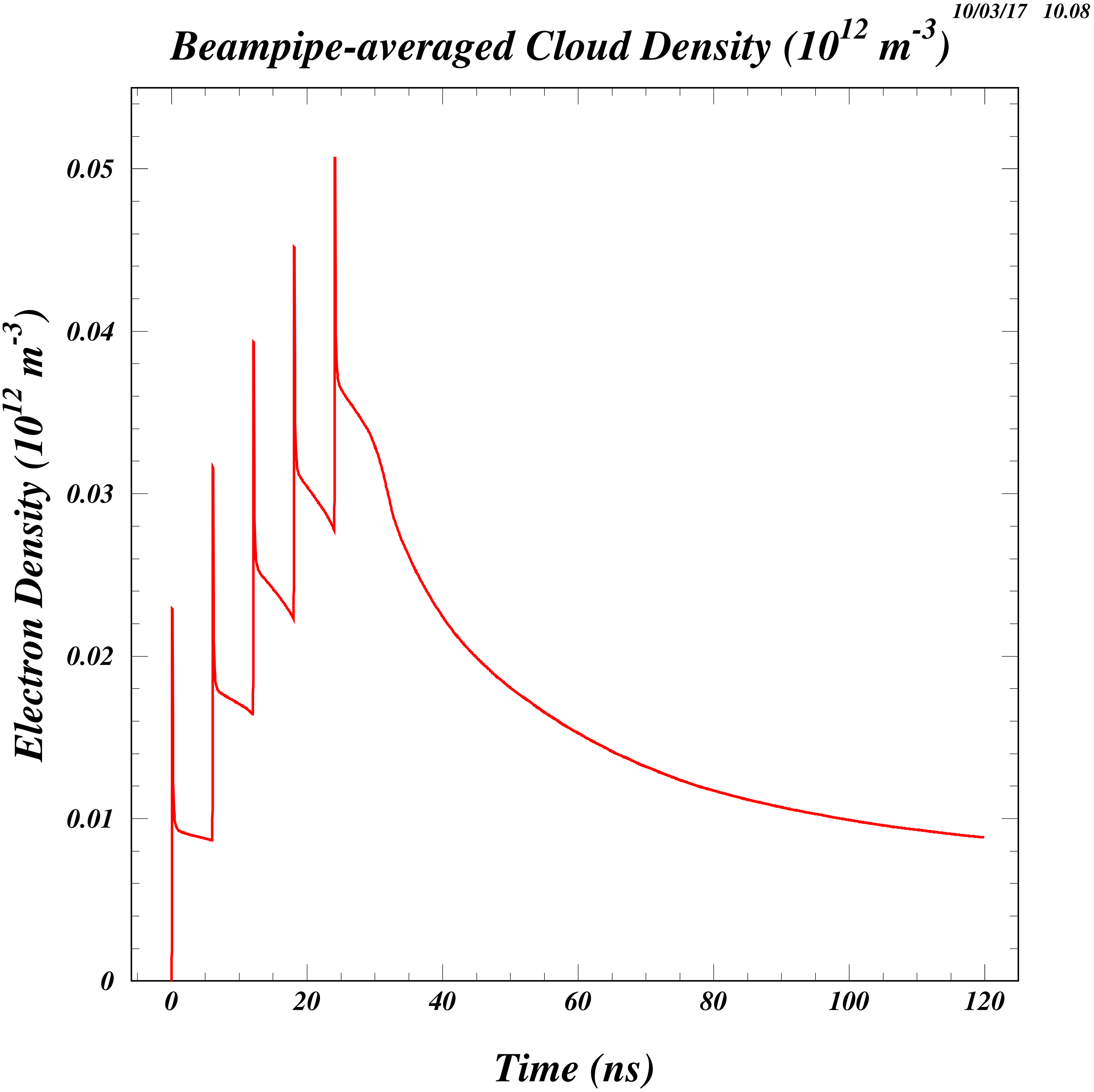
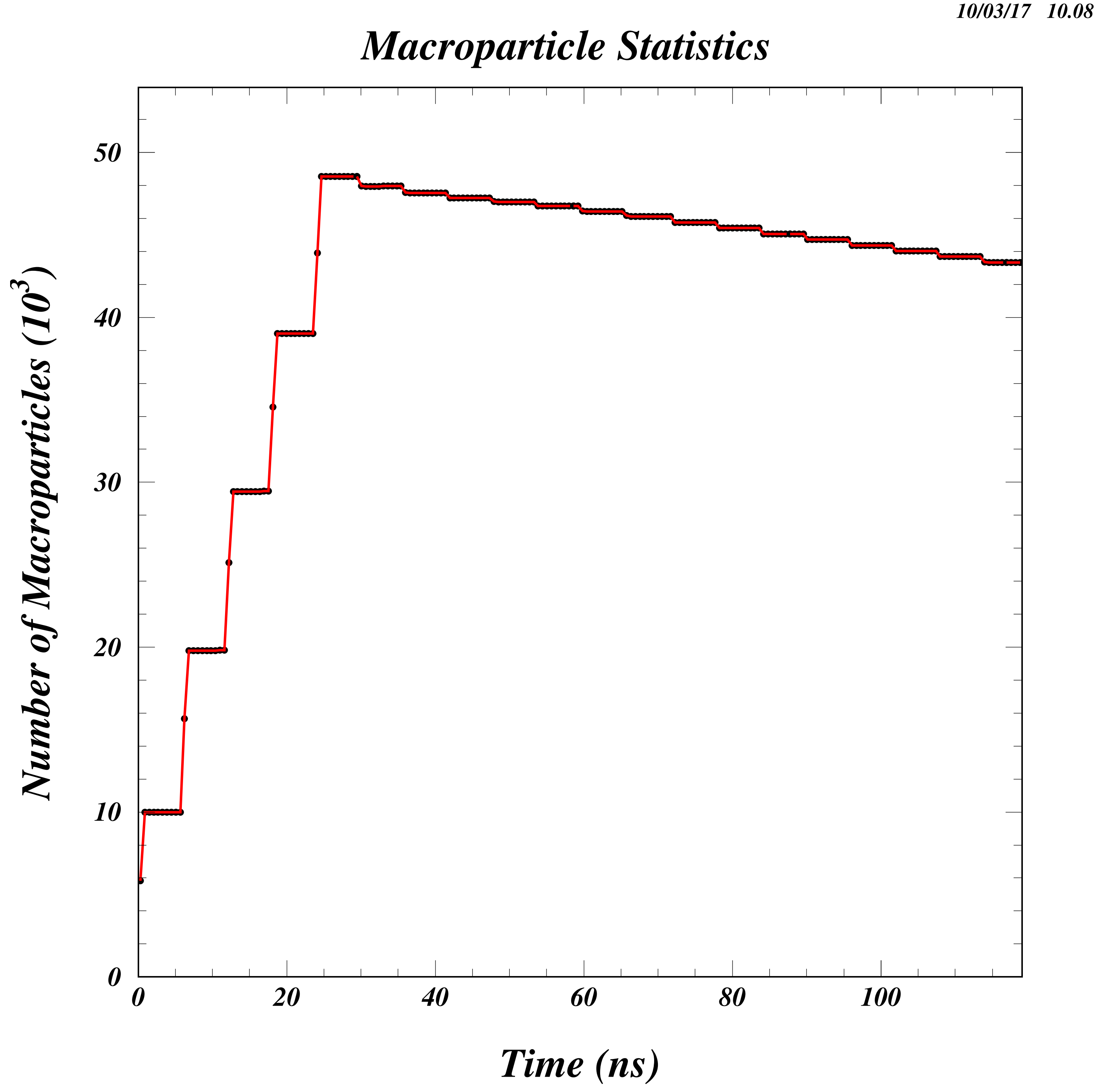
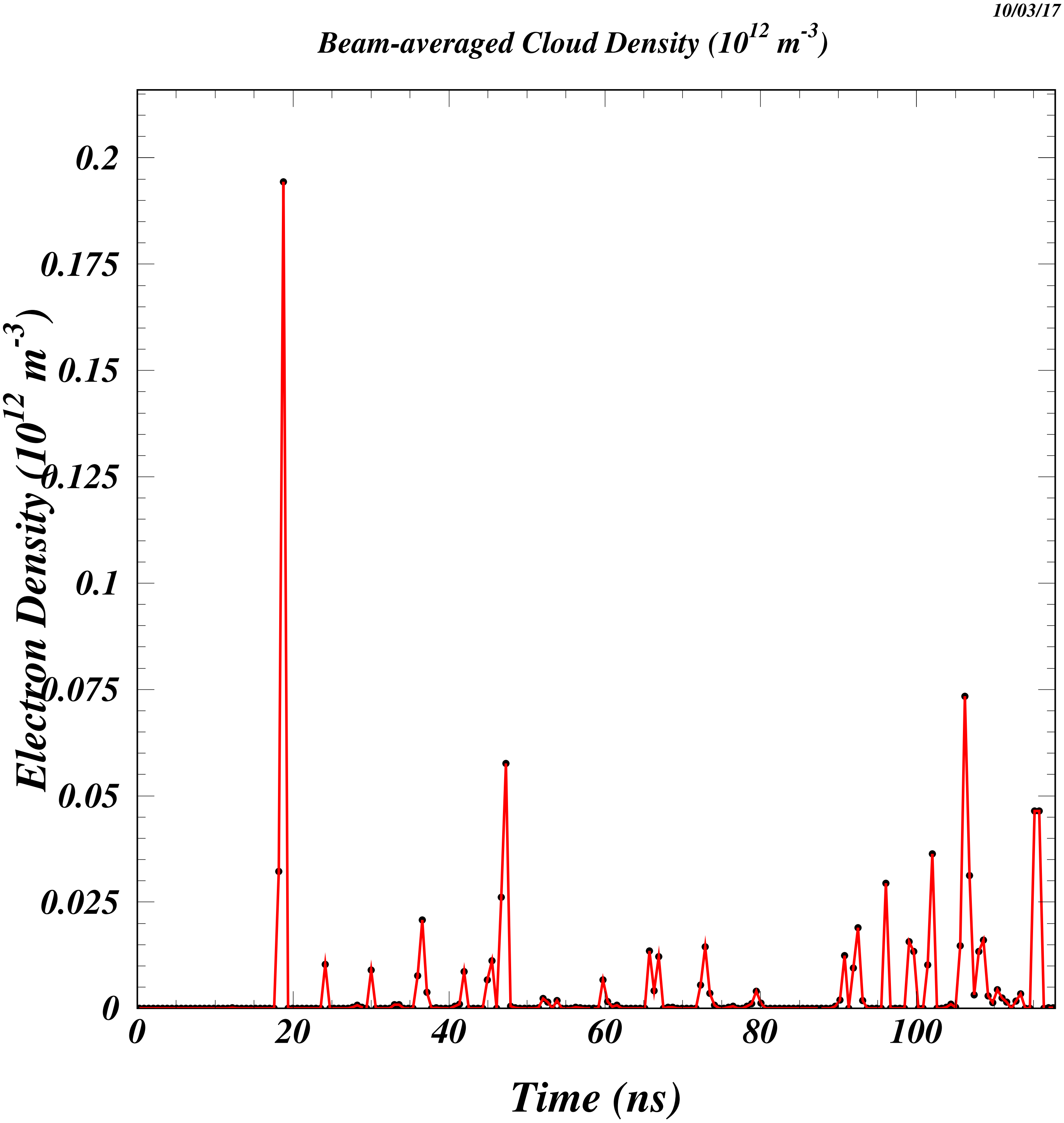


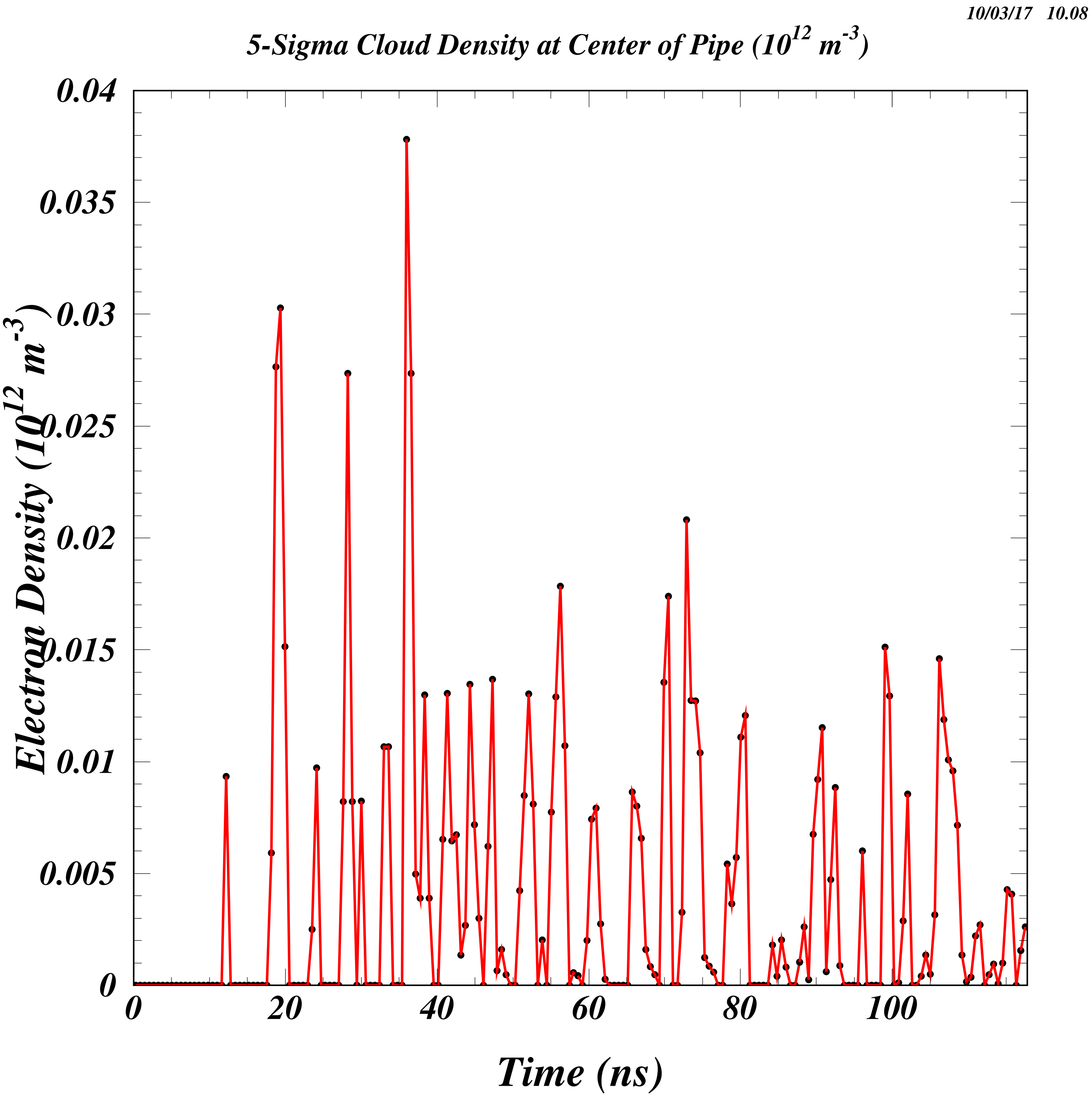
10/03/17 10.08
Beampipe-averaged Cloud Density (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.01
0.02
0.03
0.04
0.05
0
20
40
60
80
100
120
Time (ns)

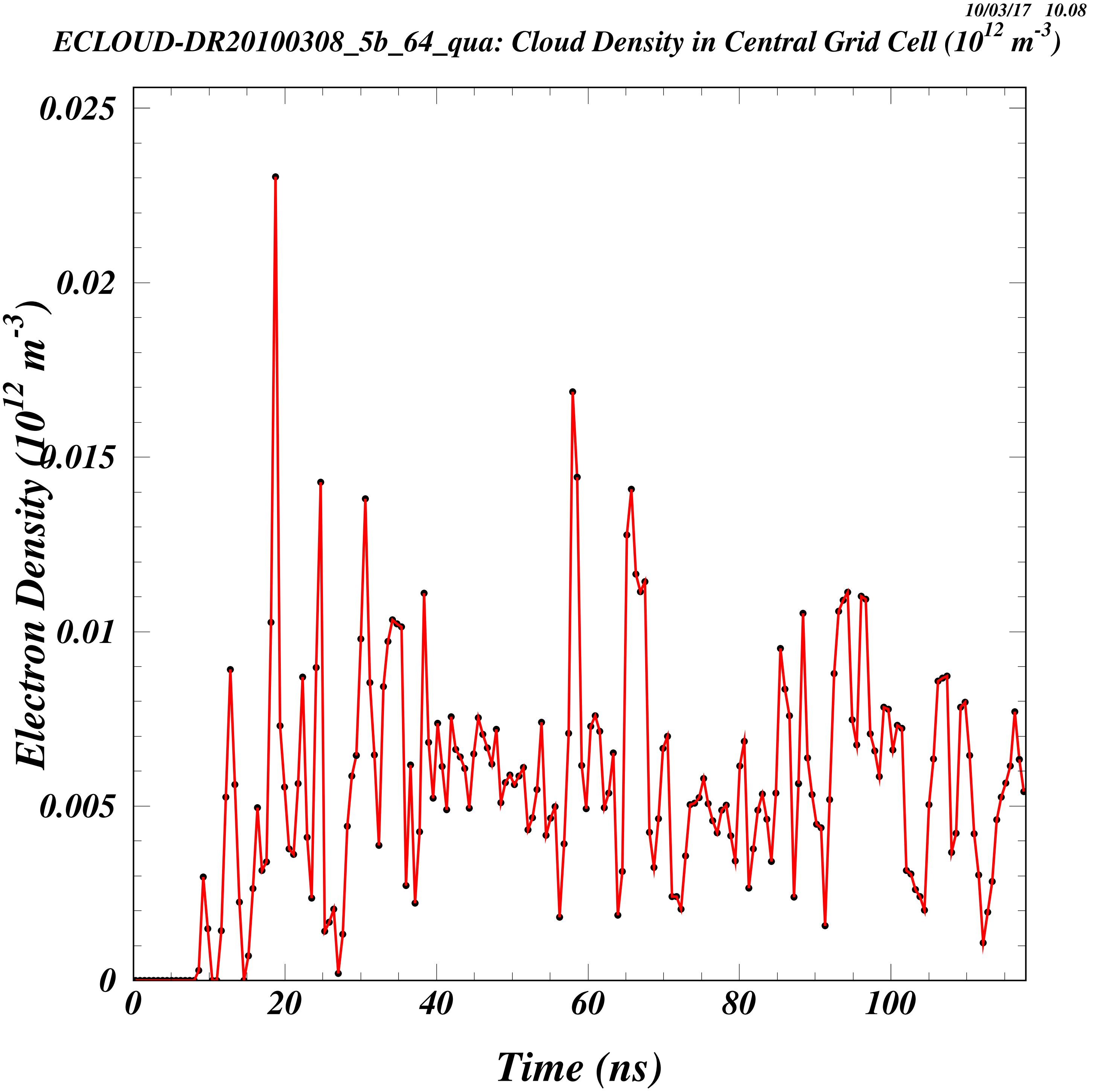
10/03/17 10.08



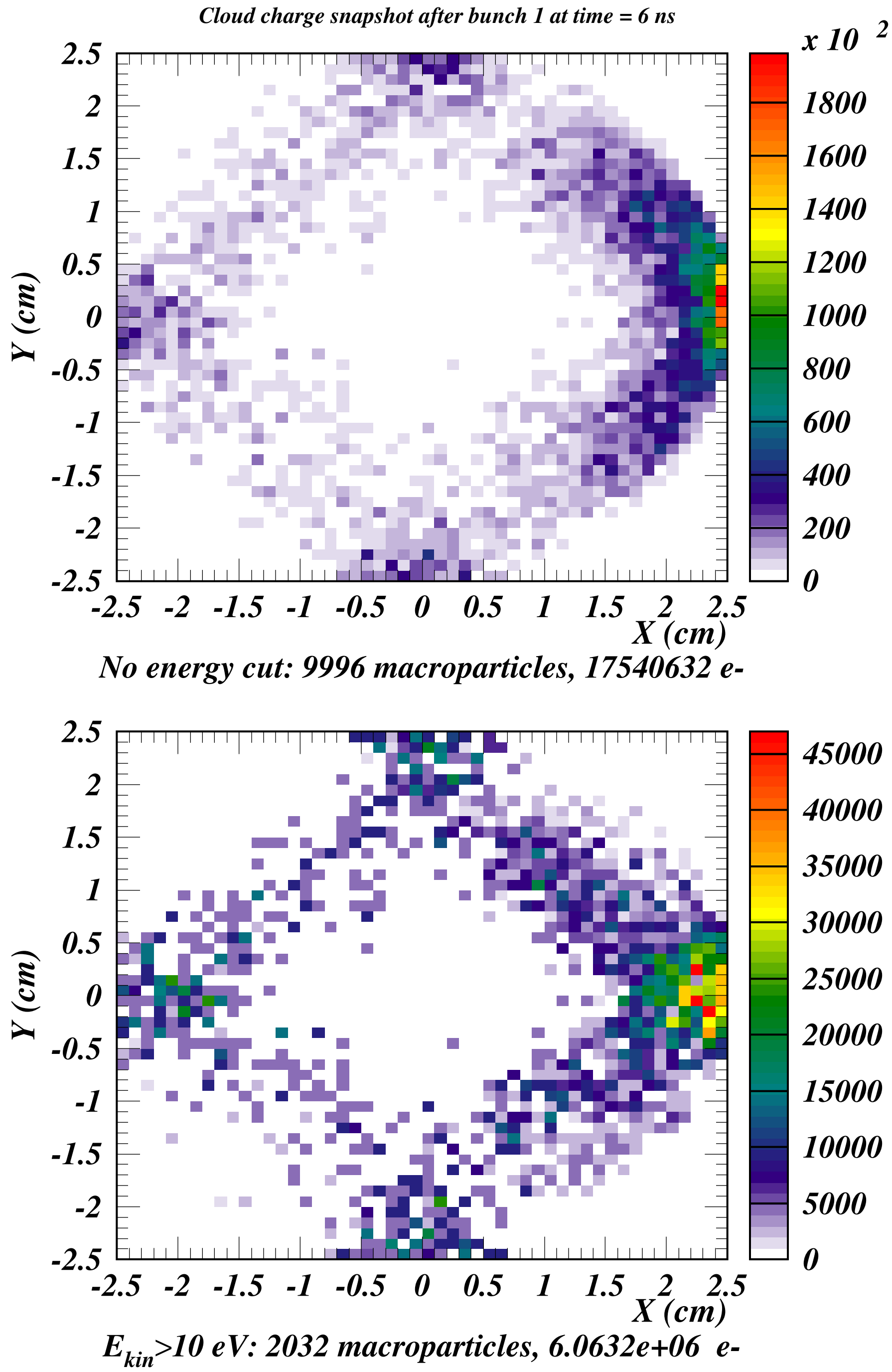
Macroparticle Statistics
Number of Macroparticles (10^3)
Time (ns)
0
10
20
30
40
50
0
20
40
60
80
100


Beam-averaged Cloud Density (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.025
0.05
0.075
0.1
0.125
0.15
0.175
0.2
0
20
40
60
80
100
Time (ns)

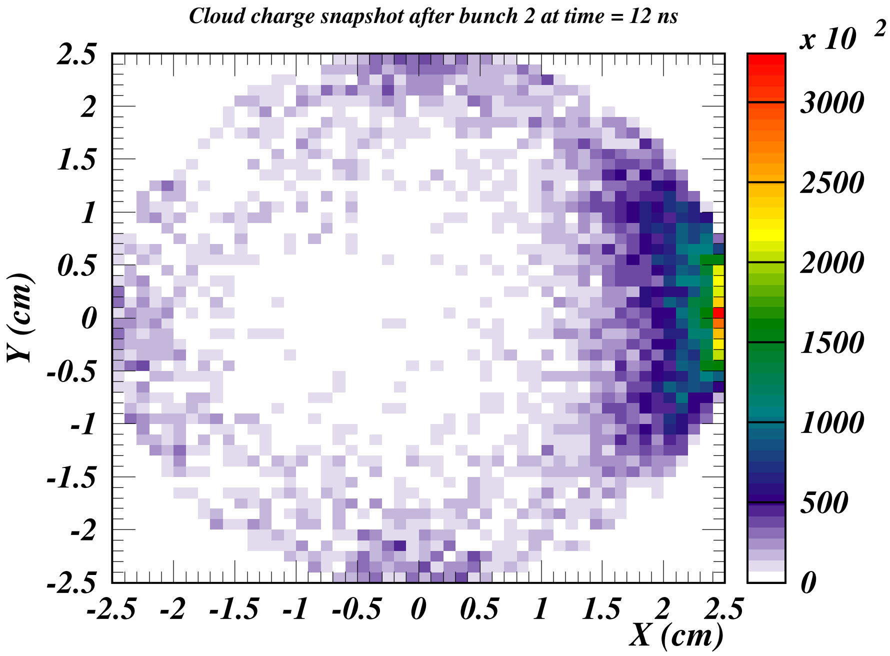

10/03/17 10.08
5-Sigma Cloud Density at Center of Pipe (10^12 m^-3)
Electron Density (10^12 m^-3)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0
20
40
60
80
100
Time (ns)


10/03/17 10.08
ECLOUD-DR20100308_5b_64_qua: Cloud Density in Central Grid Cell (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.025
0.02
0.015
0.01
0.005
0
0
20
40
60
80
100
Time (ns)

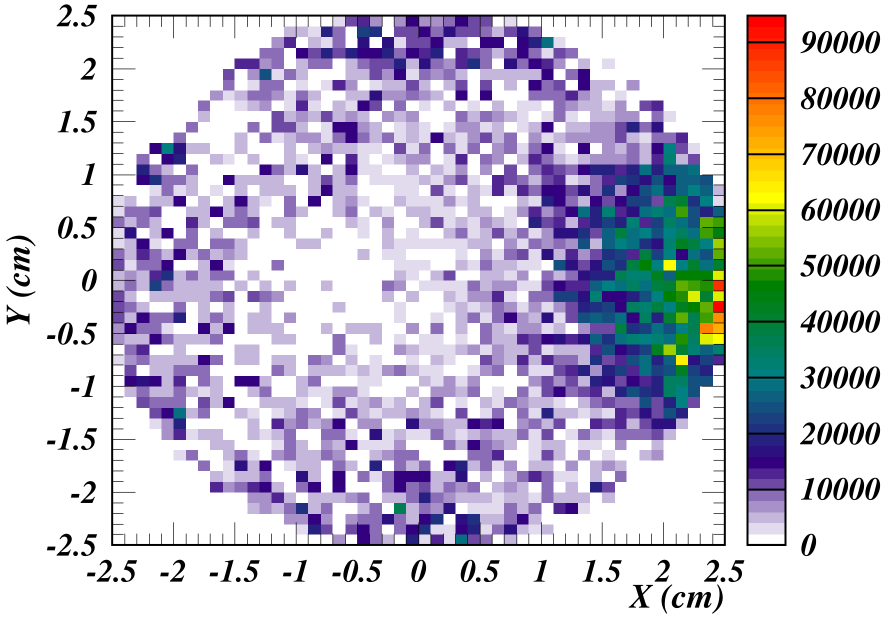
10/03/17 10.08


Cloud charge snapshot after bunch 1 at time = 6 ns
x 10 2
Y (cm)
X (cm)
No energy cut: 9996 macroparticles, 17540632 e-
Y (cm)
X (cm)
E_kin>10 eV: 2032 macroparticles, 6.0632e+06 e-

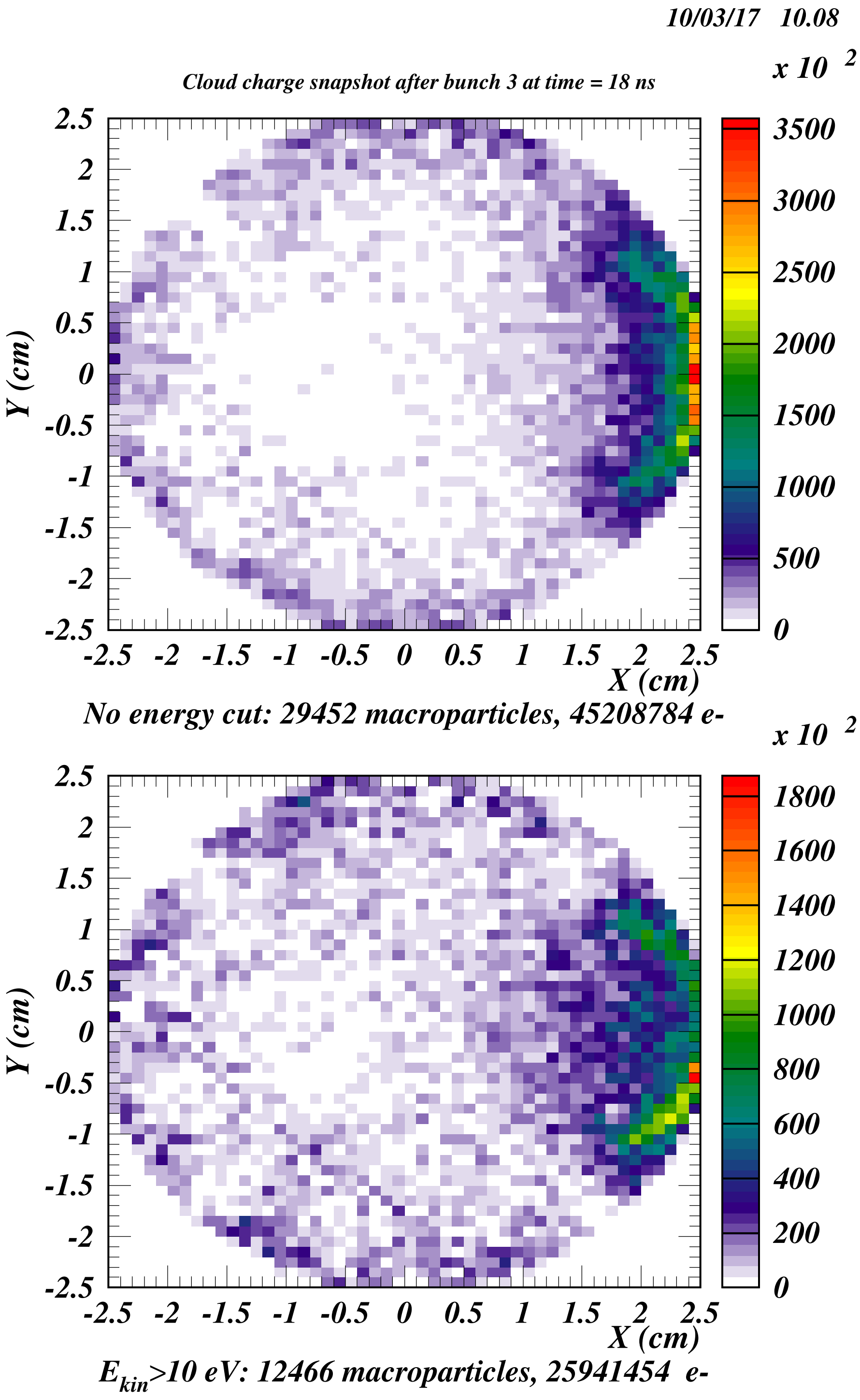
10/03/17 10.08



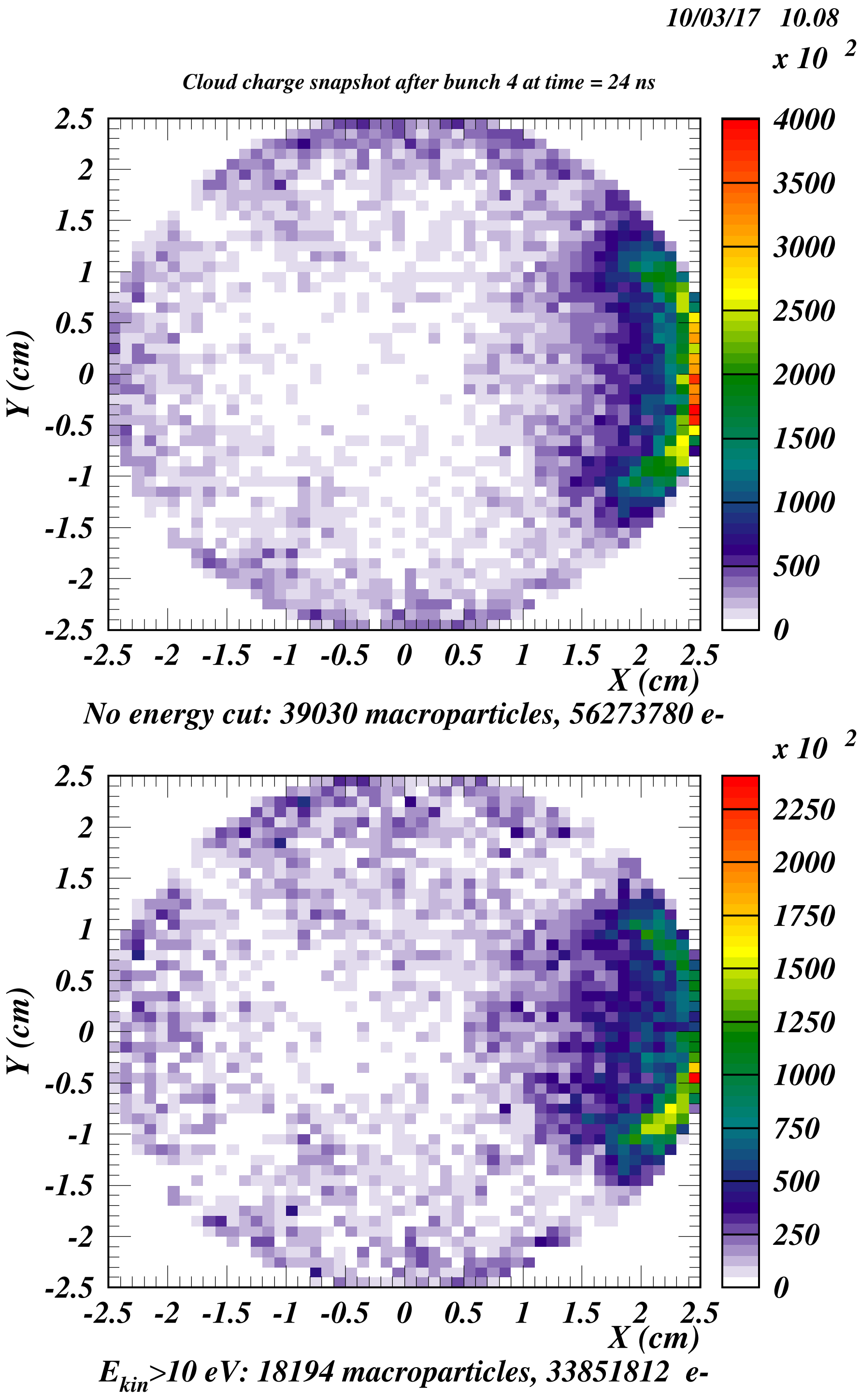
No energy cut: 19807 macroparticles, 33273604 e-



E_{kin}>10 eV: 6968 macroparticles, 17359804 e-



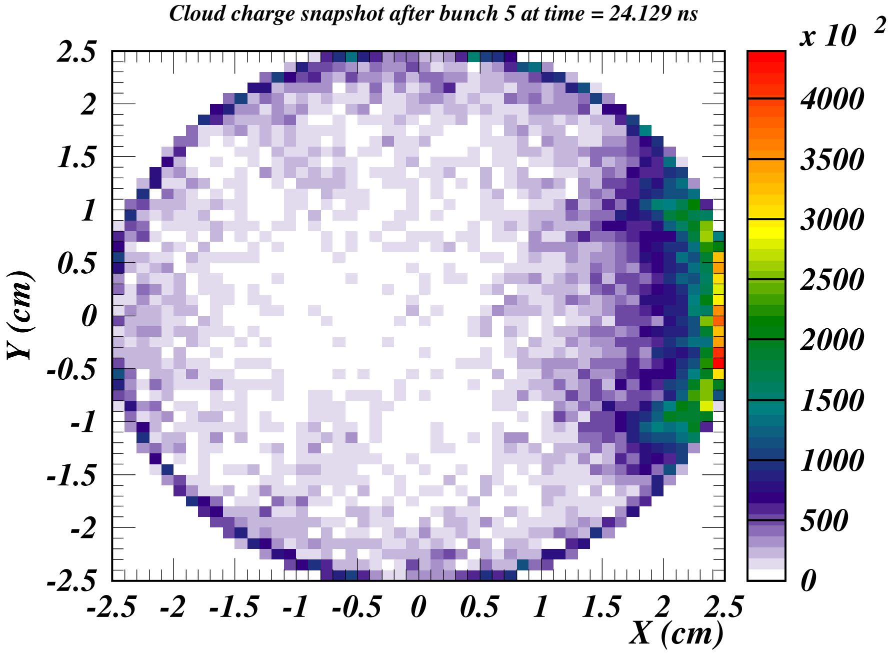
10/03/17 10.08
Cloud charge snapshot after bunch 3 at time = 18 ns
x 10 2
Y (cm)
X (cm)
No energy cut: 29452 macroparticles, 45208784 e-
x 10 2
Y (cm)
X (cm)
E_kin>10 eV: 12466 macroparticles, 25941454 e-



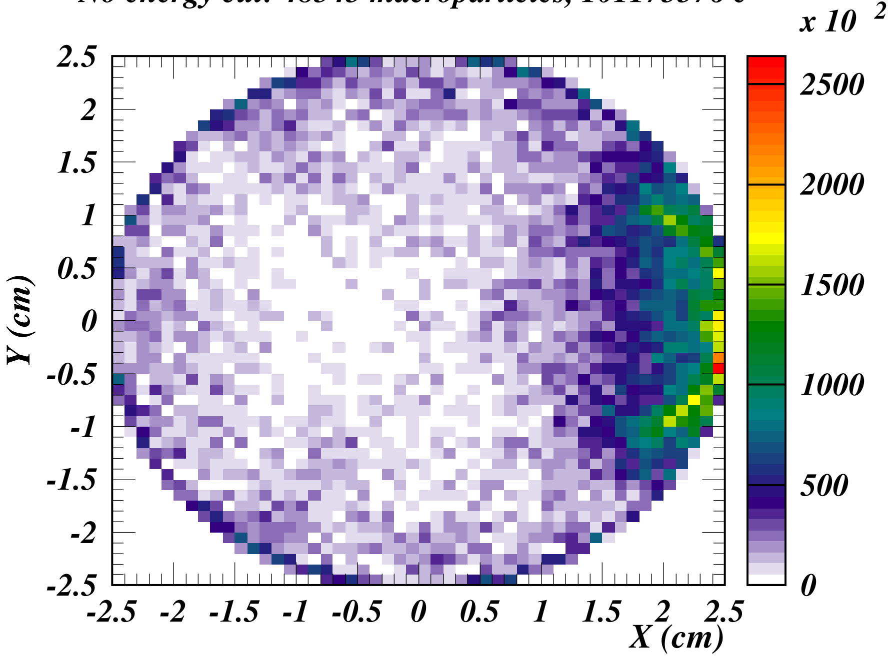
10/03/17 10.08
x 10 2
Cloud charge snapshot after bunch 4 at time = 24 ns
Y (cm)
X (cm)
4000
3500
3000
2500
2000
1500
1000
500
0
No energy cut: 39030 macroparticles, 56273780 e-
x 10 2
2250
2000
1750
1500
1250
1000
750
500
250
0
Y (cm)
X (cm)
E_kin>10 eV: 18194 macroparticles, 33851812 e-

10/03/17 10.08

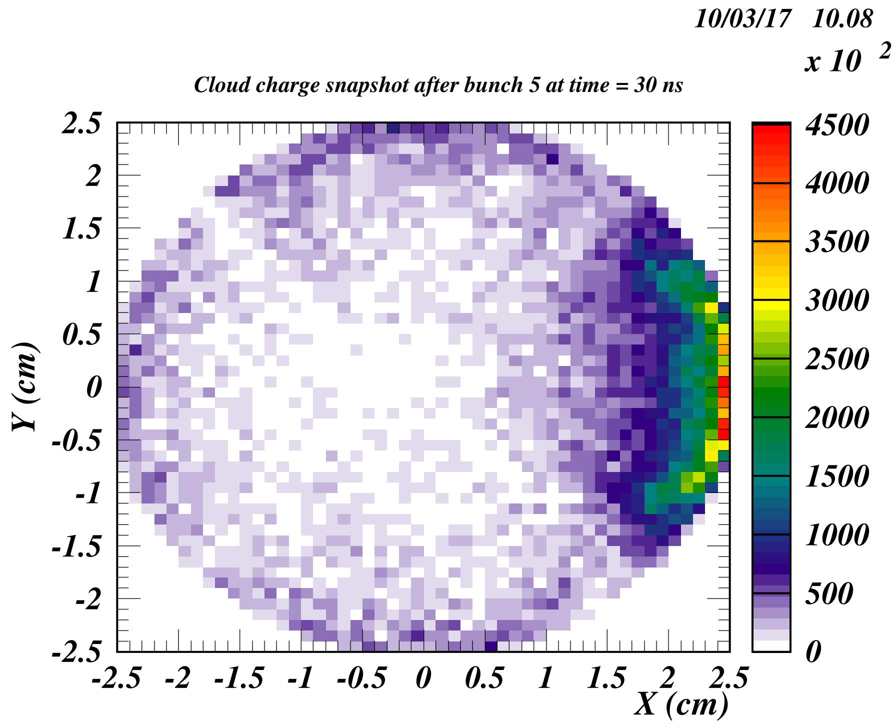
Cloud charge snapshot after bunch 5 at time = 24.129 ns



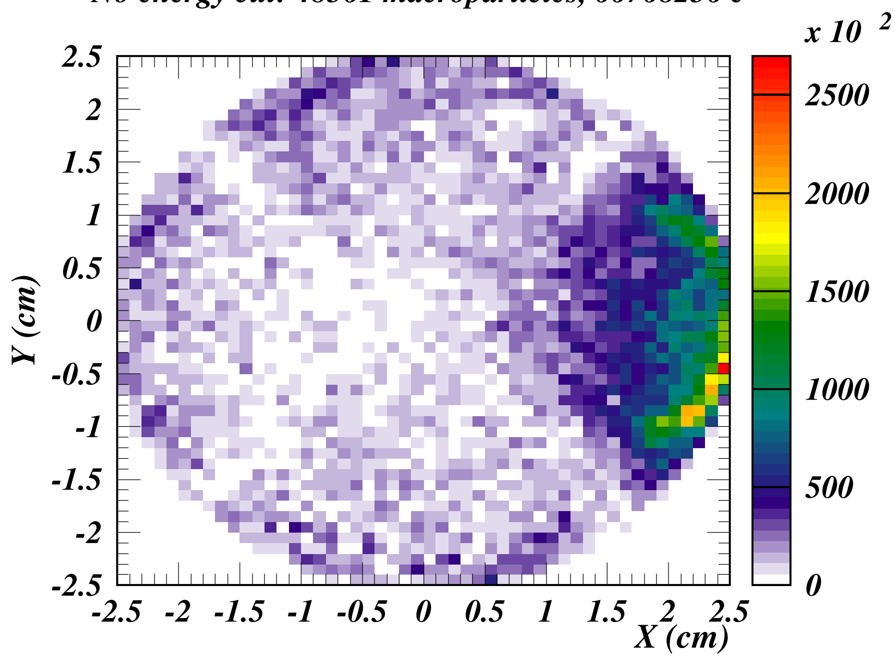
No energy cut: 48543 macroparticles, 101173376 e-



E_{kin}>10 eV: 31079 macroparticles, 65471344 e-

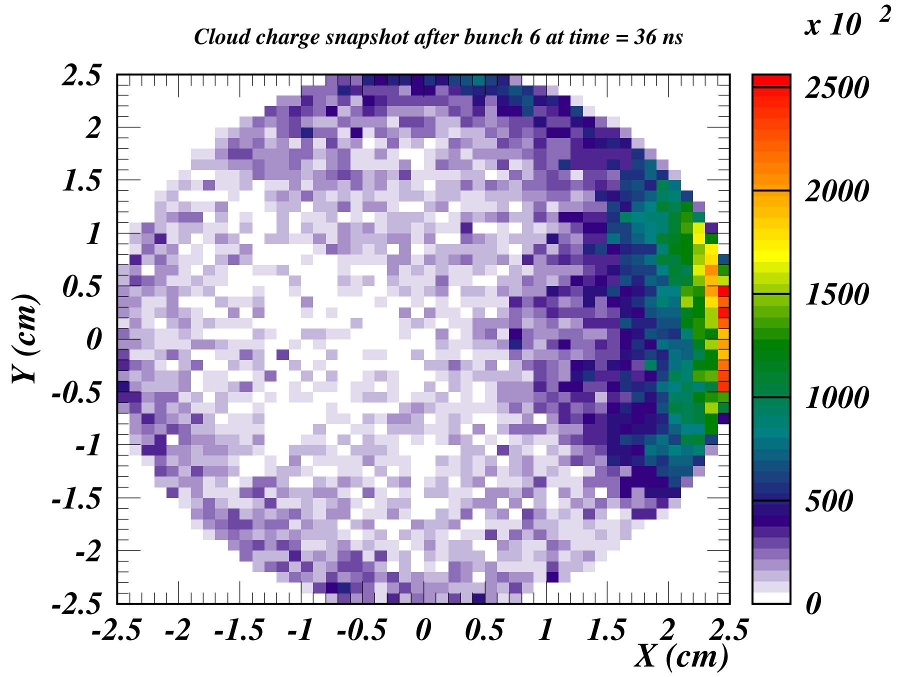


No energy cut: 48561 macroparticles, 66768256 e-

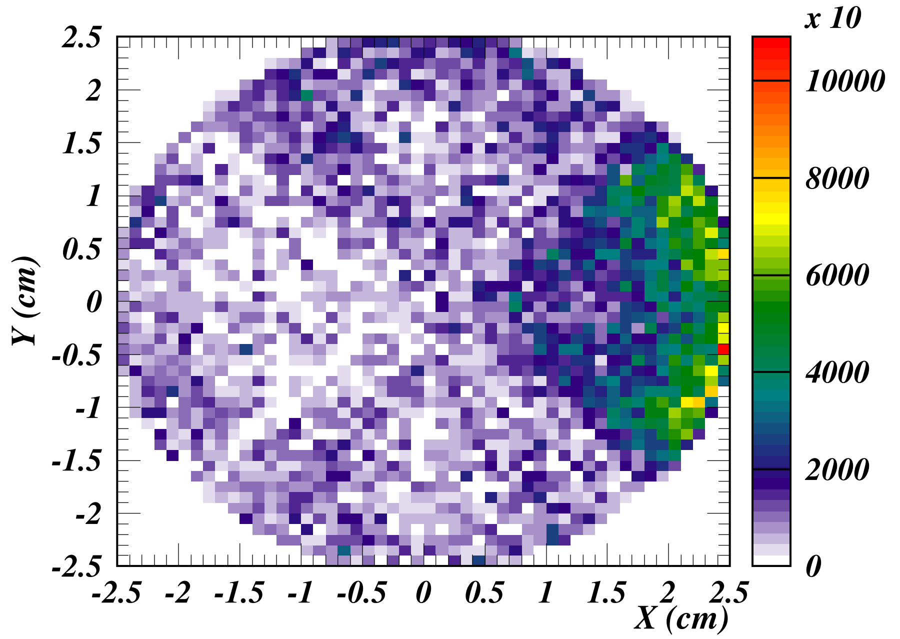


E_{kin}>10 eV: 25178 macroparticles, 43183012 e-

10/03/17 10.08



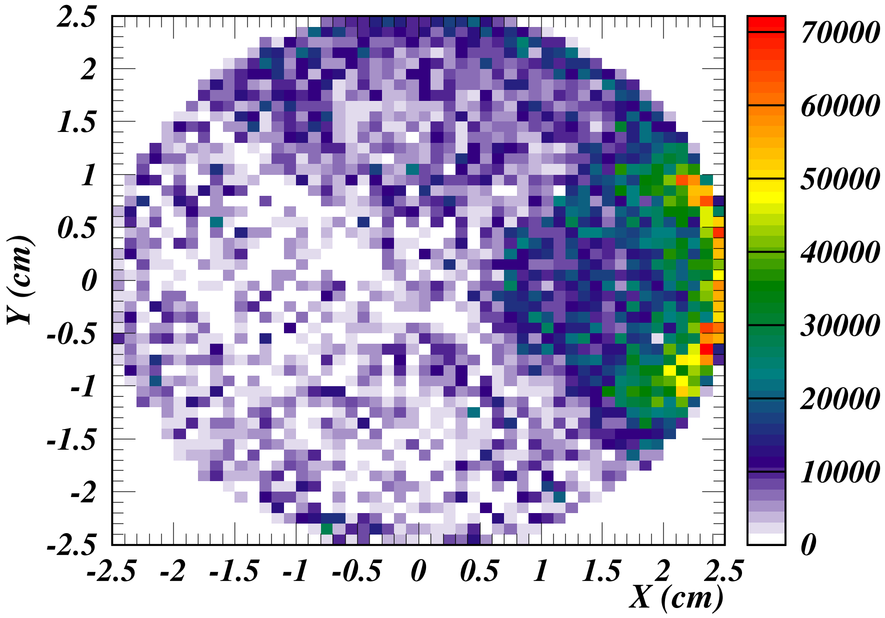
No energy cut: 47964 macroparticles, 51279480 e-



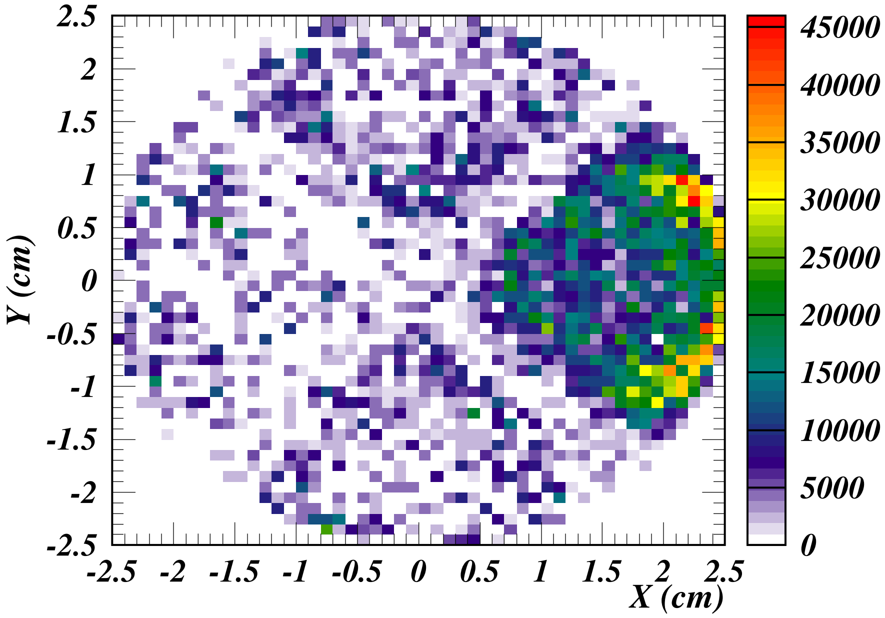
E_{kin}>10 eV: 16988 macroparticles, 26068614 e-

10/03/17 10.08

Cloud charge snapshot after bunch 21 at time = 120 ns



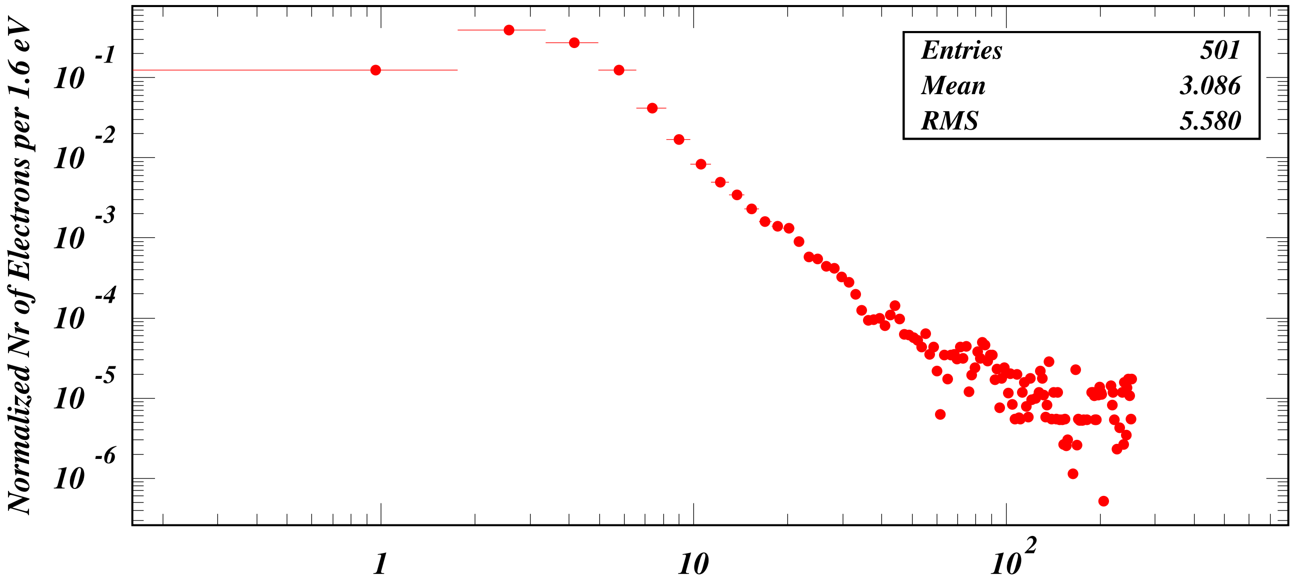
No energy cut: 43000 macroparticles, 17902768 e-

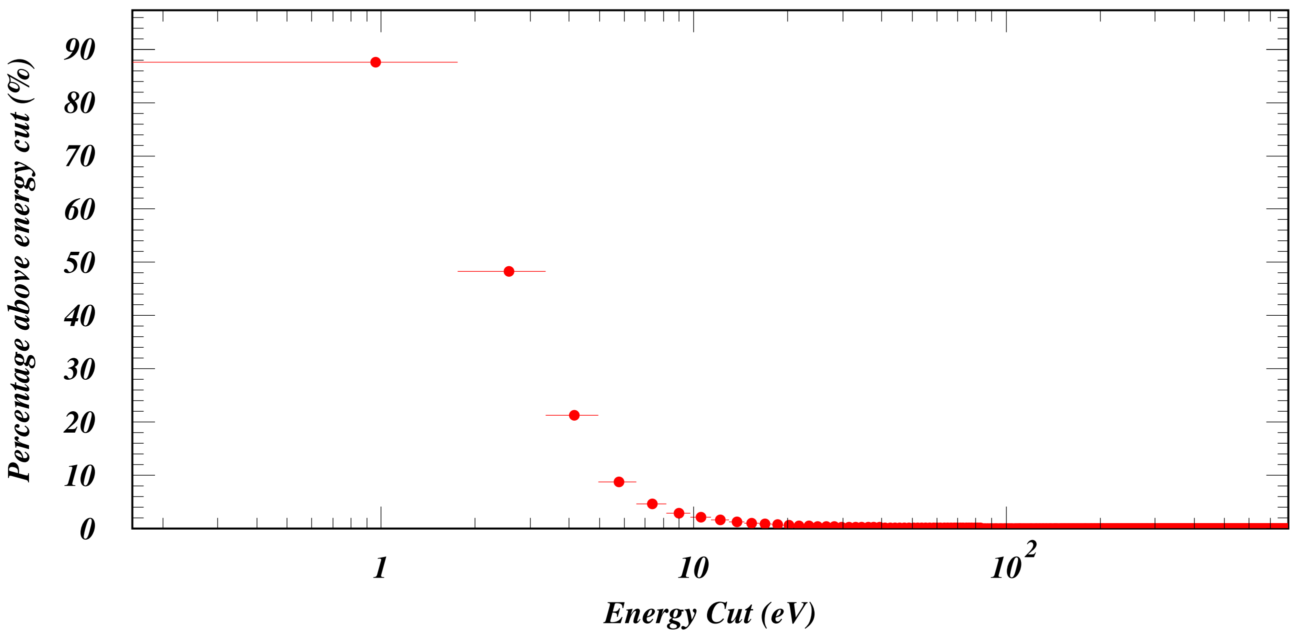


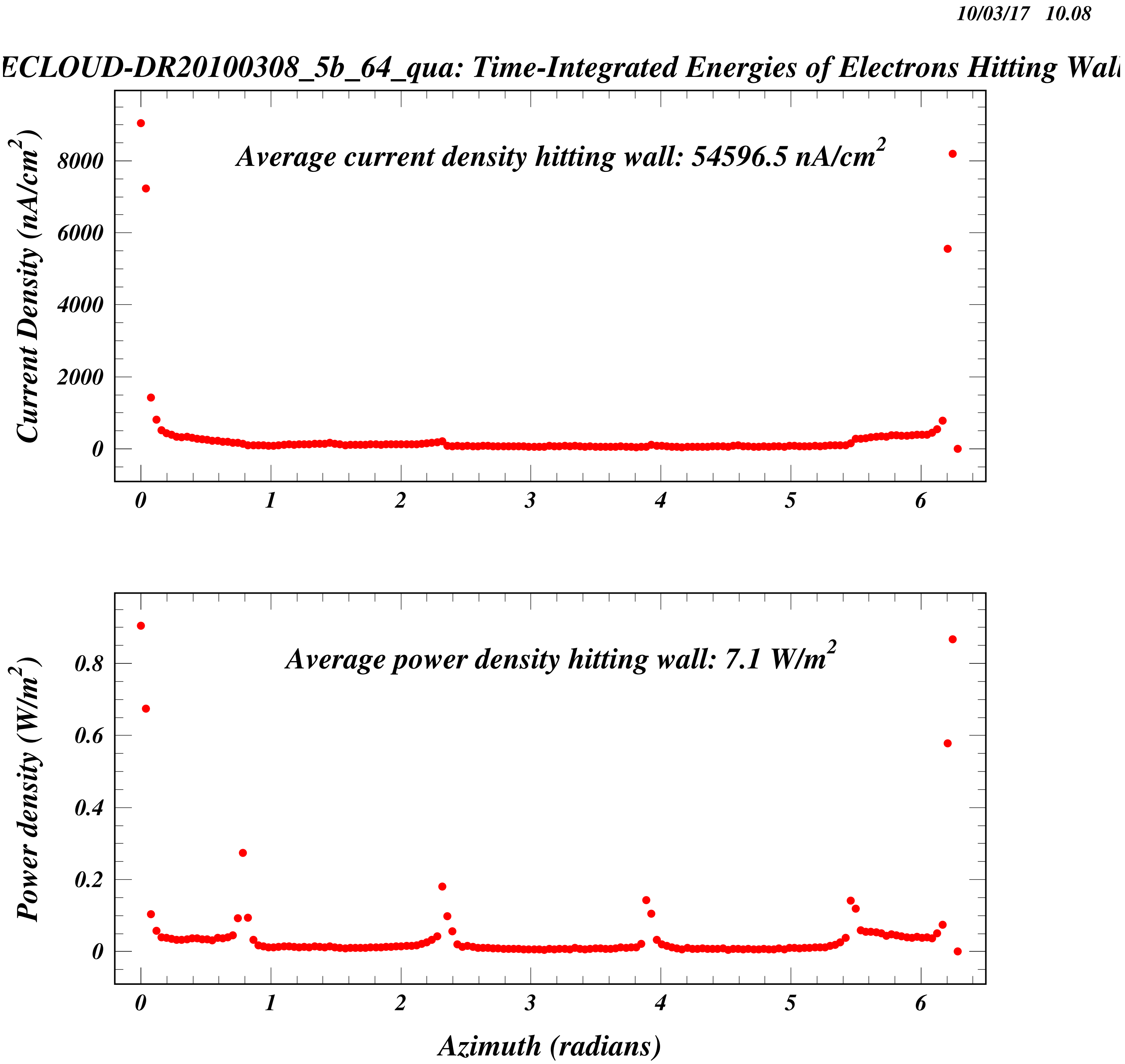
E_{kin}>10 eV: 5312 macroparticles, 9781638 e-

10/03/17 10.08

ECLOUD-DR20100308_5b_64_qua: Time-Integrated Energies of Electrons Hitting Wall

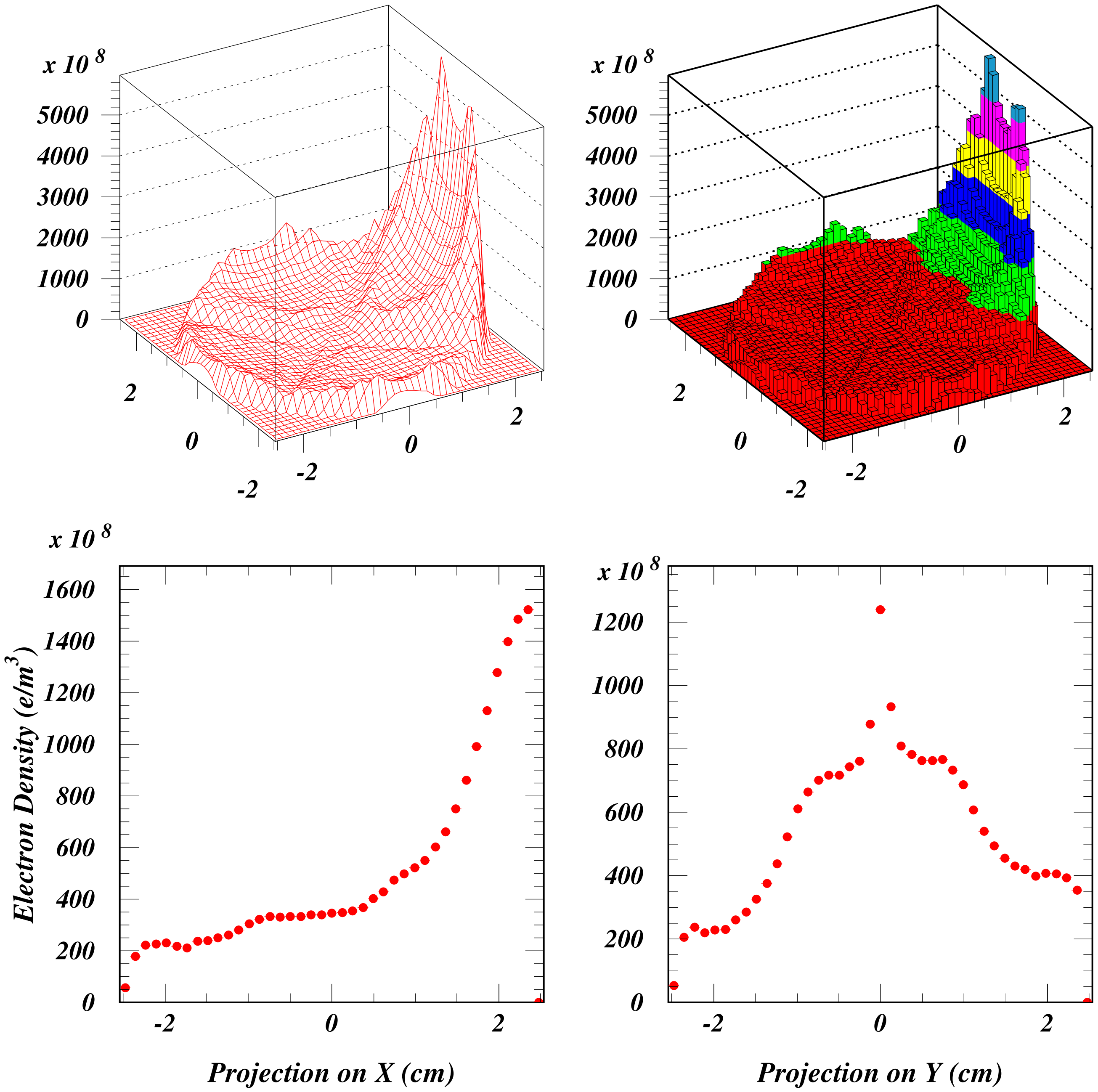


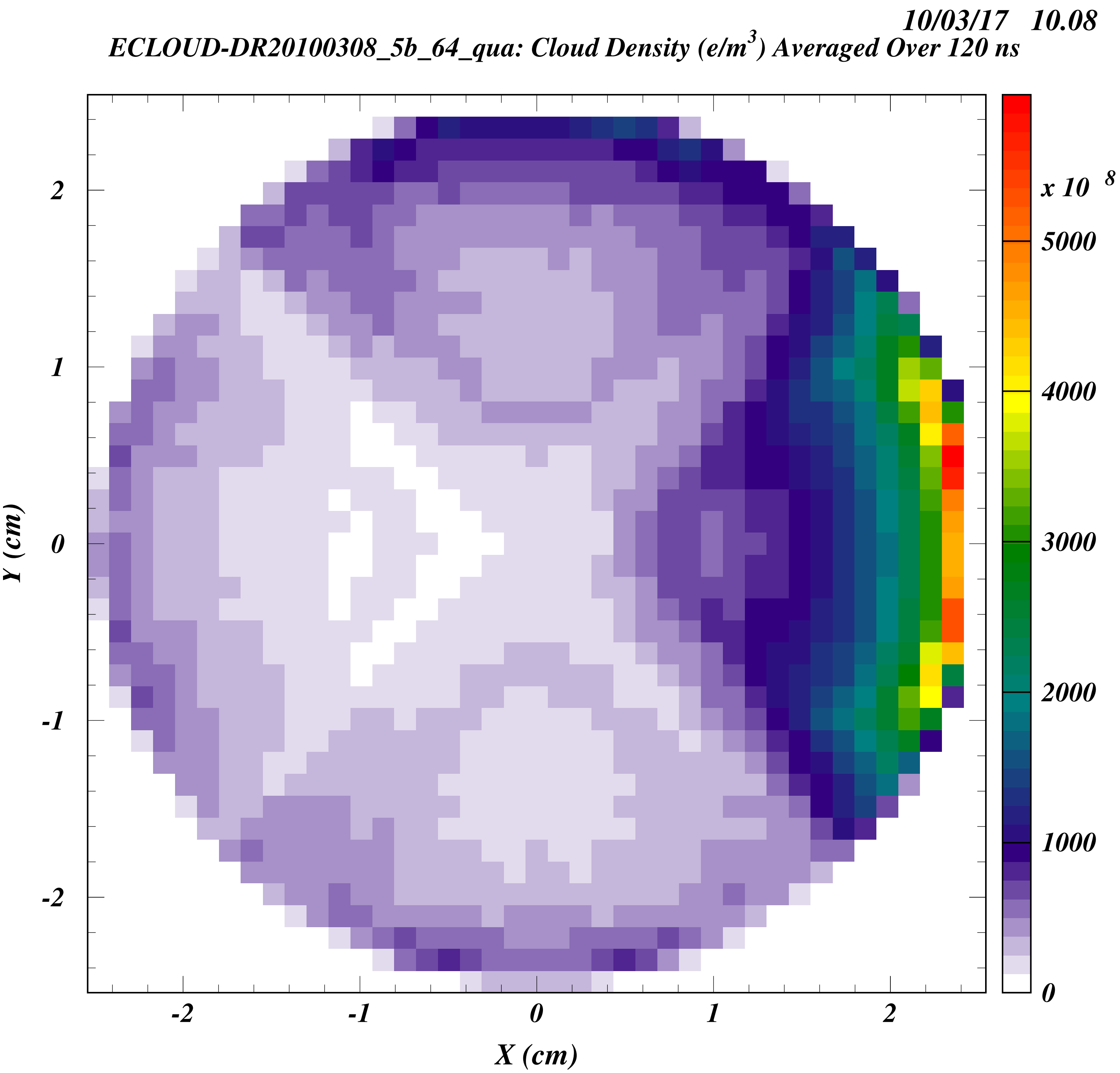



10/03/17 10.08
ECLOUD-DR20100308_5b_64_qua: Time-Integrated Energies of Electrons Hitting Wall
Average current density hitting wall: 54596.5 nA/cm^2
Current Density (nA/cm^2)
8000
6000
4000
2000
0
0
1
2
3
4
5
6
Average power density hitting wall: 7.1 W/m^2
Power density (W/m^2)
0.8
0.6
0.4
0.2
0
Azimuth (radians)

10/03/17   10.08

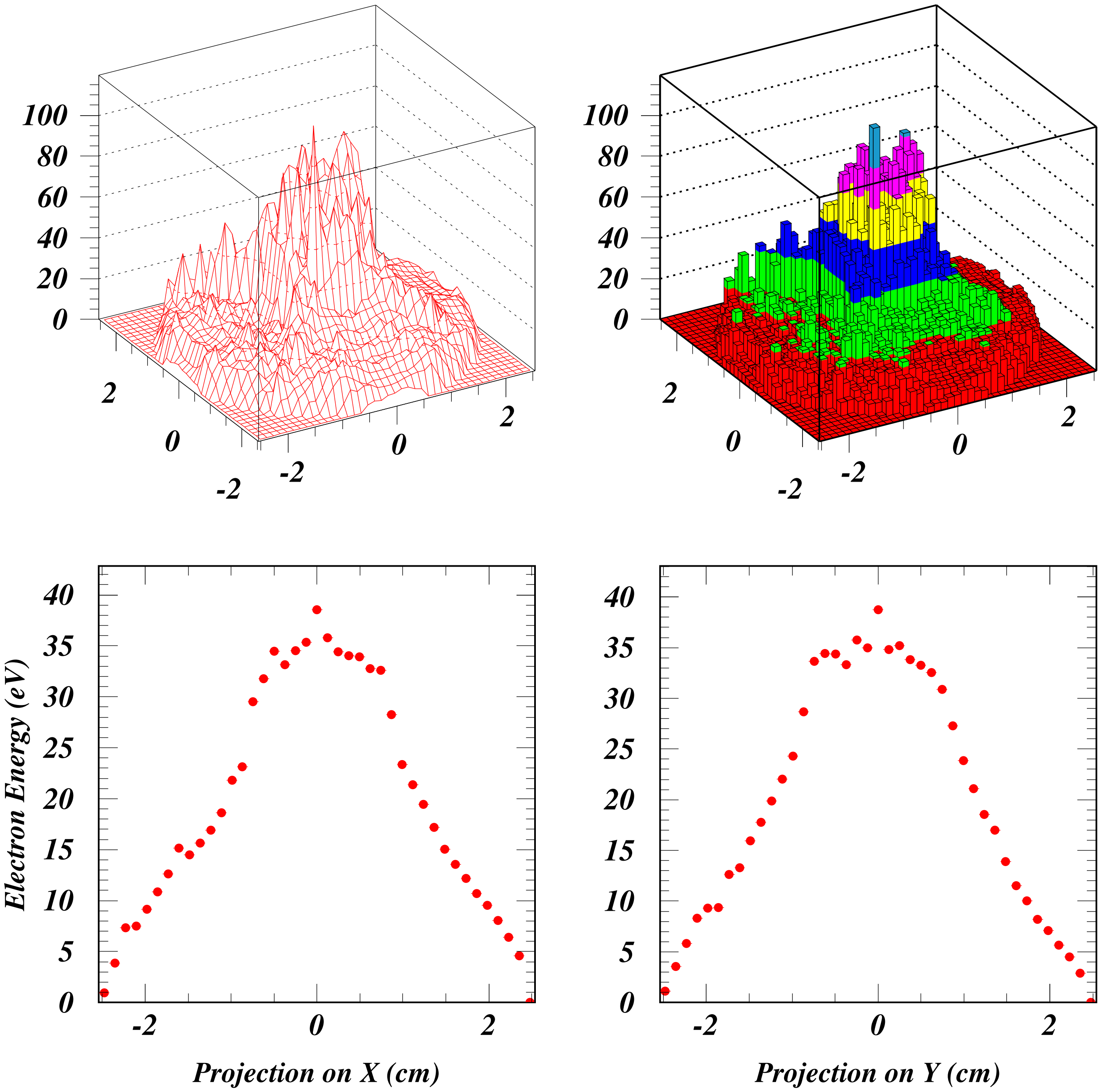
ECLOUD-DR20100308_5b_64_qua: Cloud Density (e/m^3) Averaged Over 120 ns

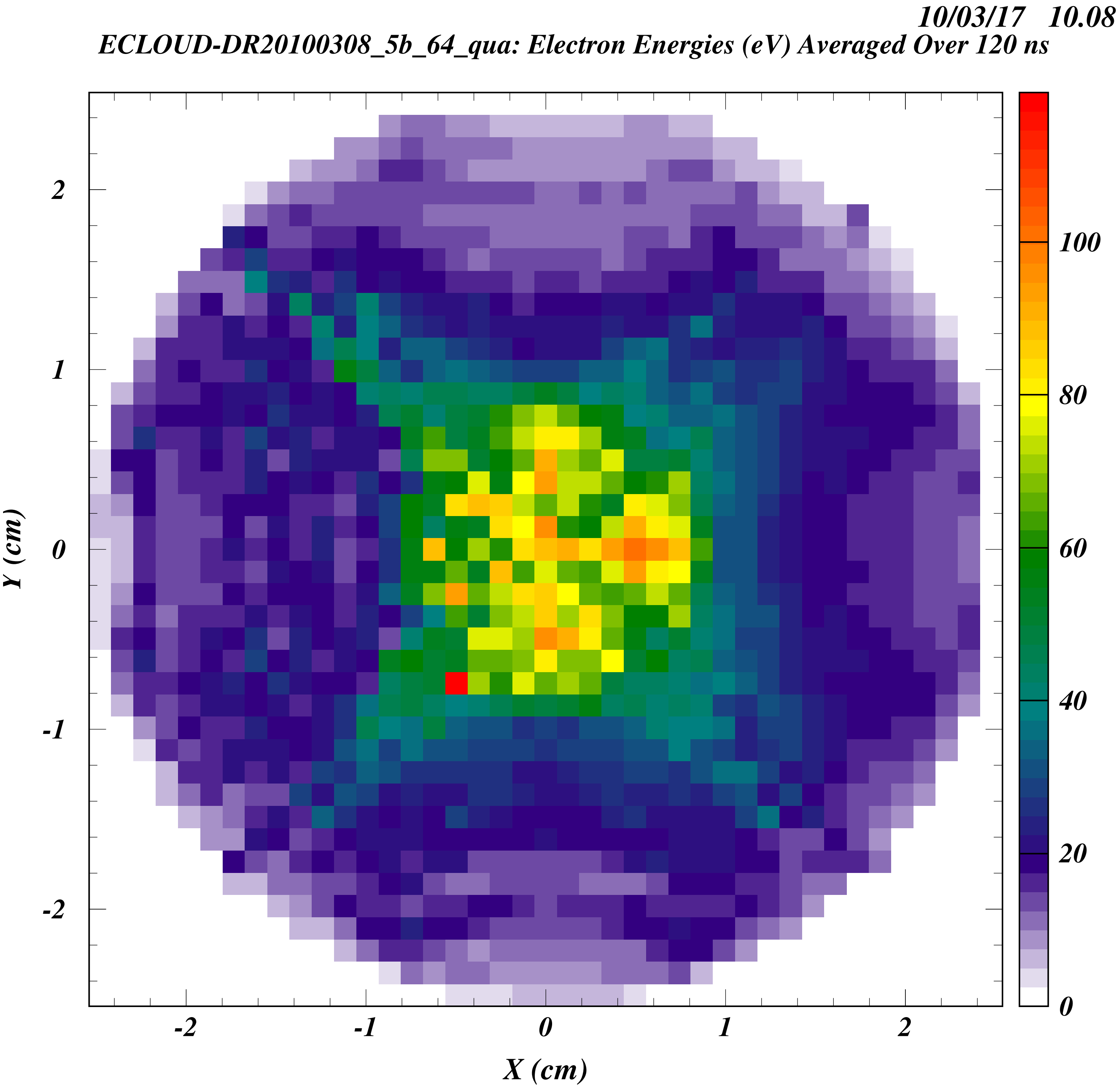



10/03/17 10.08
ECLOUD-DR20100308_5b_64_qua: Cloud Density (e/m^3) Averaged Over 120 ns
Y (cm)
X (cm)
x 10^8
5000
4000
3000
2000
1000
0
-2
-1
0
1
2

10/03/17 10.08

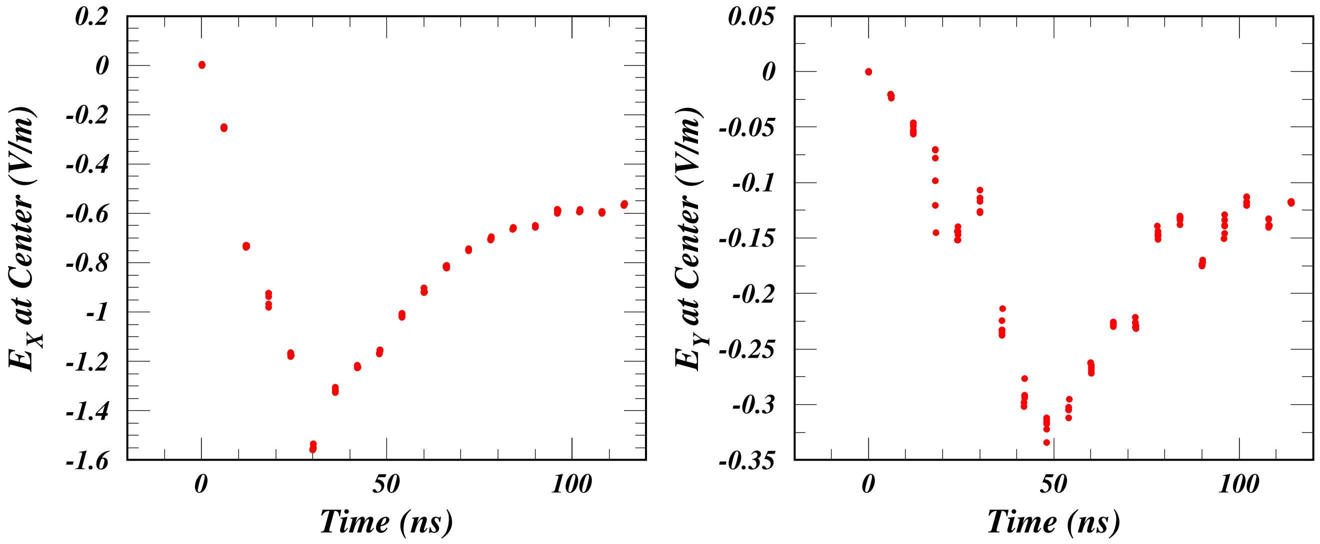
ECLOUD-DR20100308_5b_64_qua: Electron Energies (eV) Averaged Over 120 ns





10/03/17 10.08
ECLOUD-DR20100308_5b_64_qua: Electron Energies (eV) Averaged Over 120 ns
Y (cm)
X (cm)
2
1
0
-1
-2
-2
-1
0
1
2
100
80
60
40
20
0

ECLOUD-DR20100308_5b_64_qua: Electric Field at Beam



ECLOUD-DR20100308_5b_64_quaElectric Field Gradients at Beam