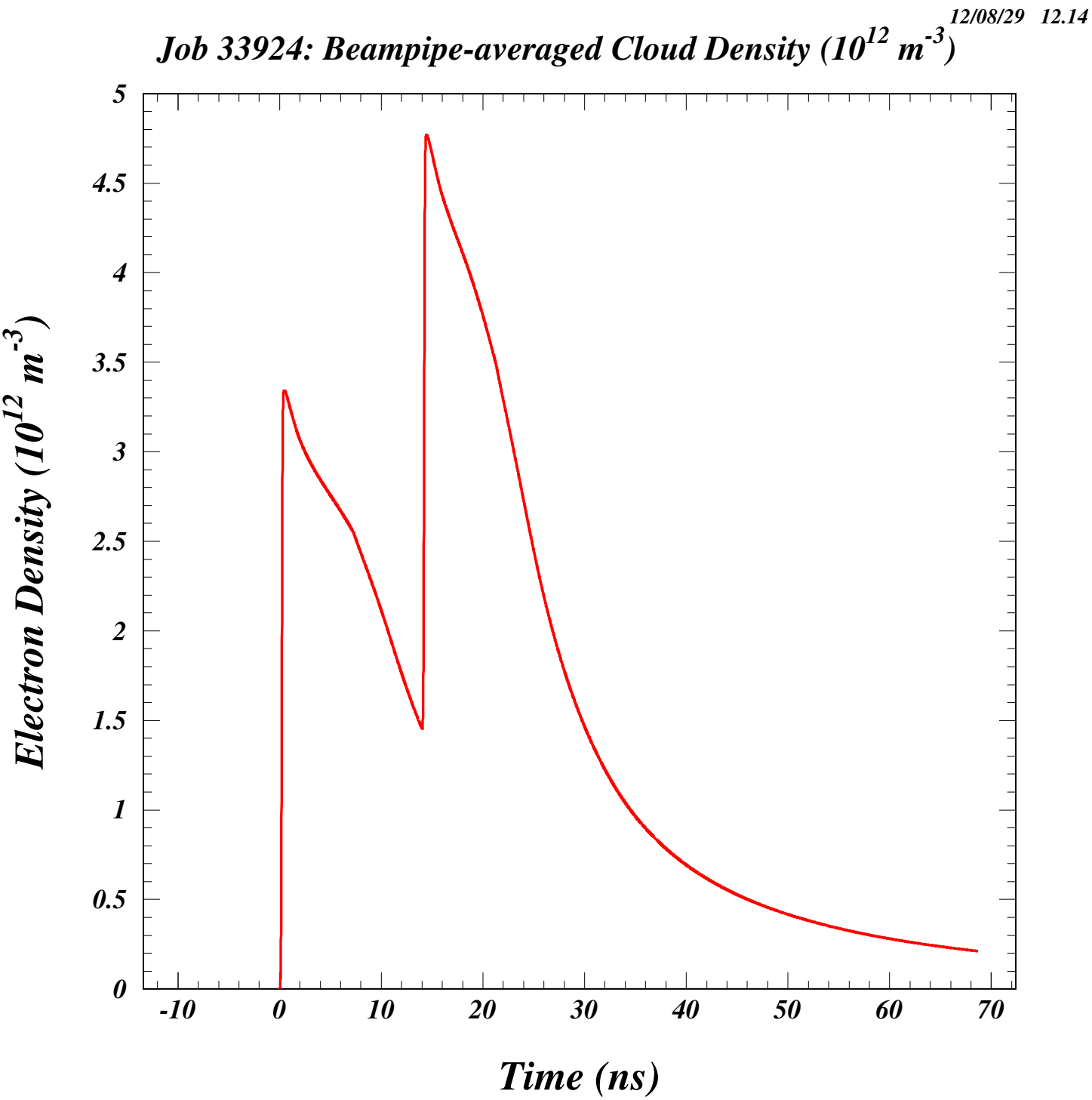
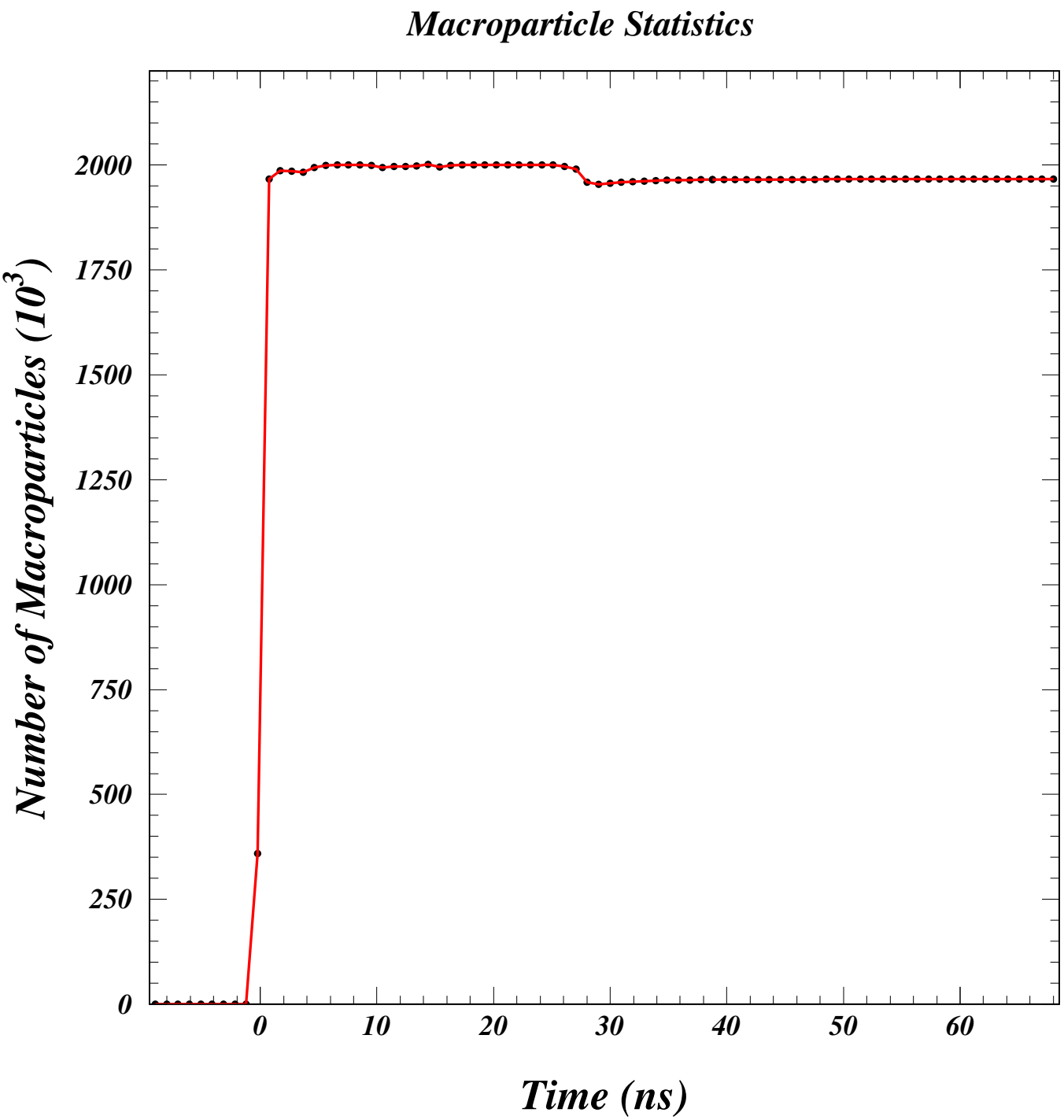
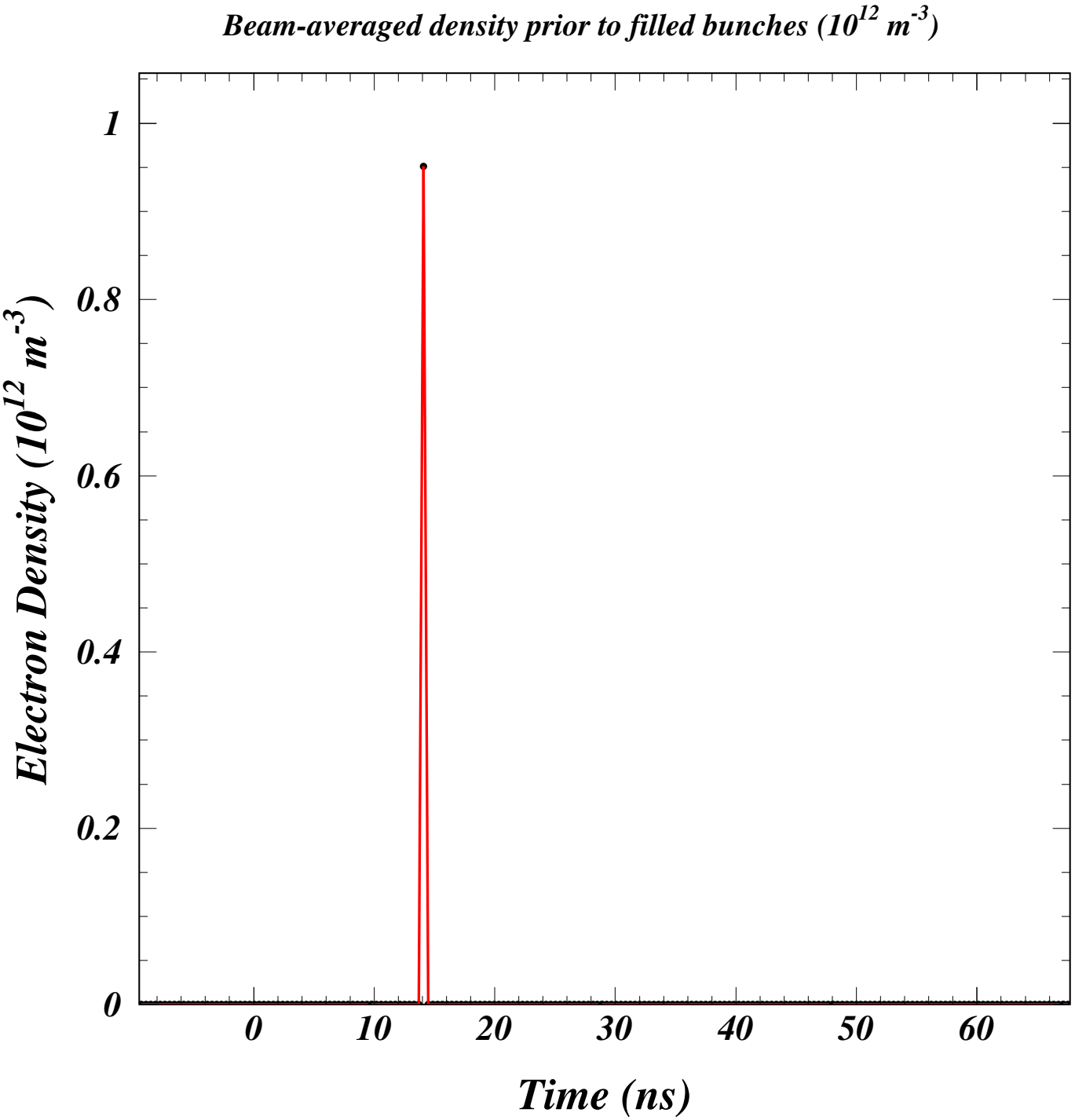
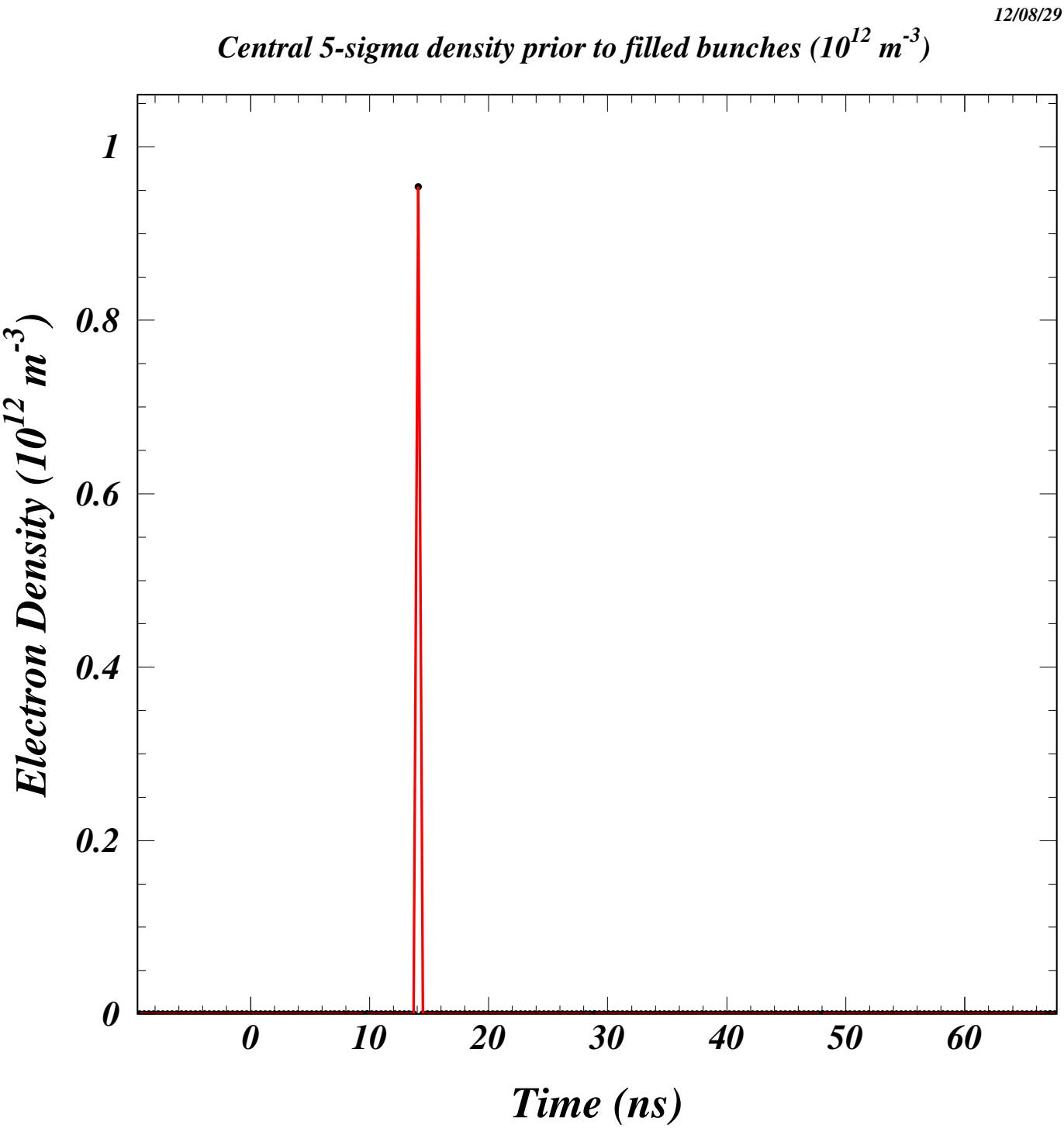

12/08/29 12.14
Job 33924: Beampipe-averaged Cloud Density ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-10
0
10
20
30
40
50
60
70
Time (ns)

12/08/29 12.14

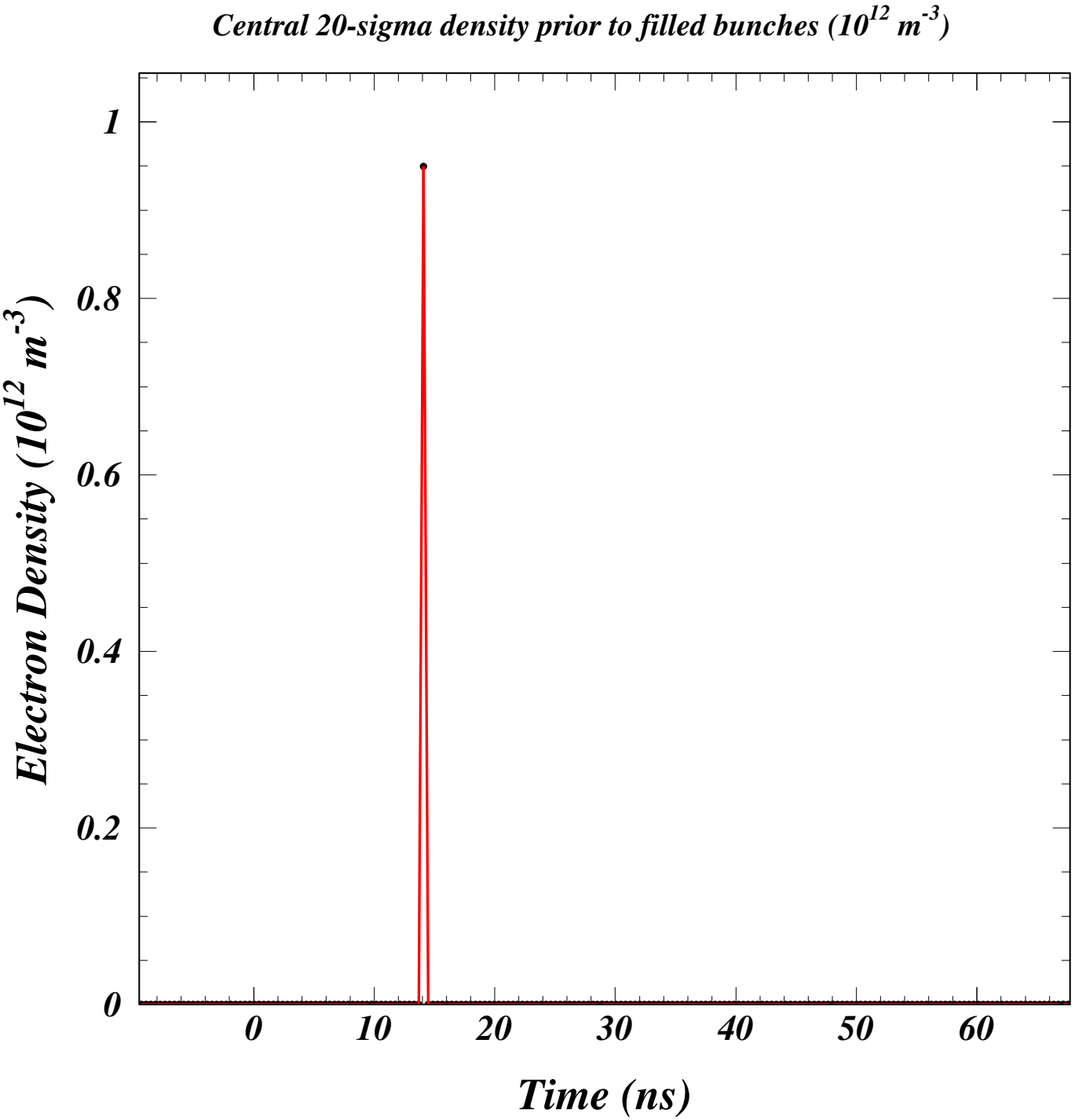

Macroparticle Statistics
Number of Macroparticles ($10^3$)
2000
1750
1500
1250
1000
750
500
250
0
0
10
20
30
40
50
60
Time (ns)

12/08/29 12.14

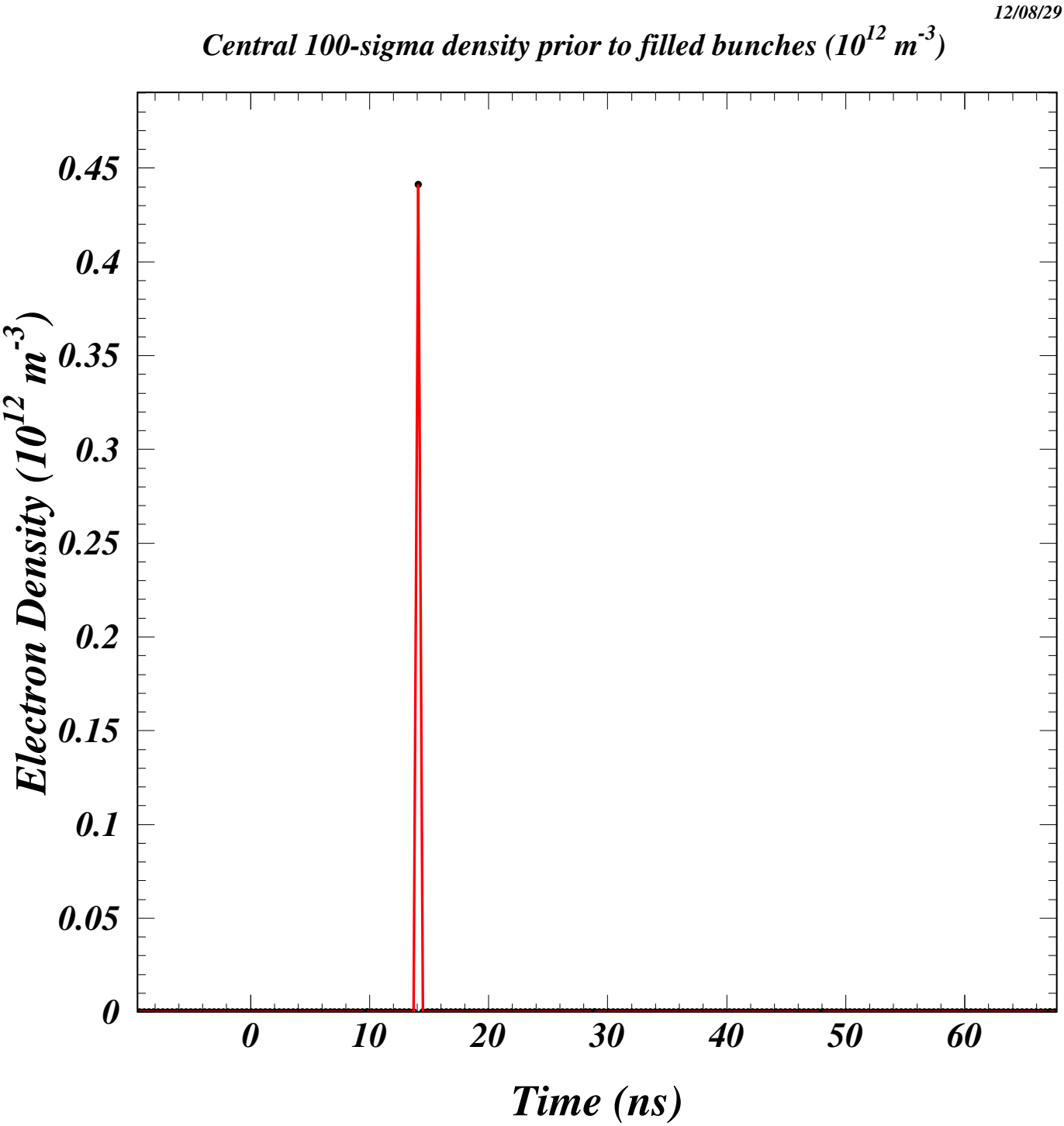

Beam-averaged density prior to filled bunches ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
50
60
Time (ns)


Central 5-sigma density prior to filled bunches ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
50
60
Time (ns)

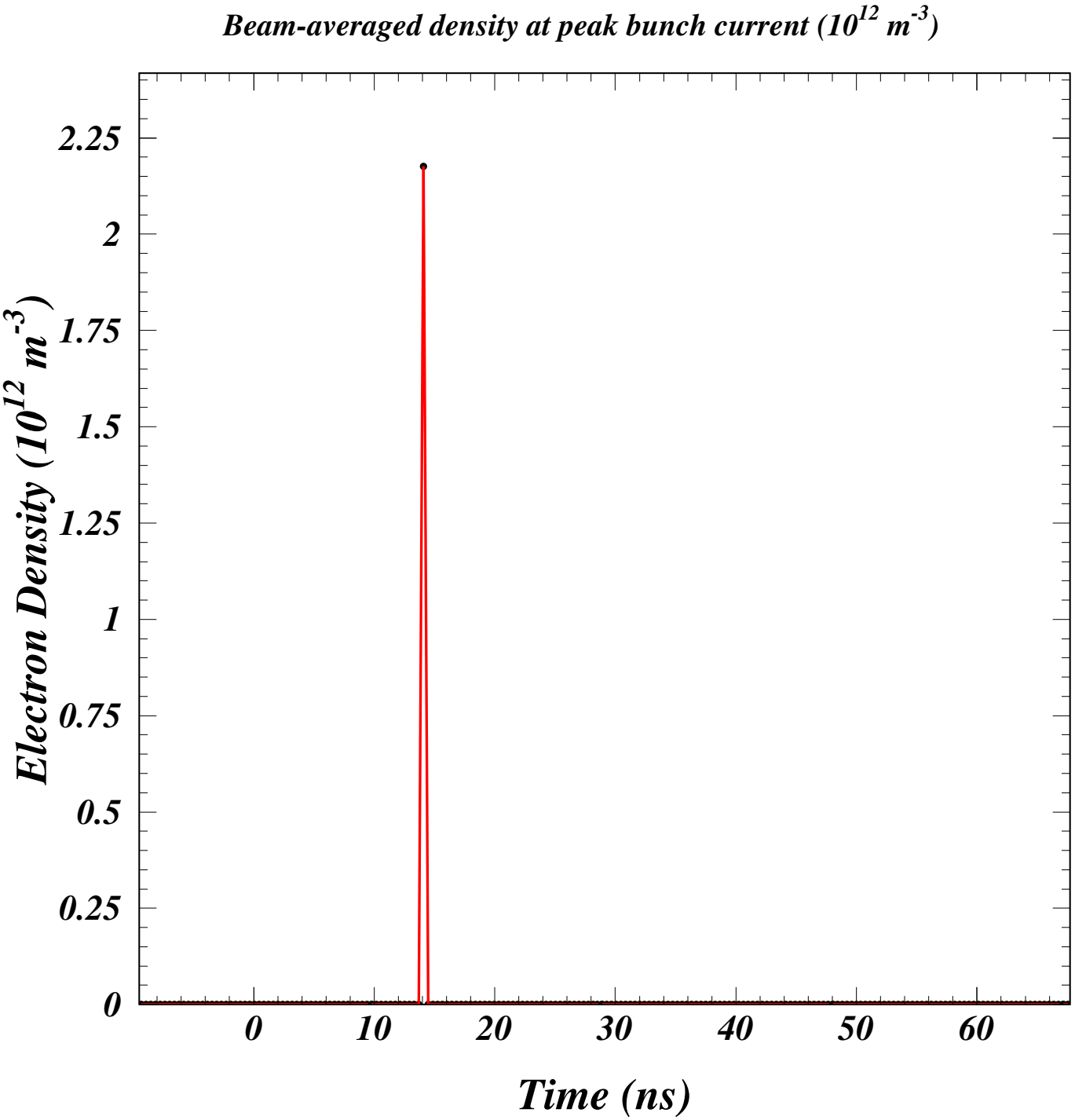
12/08/29 12.14


Central 20-sigma density prior to filled bunches ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
50
60
Time (ns)

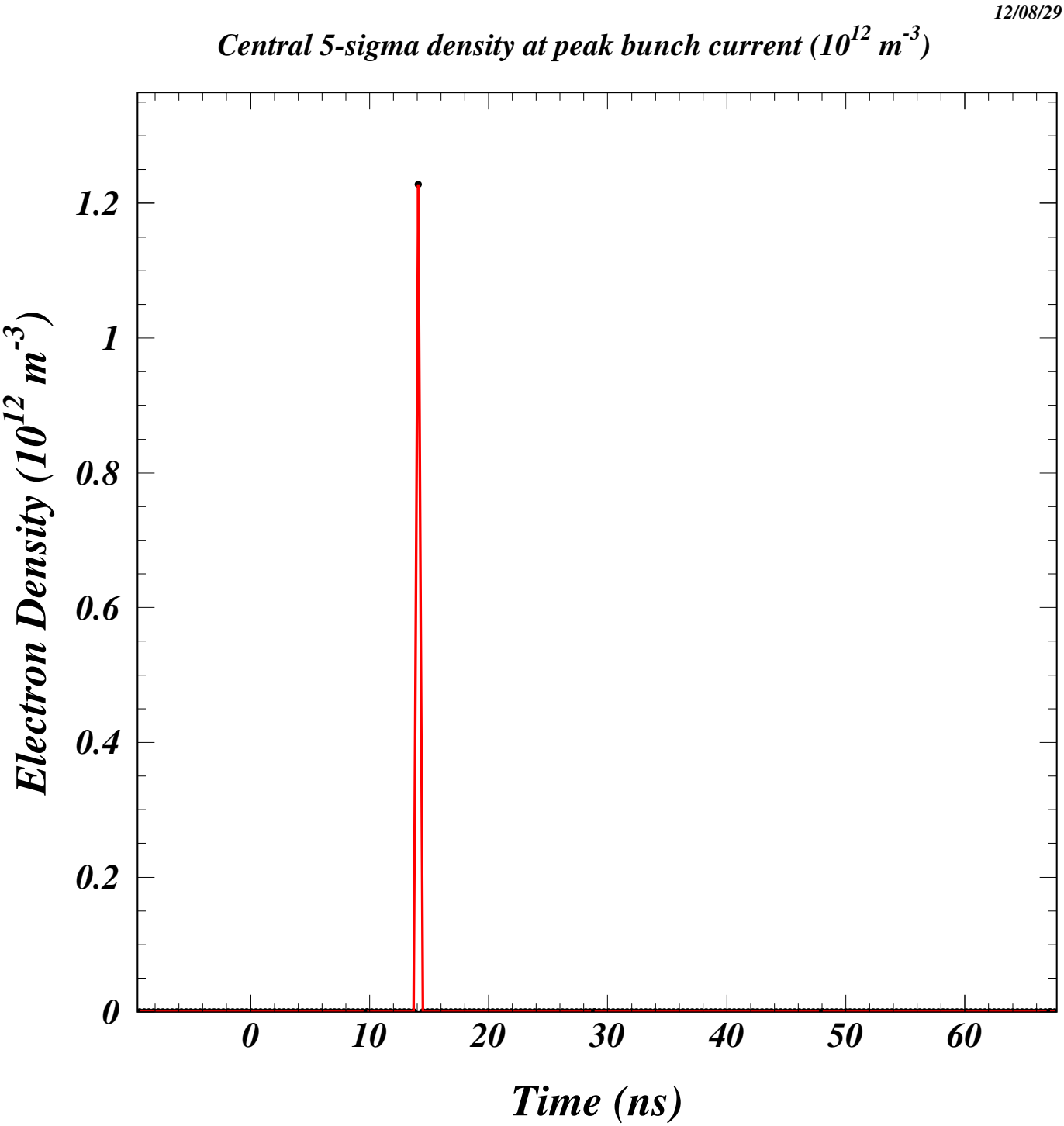
12/08/29 12.14

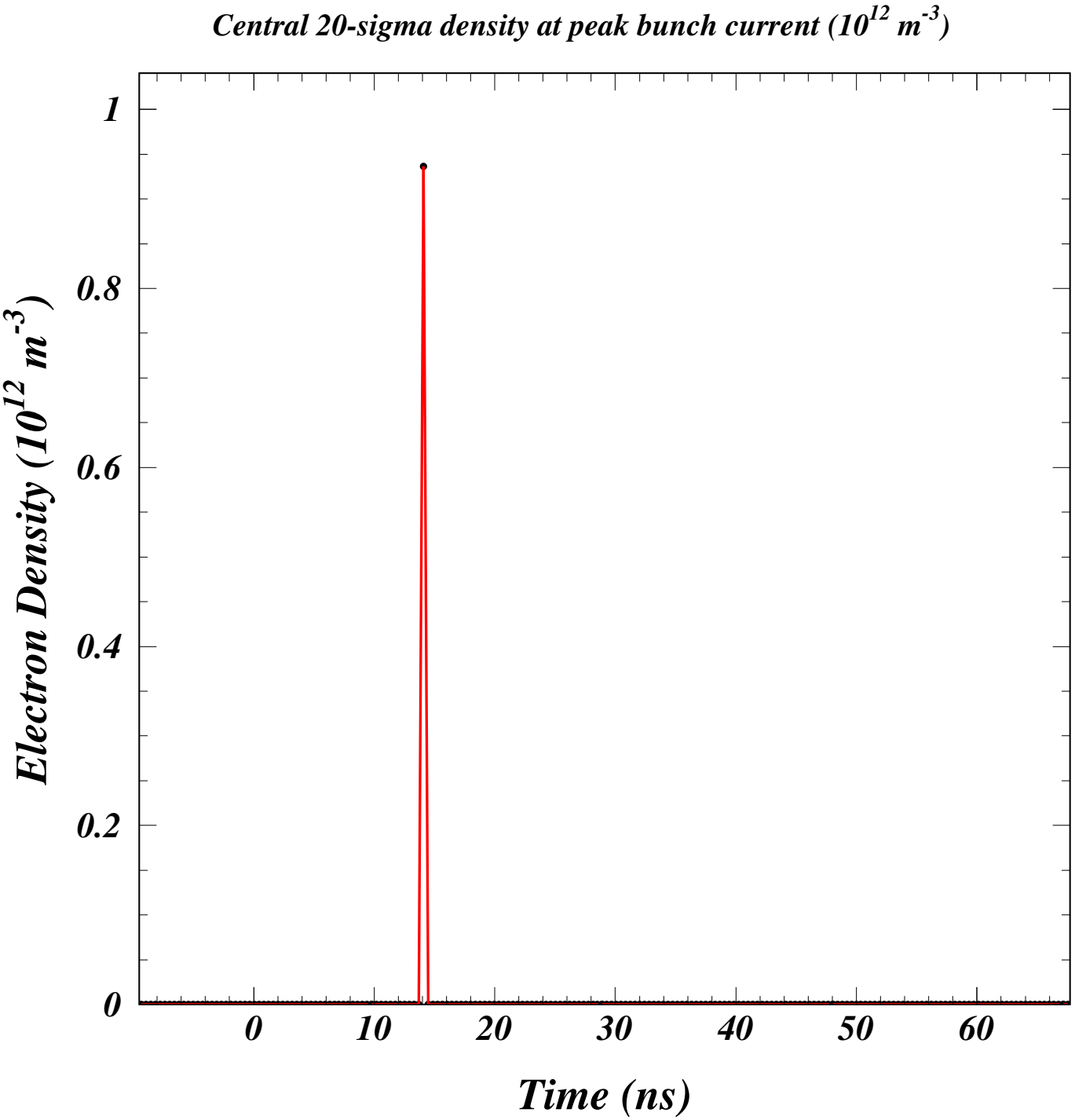

Central 100-sigma density prior to filled bunches ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
10
20
30
40
50
60
Time (ns)

12/08/29 12.14

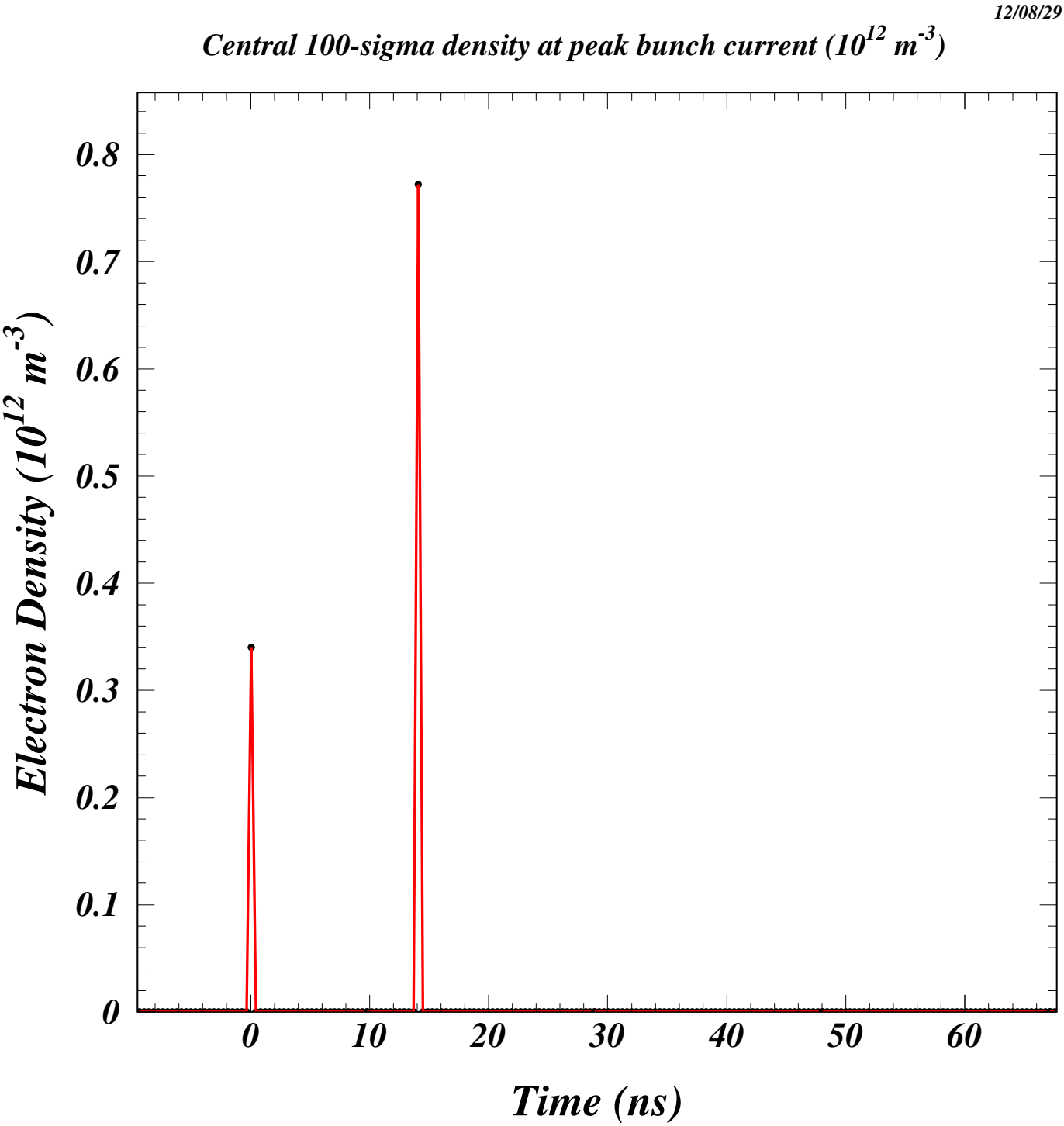

Beam-averaged density at peak bunch current ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
2.25
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0
0
10
20
30
40
50
60
Time (ns)

12/08/29 12.14

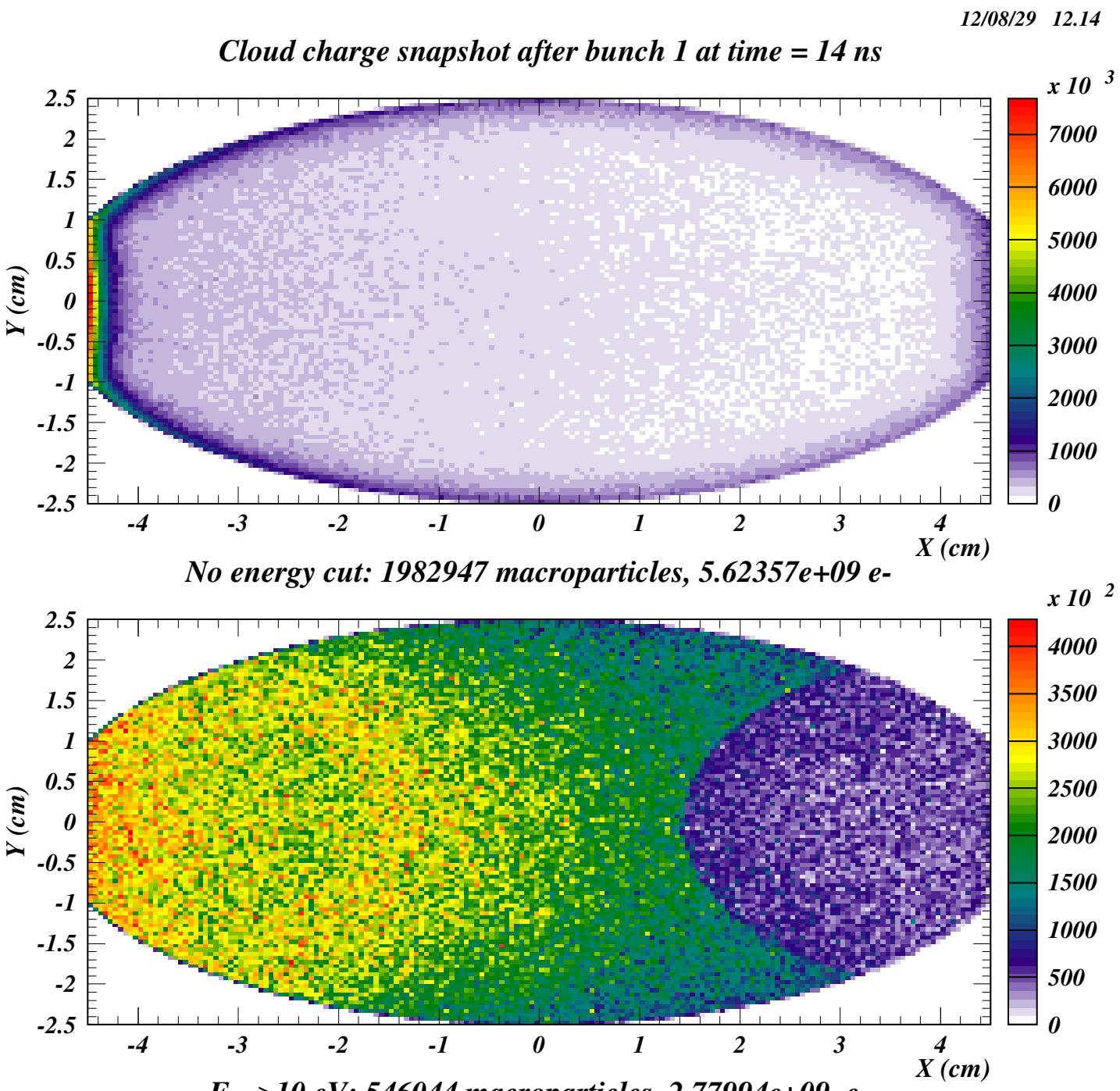

Central 5-sigma density at peak bunch current ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
1.2
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
50
60
Time (ns)


Central 20-sigma density at peak bunch current ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
50
60
Time (ns)

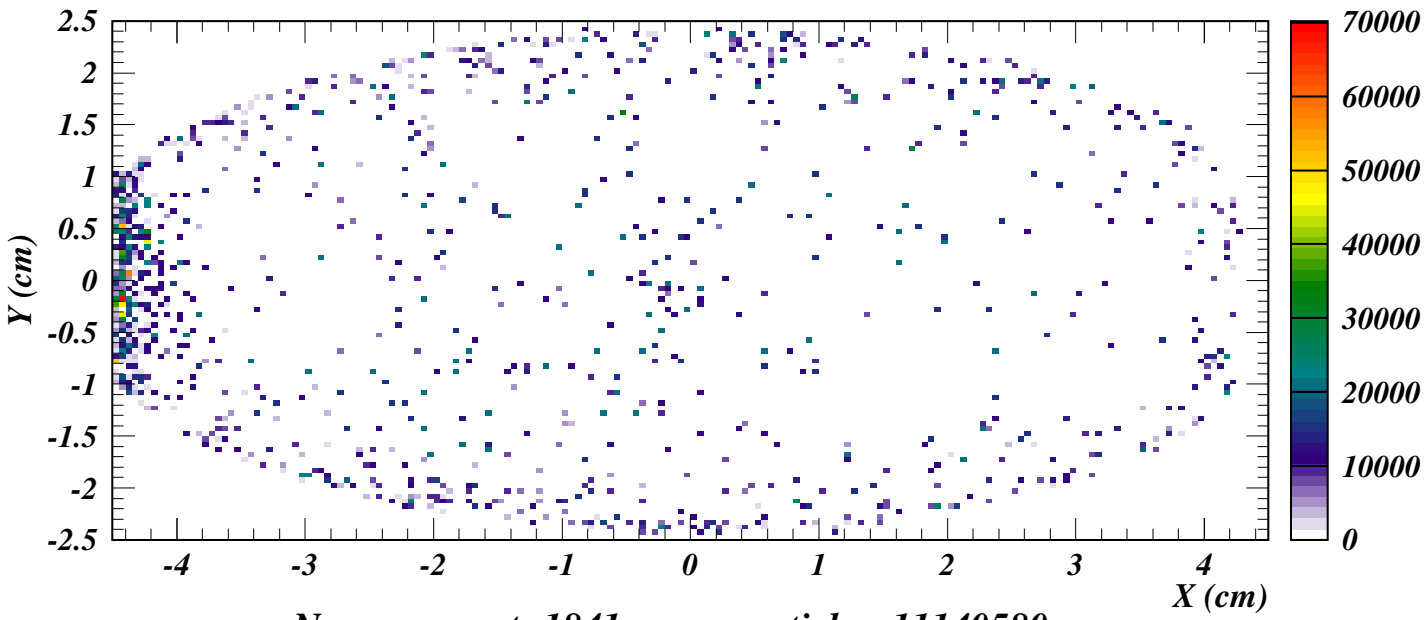
12/08/29 12.14


Central 100-sigma density at peak bunch current ($10^{12}$ $m^{-3}$)
Electron Density ($10^{12}$ $m^{-3}$)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
Time (ns)

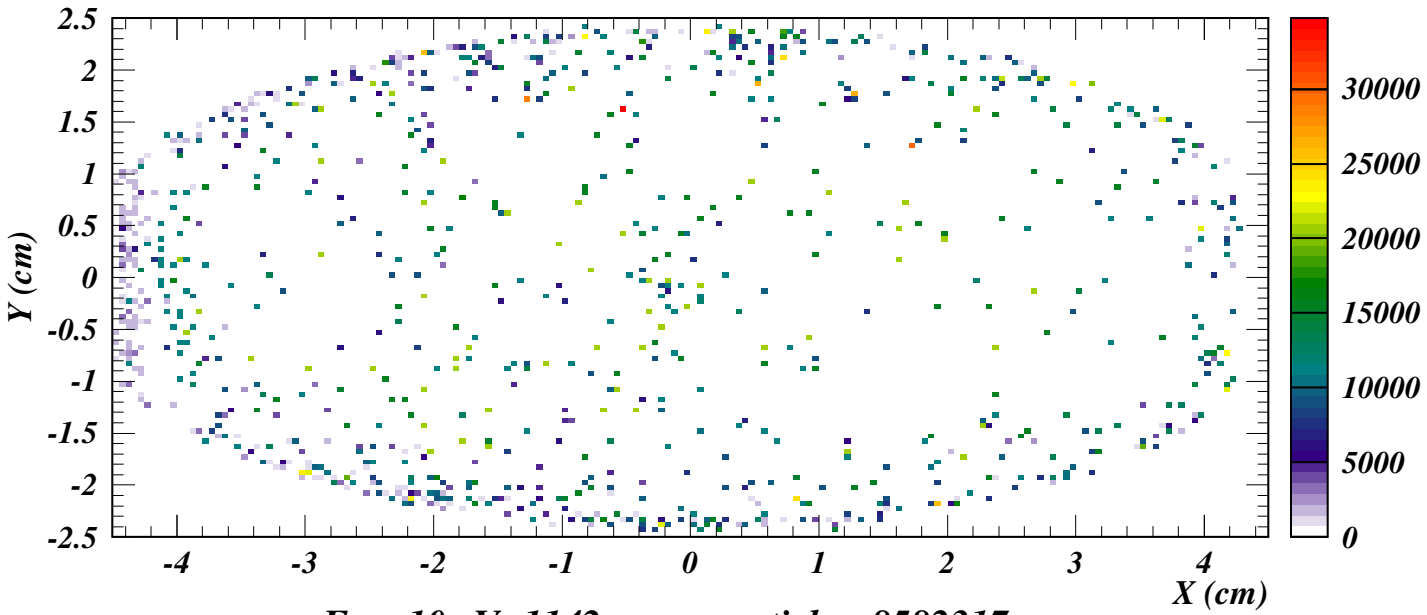
12/08/29 12.14


Cloud charge snapshot after bunch 1 at time = 14 ns
x 10 3
7000
6000
5000
4000
3000
2000
1000
0
Y (cm)
X (cm)
No energy cut: 1982947 macroparticles, 5.62357e+09 e-
x 10 2
4000
3500
3000
2500
2000
1500
1000
500
0
Y (cm)
X (cm)
E_kin>10 eV: 546044 macroparticles, 2.77994e+09 e-

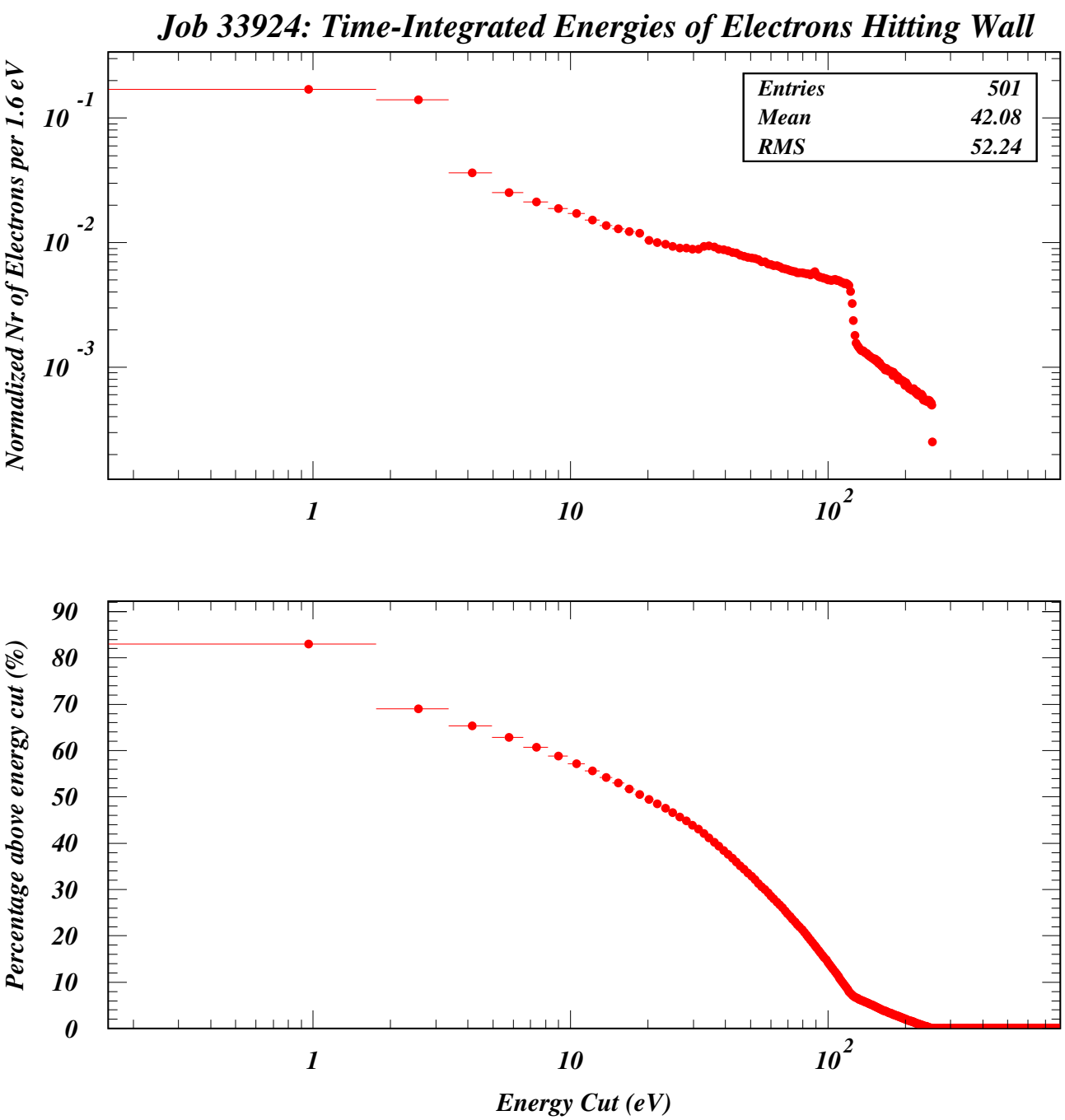
## Cloud charge snapshot after bunch 2 at time = 14.432 ns

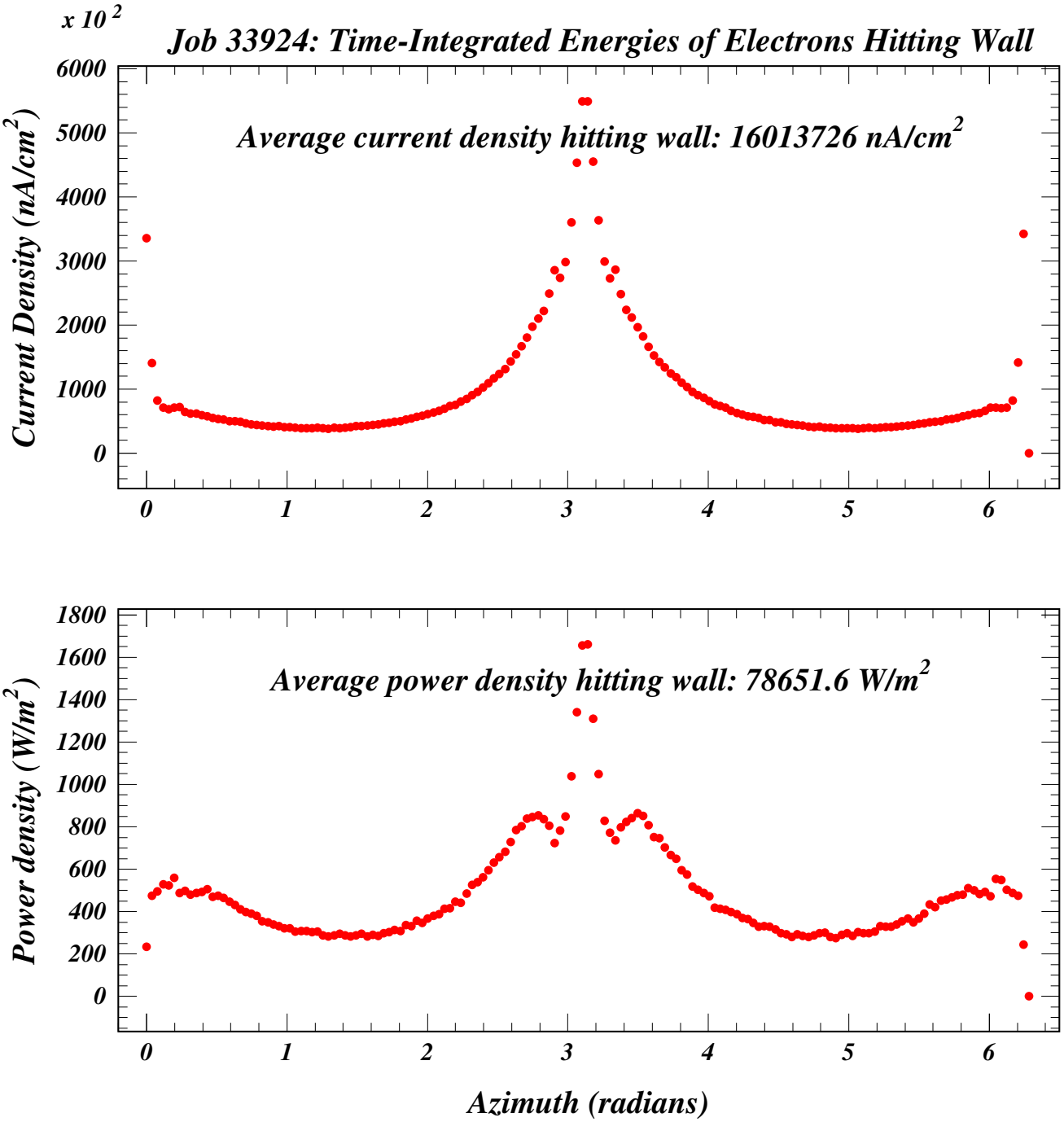



No energy cut: 1841 macroparticles, 11140580 e-



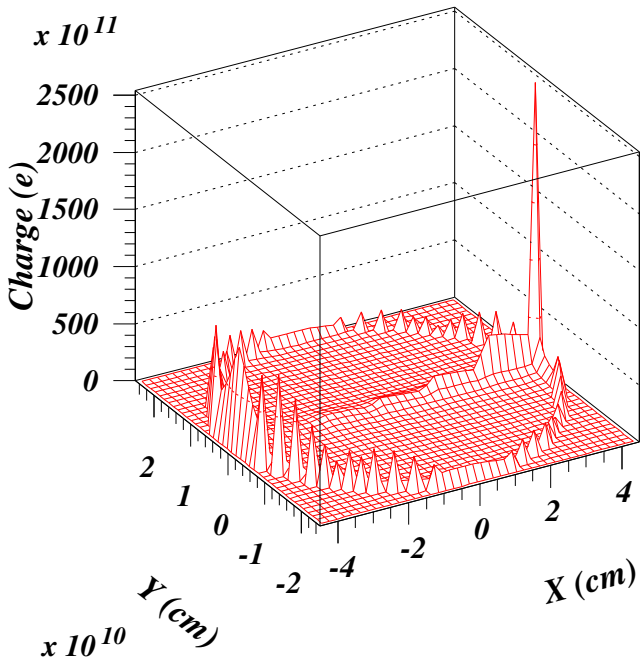

$E_{kin}$>10 eV: 1142 macroparticles, 8582317 e-

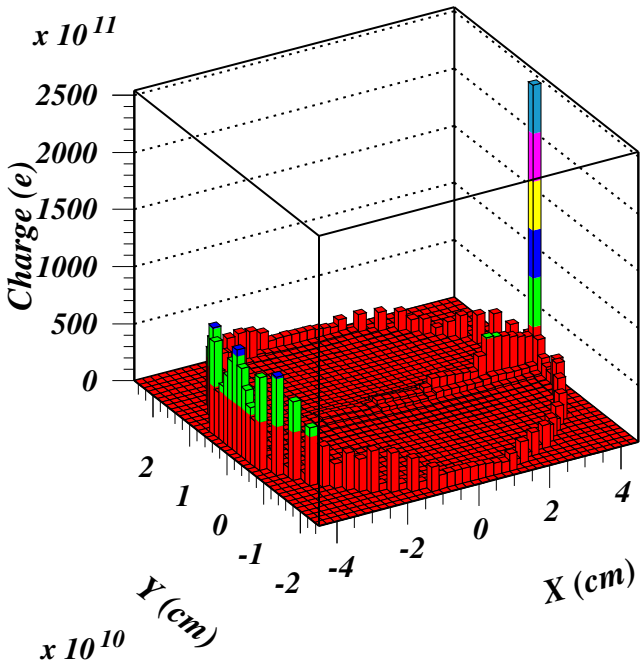

Job 33924: Time-Integrated Energies of Electrons Hitting Wall
Entries 501
Mean 42.08
RMS 52.24
Normalized Nr of Electrons per 1.6 eV
10 -1
10 -2
10 -3
1
10
10 2
Percentage above energy cut (%)
90
80
70
60
50
40
30
20
10
0
1
10
10 2
Energy Cut (eV)

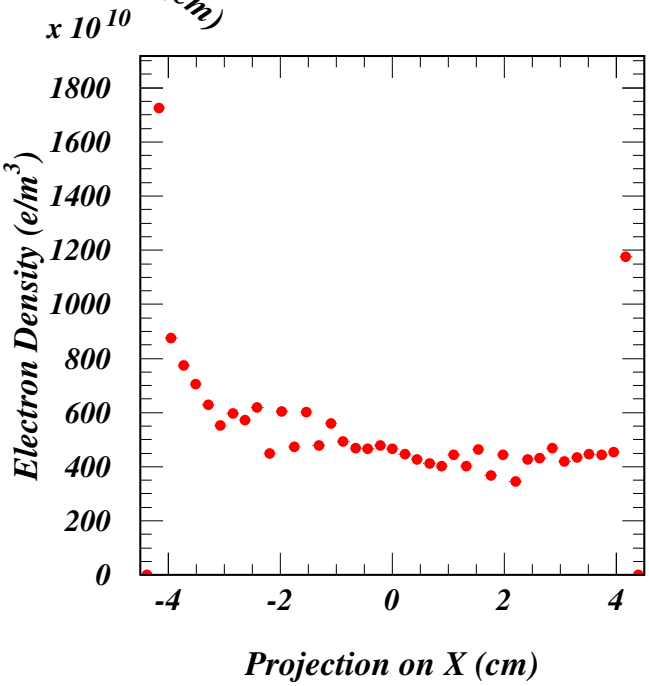

x 10 2
Job 33924: Time-Integrated Energies of Electrons Hitting Wall
Average current density hitting wall: 16013726 nA/cm2
Current Density (nA/cm2)
6000
5000
4000
3000
2000
1000
0
0
1
2
3
4
5
6
Average power density hitting wall: 78651.6 W/m2
Power density (W/m2)
1800
1600
1400
1200
1000
800
600
400
200
0
Azimuth (radians)

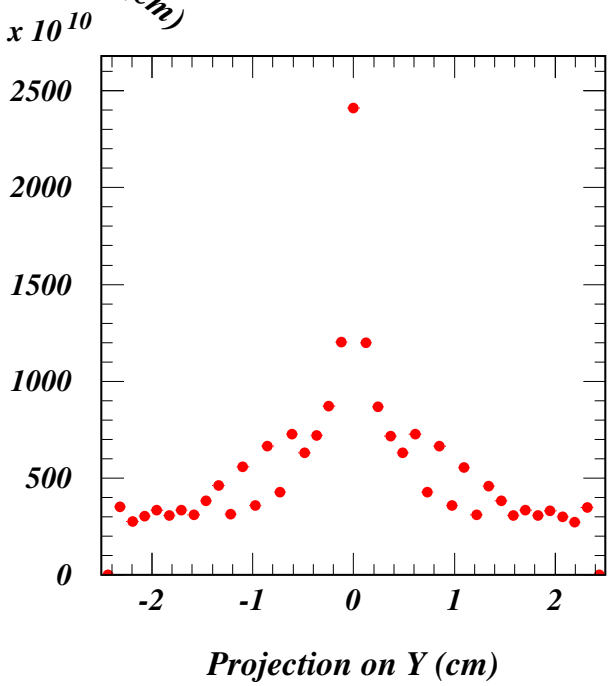
12/08/29 12.15

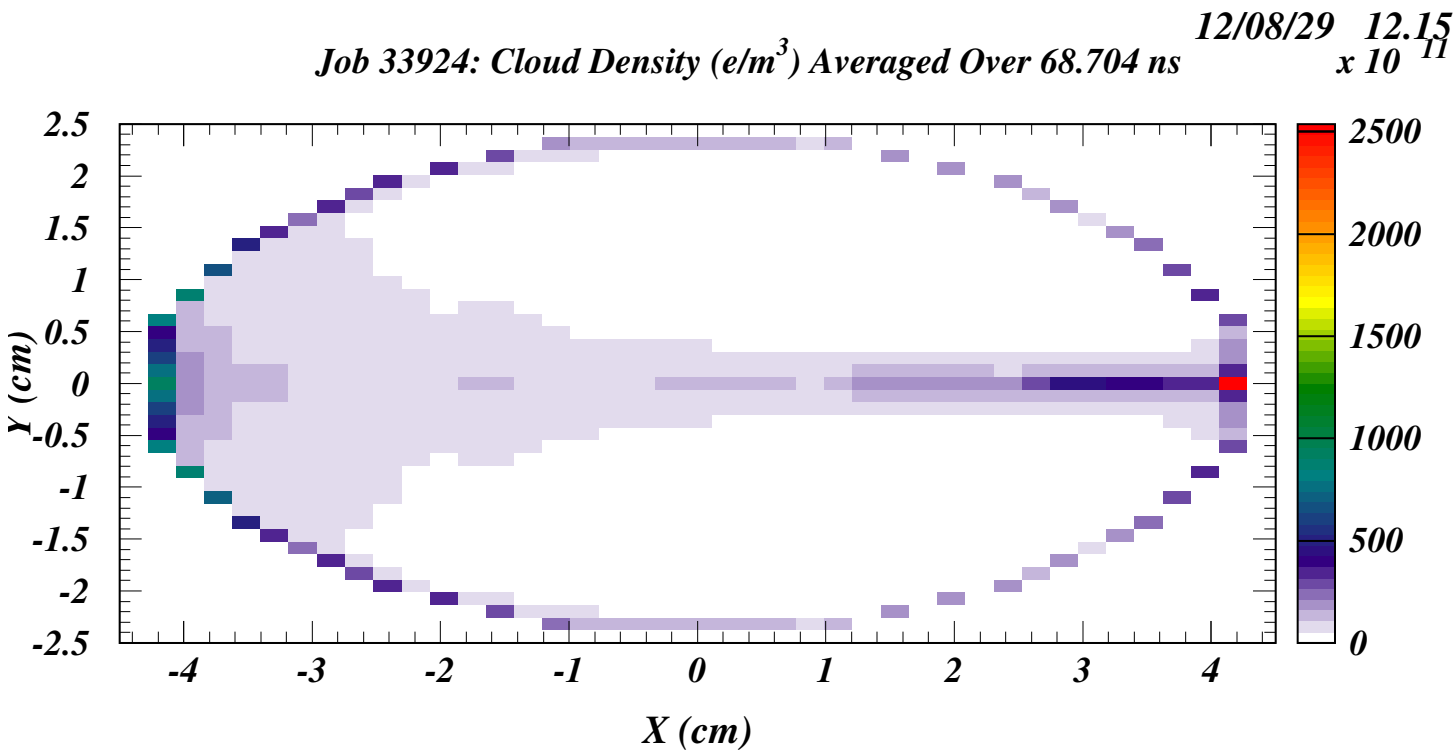
# Job 33924: Cloud Density ($e/m^3$) Averaged Over 68.704 ns



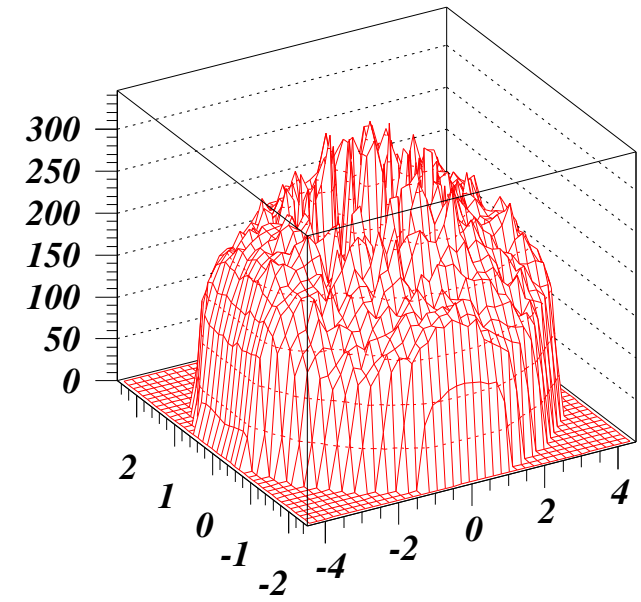



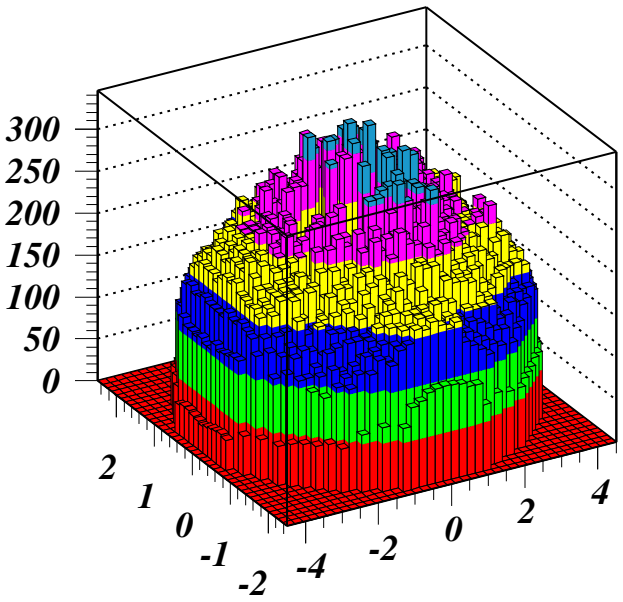



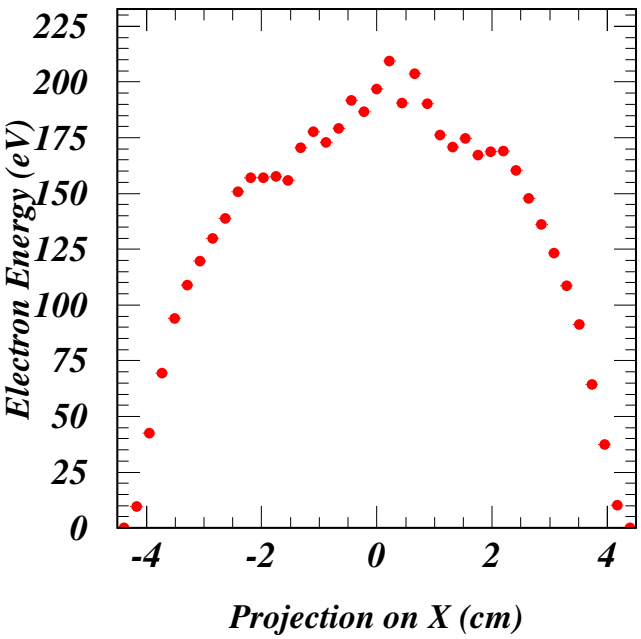

12/08/29 12.15
Job 33924: Cloud Density (e/m3) Averaged Over 68.704 ns
x 10 11
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
Y (cm)
-4
-3
-2
-1
0
1
2
3
4
X (cm)
2500
2000
1500
1000
500
0

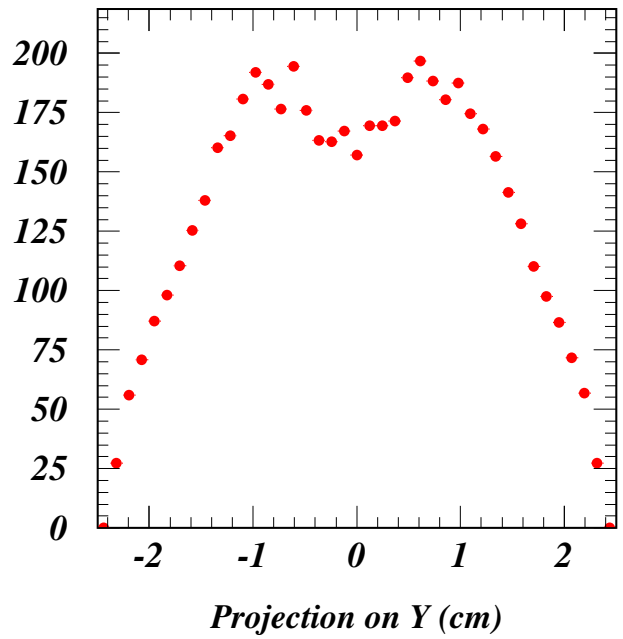
12/08/29 12.15

Job 33924: Electron Energies (eV) Averaged Over 68.704 ns



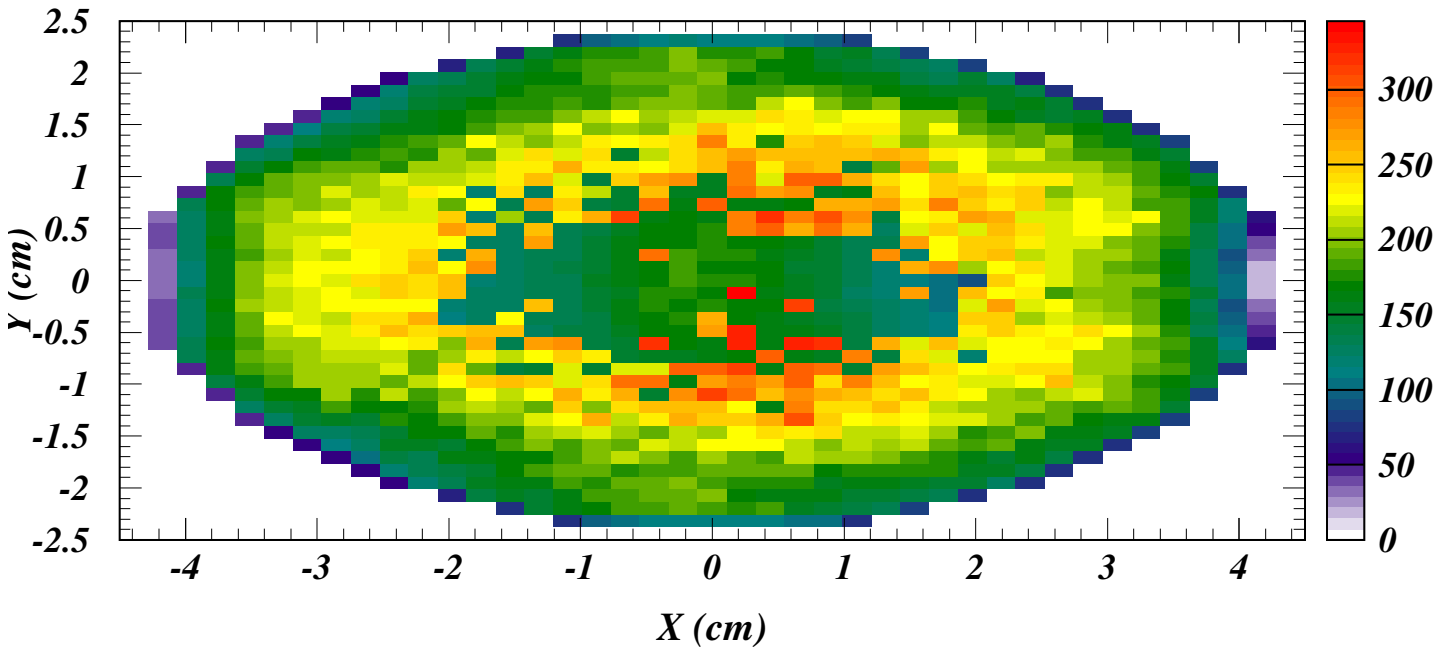



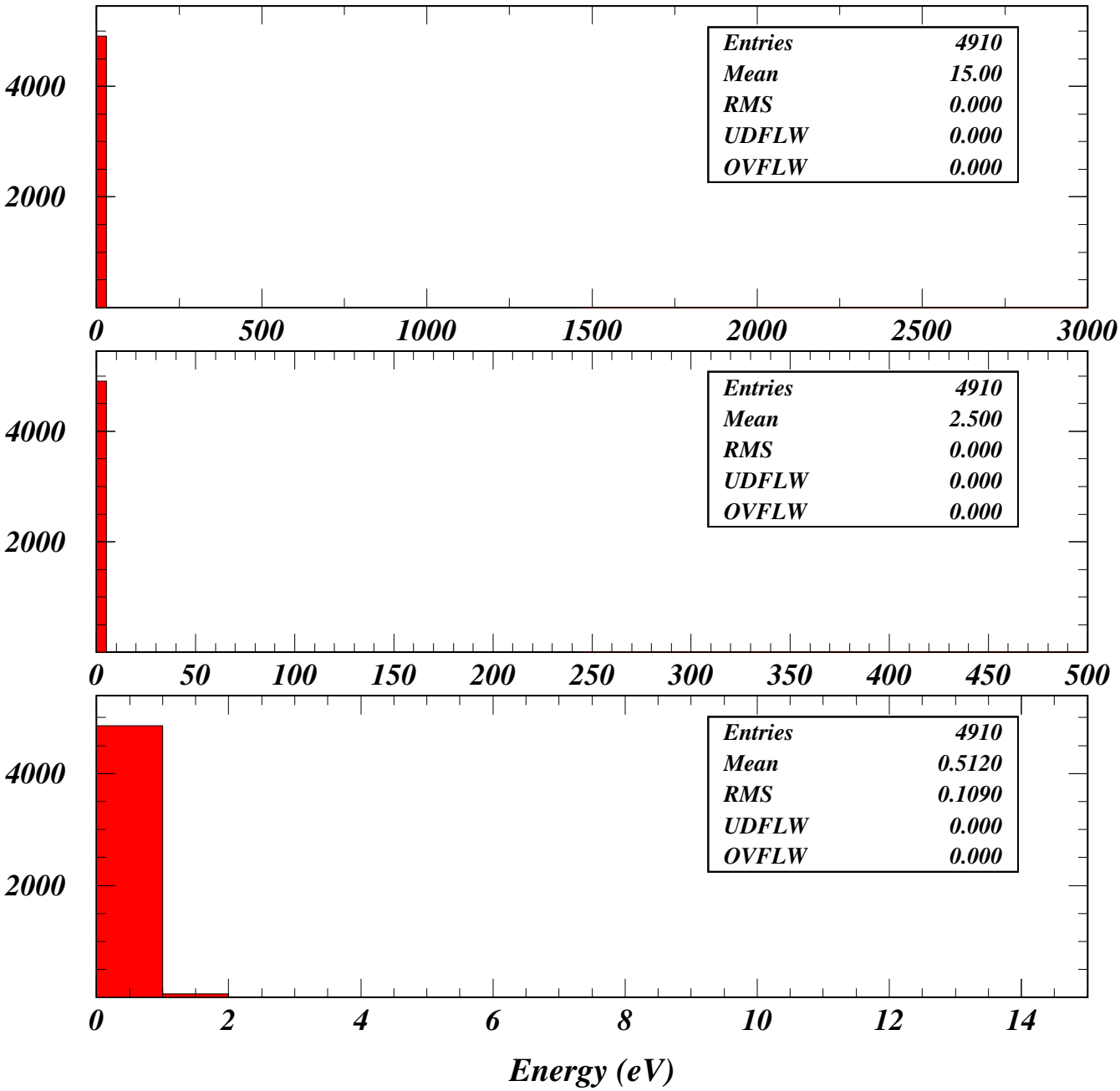
12/08/29 12.15

Job 33924: Electron Energies (eV) Averaged Over 68.704 ns



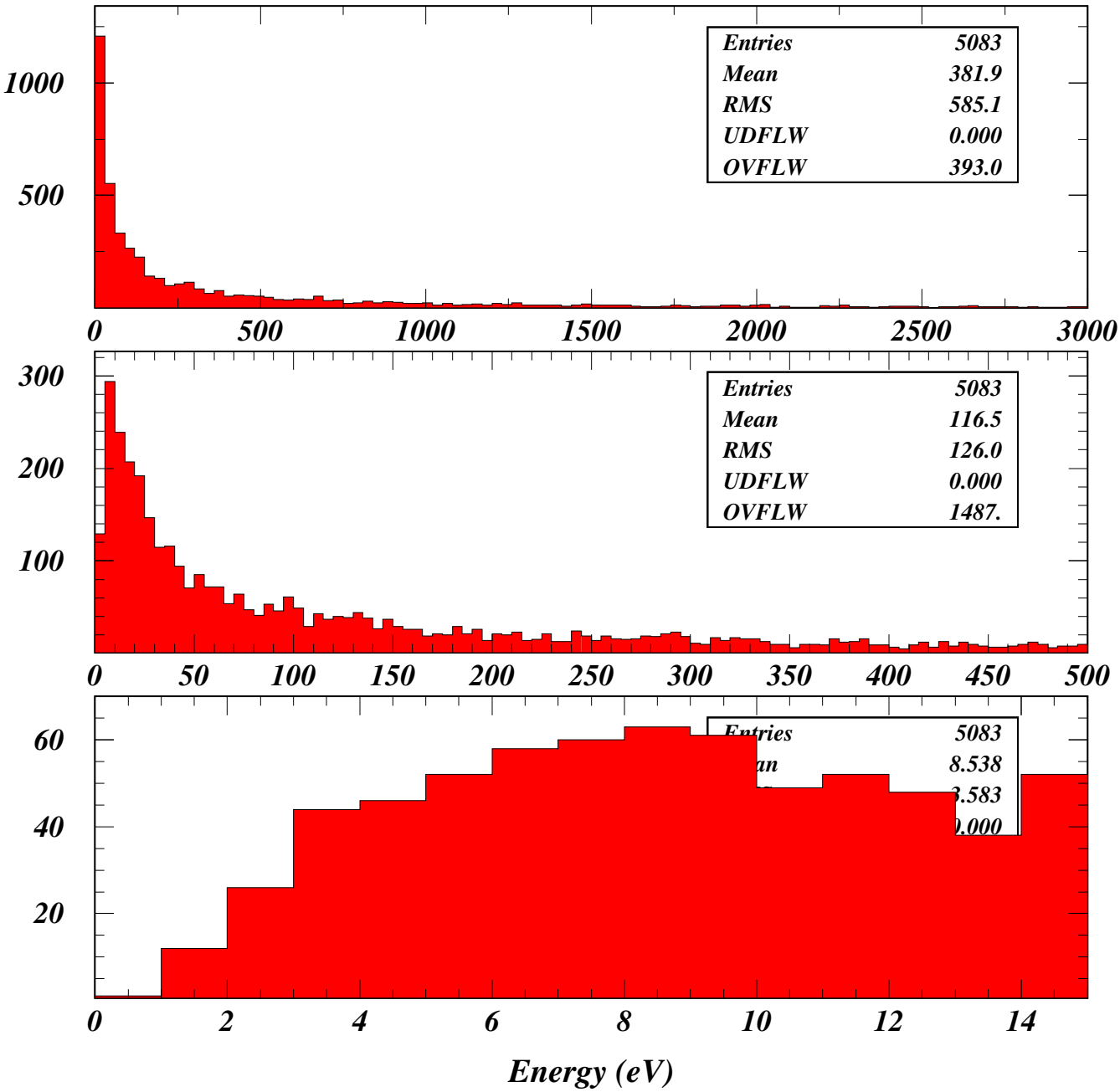
12/08/29 12.15

# Job 33924: Photoelectrons from Direct Photons



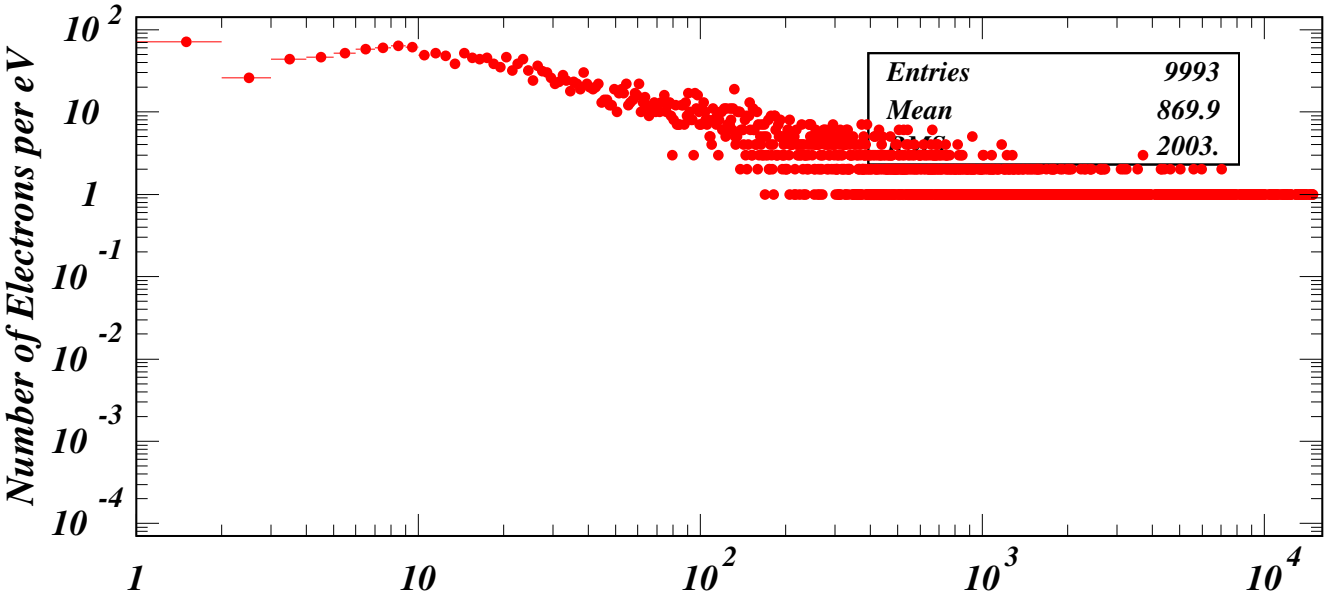
12/08/29 12.15

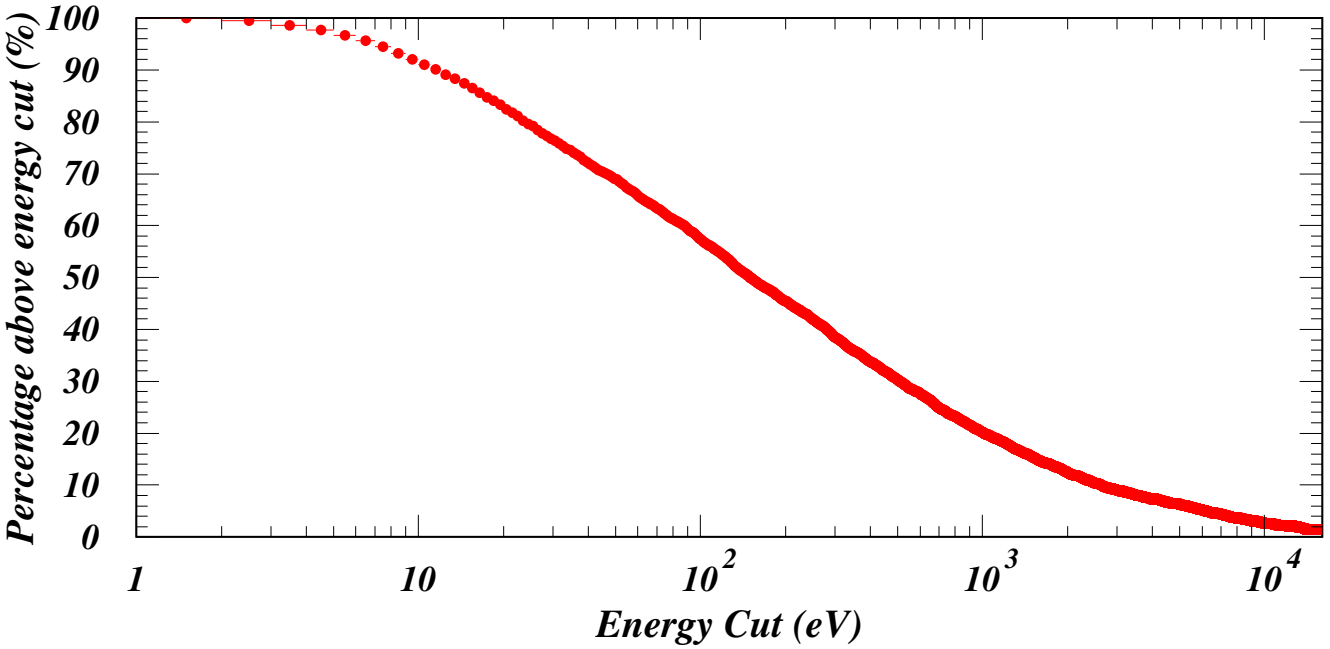
# Job 33924: Photoelectrons from Reflected Photons



12/08/29 12.15

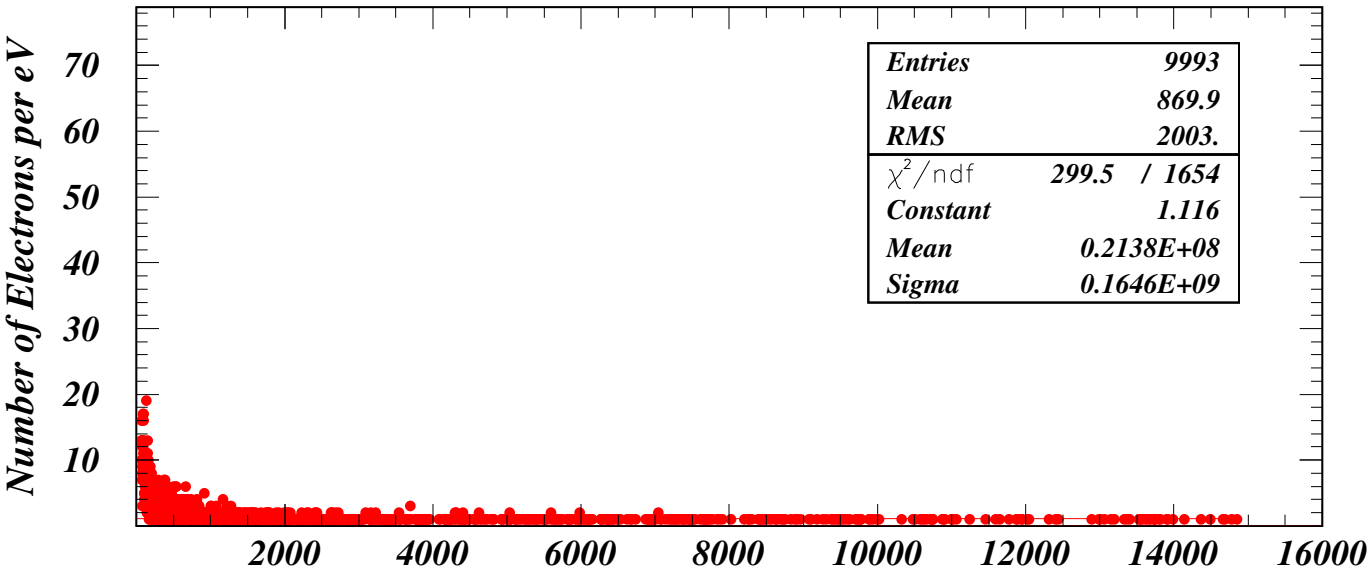
# Job 33924: Photoelectron Energies

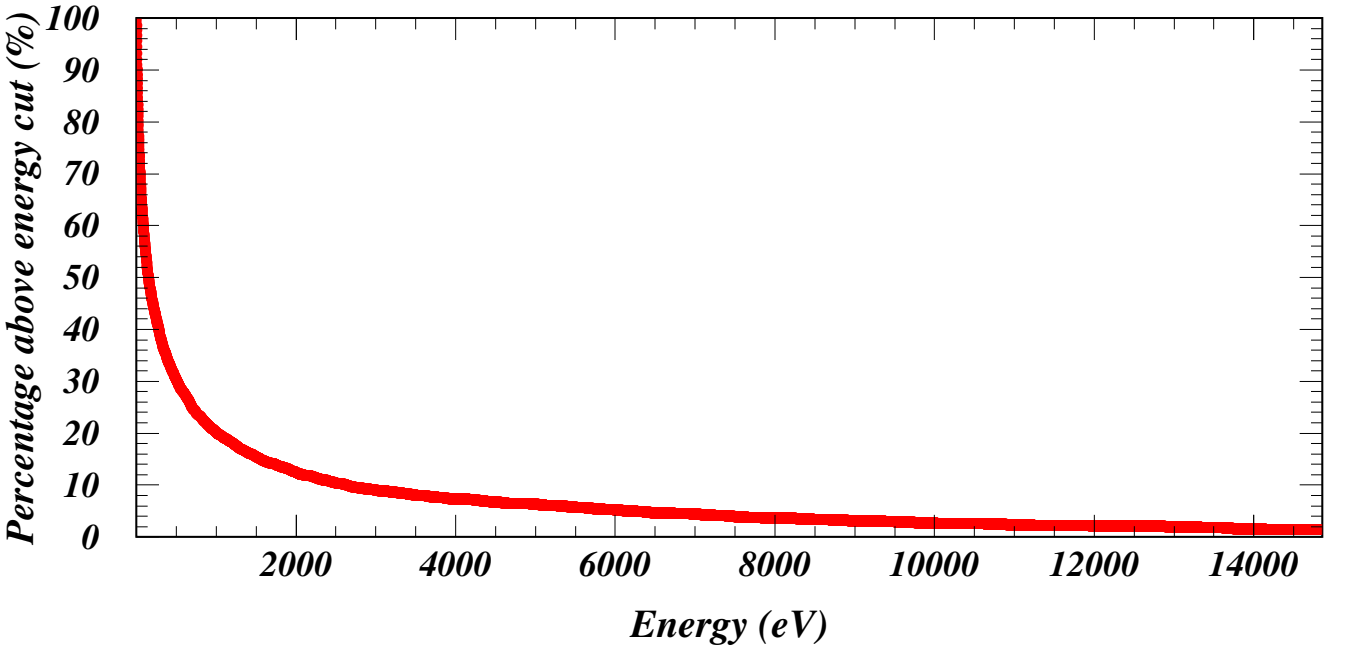


12/08/29 12.15

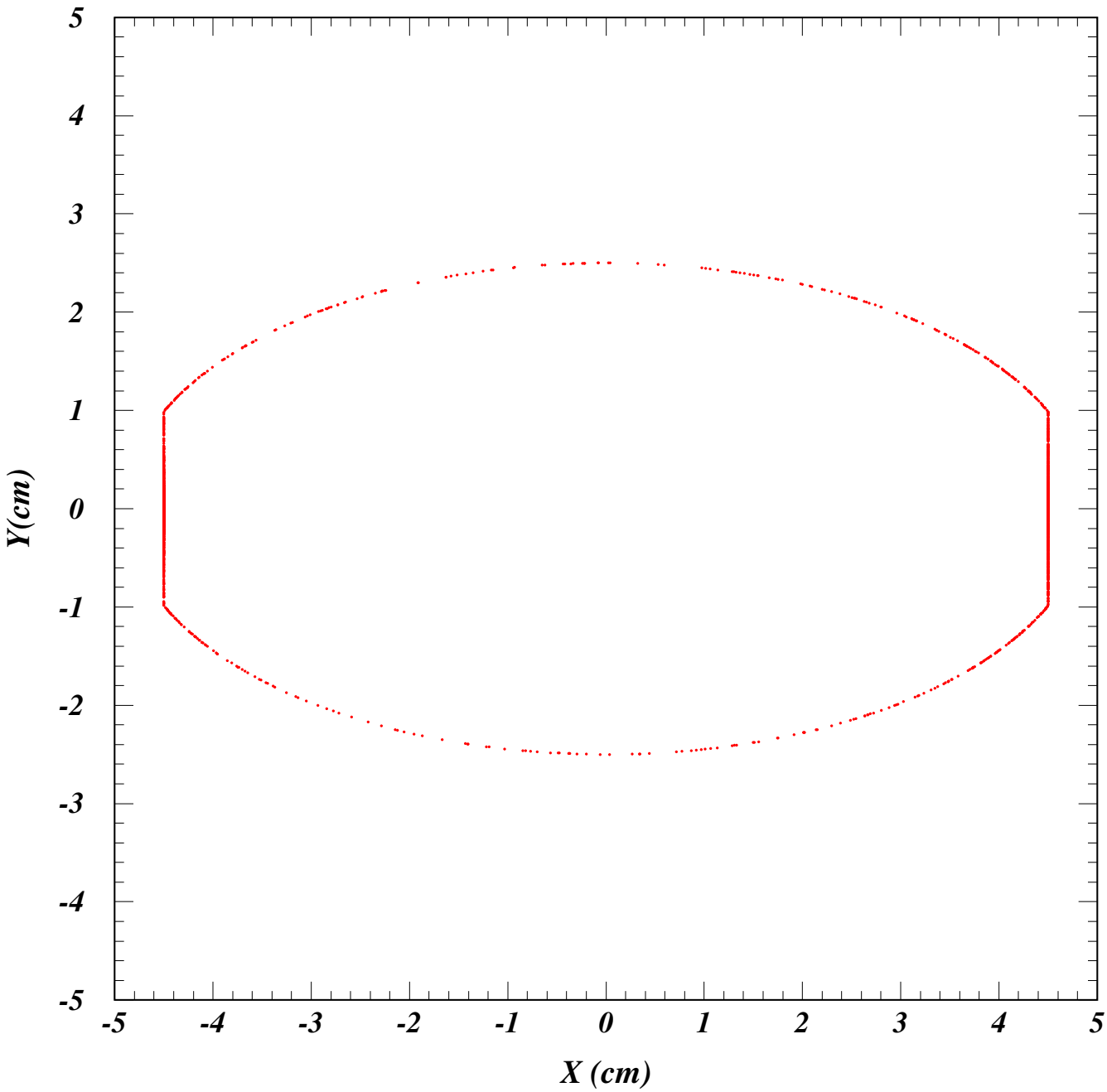
# Job 33924: Photoelectron Energies



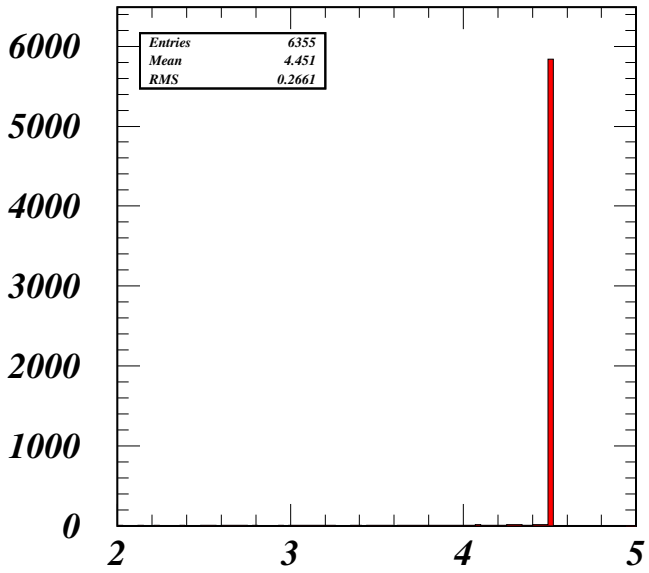



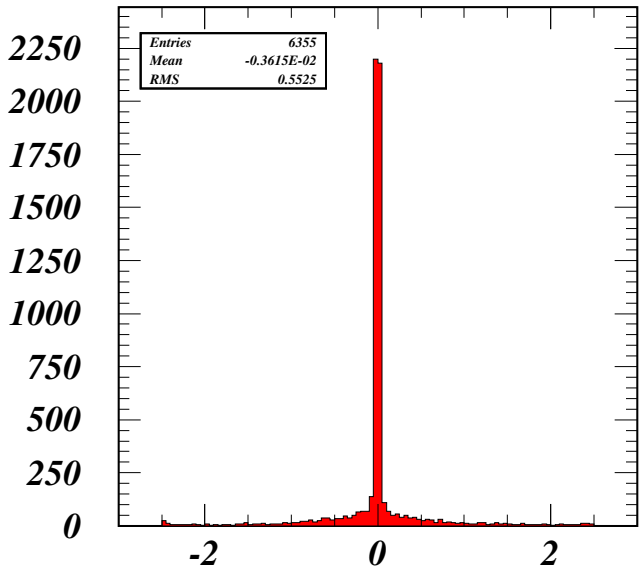
12/08/29 12.15

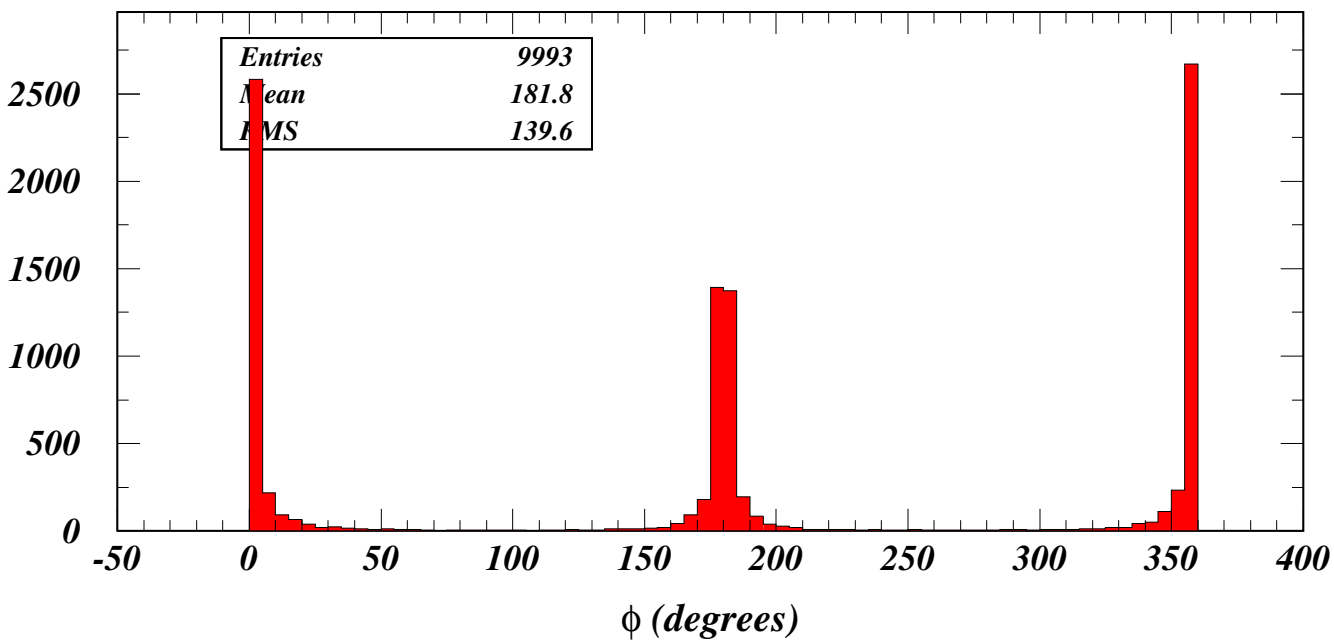
# Job 33924: Photoelectron Production Distributions



# Job 33924: Photoelectron Production Distributions

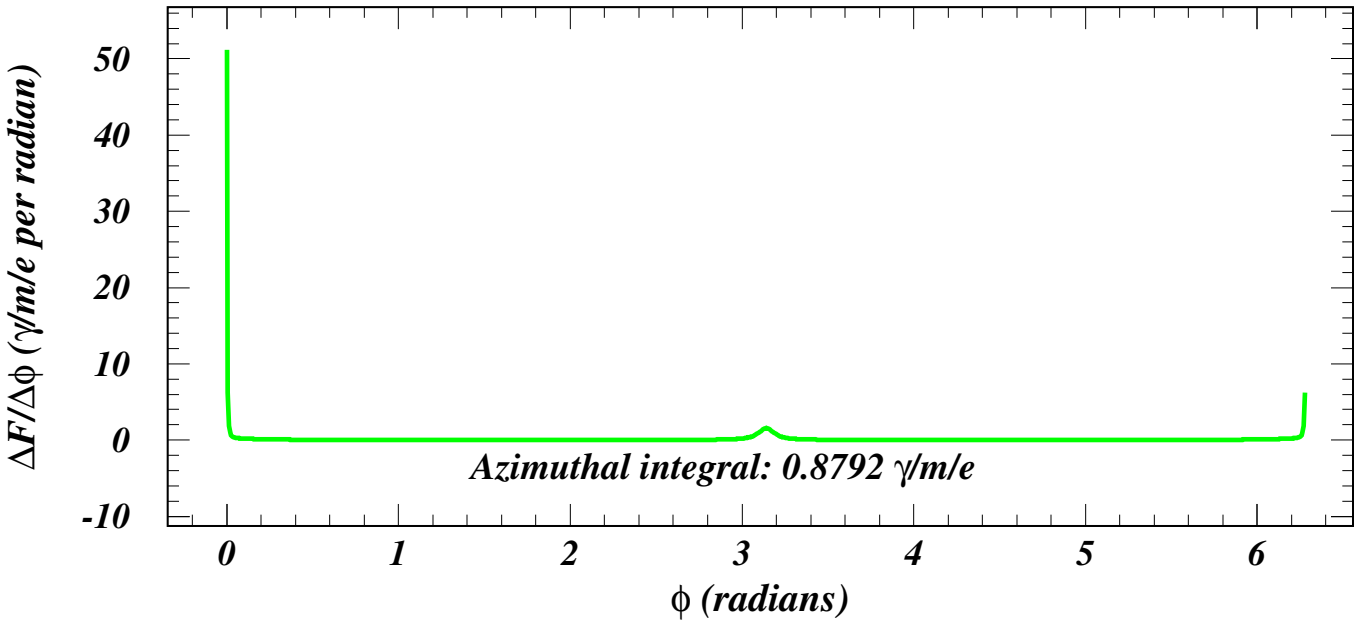


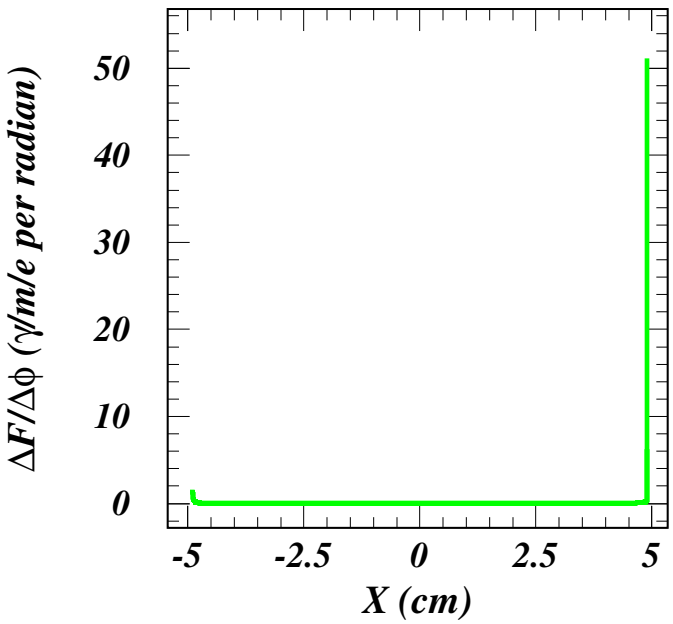



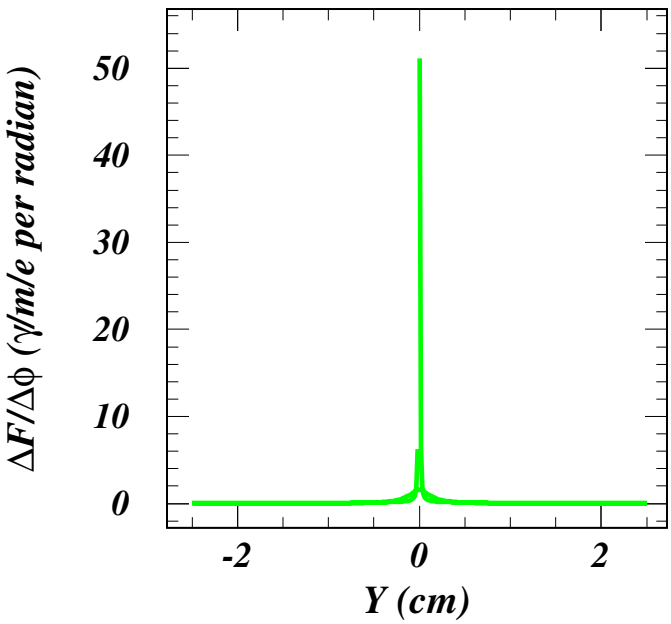



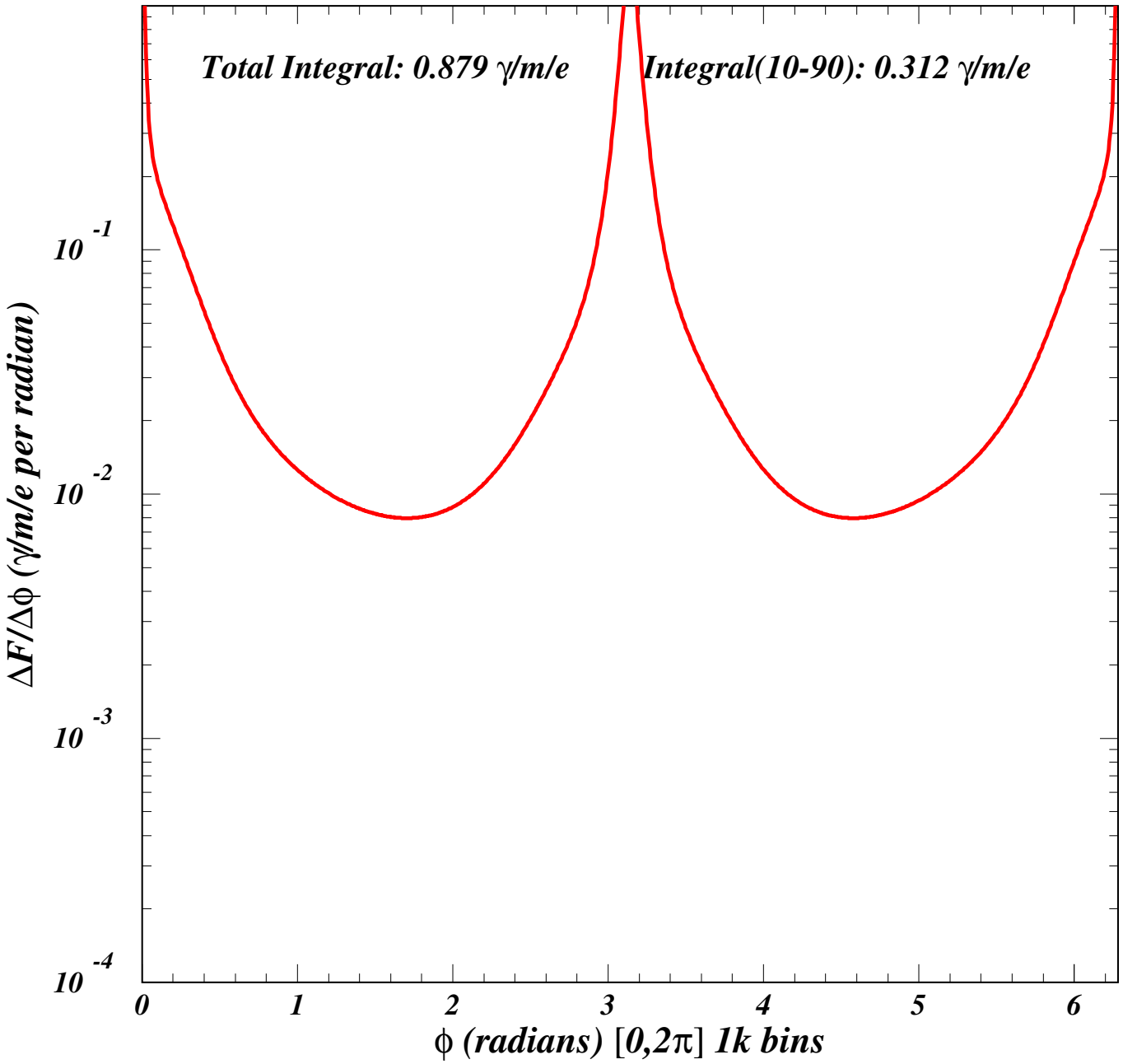
12/08/29 12.15

# Job 33924: Photoelectron Production Distributions



12/08/29 12.15

# Job 33924: Photoelectron Production Distributions