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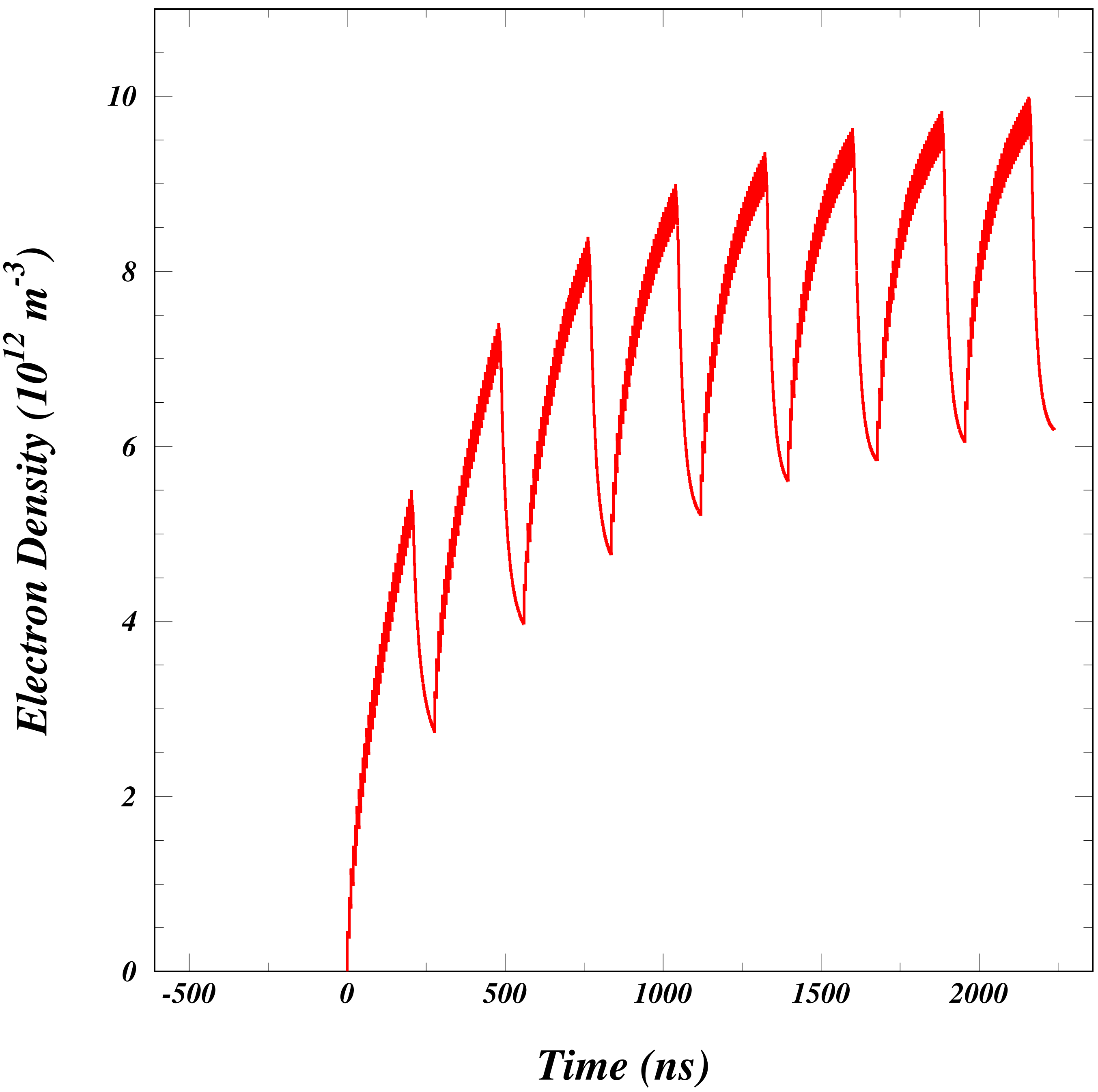
ECLOUD-DTC03_Wigg_Quad: Beampipe-averaged Cloud Density (10^{12} m^{-3})



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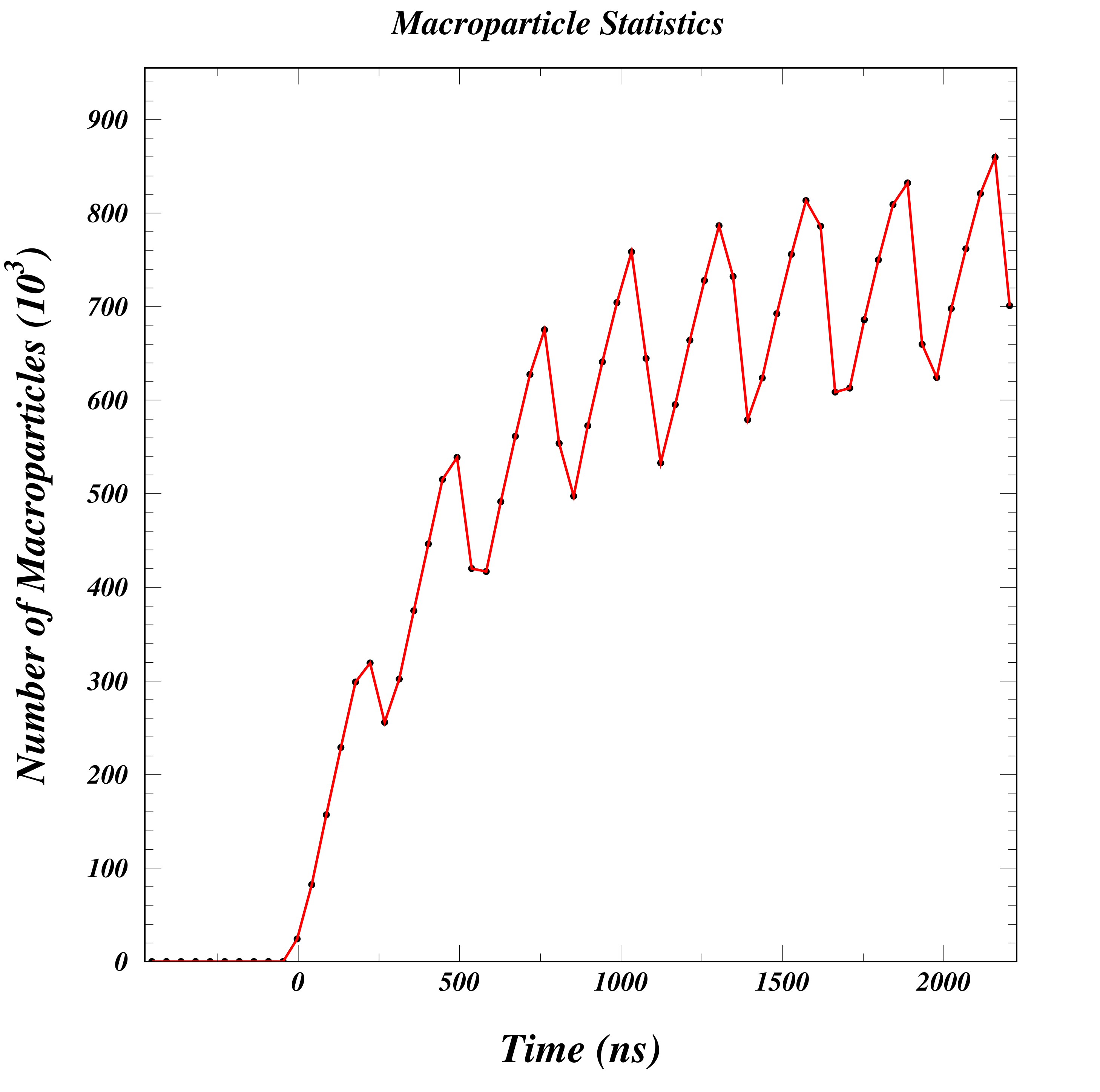
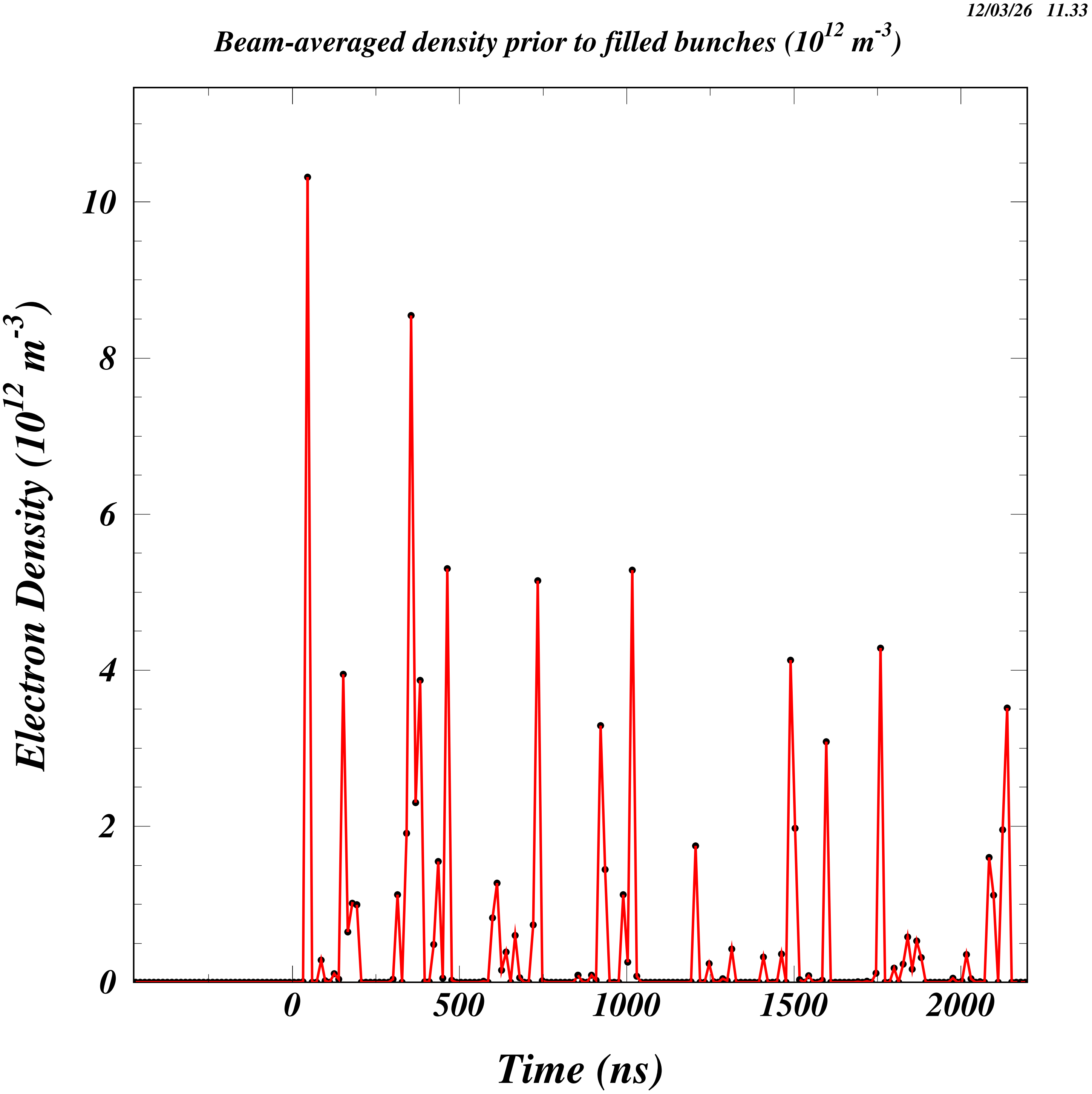


Macroparticle Statistics
Number of Macroparticles (10^3)
900
800
700
600
500
400
300
200
100
0
0
500
1000
1500
2000
Time (ns)



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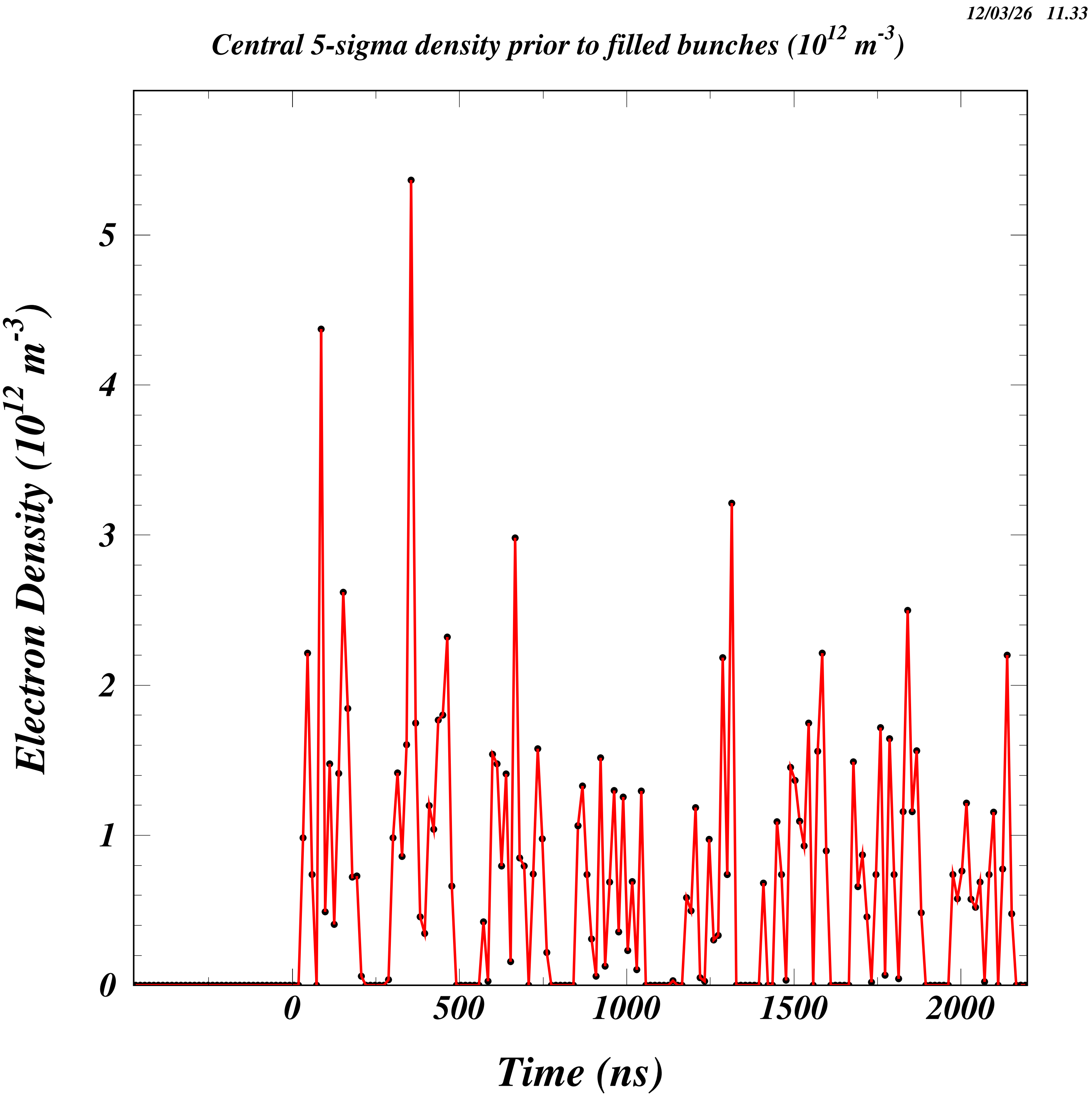
Beam-averaged density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
2
4
6
8
10
0
500
1000
1500
2000
Time (ns)



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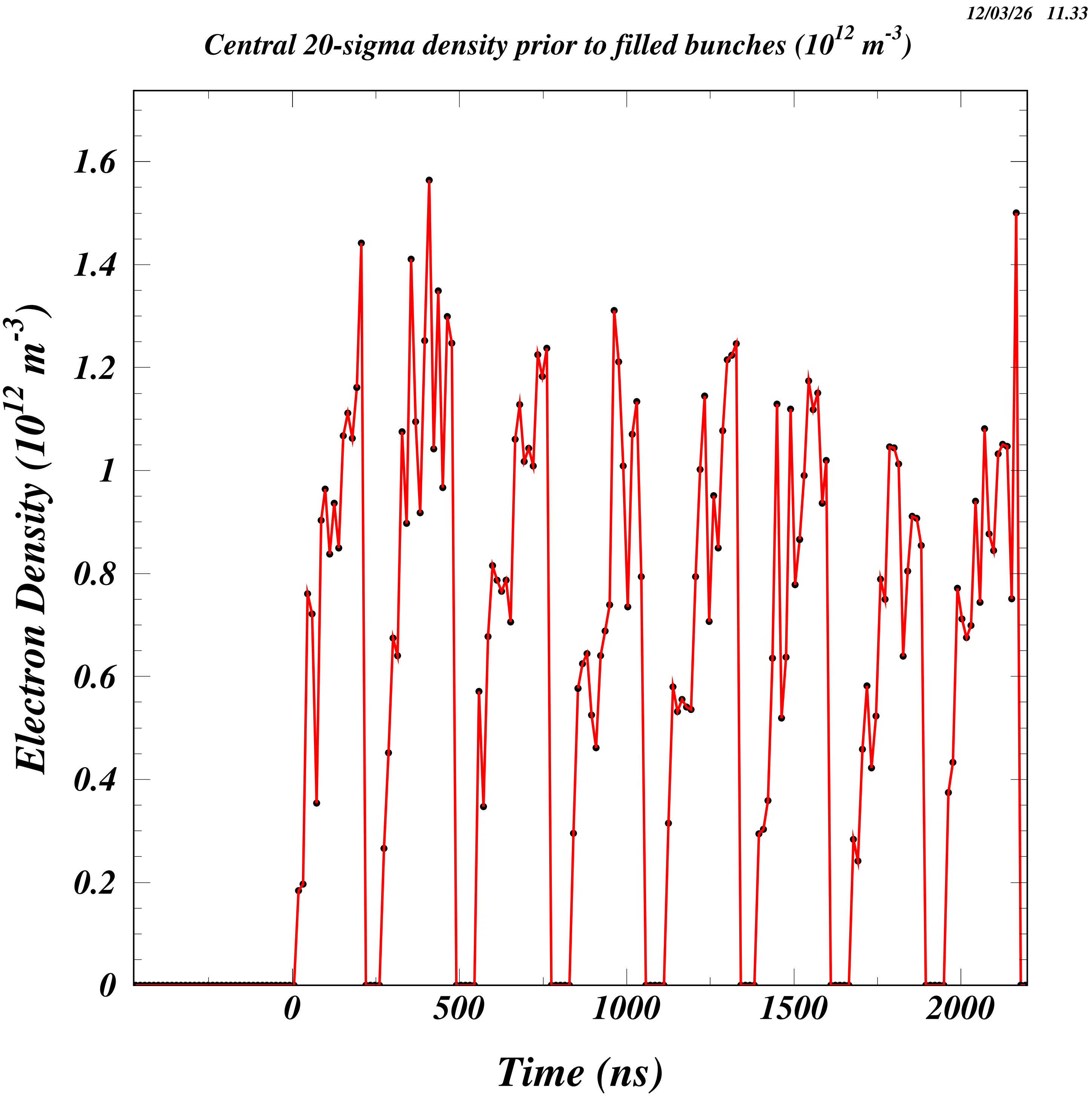
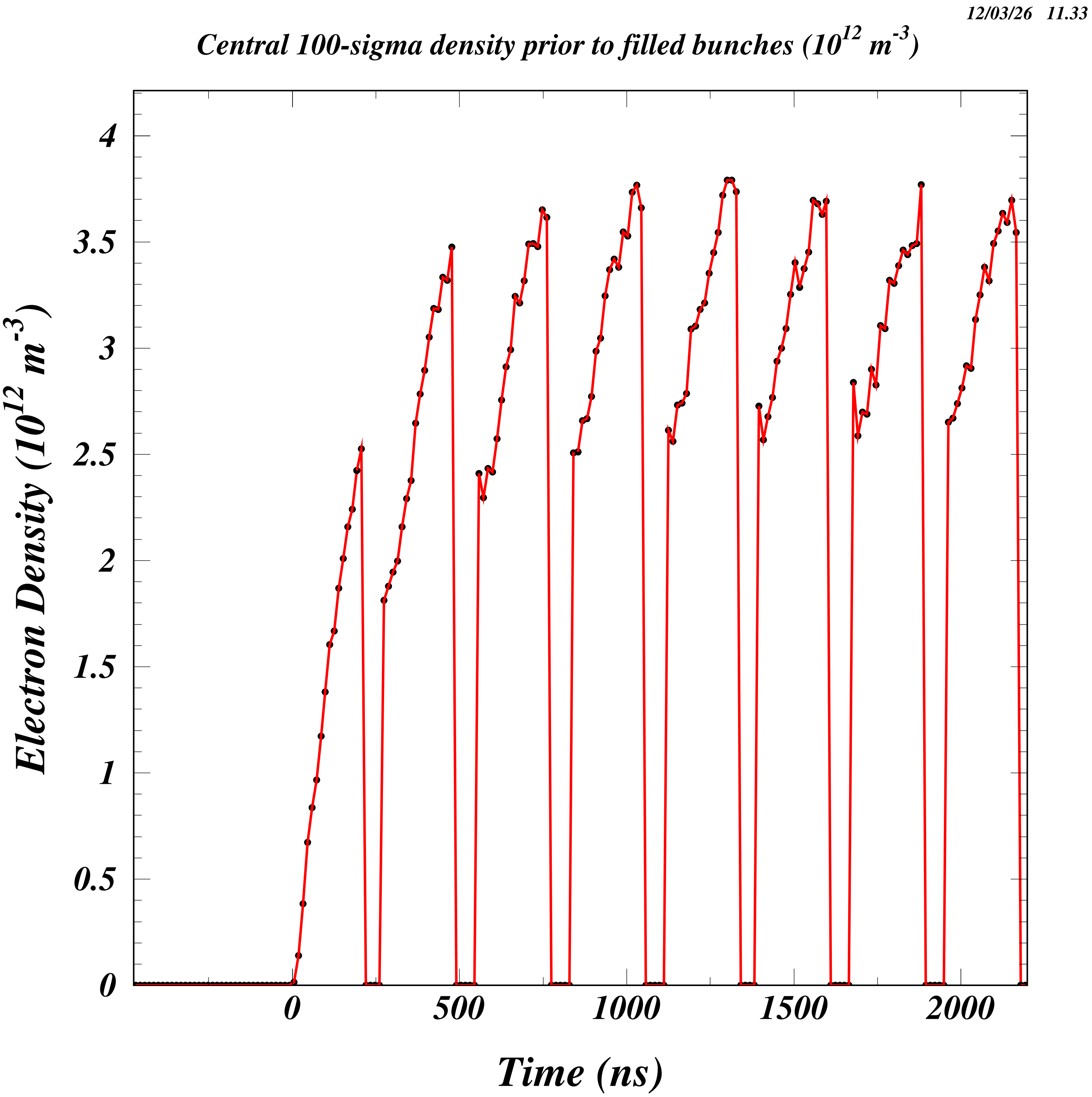
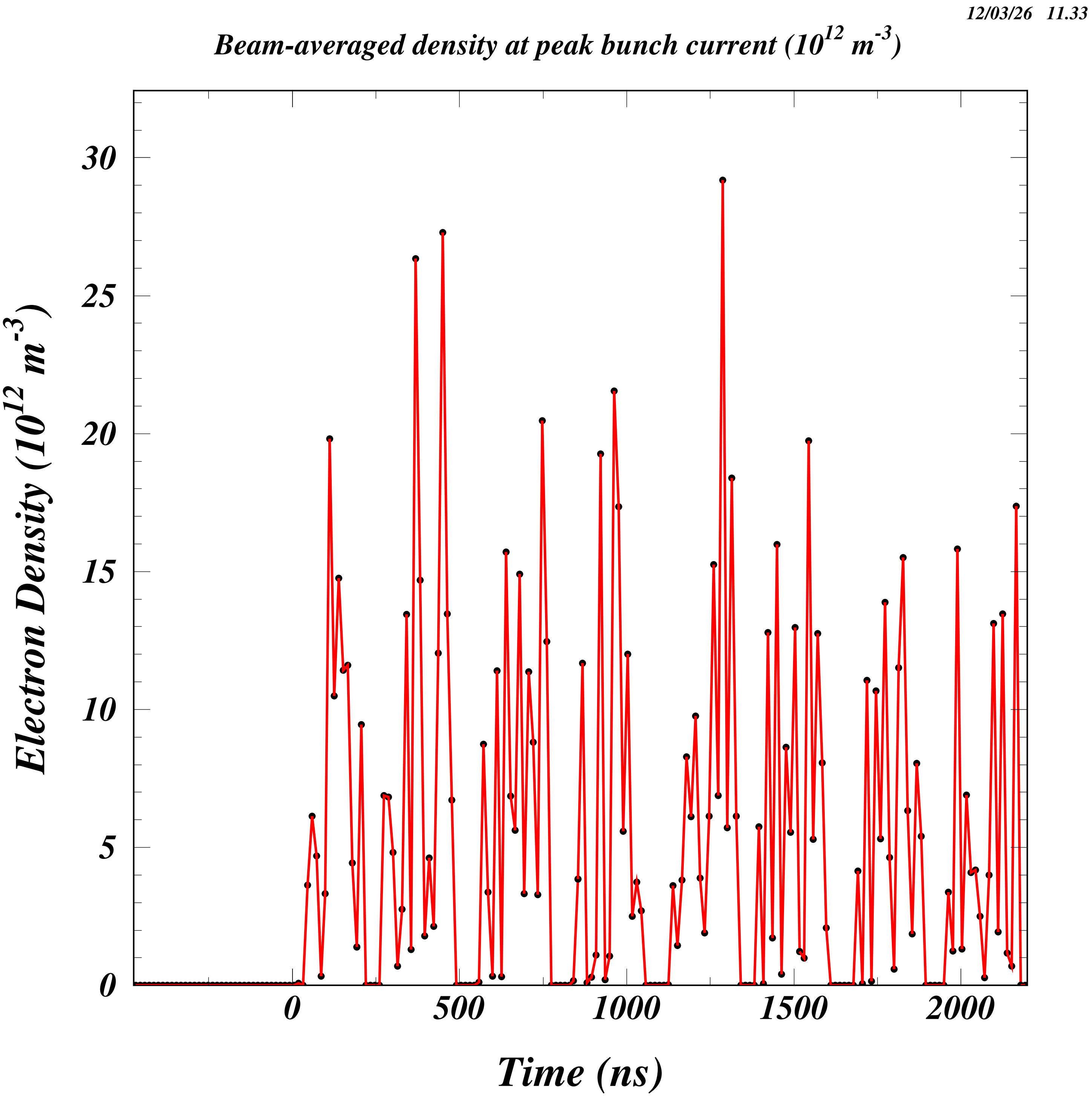
Central 5-sigma density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
1
2
3
4
5
0
500
1000
1500
2000
Time (ns)


12/03/26 11.33
Central 20-sigma density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
0
500
1000
1500
2000
Time (ns)


12/03/26 11.33
Central 100-sigma density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
Time (ns)
0
0.5
1
1.5
2
2.5
3
3.5
4
0
500
1000
1500
2000



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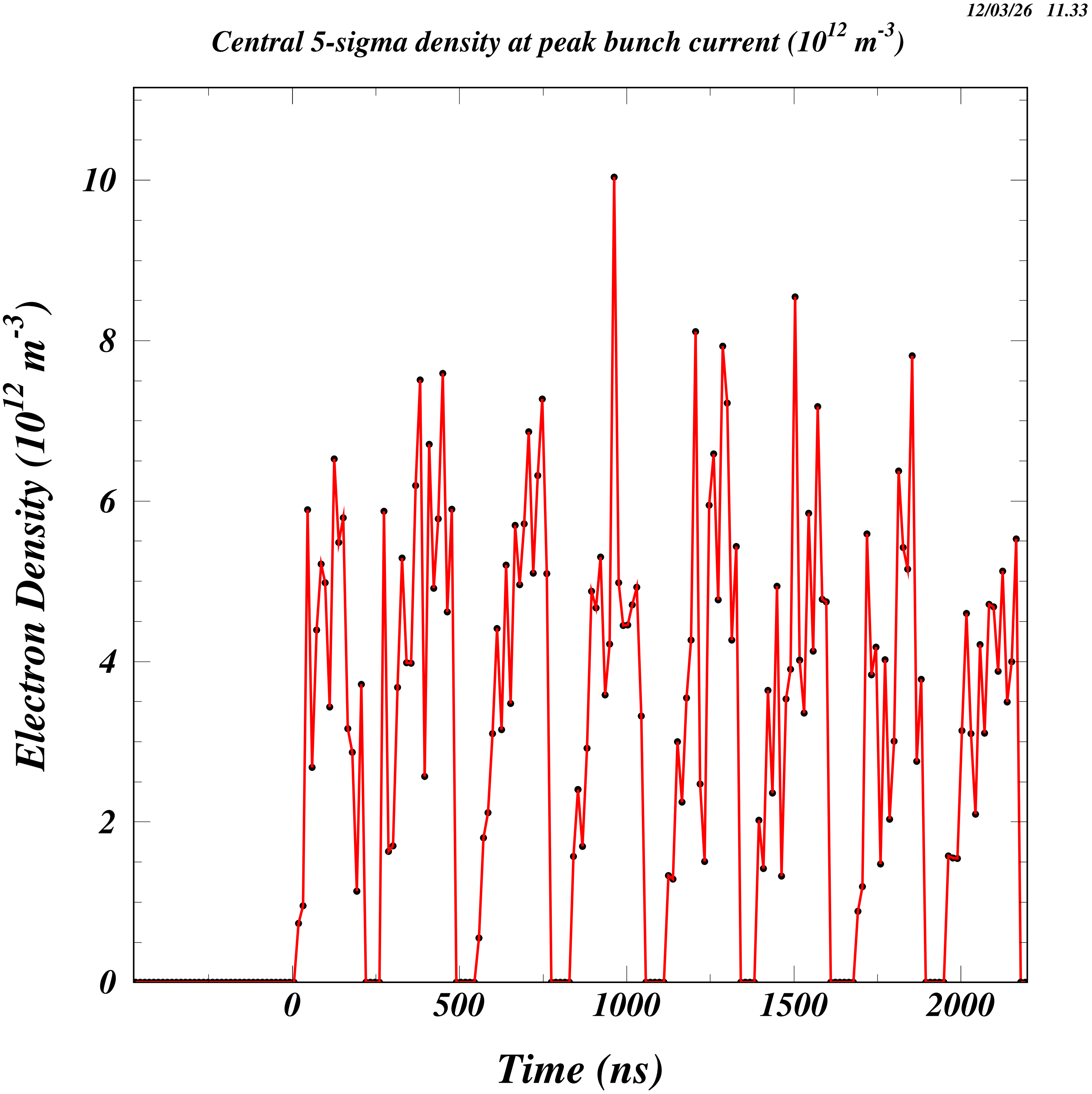
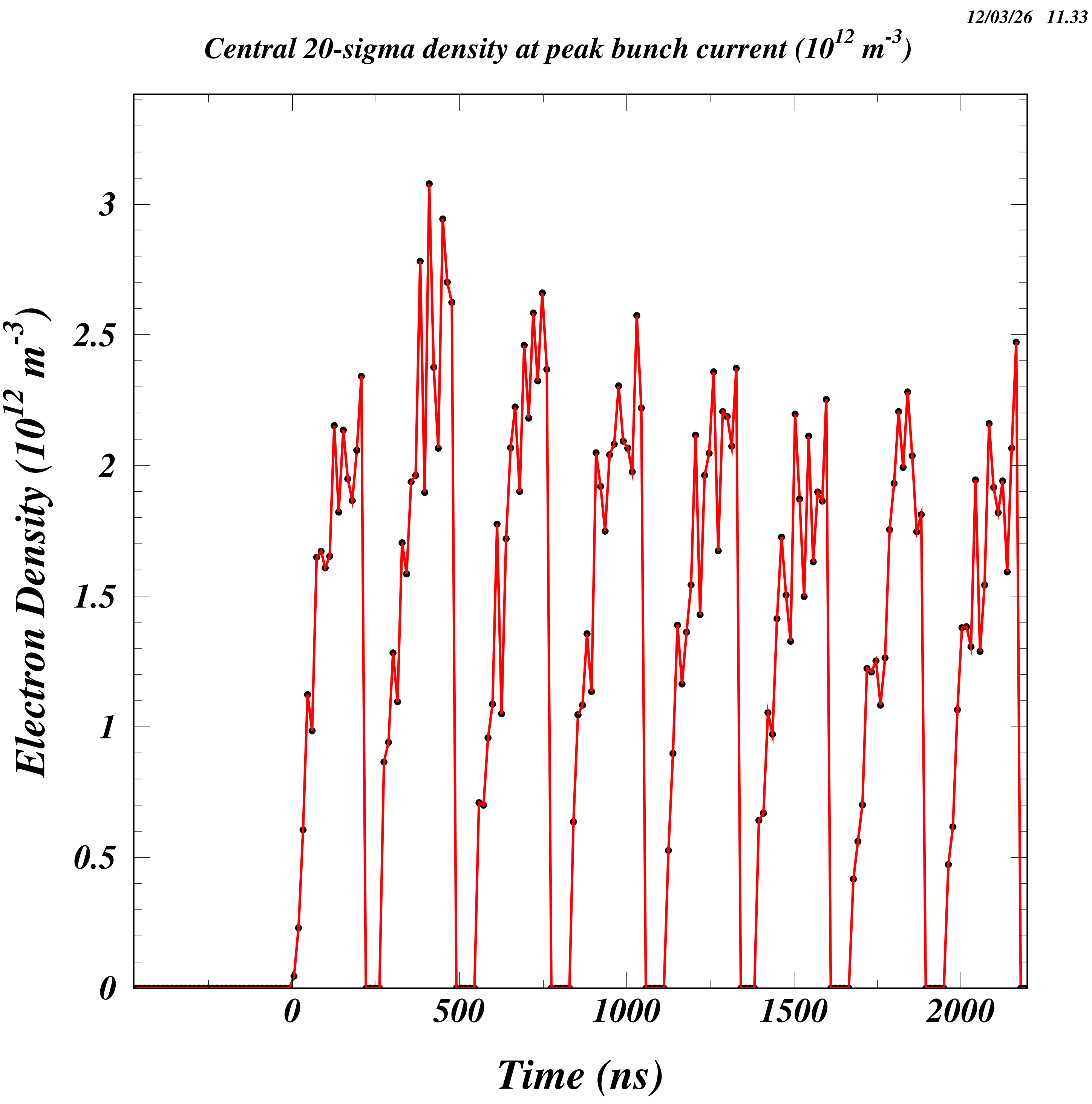
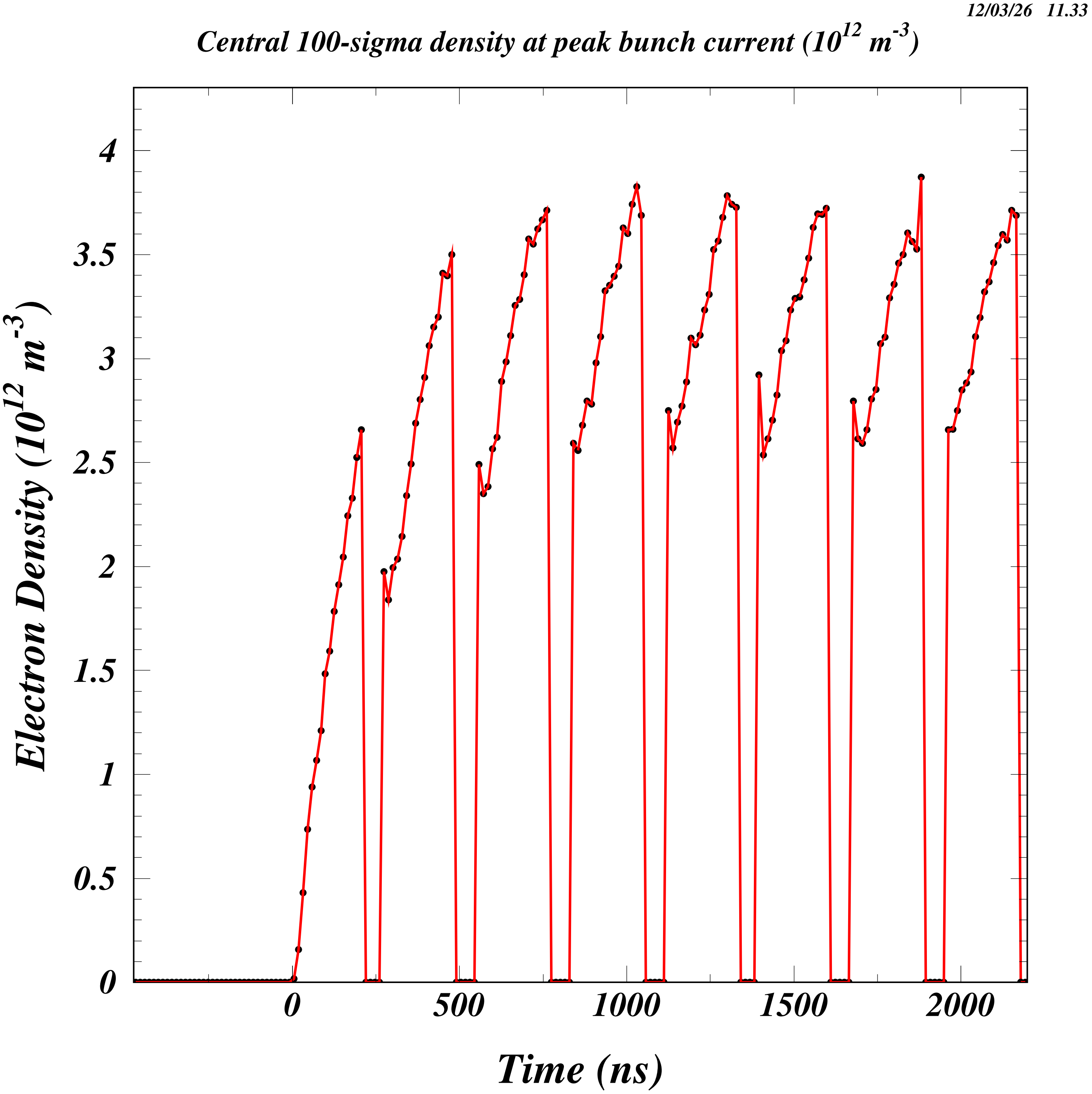
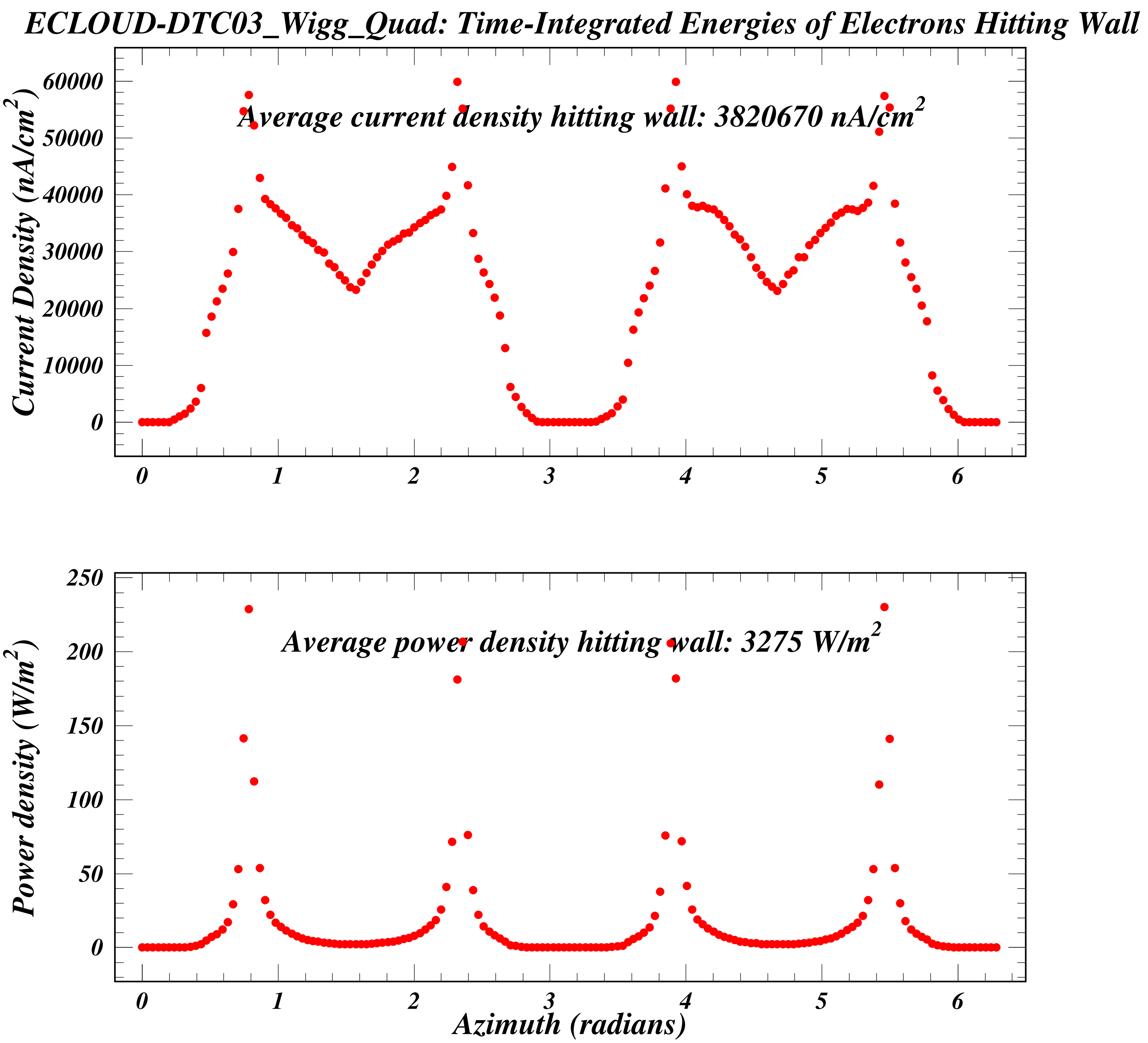
Beam-averaged density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
5
10
15
20
25
30
0
500
1000
1500
2000
Time (ns)

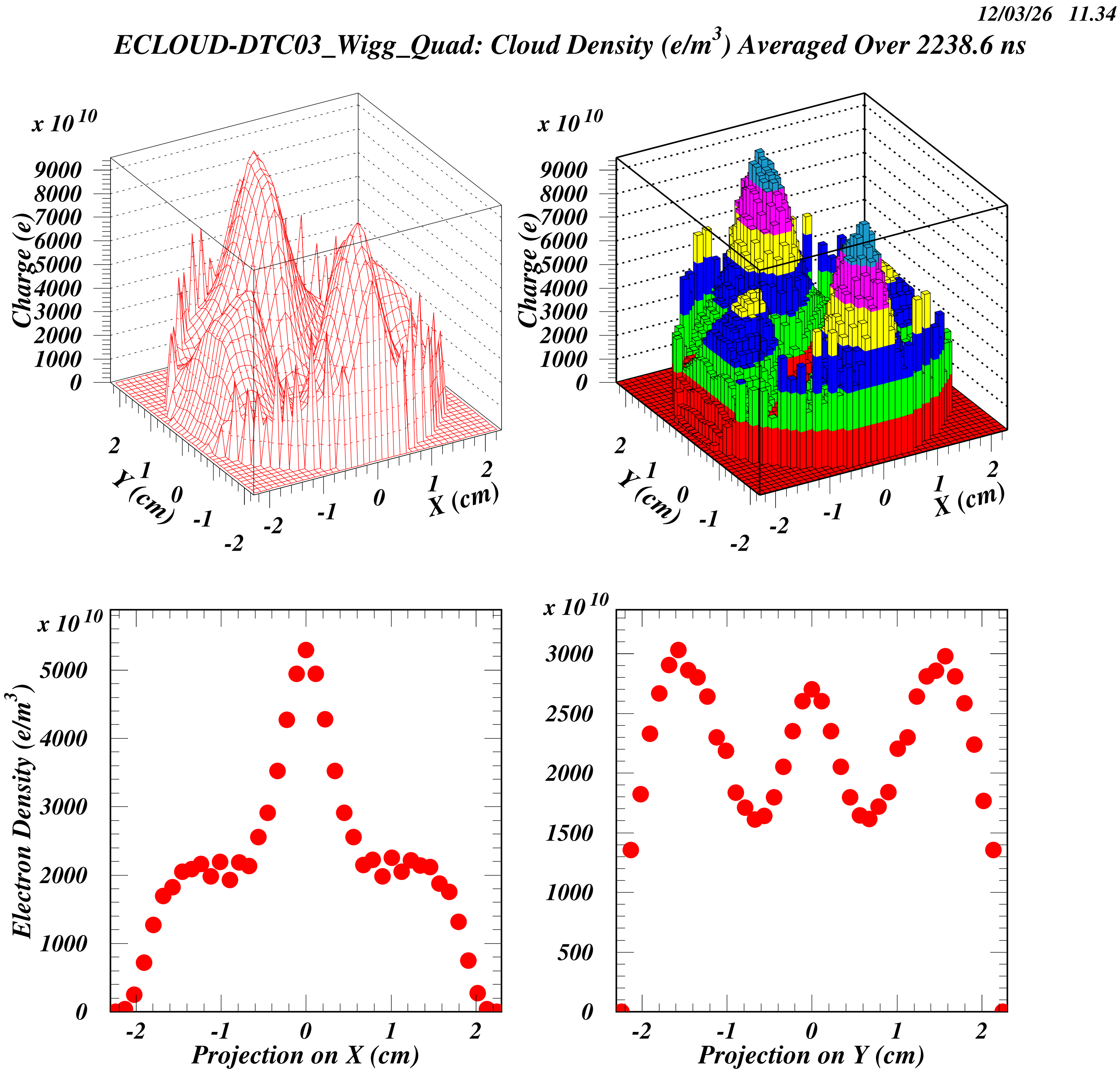

12/03/26 11.33
Central 5-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
2
4
6
8
10
0
500
1000
1500
2000
Time (ns)



12/03/26 11.33
Central 20-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
Time (ns)
0
0.5
1
1.5
2
2.5
3
0
500
1000
1500
2000


12/03/26 11.33
Central 100-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
Time (ns)
0
0.5
1
1.5
2
2.5
3
3.5
4
0
500
1000
1500
2000


ECLOUD-DTC03_Wigg_Quad: Time-Integrated Energies of Electrons Hitting Wall
Average current density hitting wall: 3820670 nA/cm^2
Current Density (nA/cm^2)
60000
50000
40000
30000
20000
10000
0
0
1
2
3
4
5
6
Average power density hitting wall: 3275 W/m^2
Power density (W/m^2)
250
200
150
100
50
0
Azimuth (radians)



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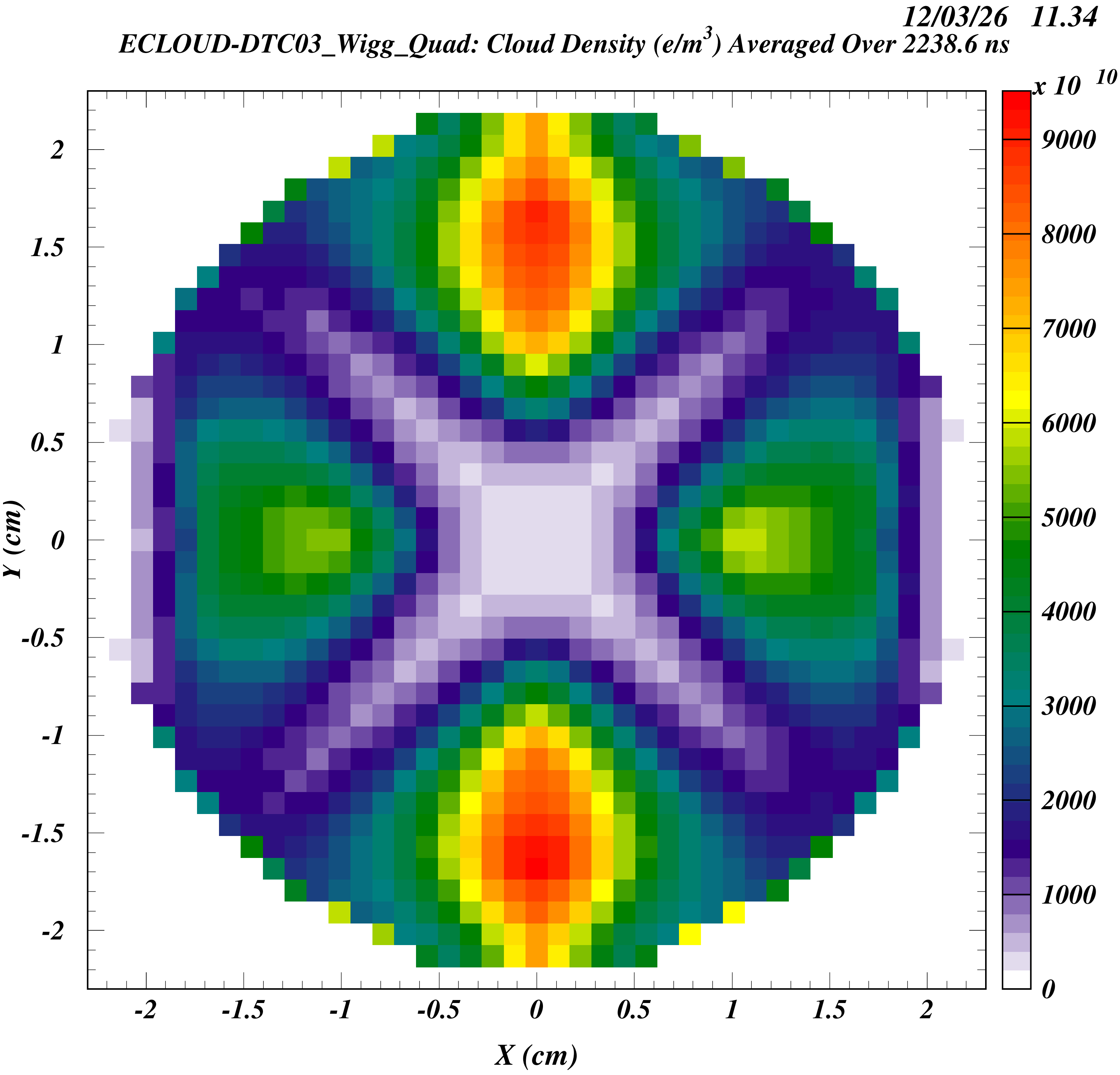
ECLOUD-DTC03_Wigg_Quad: Cloud Density (e/m^3) Averaged Over 2238.6 ns
x 10^{10}
Charge (e)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Y (cm)
X (cm)
2
1
0
-1
-2
x 10^{10}
Charge (e)
Y (cm)
X (cm)
x 10^{10}
Electron Density (e/m^3)
5000
4000
3000
2000
1000
0
Projection on X (cm)
x 10^{10}
3000
2500
2000
1500
1000
500
0
Projection on Y (cm)


12/03/26 11.34
ECLOUD-DTC03_Wigg_Quad: Cloud Density (e/m^3) Averaged Over 2238.6 ns
x 10 ^{10}
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Y (cm)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
X (cm)

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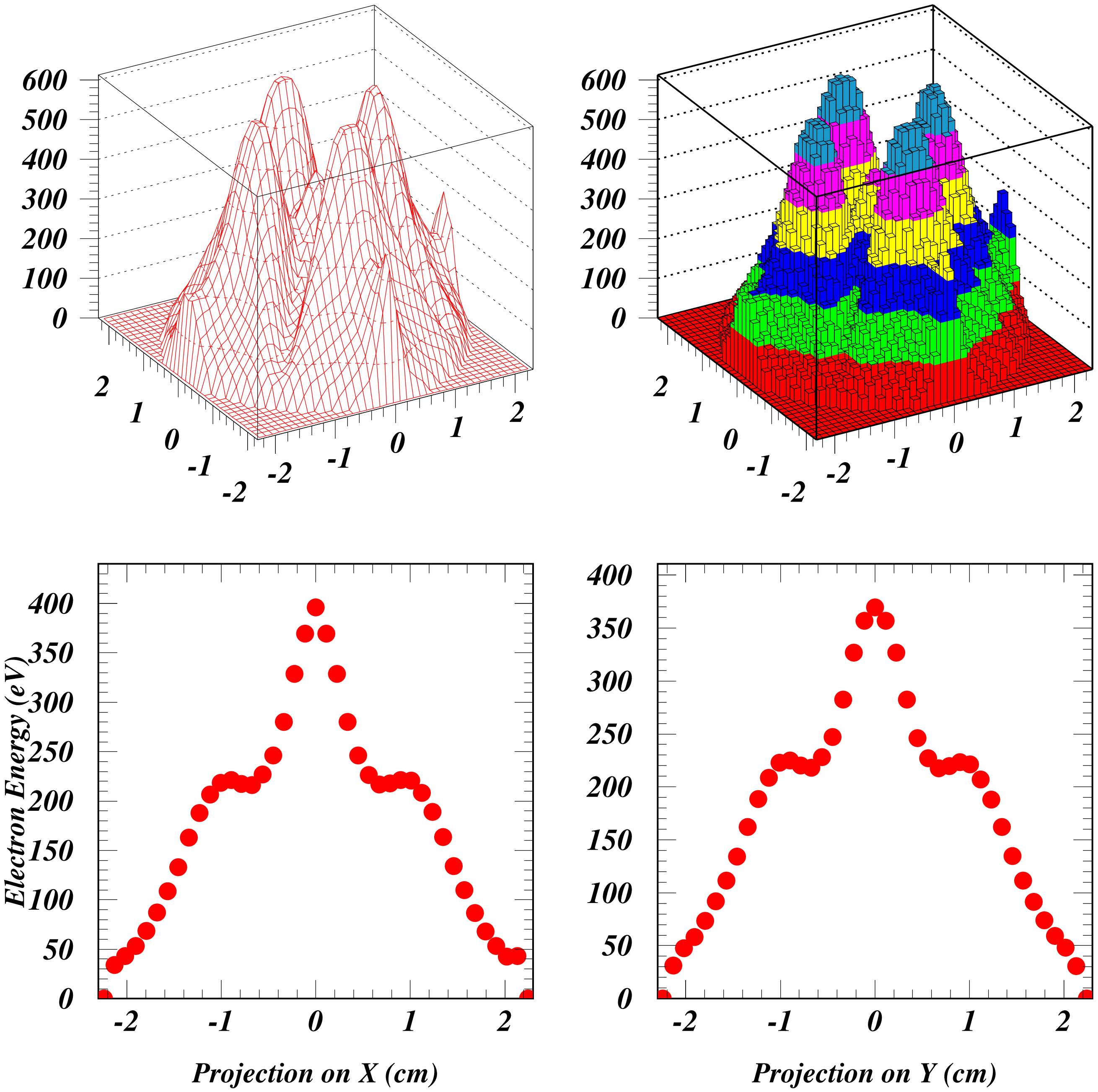
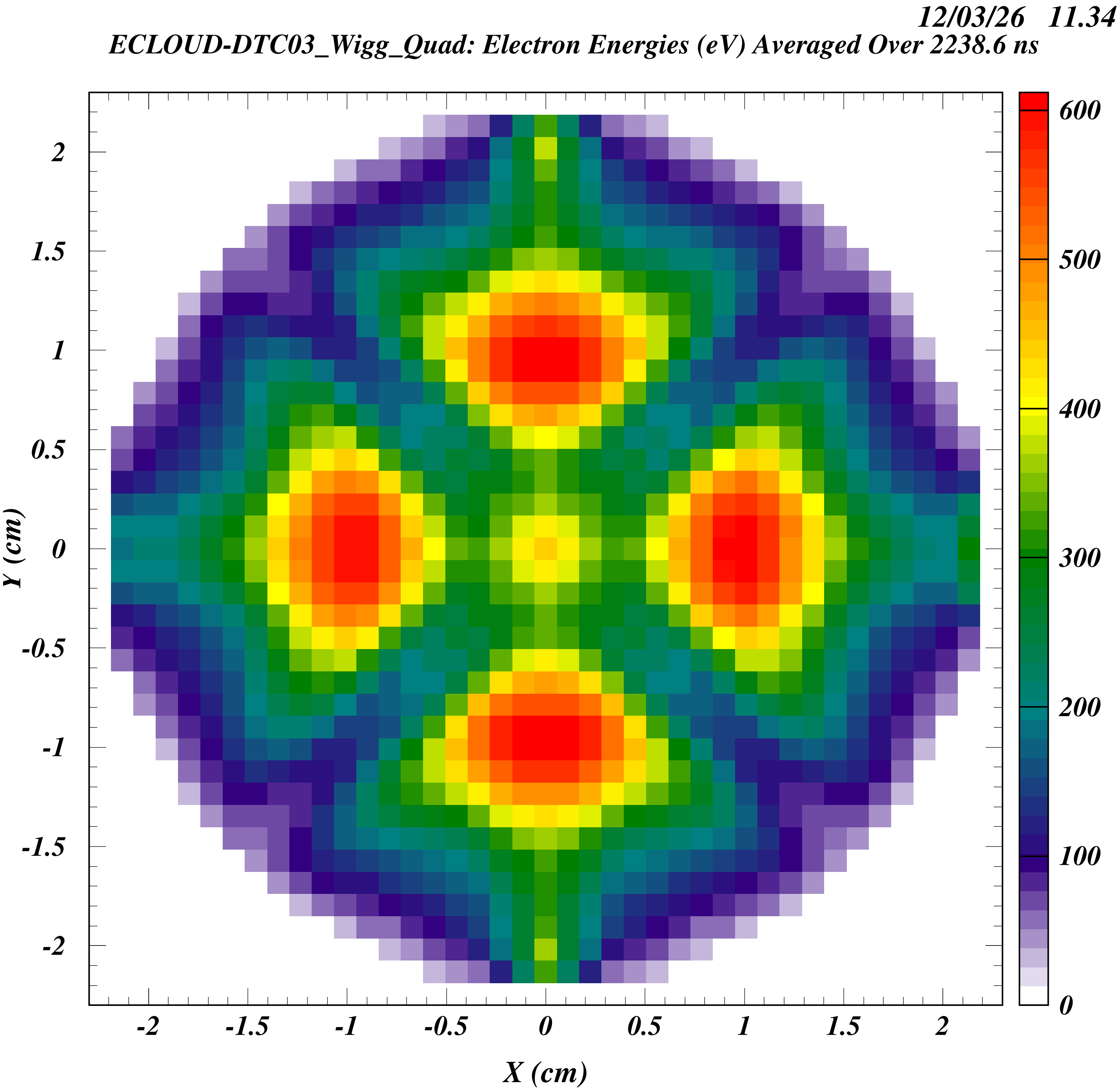
ECLOUD-DTC03_Wigg_Quad: Electron Energies (eV) Averaged Over 2238.6 ns





12/03/26 11.34
ECLOUD-DTC03_Wigg_Quad: Electron Energies (eV) Averaged Over 2238.6 ns
Y (cm)
X (cm)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
600
500
400
300
200
100
0

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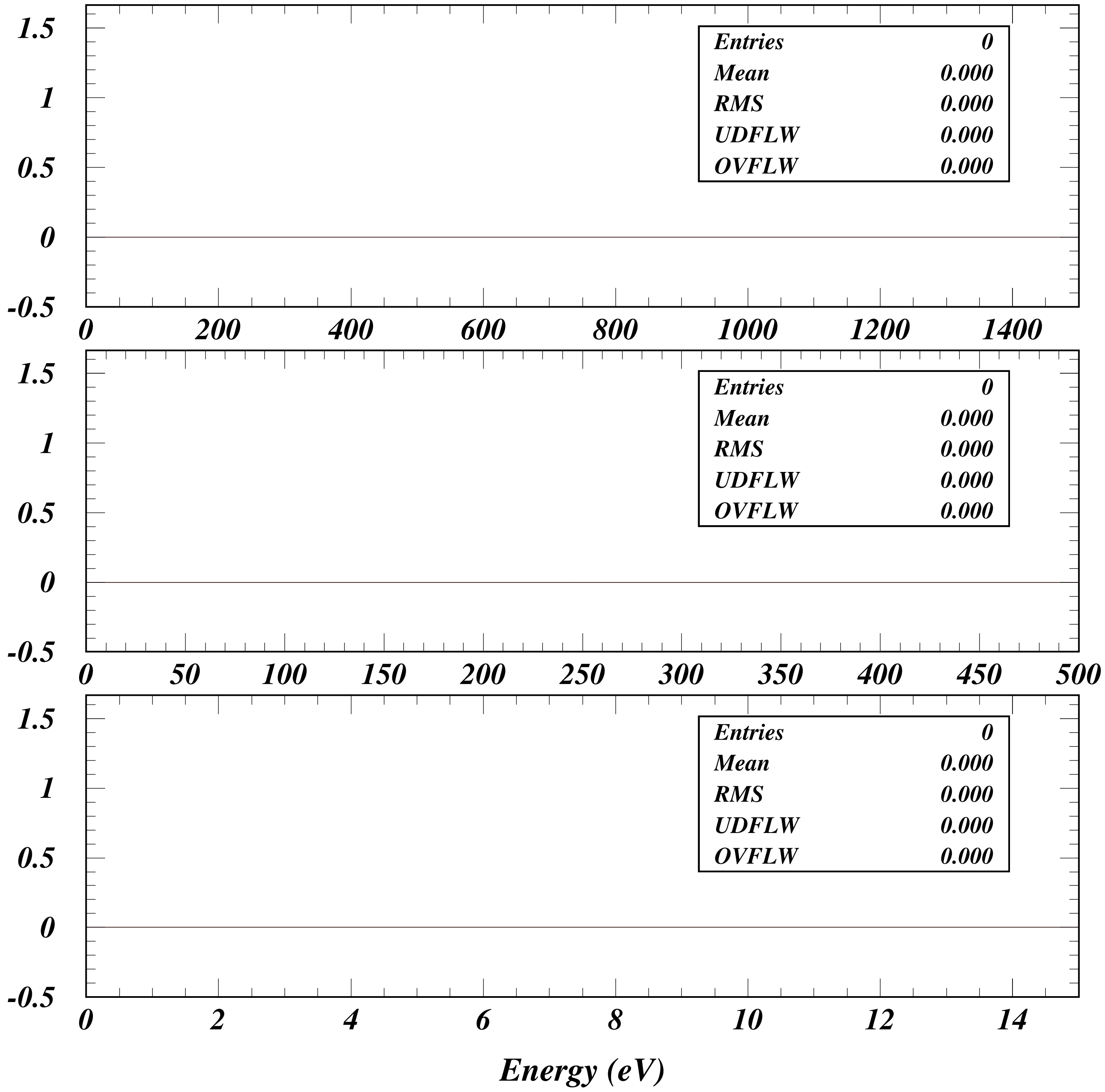
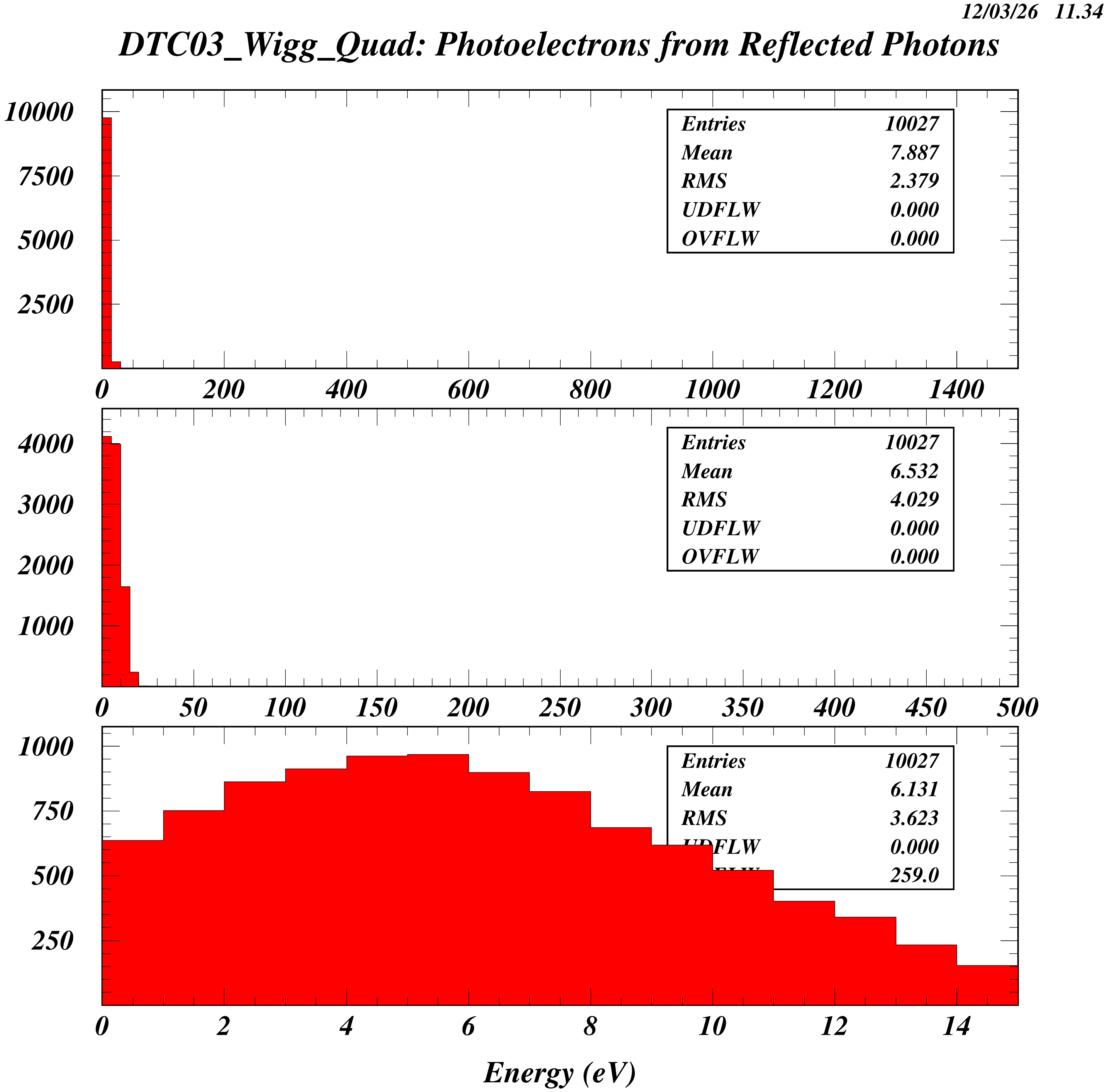
DTC03_Wigg_Quad: Photoelectrons from Direct Photons





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DTC03_Wigg_Quad: Photoelectrons from Reflected Photons
Entries 10027
Mean 7.887
RMS 2.379
UDFLW 0.000
OVFLW 0.000
Entries 10027
Mean 6.532
RMS 4.029
UDFLW 0.000
OVFLW 0.000
Entries 10027
Mean 6.131
RMS 3.623
0.000
259.0
Energy (eV)

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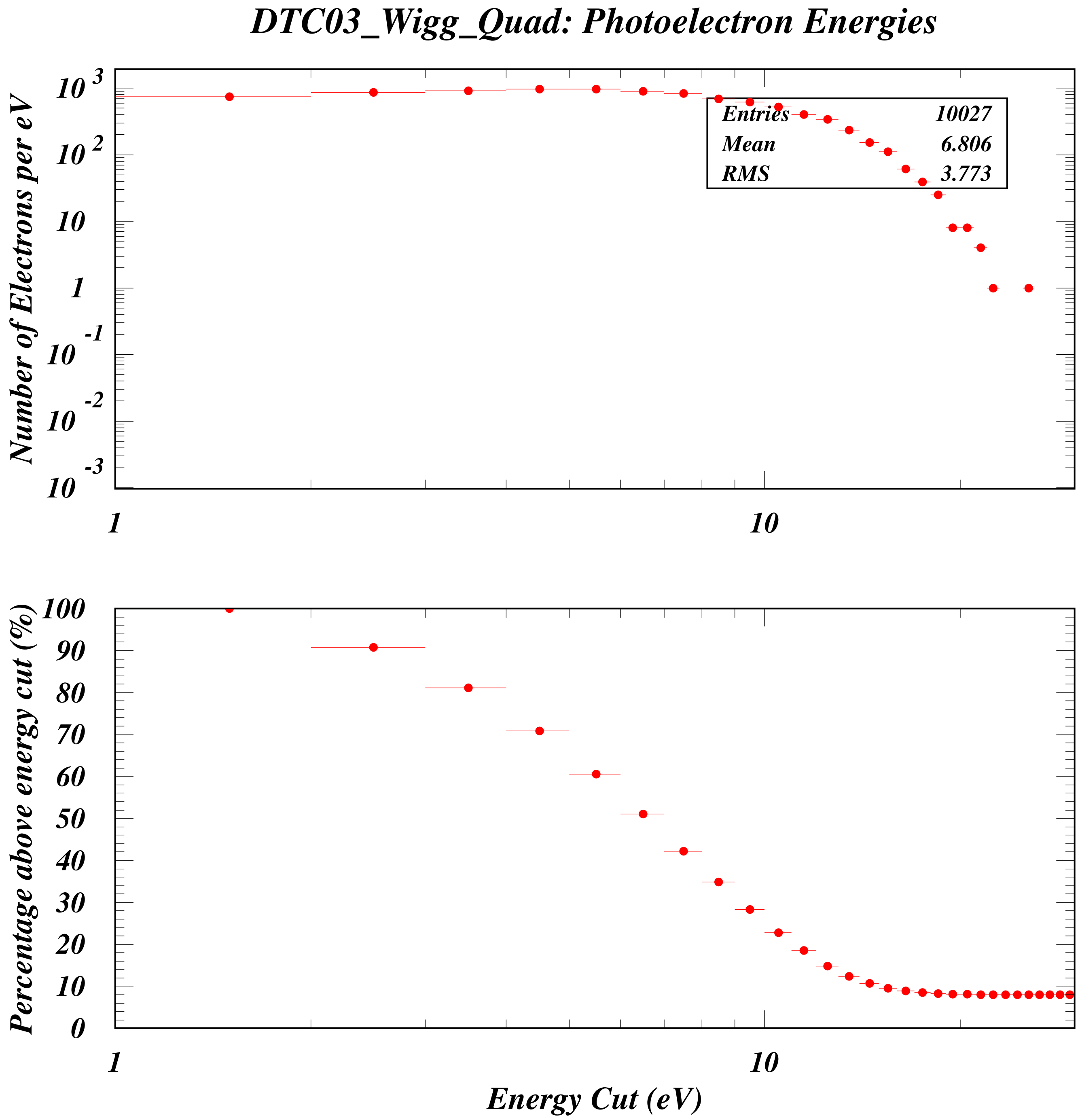
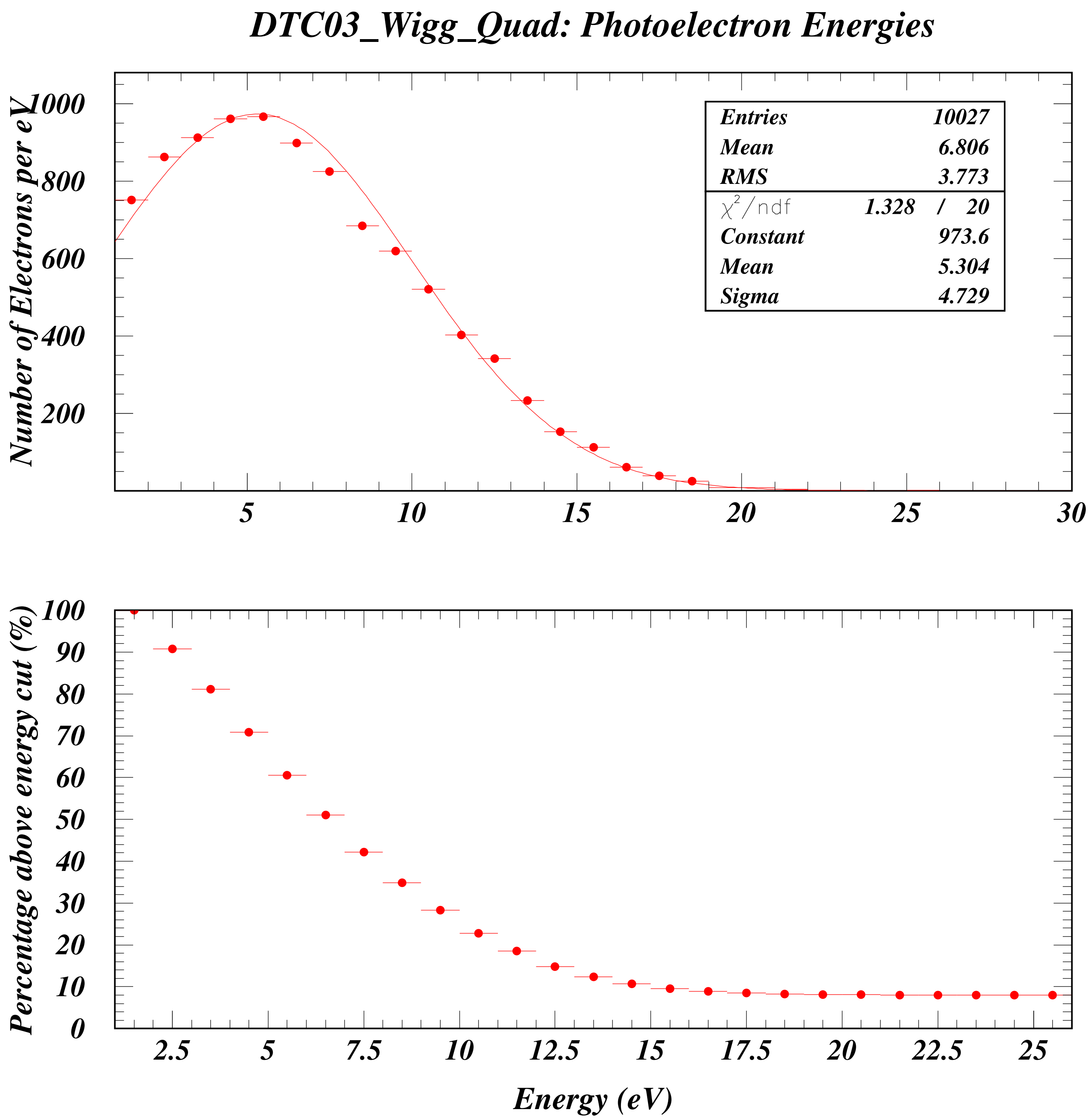

DTC03_Wigg_Quad: Photoelectron Energies
Number of Electrons per eV
Entries 10027
Mean 6.806
RMS 3.773
Percentage above energy cut (%)
Energy Cut (eV)

12/03/26 11.34



DTC03_Wigg_Quad: Photoelectron Energies
Number of Electrons per eV
Entries 10027
Mean 6.806
RMS 3.773
χ²/ndf 1.328 / 20
Constant 973.6
Mean 5.304
Sigma 4.729
Percentage above energy cut (%)
Energy (eV)

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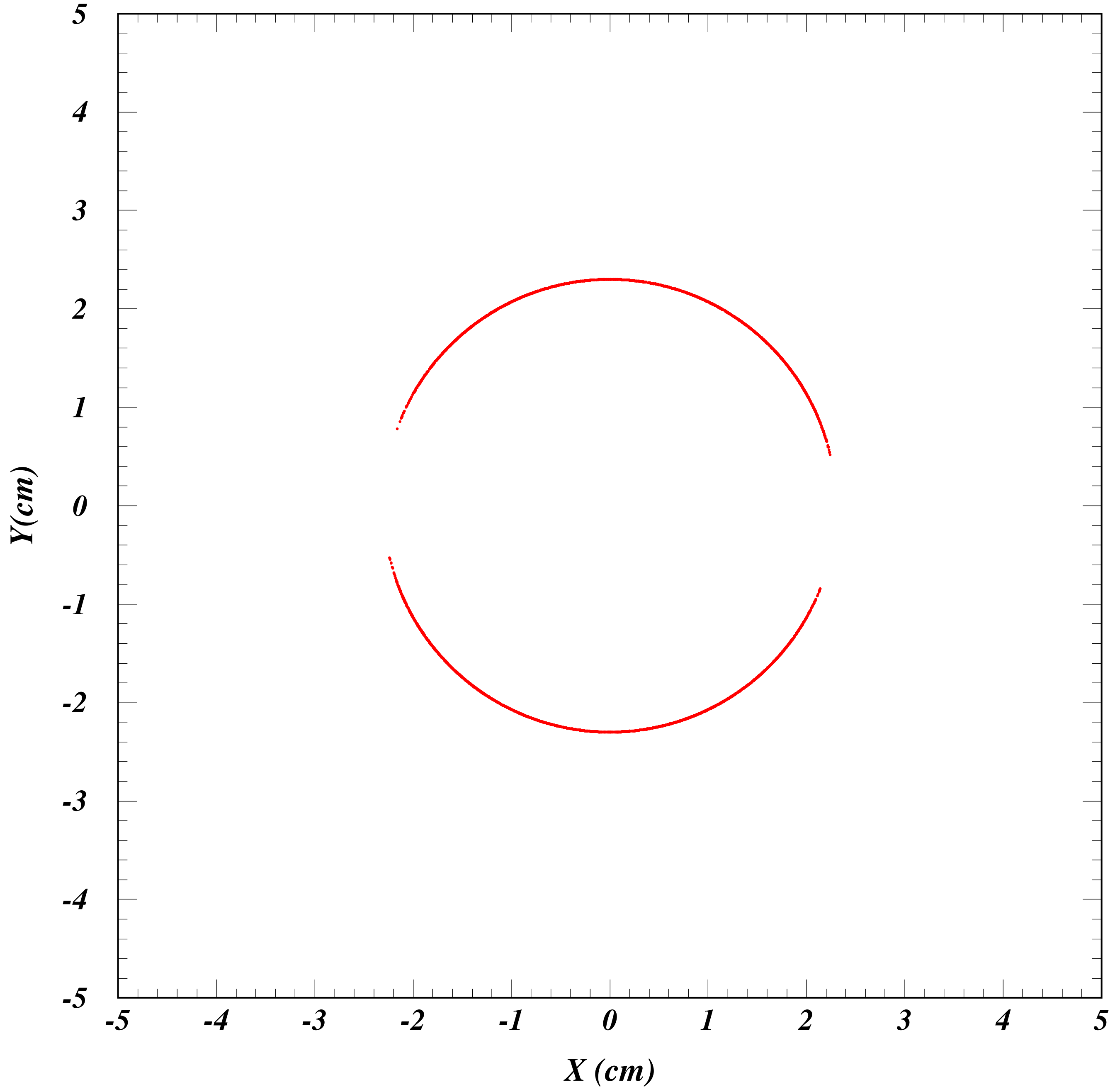
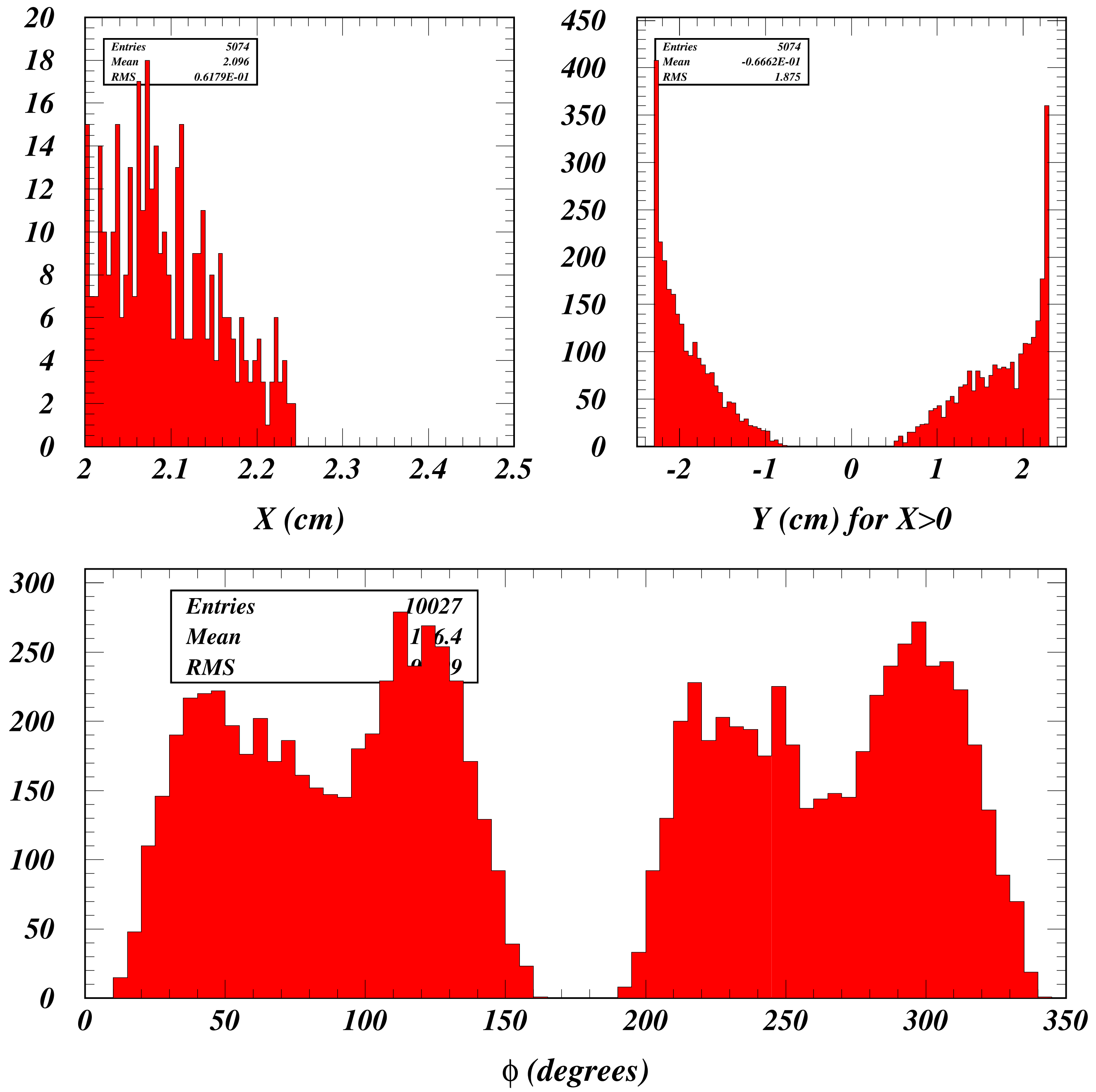
DTC03_Wigg_Quad: Photoelectron Production Distributions



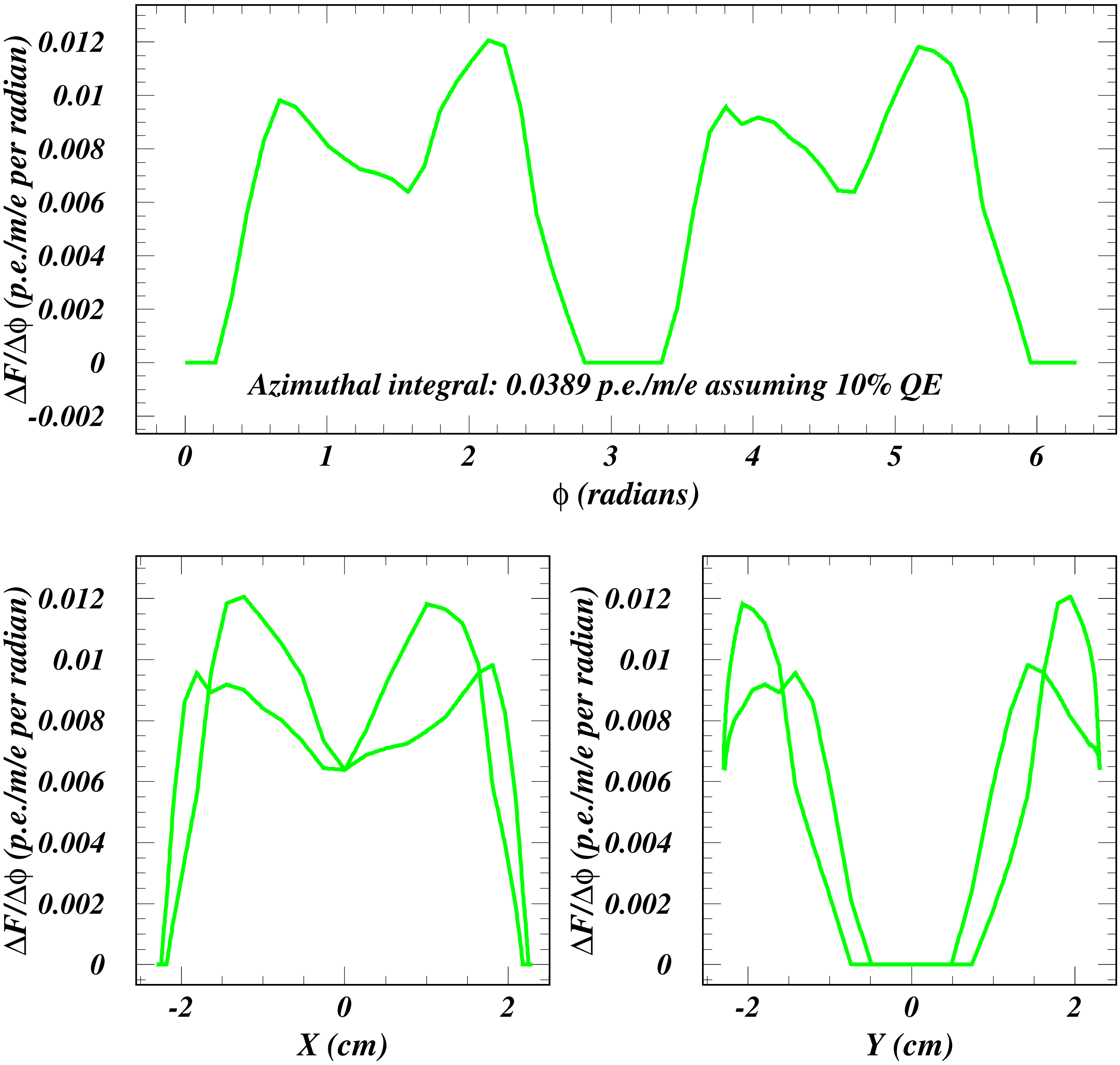
12/03/26 11.34

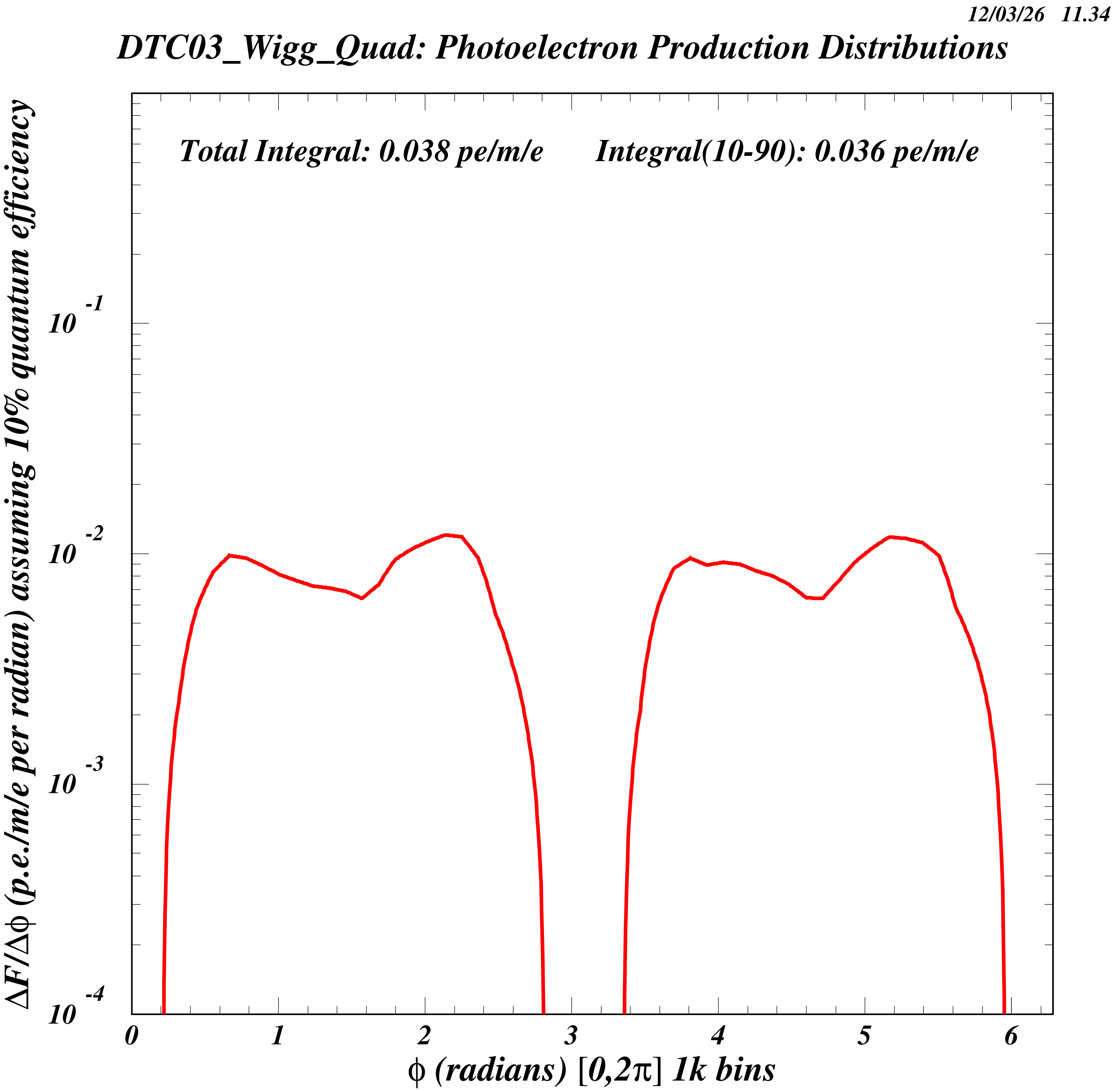
DTC03_Wigg_Quad: Photoelectron Production Distributions



12/03/26 11.34

DTC03_Wigg_Quad: Photoelectron Production Distributions





12/03/26 11.34
DTC03_Wigg_Quad: Photoelectron Production Distributions
Total Integral: 0.038 pe/m/e
Integral(10-90): 0.036 pe/m/e
ΔF/Δϕ (p.e./m/e per radian) assuming 10% quantum efficiency
10 -1
10 -2
10 -3
10 -4
0
1
2
3
4
5
6
ϕ (radians) [0,2π] 1k bins