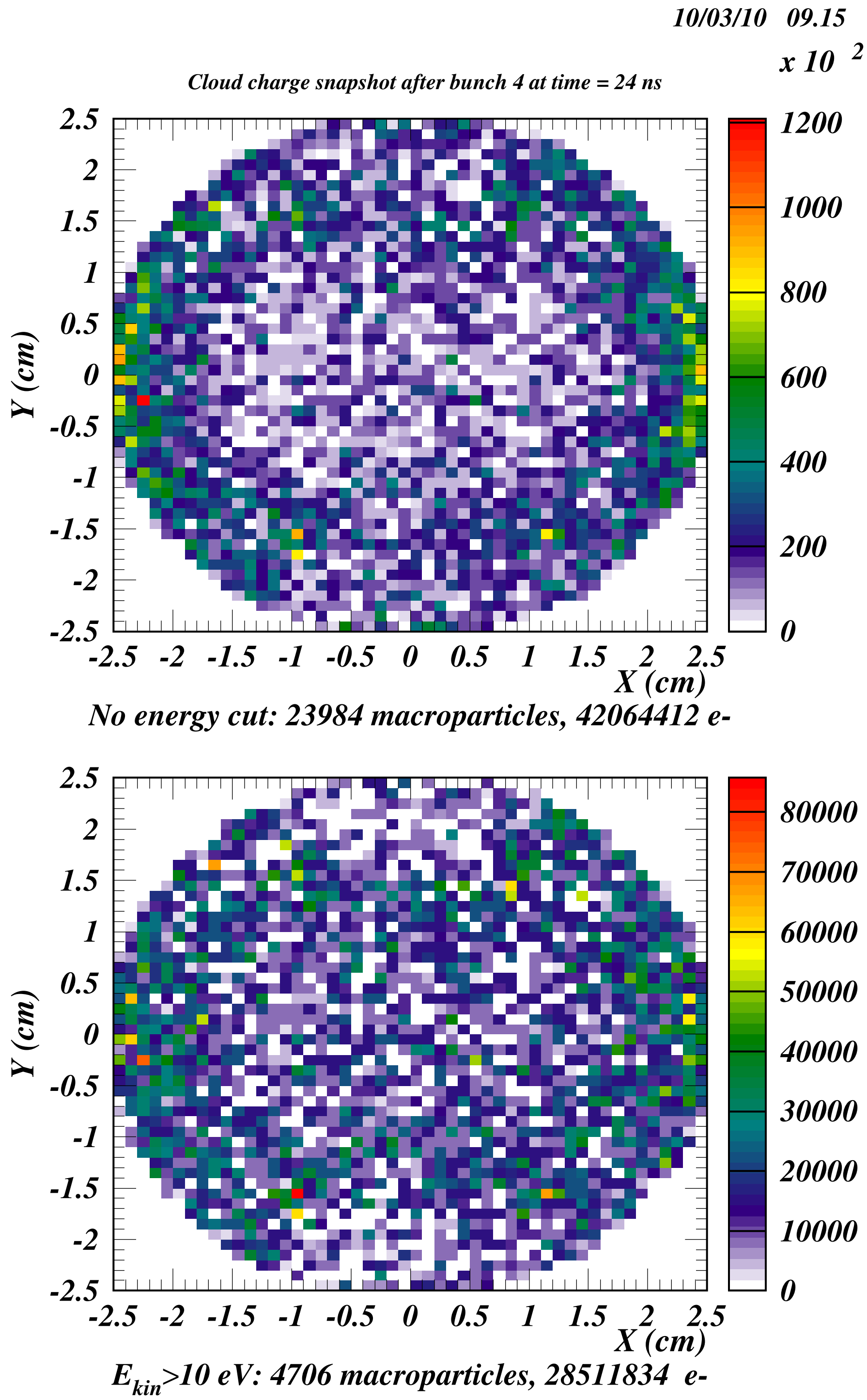
10/03/10 09.15

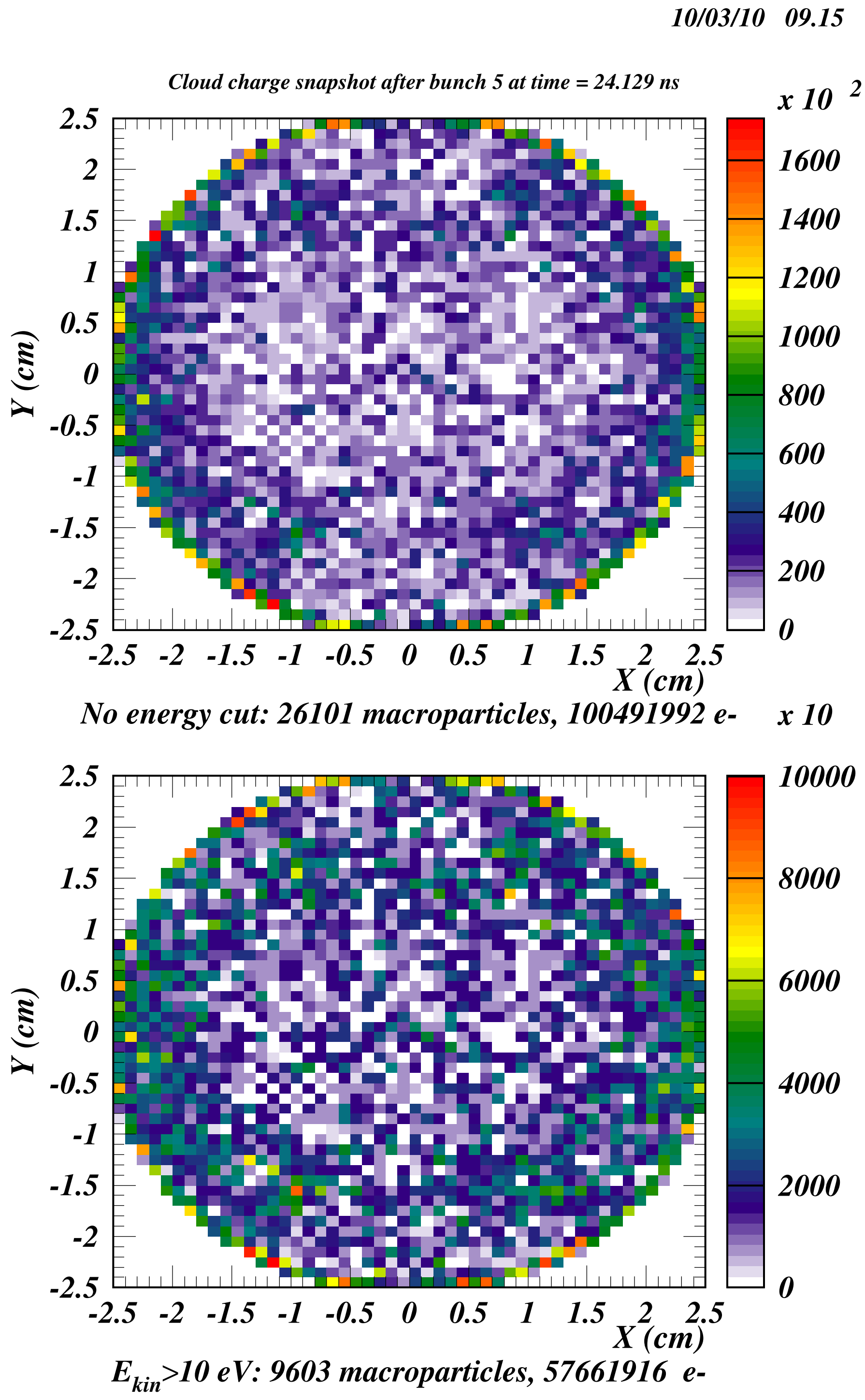


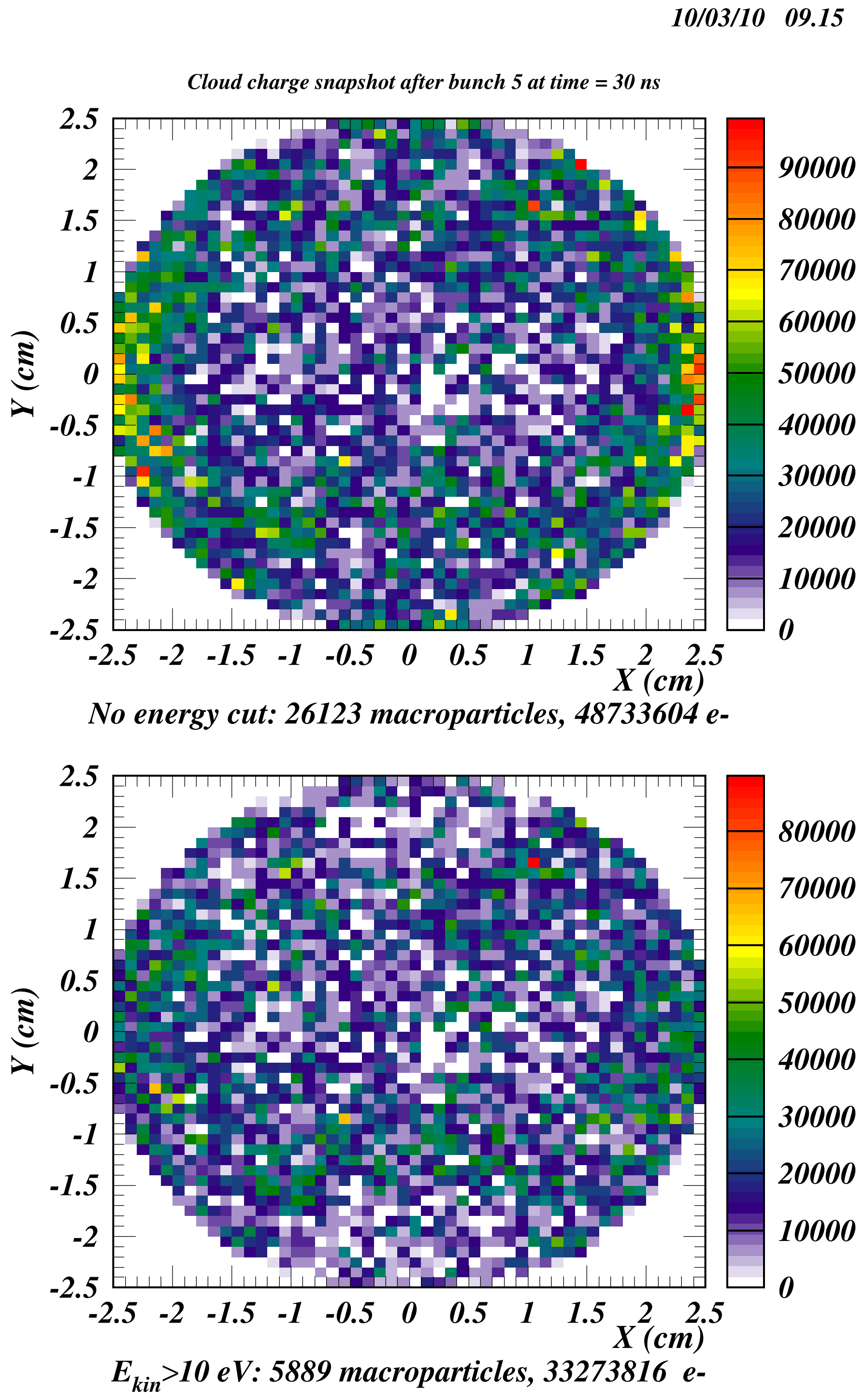
No energy cut: 21384 macroparticles, 34322152 e-



E_{kin}>10 eV: 3484 macroparticles, 22977266 e-

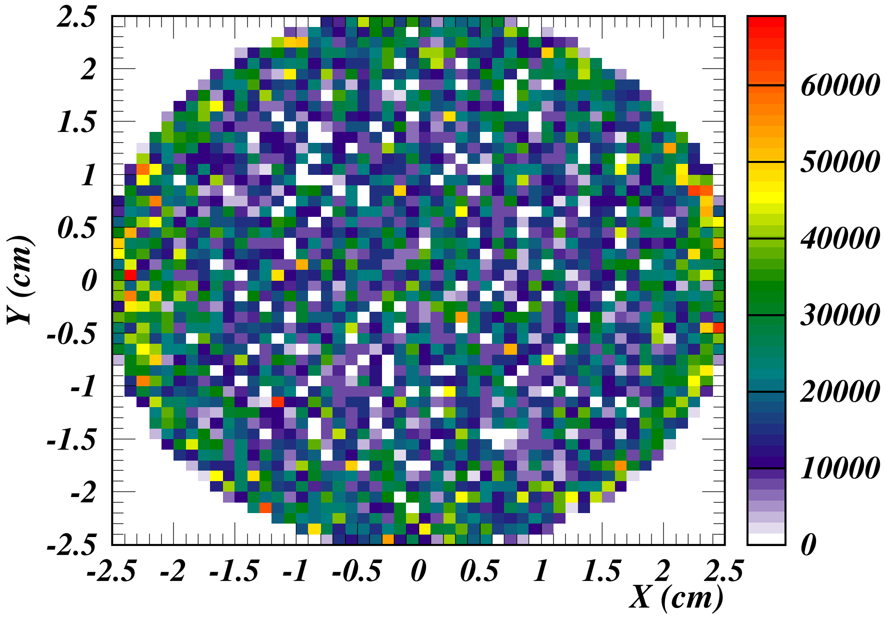

10/03/10 09.15
Cloud charge snapshot after bunch 4 at time = 24 ns
x 10 2
1200
1000
800
600
400
200
0
Y (cm)
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-2.5 -2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5
X (cm)
No energy cut: 23984 macroparticles, 42064412 e-
80000
70000
60000
50000
40000
30000
20000
10000
0
Y (cm)
X (cm)
E_kin>10 eV: 4706 macroparticles, 28511834 e-


10/03/10 09.15
Cloud charge snapshot after bunch 5 at time = 24.129 ns
Y (cm)
X (cm)
x 10^2
0
200
400
600
800
1000
1200
1400
1600
No energy cut: 26101 macroparticles, 100491992 e-
x 10
0
2000
4000
6000
8000
10000
Y (cm)
X (cm)
E_kin>10 eV: 9603 macroparticles, 57661916 e-

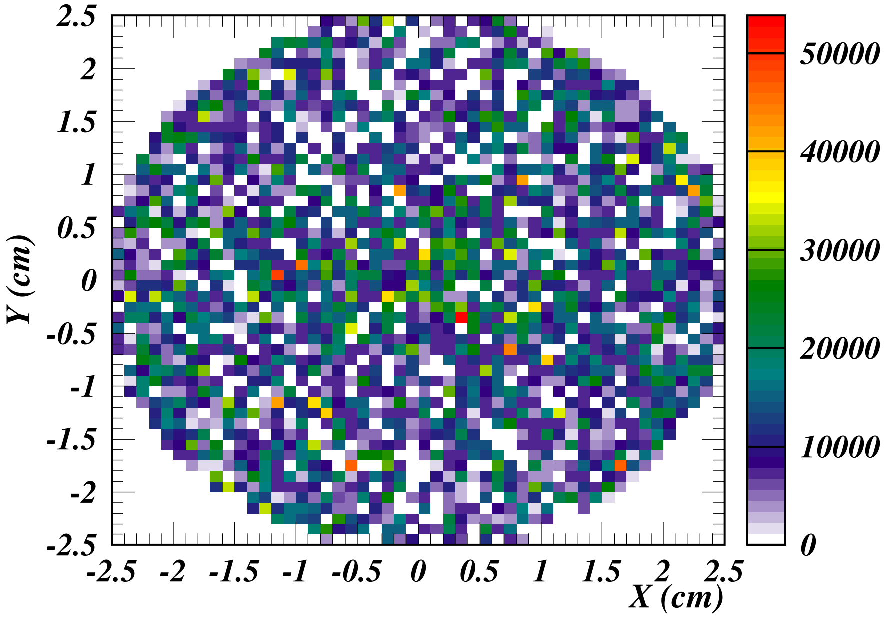

10/03/10 09.15
Cloud charge snapshot after bunch 5 at time = 30 ns
Y (cm)
X (cm)
No energy cut: 26123 macroparticles, 48733604 e-
Y (cm)
X (cm)
E_kin>10 eV: 5889 macroparticles, 33273816 e-

10/03/10 09.15

Cloud charge snapshot after bunch 6 at time = 36 ns



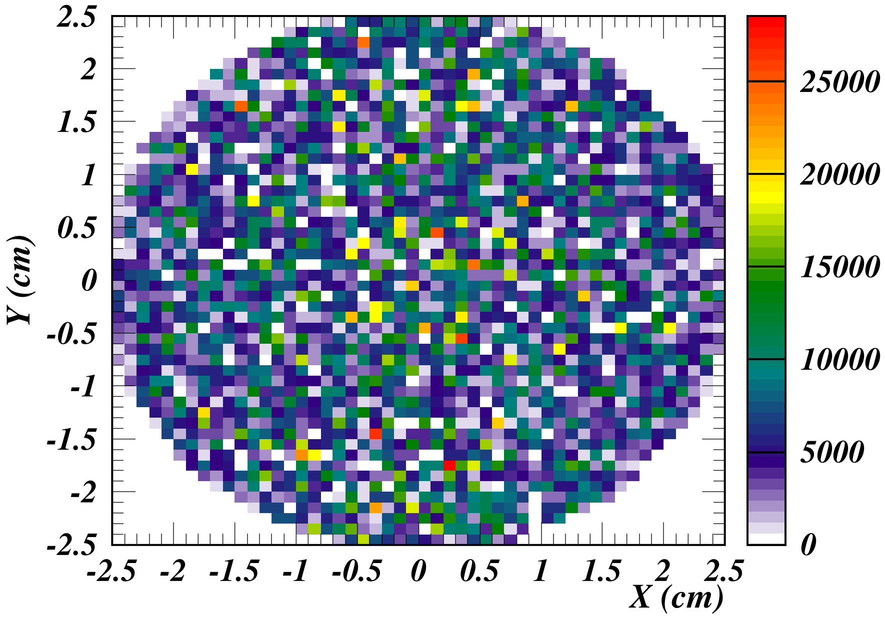
No energy cut: 17994 macroparticles, 39111620 e-



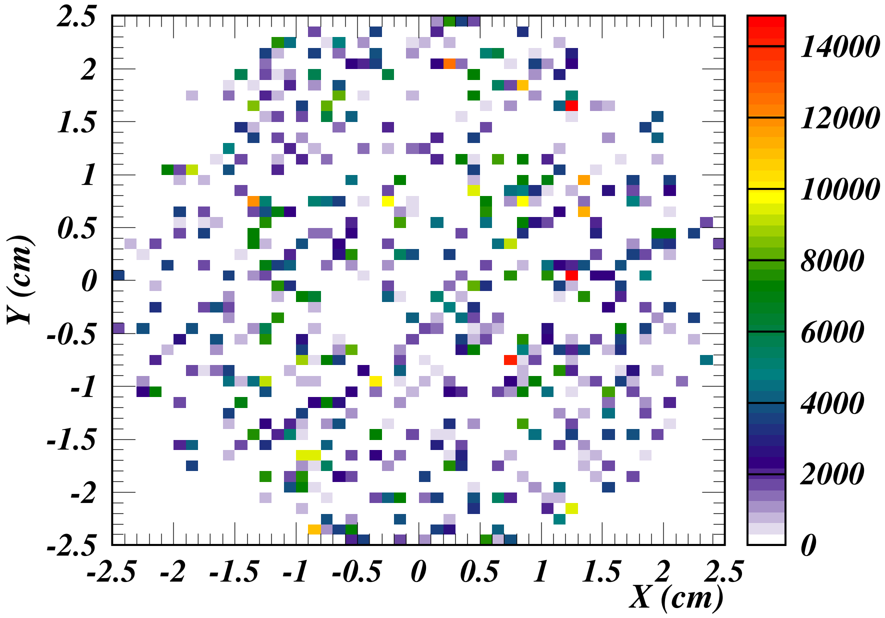
E_{kin}>10 eV: 4259 macroparticles, 21509404 e-

10/03/10 09.15

Cloud charge snapshot after bunch 21 at time = 120 ns

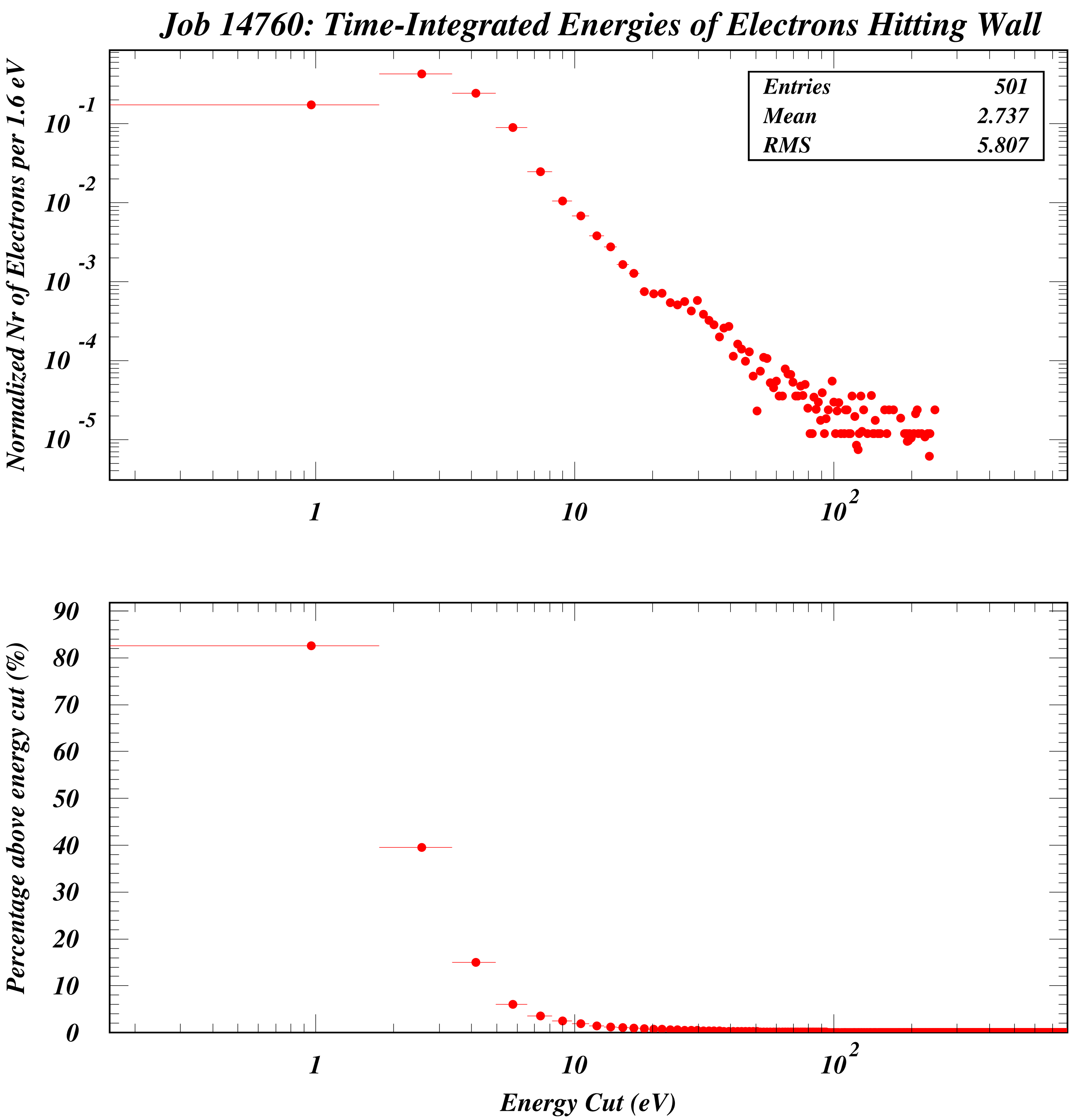


No energy cut: 11987 macroparticles, 12785112 e-



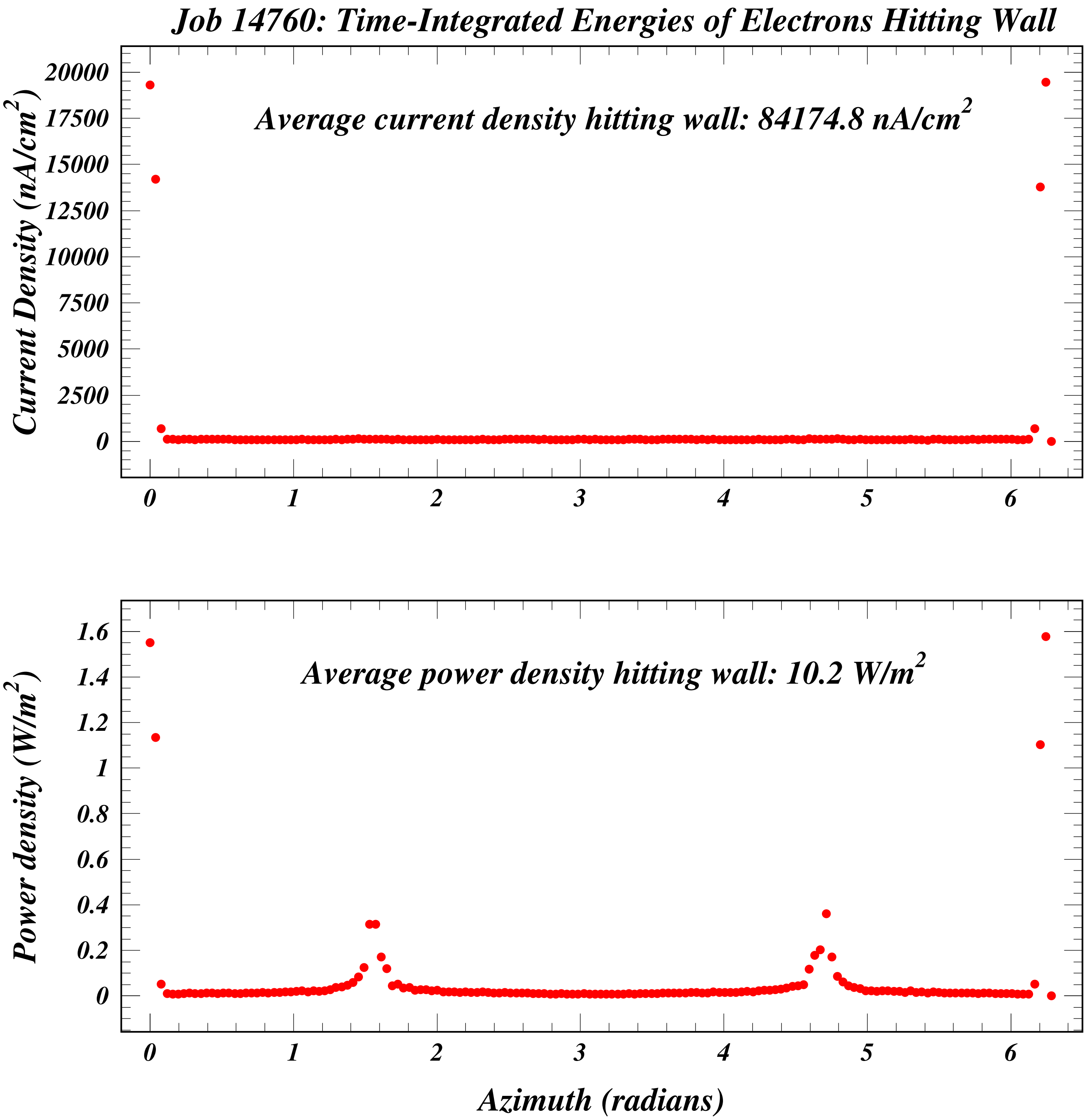
E_{kin}>10 eV: 679 macroparticles, 1.60627e+06 e-

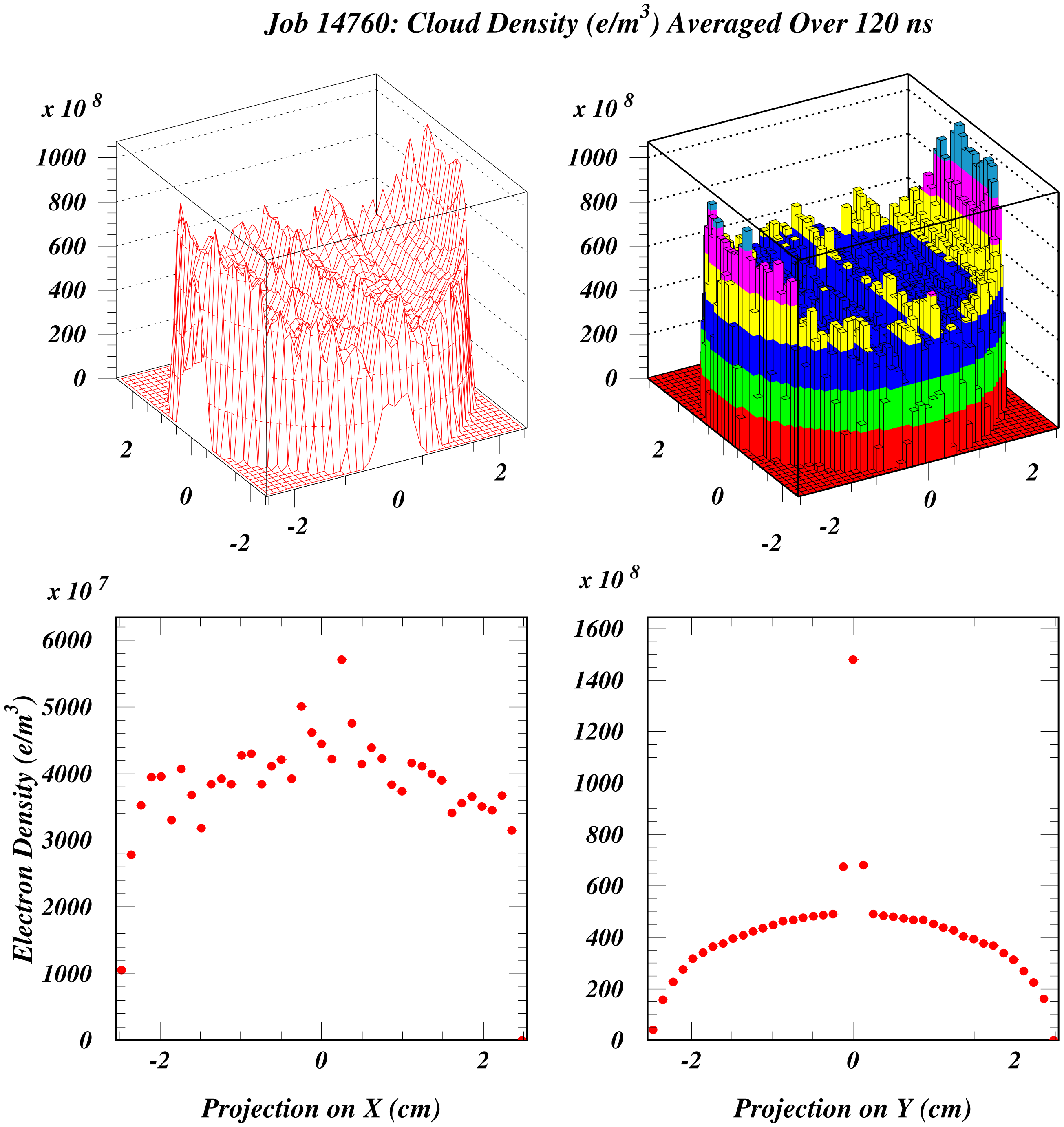
10/03/10 09.15

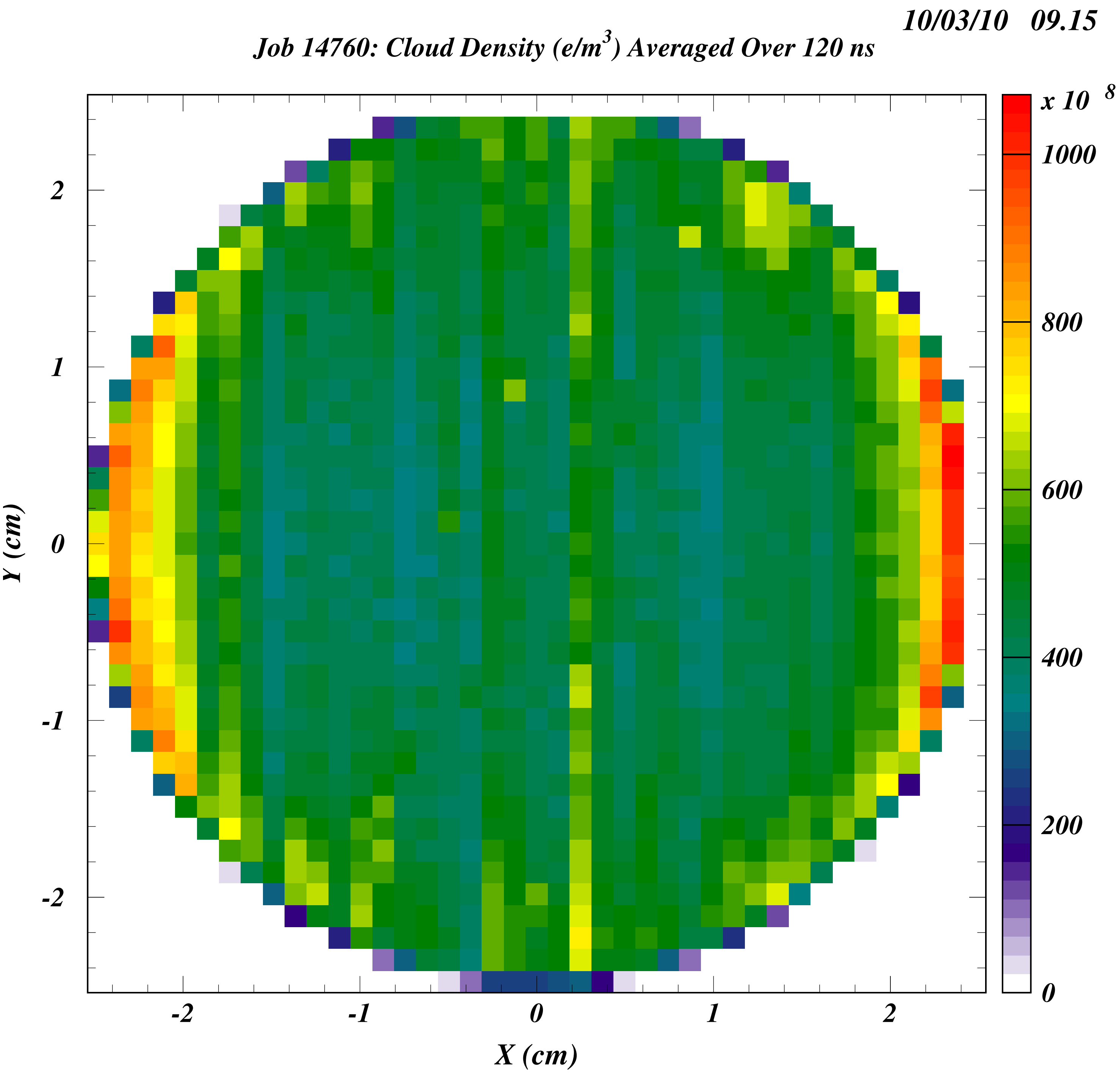


Job 14760: Time-Integrated Energies of Electrons Hitting Wall
Entries 501
Mean 2.737
RMS 5.807
Normalized Nr of Electrons per 1.6 eV
10^-1
10^-2
10^-3
10^-4
10^-5
1
10
10^2
Percentage above energy cut (%)
90
80
70
60
50
40
30
20
10
0
1
10
10^2
Energy Cut (eV)

10/03/10 09.15

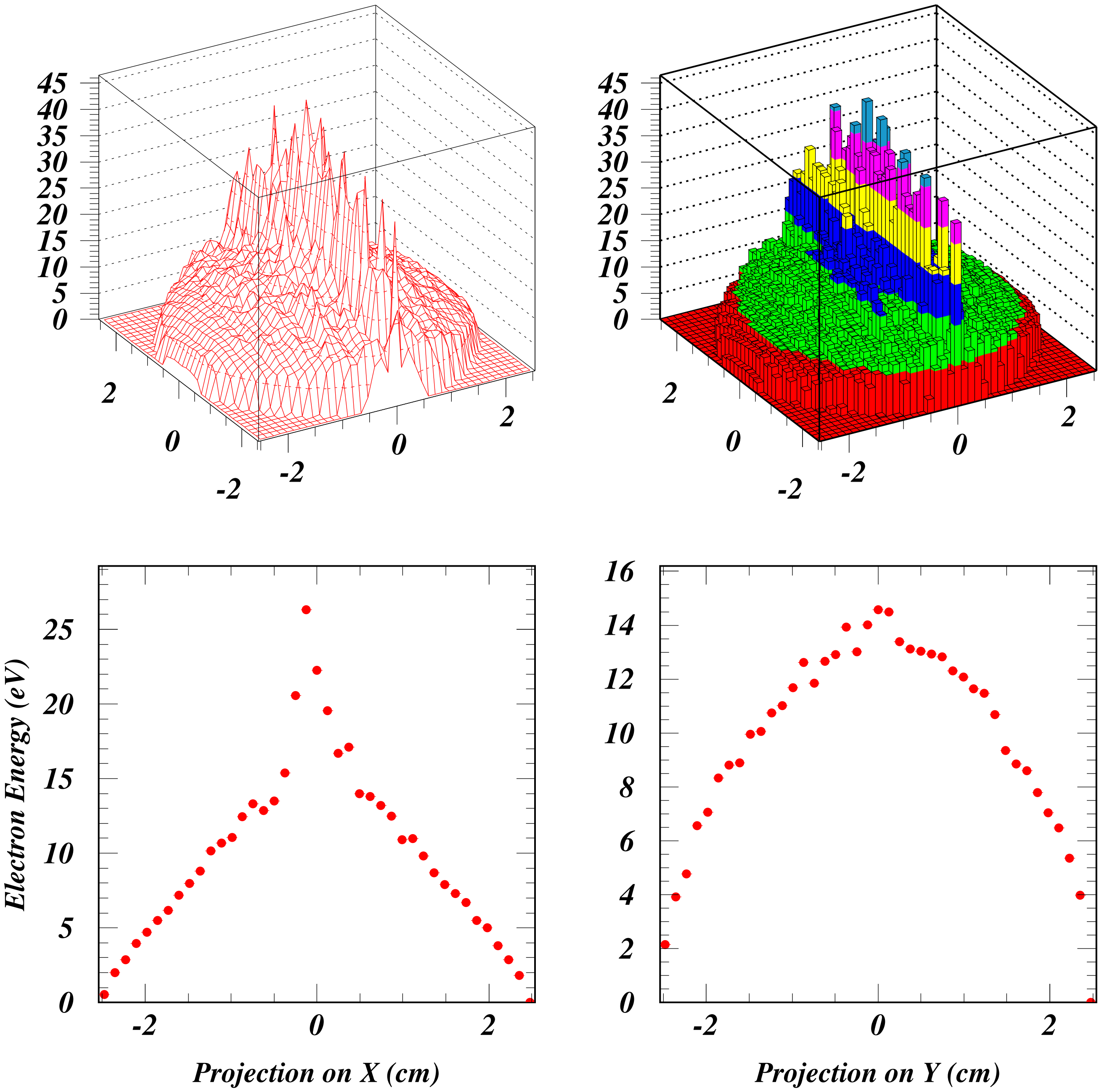

Job 14760: Time-Integrated Energies of Electrons Hitting Wall
Average current density hitting wall: 84174.8 nA/cm^2
Current Density (nA/cm^2)
20000
17500
15000
12500
10000
7500
5000
2500
0
0
1
2
3
4
5
6
Average power density hitting wall: 10.2 W/m^2
Power density (W/m^2)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Azimuth (radians)

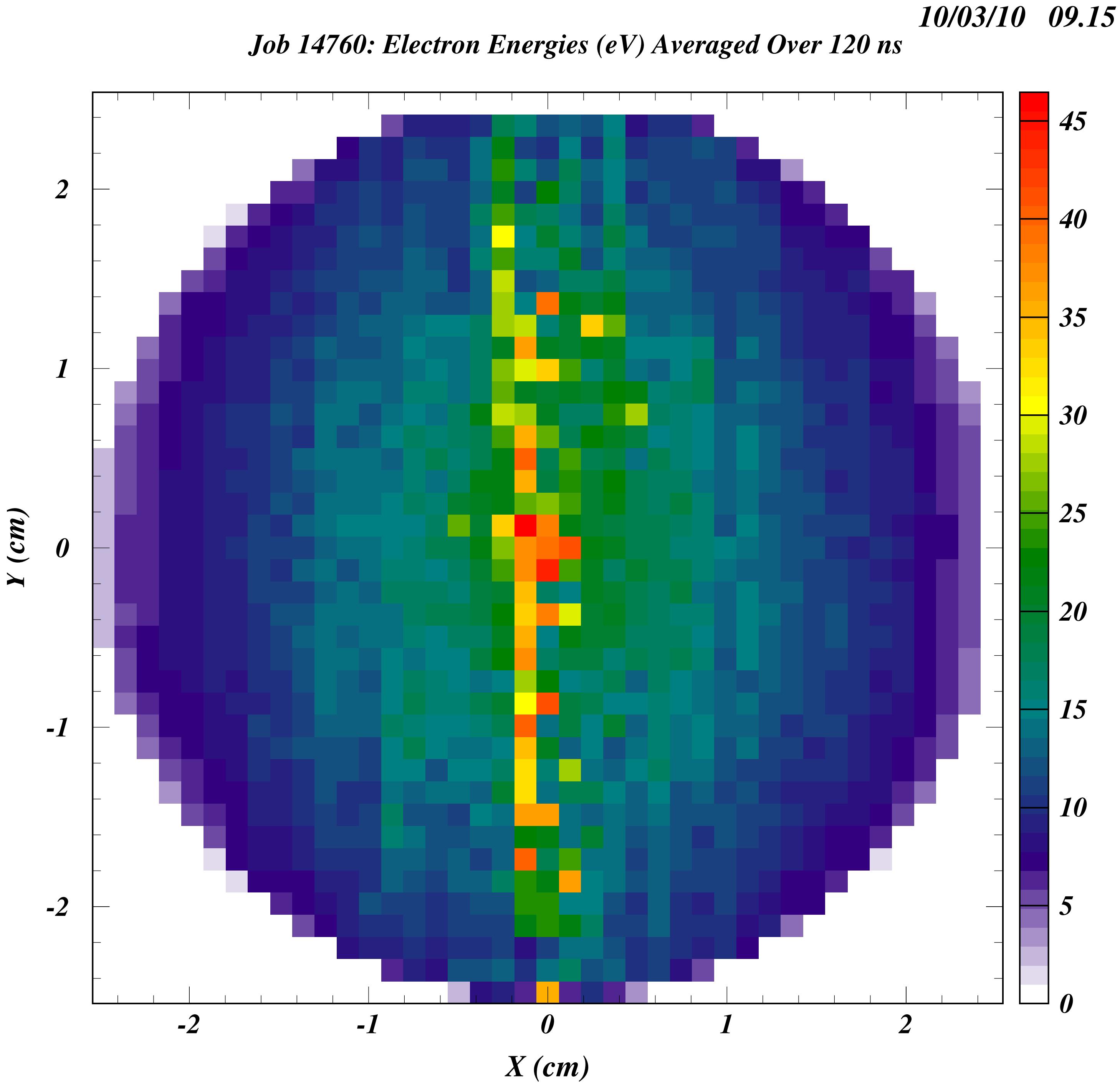

Job 14760: Cloud Density (e/m^3) Averaged Over 120 ns
x 10^8
1000
800
600
400
200
0
2
0
-2
-2
0
2
x 10^8
1000
800
600
400
200
0
2
0
-2
-2
0
2
x 10^7
6000
5000
4000
3000
2000
1000
0
Electron Density (e/m^3)
-2
0
2
Projection on X (cm)
x 10^8
1600
1400
1200
1000
800
600
400
200
0
-2
0
2
Projection on Y (cm)


10/03/10 09.15
Job 14760: Cloud Density (e/m^3) Averaged Over 120 ns
x 10^8
1000
800
600
400
200
0
Y (cm)
2
1
0
-1
-2
X (cm)
-2
-1
0
1
2

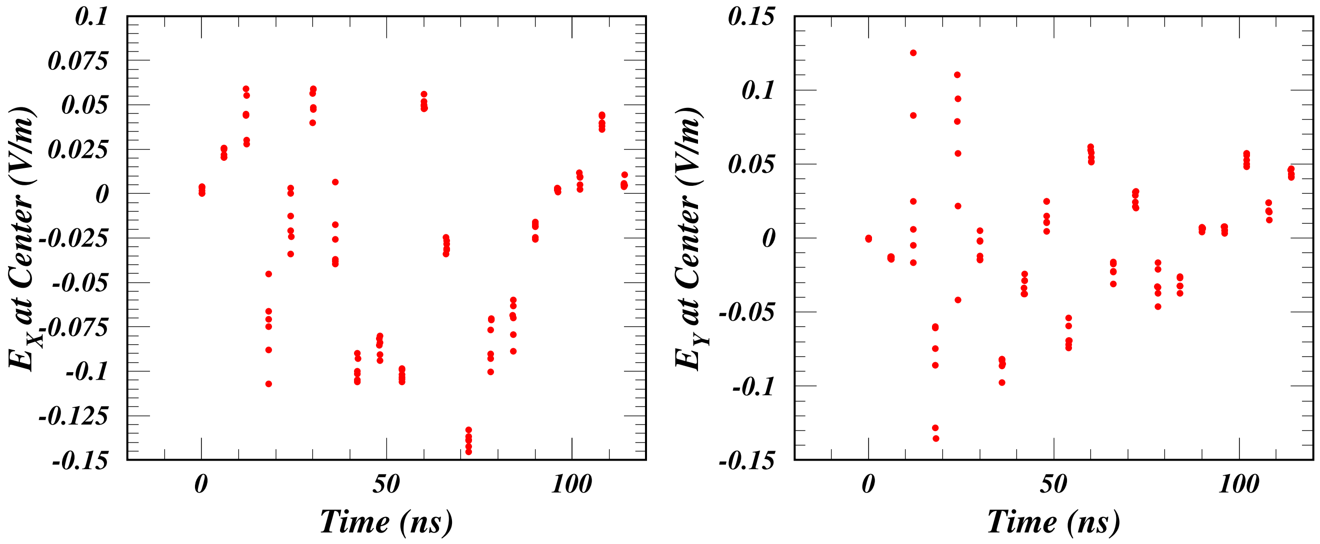
10/03/10 09.15

Job 14760: Electron Energies (eV) Averaged Over 120 ns




10/03/10 09.15
Job 14760: Electron Energies (eV) Averaged Over 120 ns
Y (cm)
X (cm)
2
1
0
-1
-2
45
40
35
30
25
20
15
10
5
0

Job 14760: Electric Field at Beam



Job 14760Electric Field Gradients at Beam