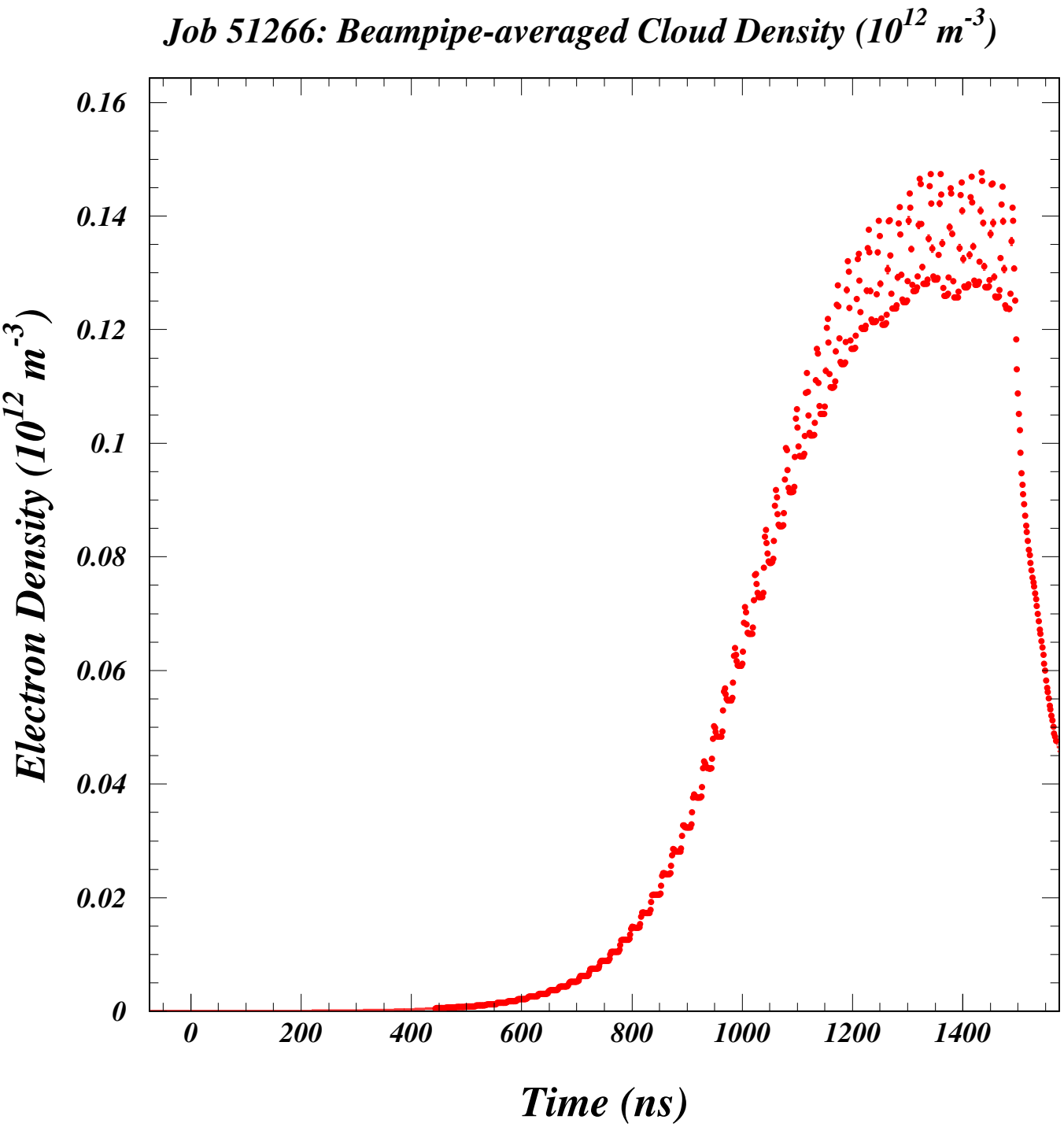
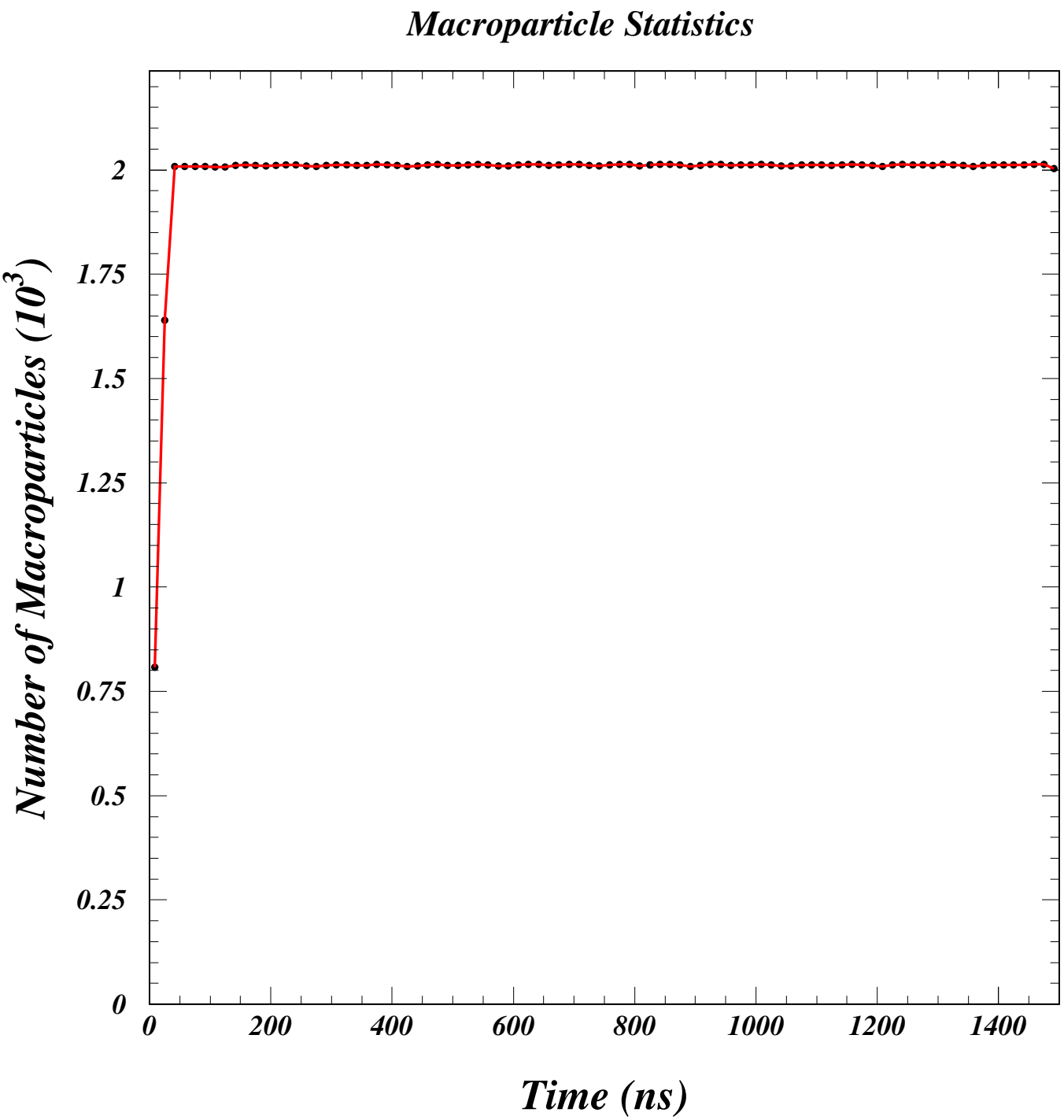
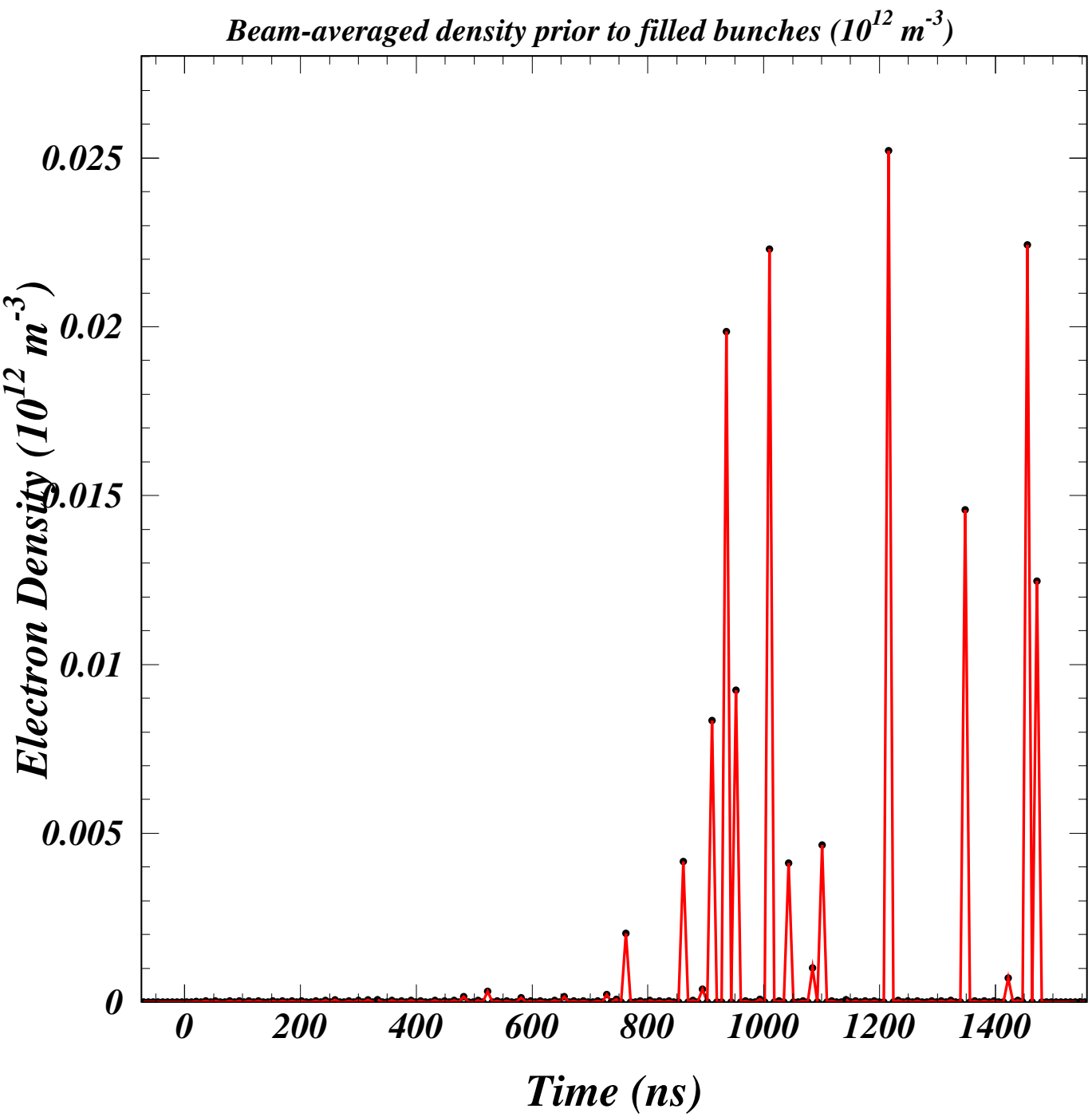
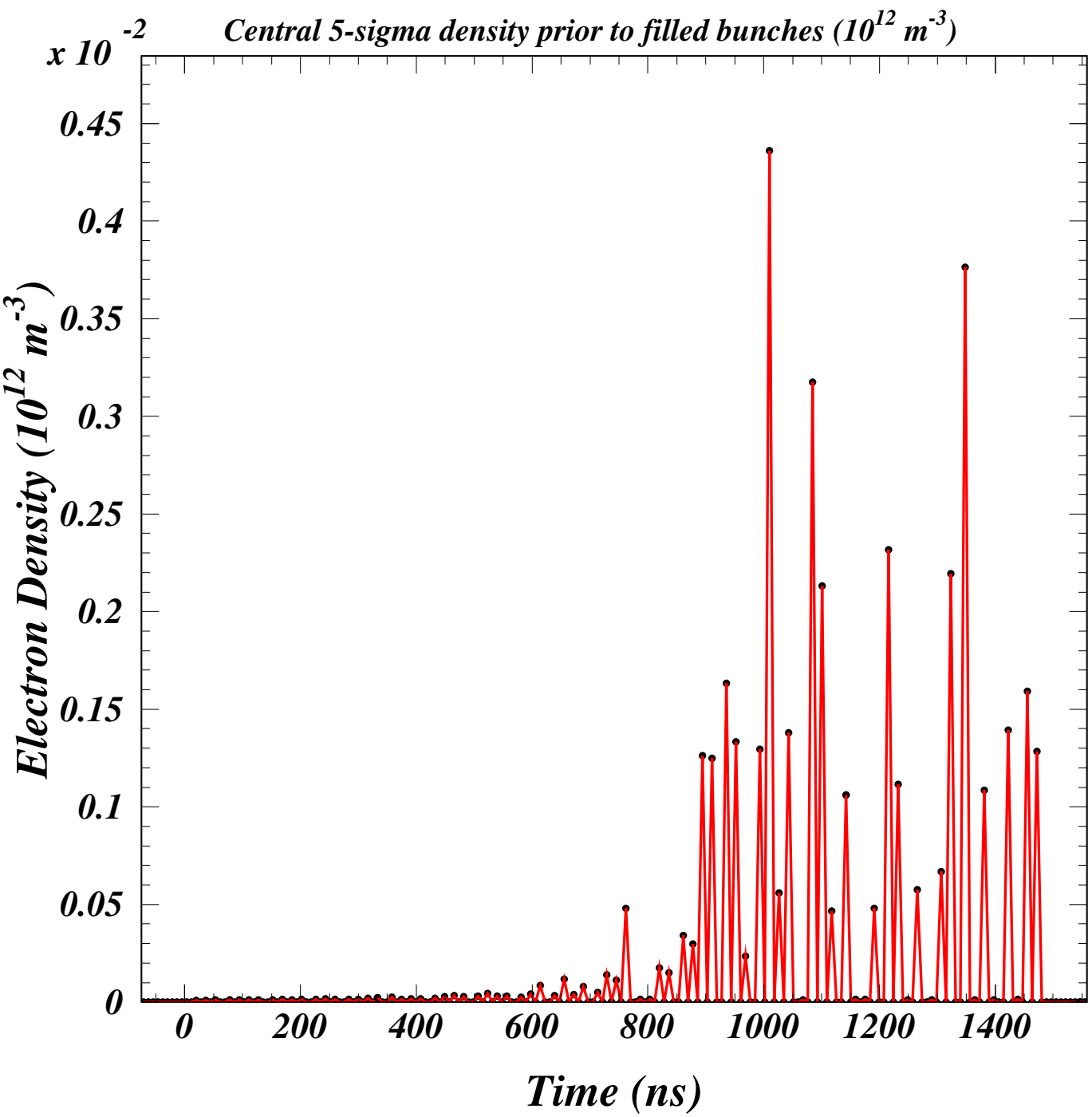

Job 51266: Beampipe-averaged Cloud Density (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
200
400
600
800
1000
1200
1400
Time (ns)


Macroparticle Statistics
Number of Macroparticles (10^3)
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0
0
200
400
600
800
1000
1200
1400
Time (ns)

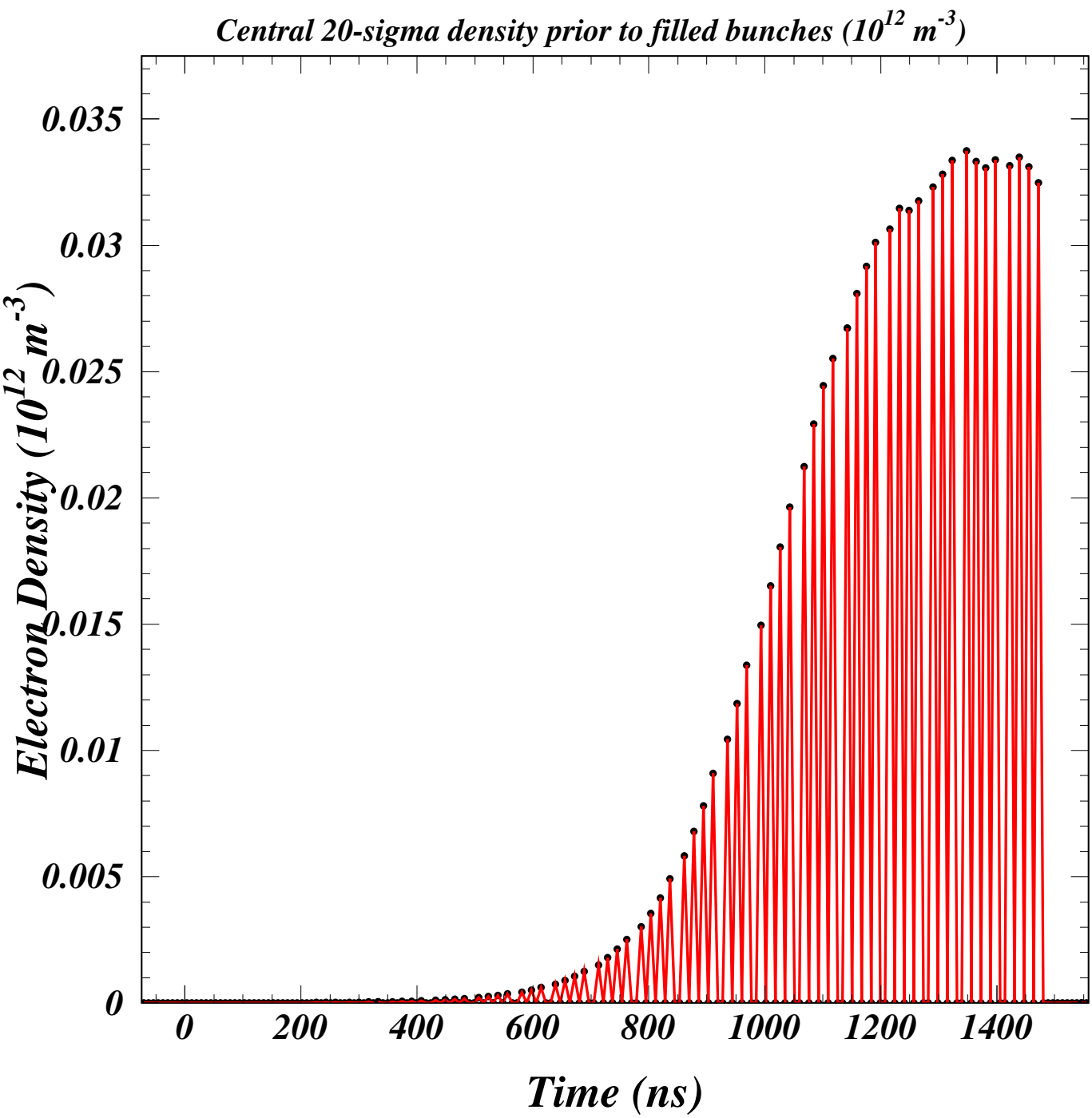
17/01/01 15.01


Beam-averaged density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.025
0.02
0.015
0.01
0.005
0
0
200
400
600
800
1000
1200
1400
Time (ns)

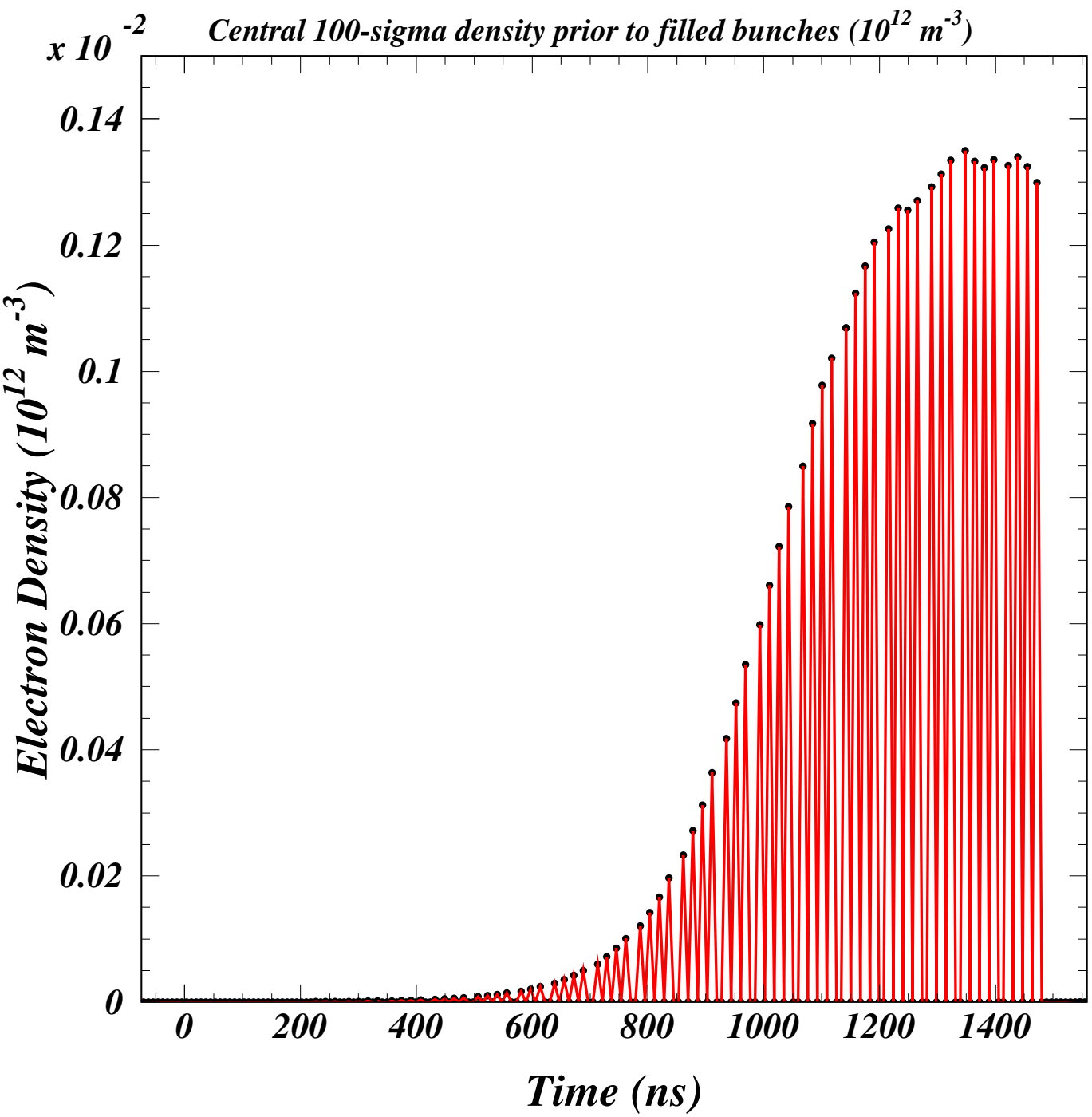
17/01/01 15.01


Central 5-sigma density prior to filled bunches (10^{12} m^{-3})
x 10 -2
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Electron Density (10^{12} m^{-3})
0
200
400
600
800
1000
1200
1400
Time (ns)

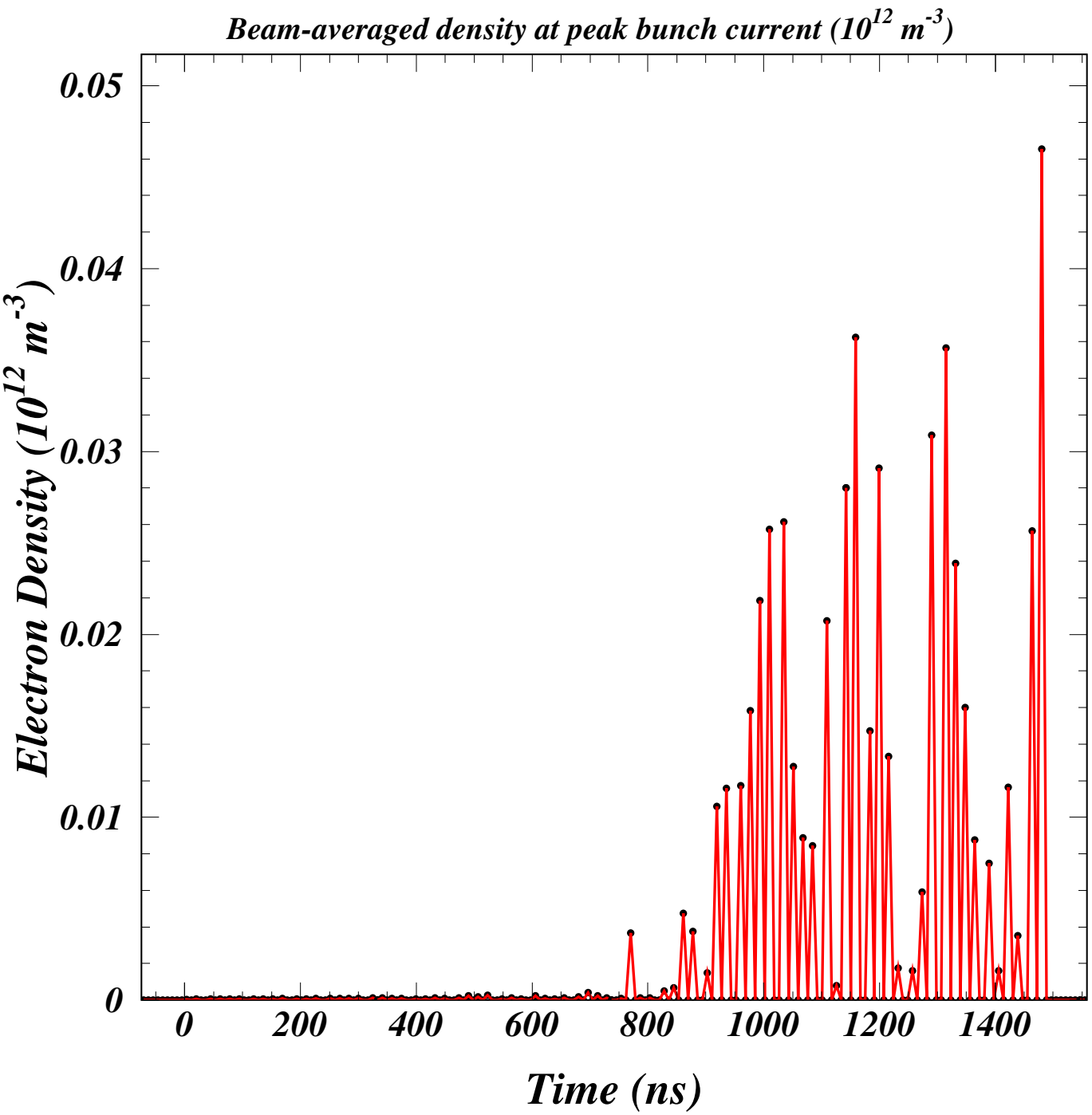
17/01/01 15.01


Central 20-sigma density prior to filled bunches (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0
200
400
600
800
1000
1200
1400
Time (ns)

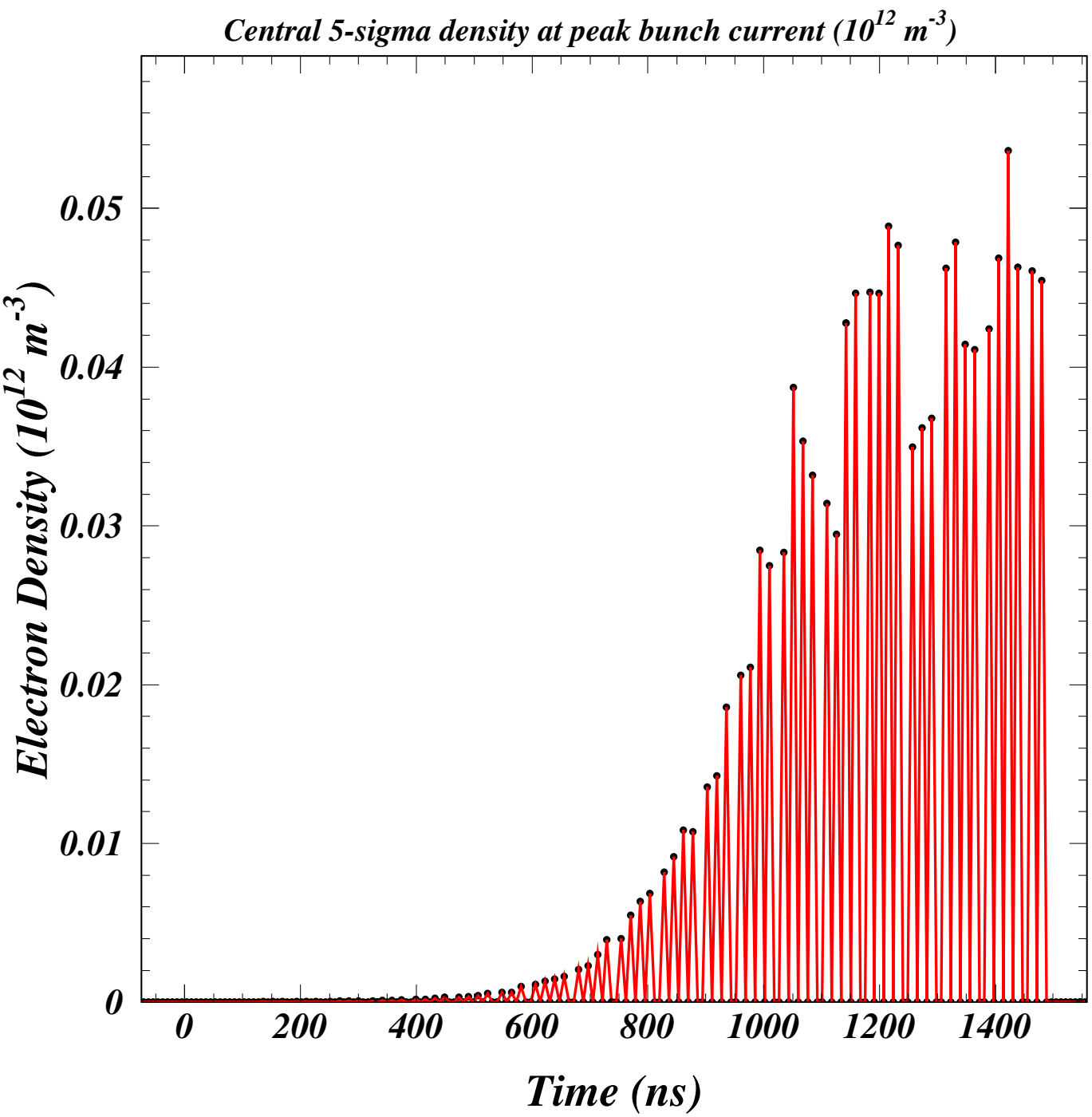
17/01/01 15.01


Central 100-sigma density prior to filled bunches (10^{12} m^{-3})
x 10 -2
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Electron Density (10^{12} m^{-3})
0
200
400
600
800
1000
1200
1400
Time (ns)

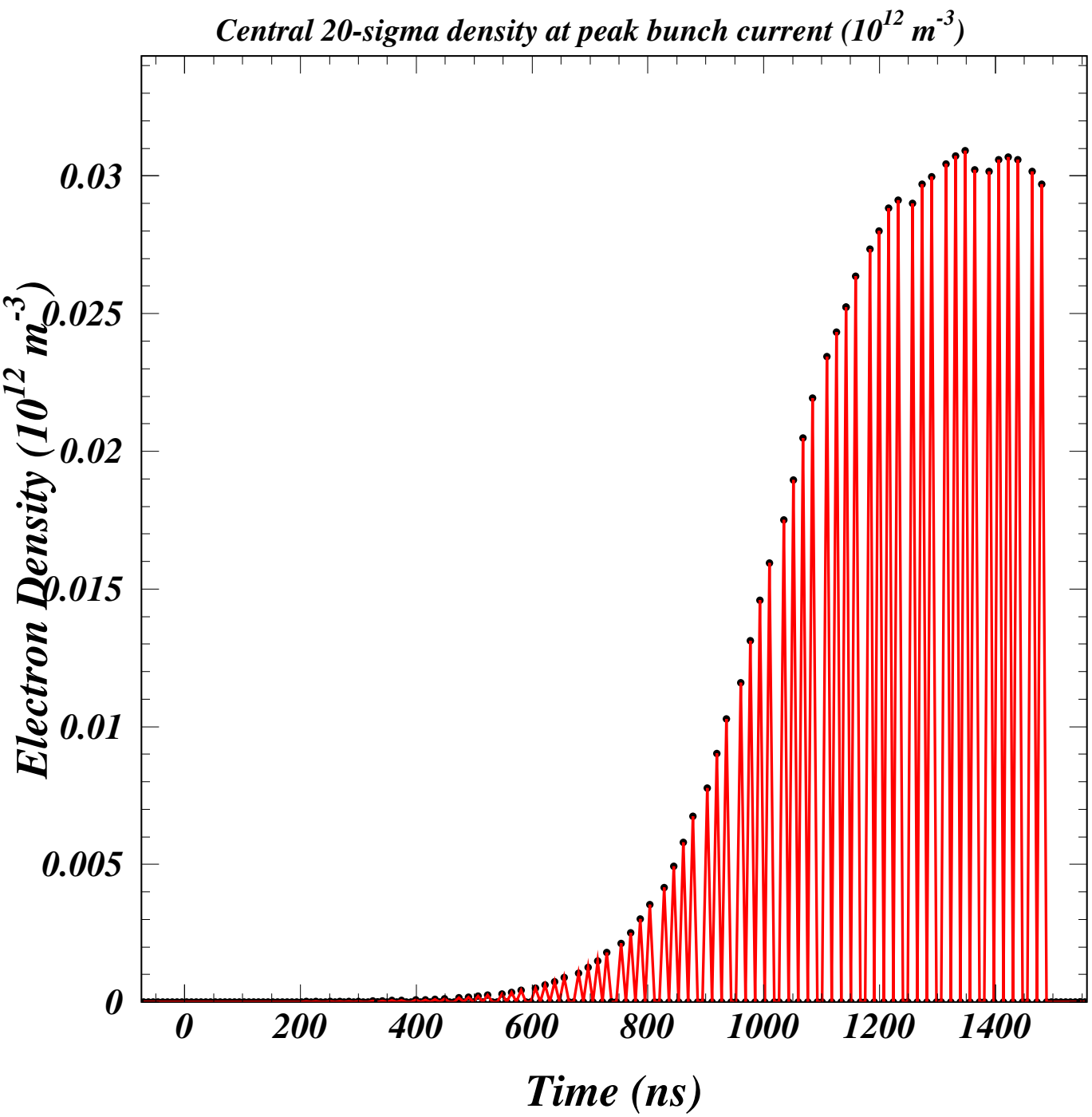
17/01/01 15.01


Beam-averaged density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.05
0.04
0.03
0.02
0.01
0
0
200
400
600
800
1000
1200
1400
Time (ns)

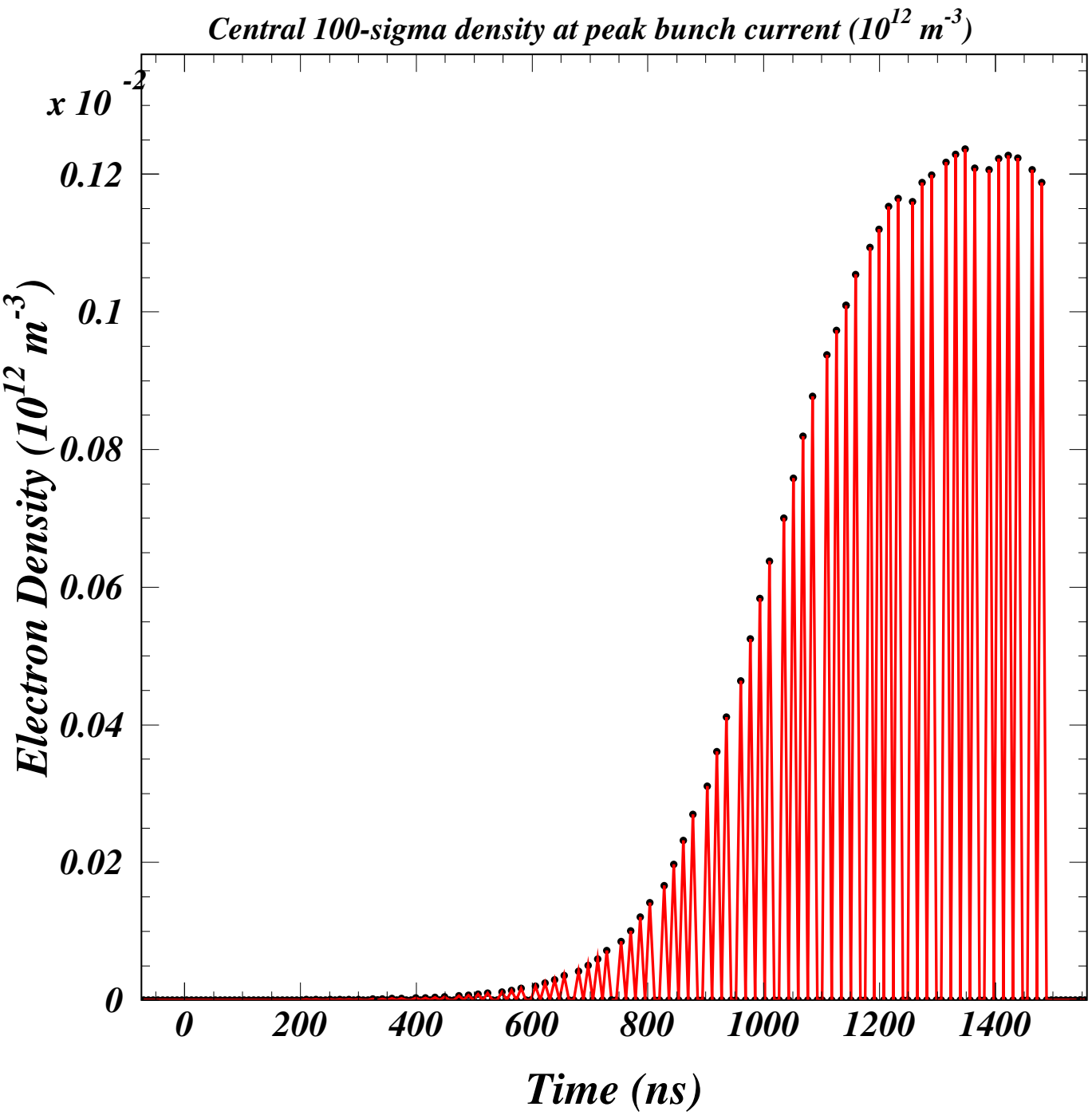
17/01/01 15.01

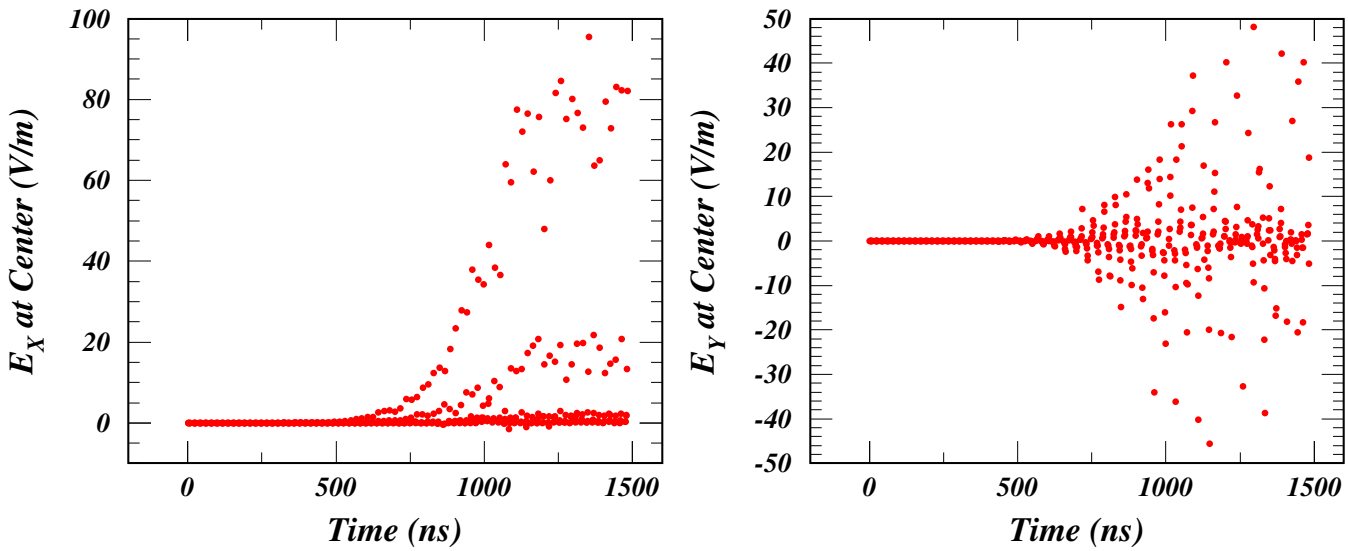

Central 5-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0
0.01
0.02
0.03
0.04
0.05
0
200
400
600
800
1000
1200
1400
Time (ns)

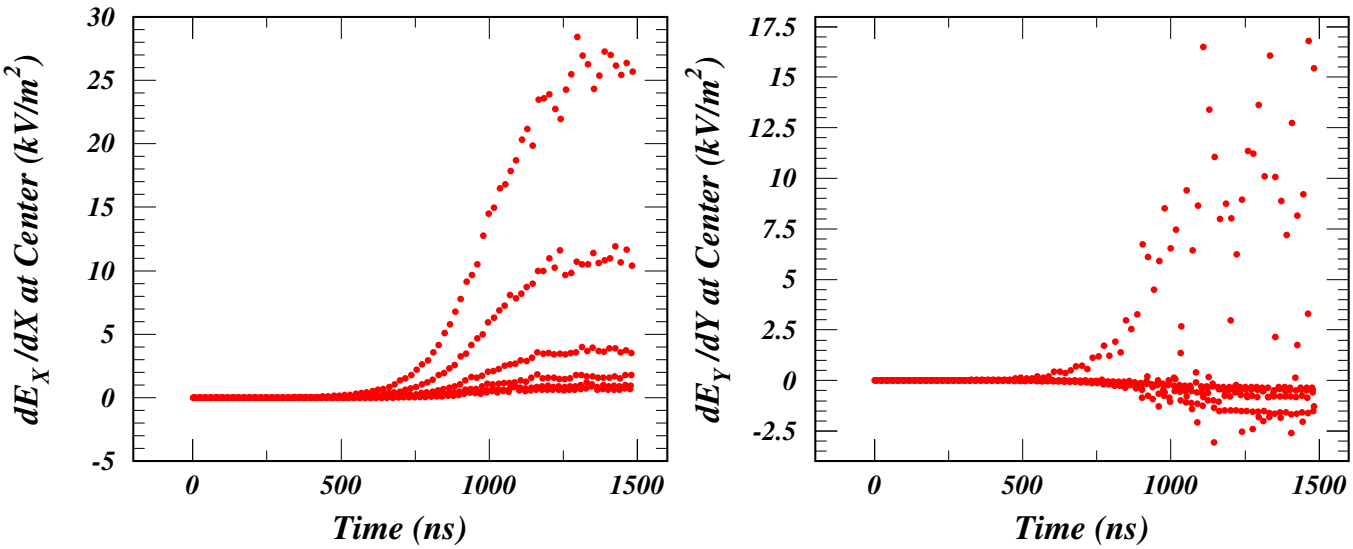
17/01/01 15.01

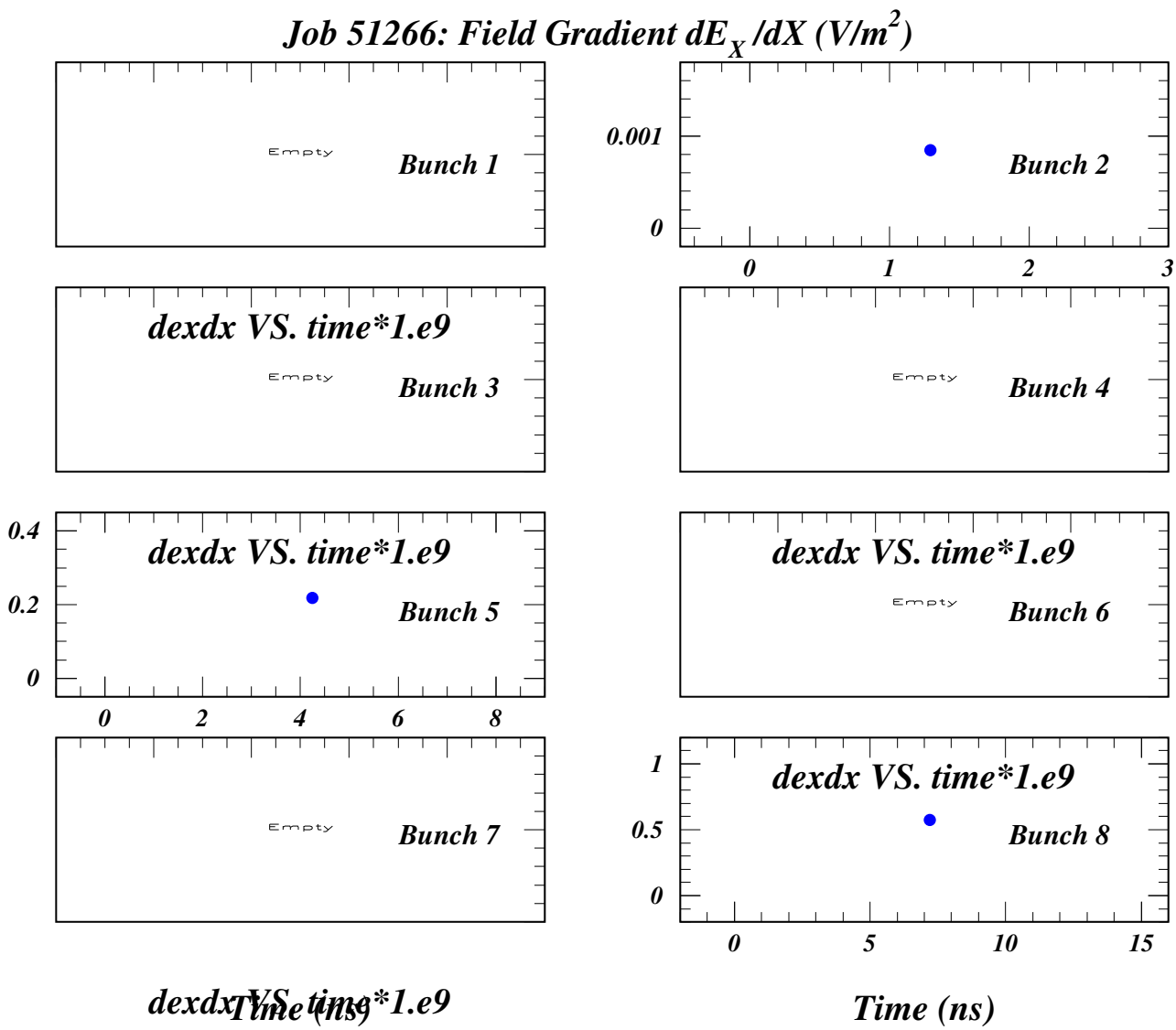

Central 20-sigma density at peak bunch current (10^{12} m^{-3})
Electron Density (10^{12} m^{-3})
0.03
0.025
0.02
0.015
0.01
0.005
0
0
200
400
600
800
1000
1200
1400
Time (ns)

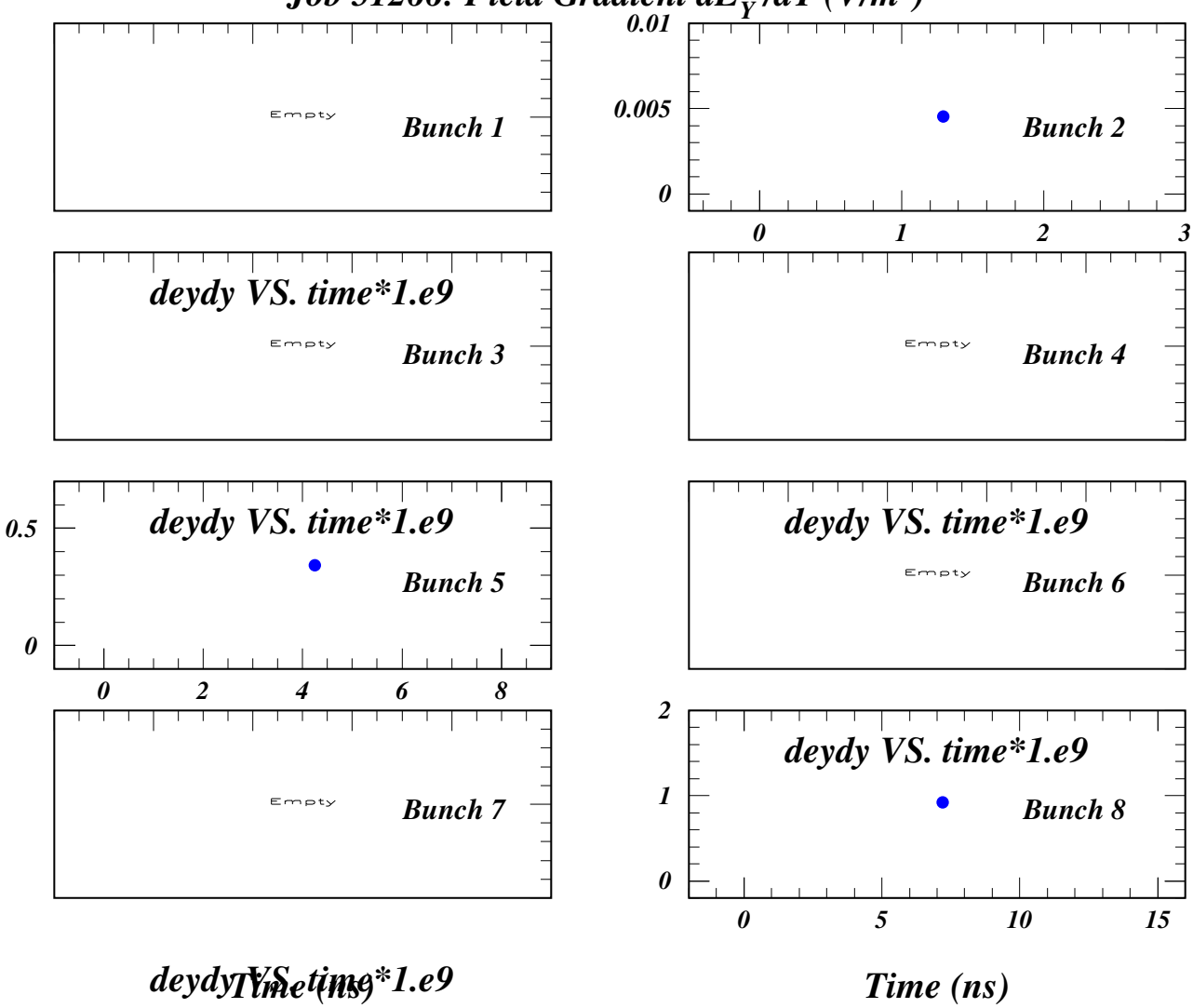
17/01/01 15.01

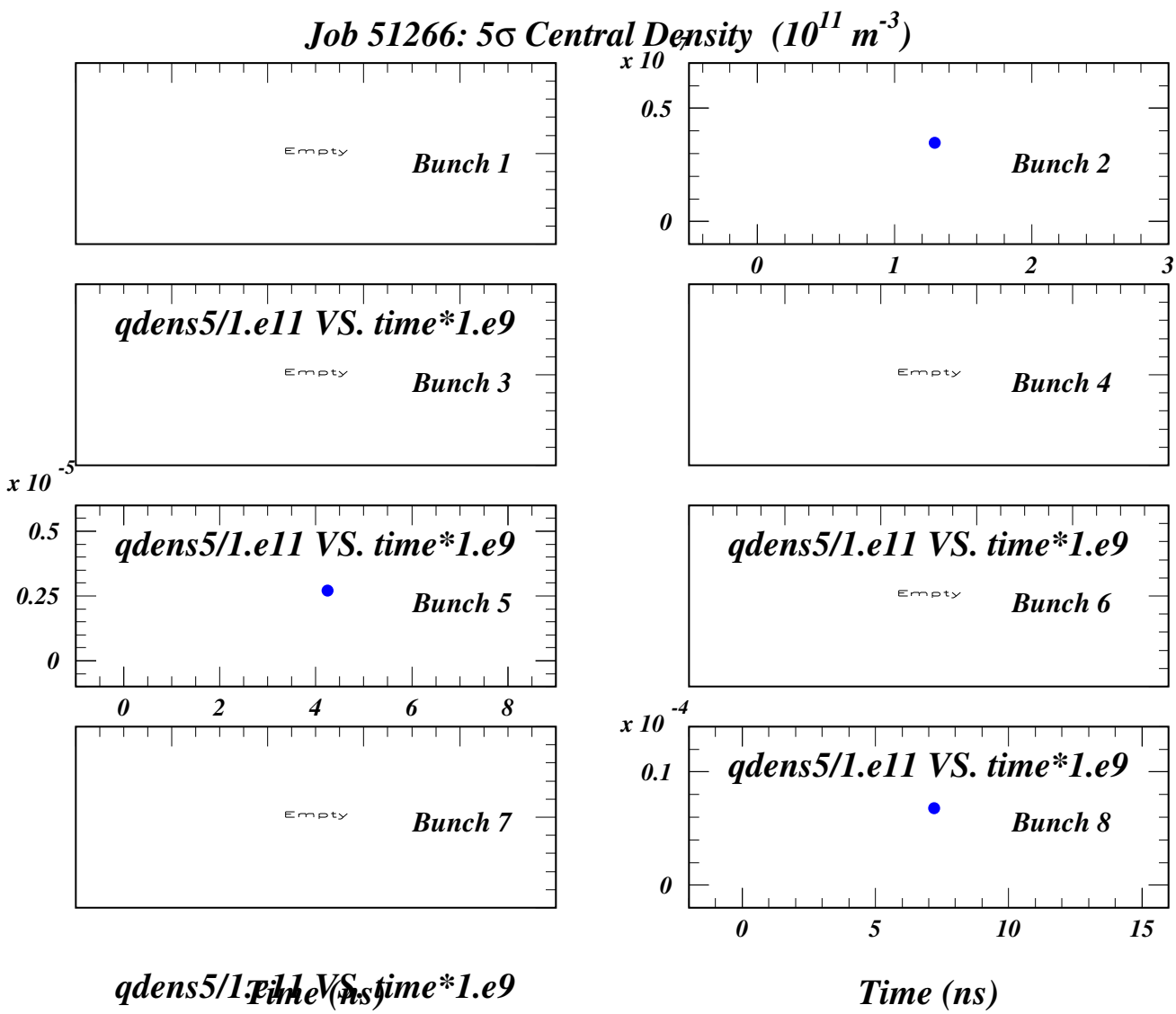

Central 100-sigma density at peak bunch current (10^{12} m^{-3})
x 10^{-2}
0.12
0.1
0.08
0.06
0.04
0.02
0
Electron Density (10^{12} m^{-3})
0
200
400
600
800
1000
1200
1400
Time (ns)

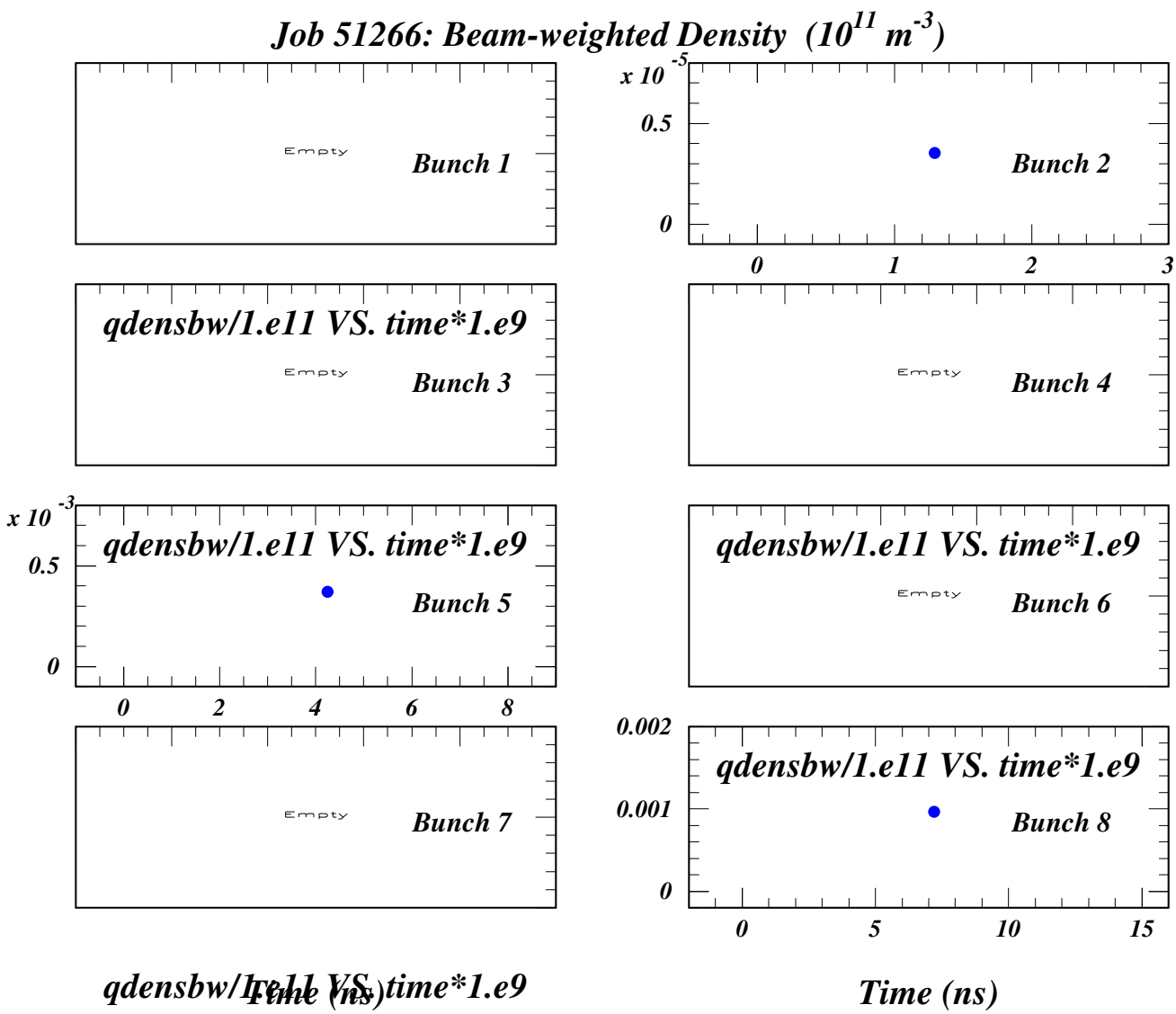

100
80
60
40
20
0
E_X at Center (V/m)
0
500
1000
1500
Time (ns)
50
40
30
20
10
0
-10
-20
-30
-40
-50
E_Y at Center (V/m)
0
500
1000
1500
Time (ns)


30
25
20
15
10
5
0
-5
0
500
1000
1500
Time (ns)
dE_X/dX at Center (kV/m^2)
17.5
15
12.5
10
7.5
5
2.5
0
-2.5
0
500
1000
1500
Time (ns)
dE_Y/dY at Center (kV/m^2)


Job 51266: Field Gradient dE_X /dX (V/m^2)
Empty
Bunch 1
0.001
0
Bunch 2
0
1
2
3
dexdx VS. time*1.e9
Empty
Bunch 3
Empty
Bunch 4
0.4
0.2
0
dexdx VS. time*1.e9
Bunch 5
0
2
4
6
8
dexdx VS. time*1.e9
Empty
Bunch 6
Empty
Bunch 7
1
0.5
0
dexdx VS. time*1.e9
Bunch 8
0
5
10
15
dexdx VS. time*1.e9
Time (ns)
Time (ns)


Job 51266: Field Gradient dE_Y /dY (V/m^2)
Empty
Bunch 1
0.01
0.005
0
Bunch 2
0
1
2
3
deydy VS. time*1.e9
Empty
Bunch 3
Empty
Bunch 4
0.5
0
deydy VS. time*1.e9
Bunch 5
deydy VS. time*1.e9
Empty
Bunch 6
0
2
4
6
8
Empty
Bunch 7
2
1
0
deydy VS. time*1.e9
Bunch 8
0
5
10
15
deydy VS. time*1.e9
Time (ns)
Time (ns)


Job 51266: 5σ Central Density (10^11 m^-3)
Empty
Bunch 1
x 10
0.5
0
Bunch 2
0
1
2
3
qdens5/1.e11 VS. time*1.e9
Empty
Bunch 3
Empty
Bunch 4
x 10 -5
0.5
0.25
0
qdens5/1.e11 VS. time*1.e9
Bunch 5
qdens5/1.e11 VS. time*1.e9
Empty
Bunch 6
0
2
4
6
8
Empty
Bunch 7
x 10 -4
0.1
0
qdens5/1.e11 VS. time*1.e9
Bunch 8
0
5
10
15
qdens5/1.e11 VS. time*1.e9
Time (ns)
Time (ns)


Job 51266: Beam-weighted Density (10^11 m^-3)
Empty
Bunch 1
x 10^-5
0.5
0
Bunch 2
0
1
2
3
qdensbw/1.e11 VS. time*1.e9
Empty
Bunch 3
Empty
Bunch 4
x 10^-3
0.5
0
qdensbw/1.e11 VS. time*1.e9
Bunch 5
qdensbw/1.e11 VS. time*1.e9
Empty
Bunch 6
0
2
4
6
8
Empty
Bunch 7
0.002
0.001
0
qdensbw/1.e11 VS. time*1.e9
Bunch 8
0
5
10
15
qdensbw/1.e11 VS. time*1.e9
Time (ns)
Time (ns)