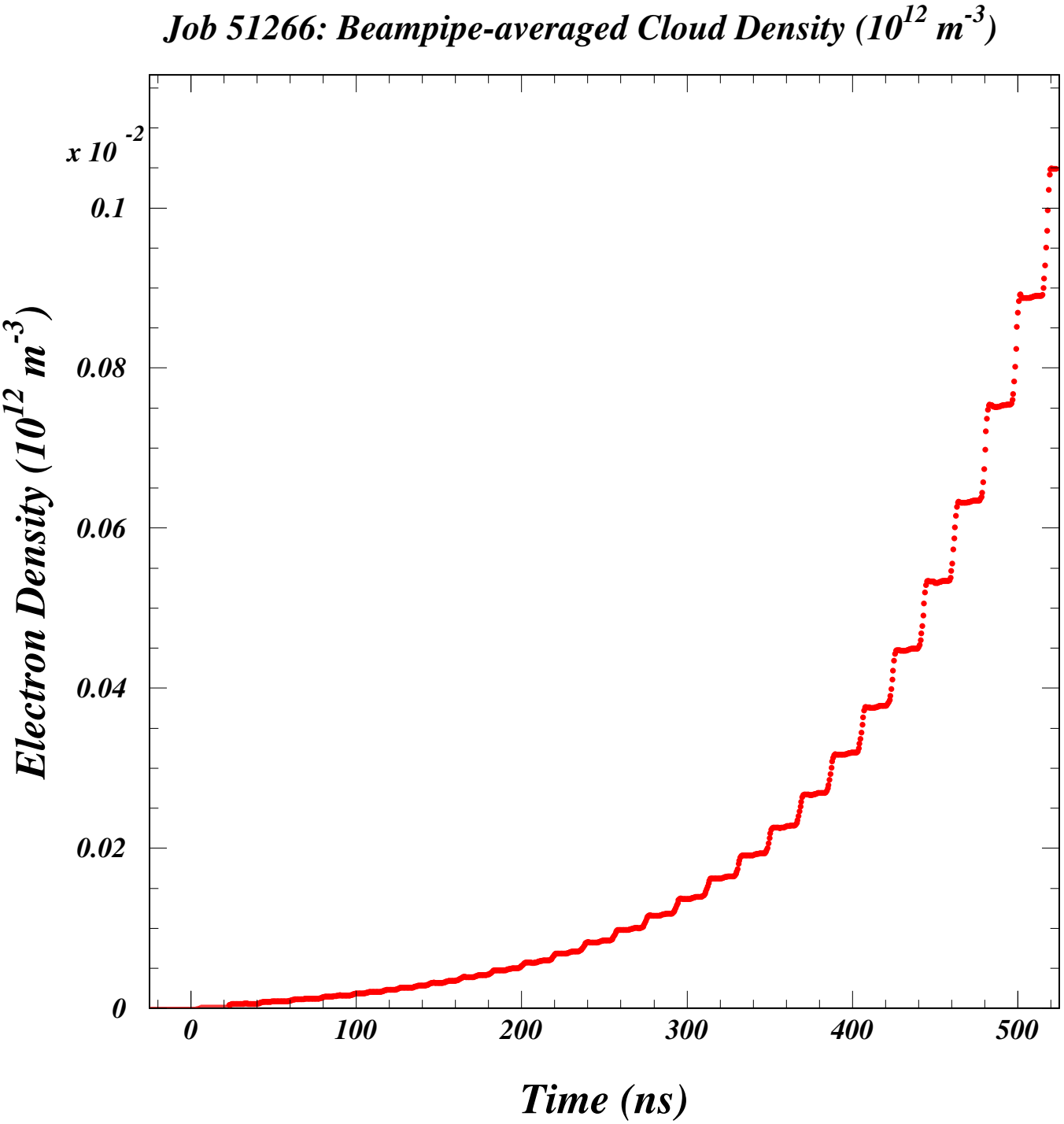
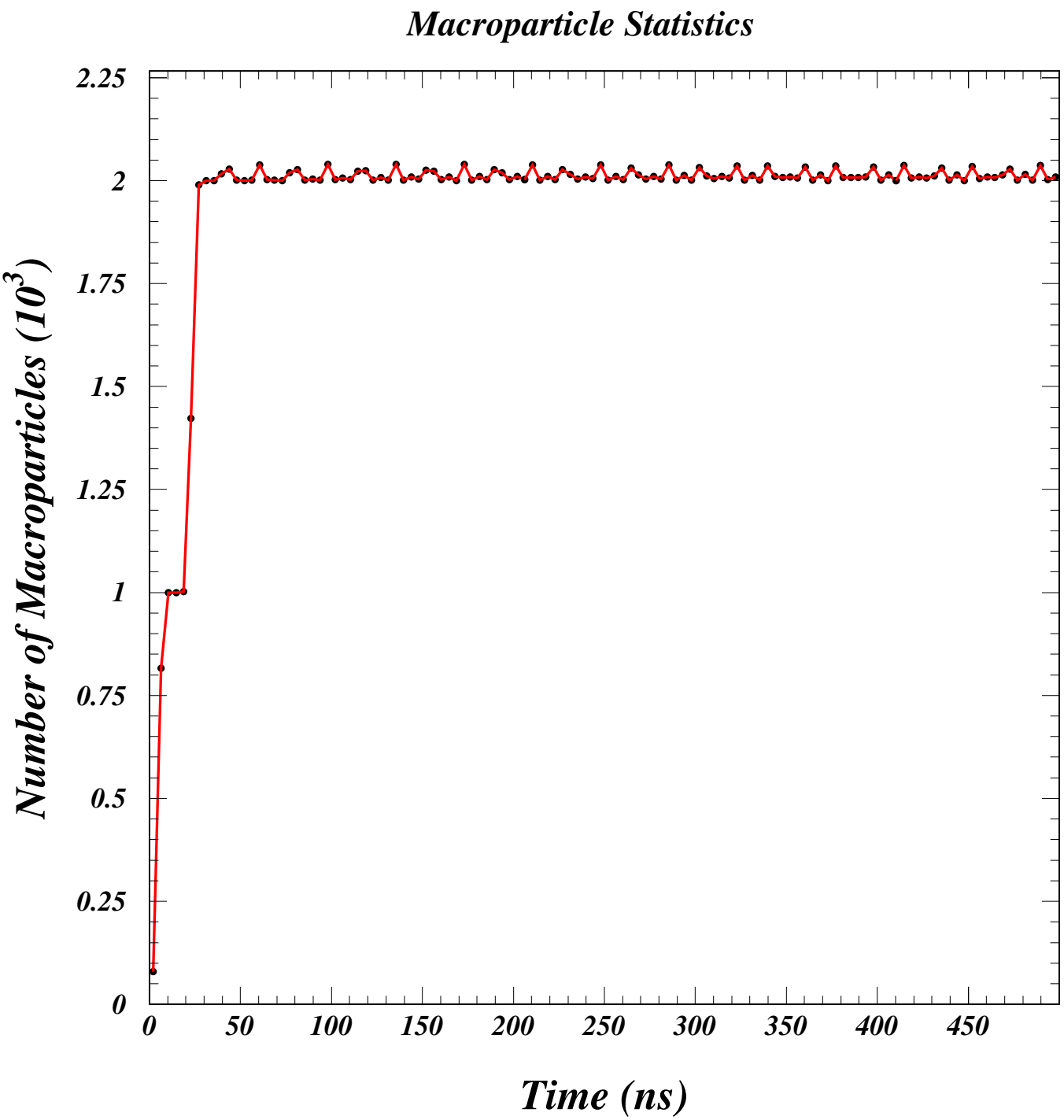
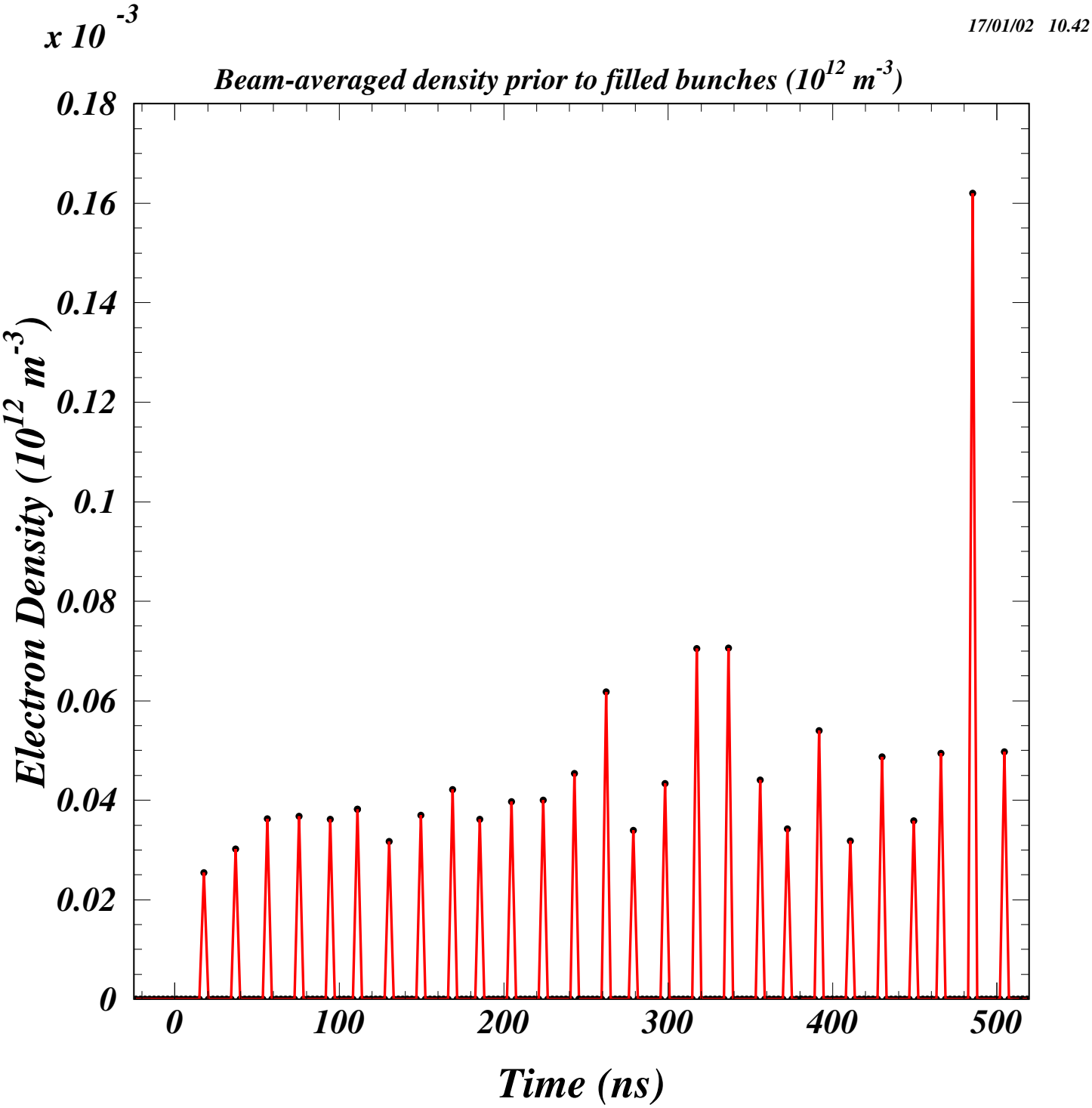
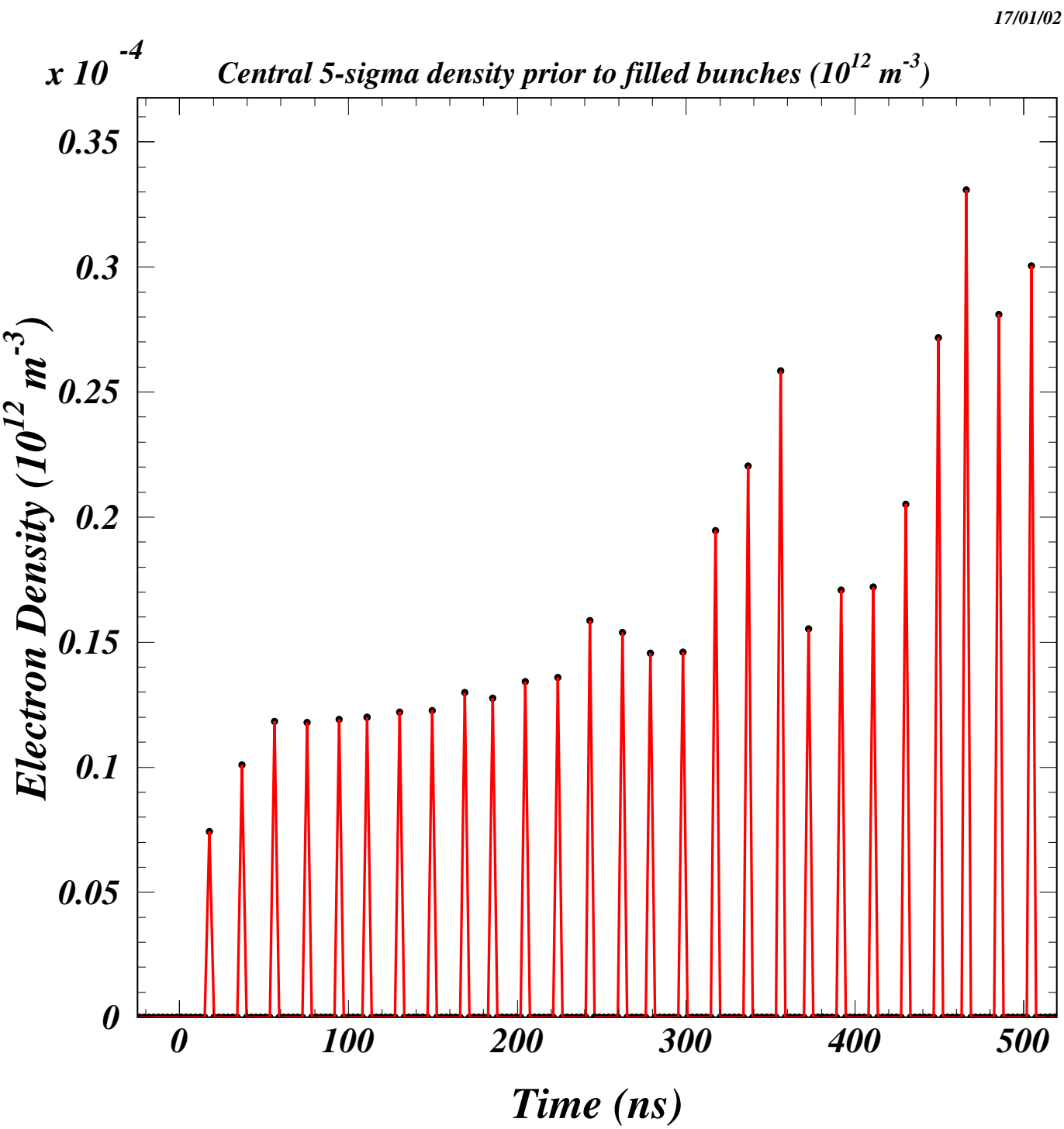
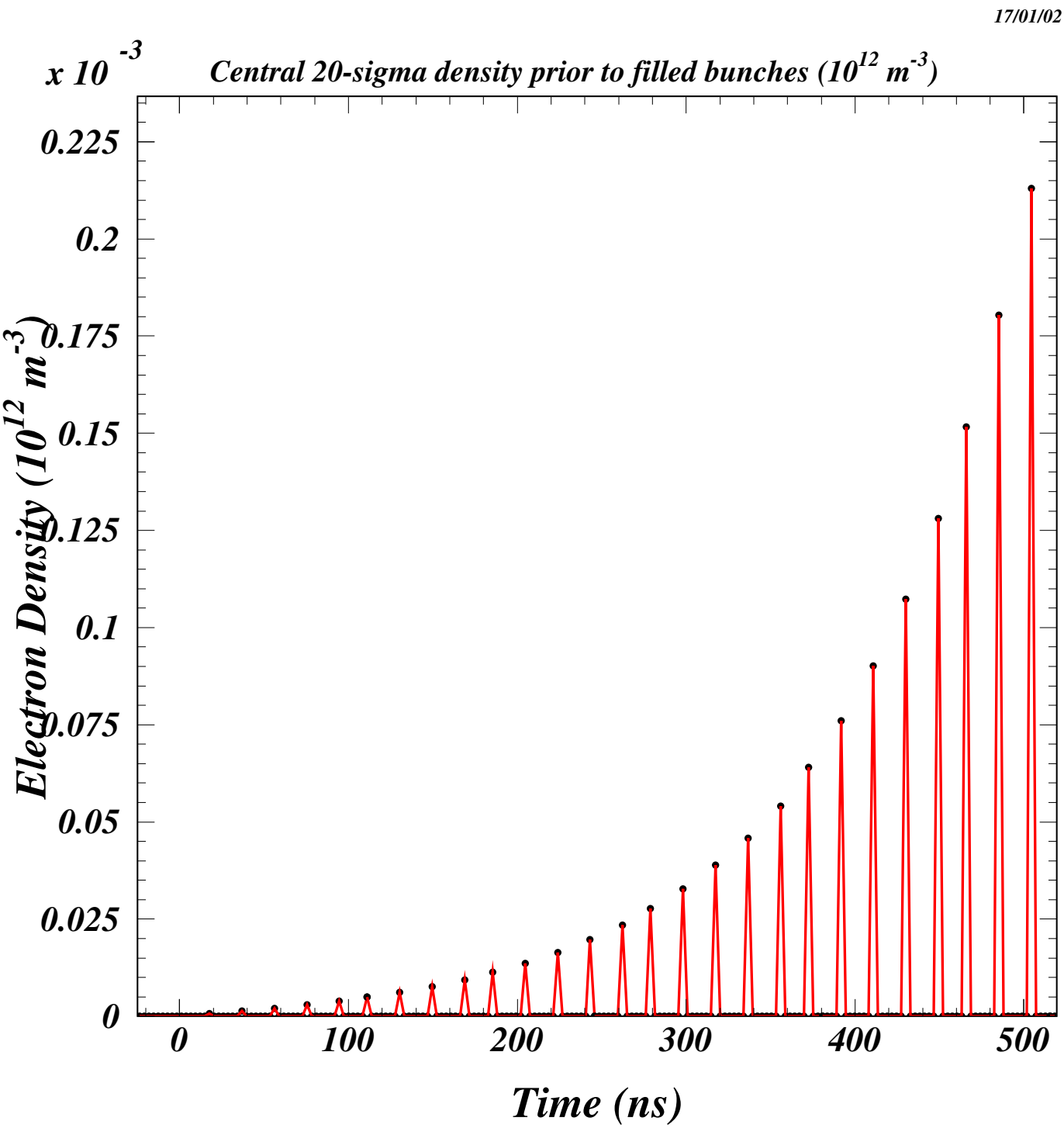
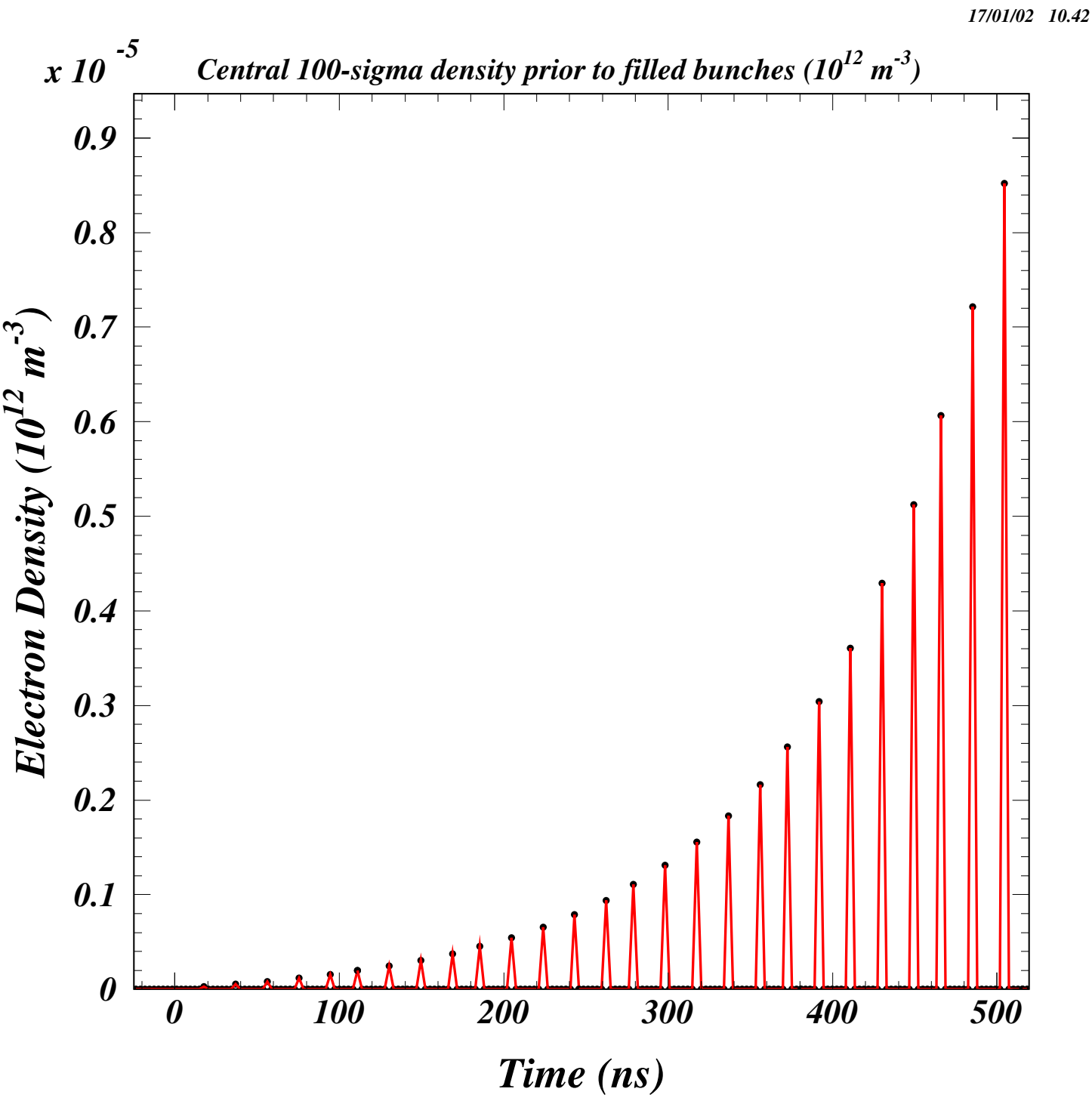

Job 51266: Beampipe-averaged Cloud Density (10^{12} m^{-3})
x 10^{-2}
0.1
0.08
0.06
0.04
0.02
0
Electron Density (10^{12} m^{-3})
0
100
200
300
400
500
Time (ns)

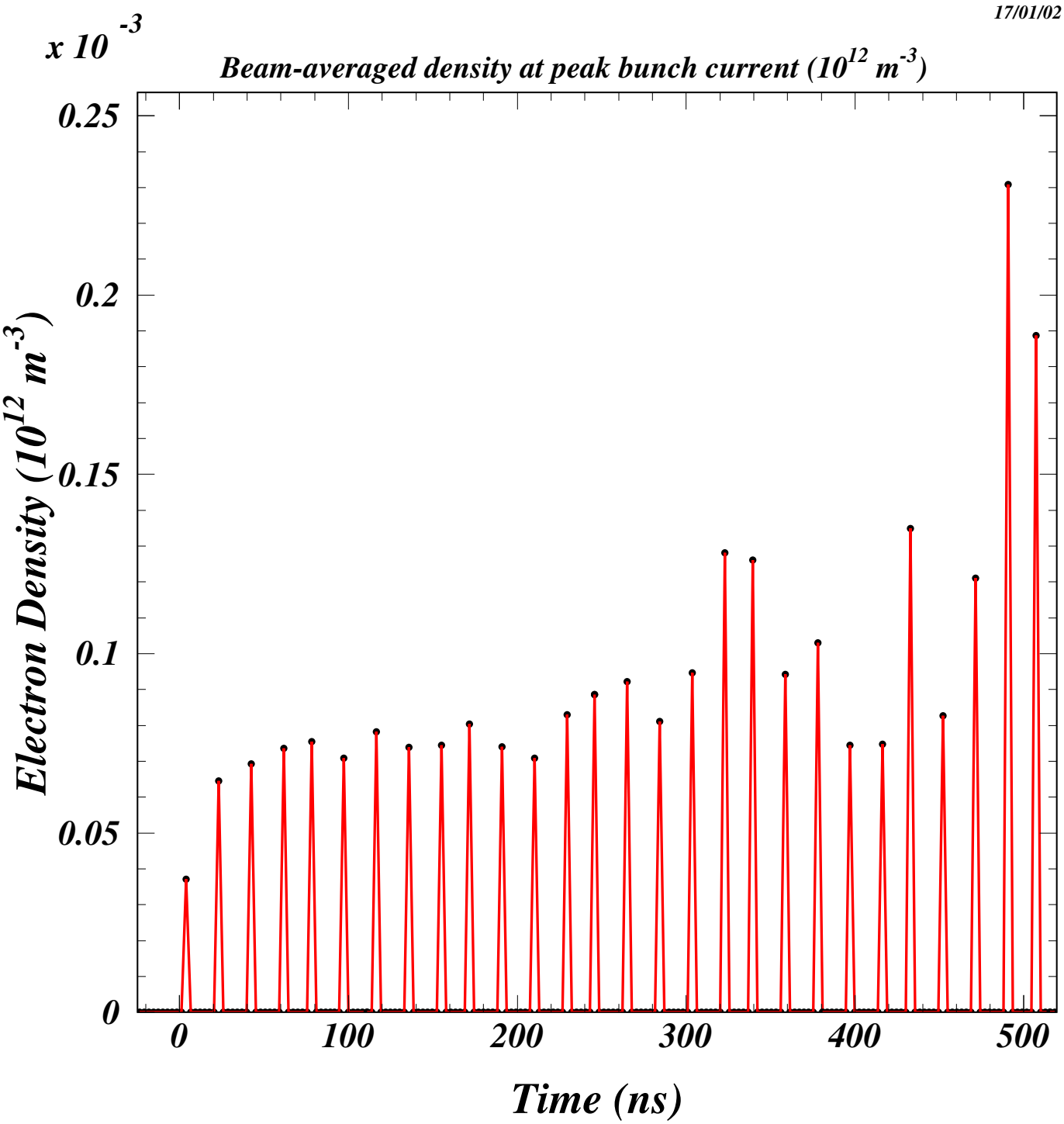

Macroparticle Statistics
Number of Macroparticles (10^3)
2.25
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0
0
50
100
150
200
250
300
350
400
450
Time (ns)

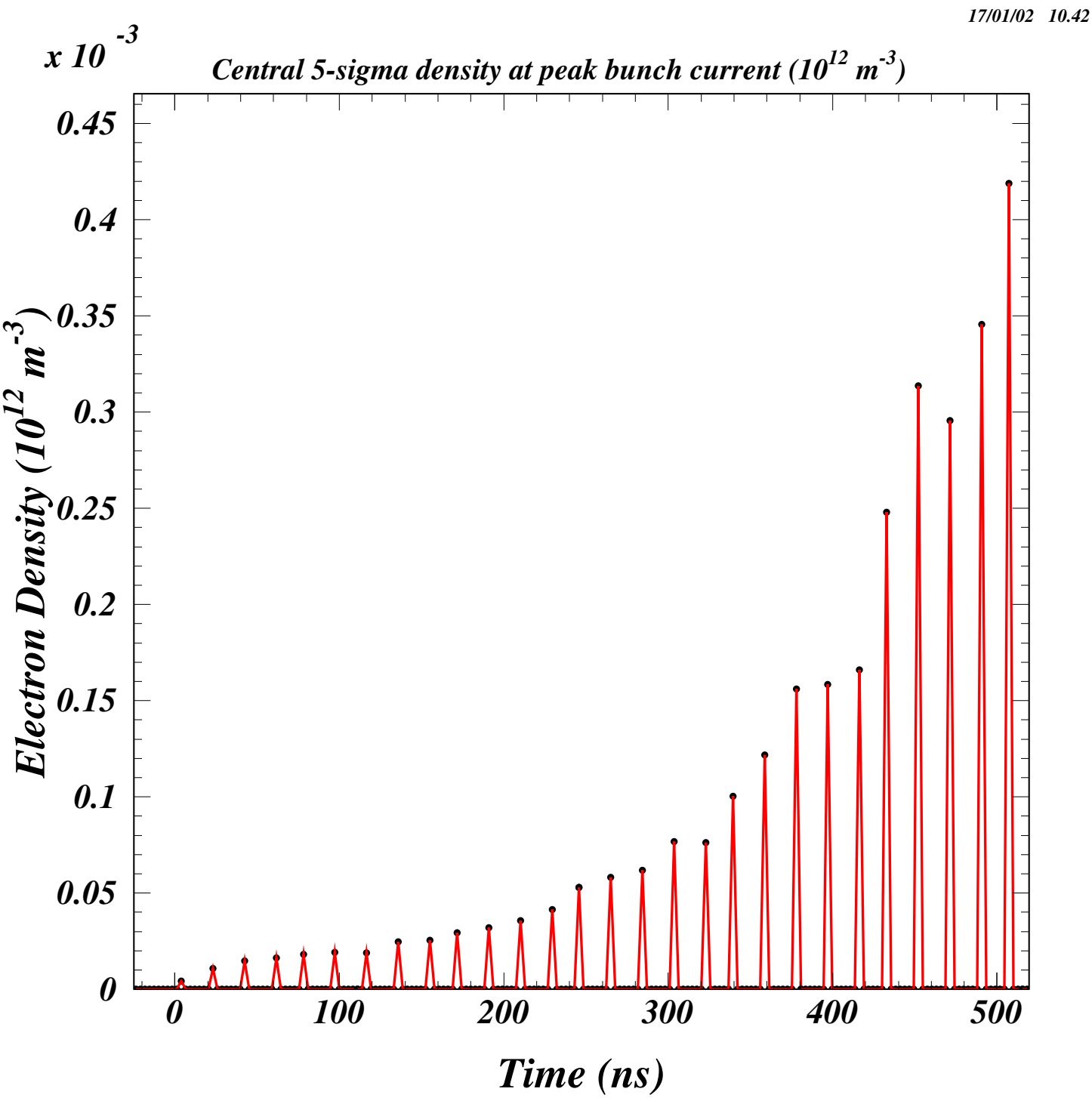

x 10 -3
17/01/02 10.42
Beam-averaged density prior to filled bunches (10^12 m^-3)
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Electron Density (10^12 m^-3)
0
100
200
300
400
500
Time (ns)

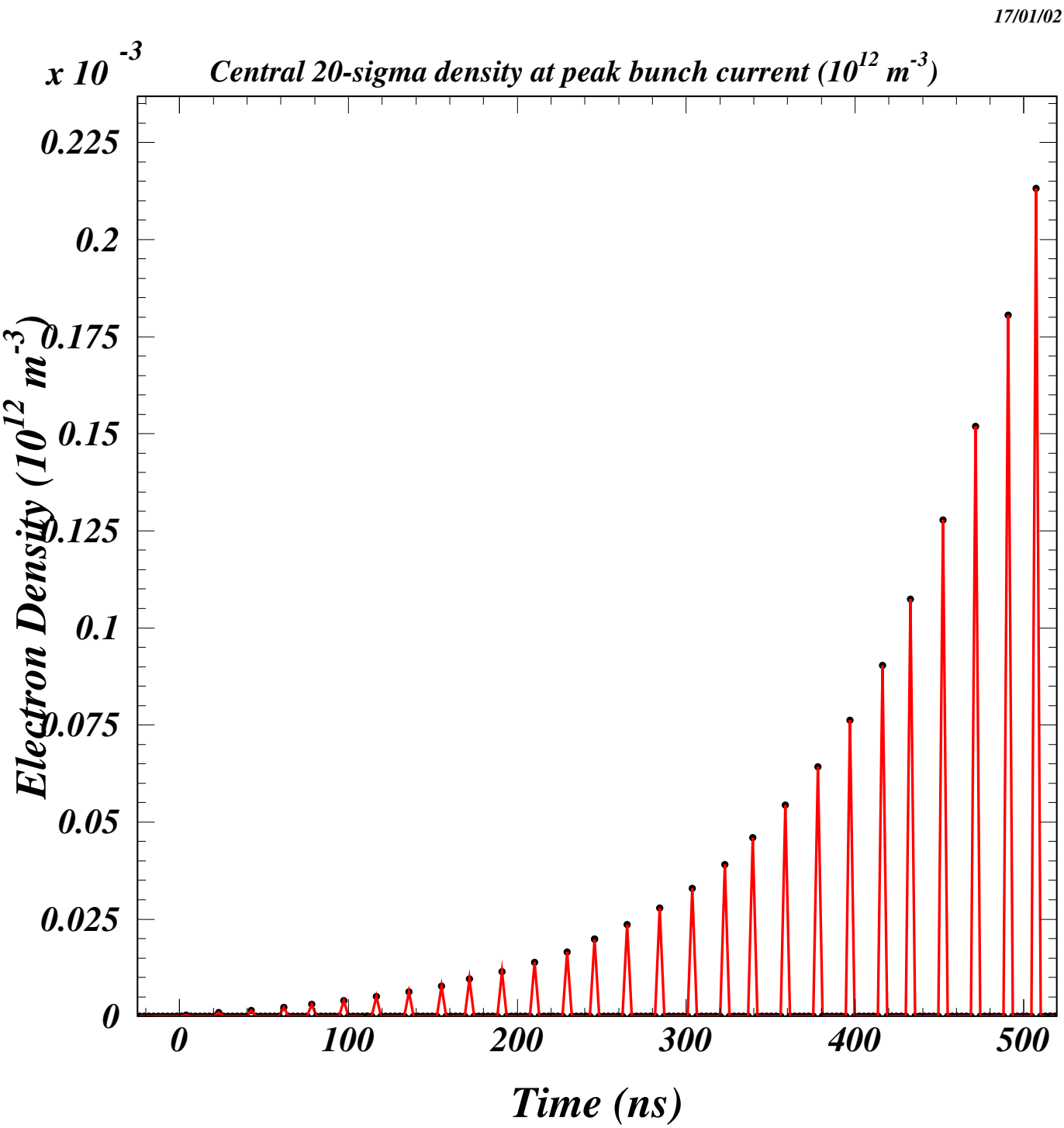

17/01/02 10.42
x 10 -4
Central 5-sigma density prior to filled bunches (10^12 m^-3)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Electron Density (10^12 m^-3)
0
100
200
300
400
500
Time (ns)

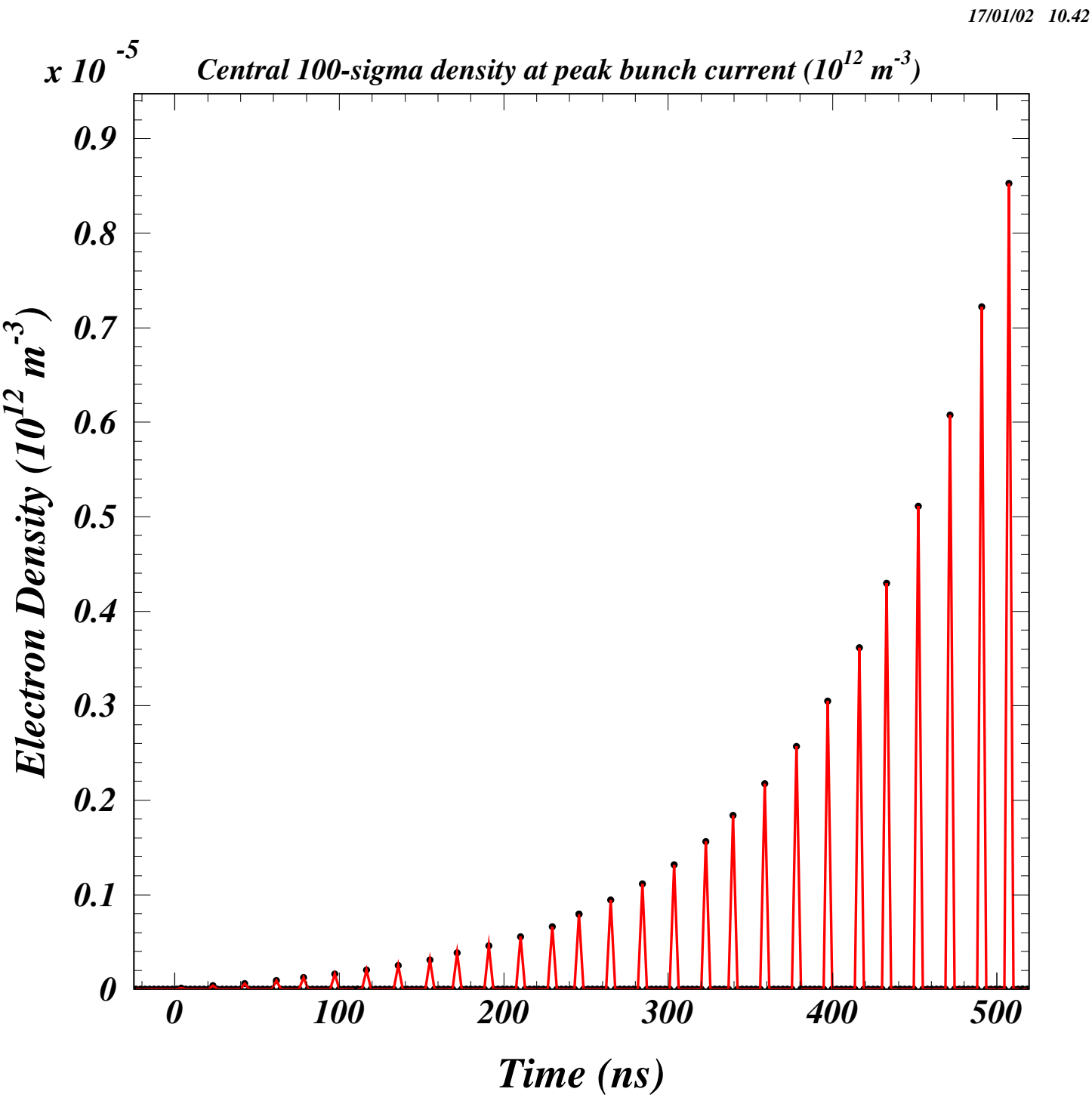

17/01/02 10.42
x 10 -3
Central 20-sigma density prior to filled bunches (10^12 m^-3)
Electron Density (10^12 m^-3)
0.225
0.2
0.175
0.15
0.125
0.1
0.075
0.05
0.025
0
0
100
200
300
400
500
Time (ns)

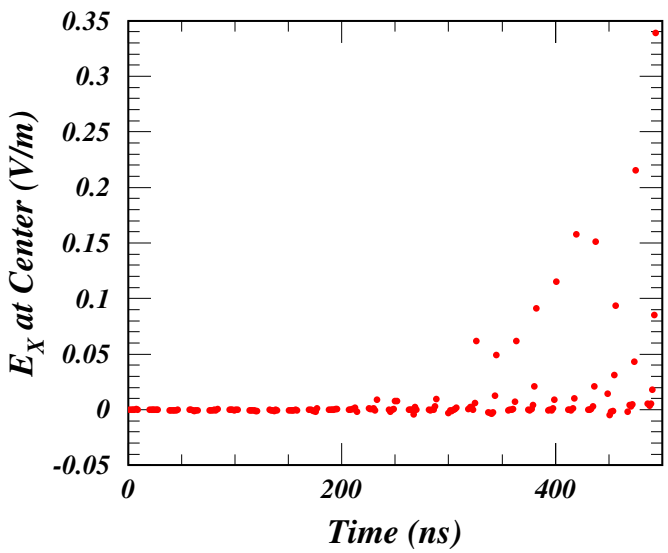

17/01/02 10.42
x 10 -5
Central 100-sigma density prior to filled bunches (10^12 m^-3)
Electron Density (10^12 m^-3)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
100
200
300
400
500
Time (ns)

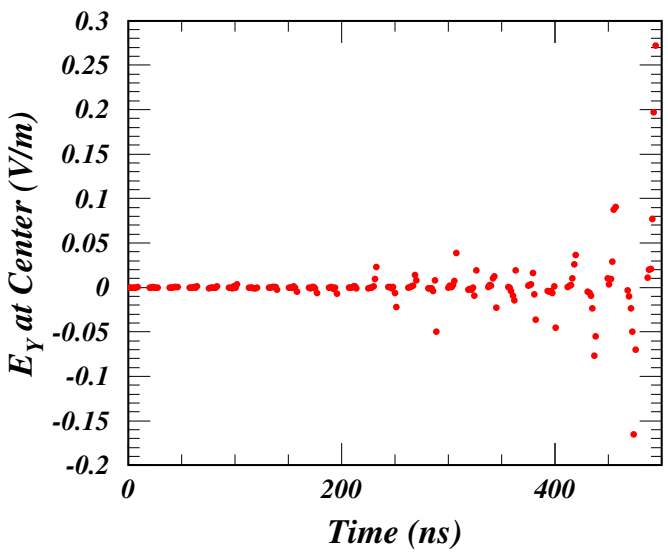

17/01/02 10.42
x 10 -3
Beam-averaged density at peak bunch current (10^12 m^-3)
0.25
0.2
0.15
0.1
0.05
0
Electron Density (10^12 m^-3)
0
100
200
300
400
500
Time (ns)

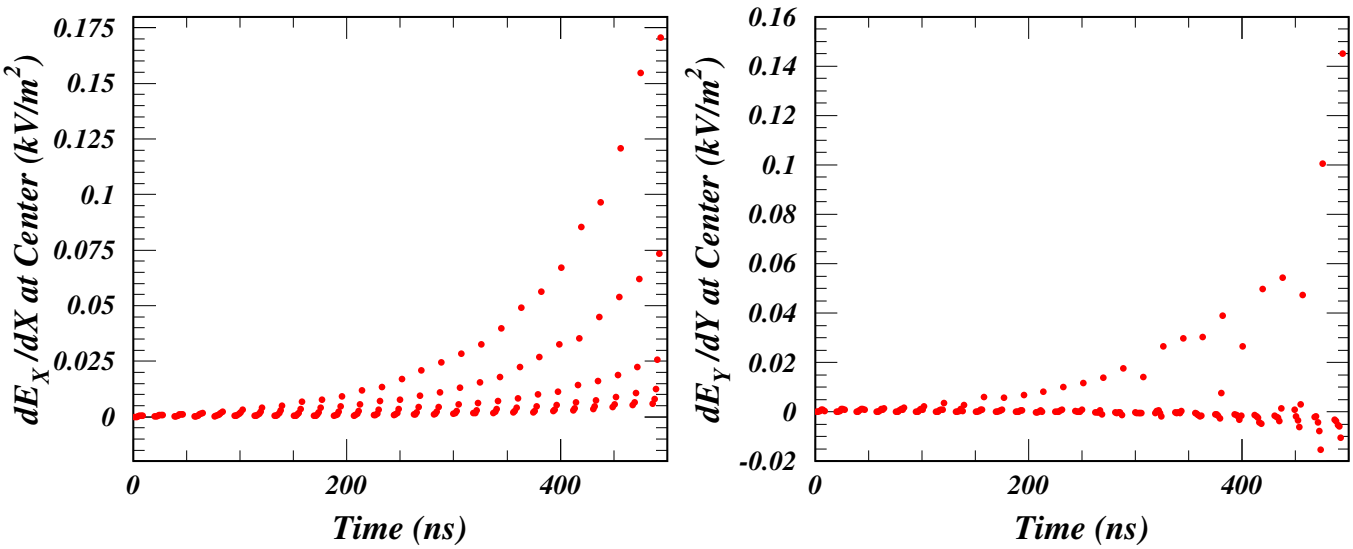

17/01/02 10.42
x 10 -3
Central 5-sigma density at peak bunch current (10^12 m^-3)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Electron Density (10^12 m^-3)
0
100
200
300
400
500
Time (ns)

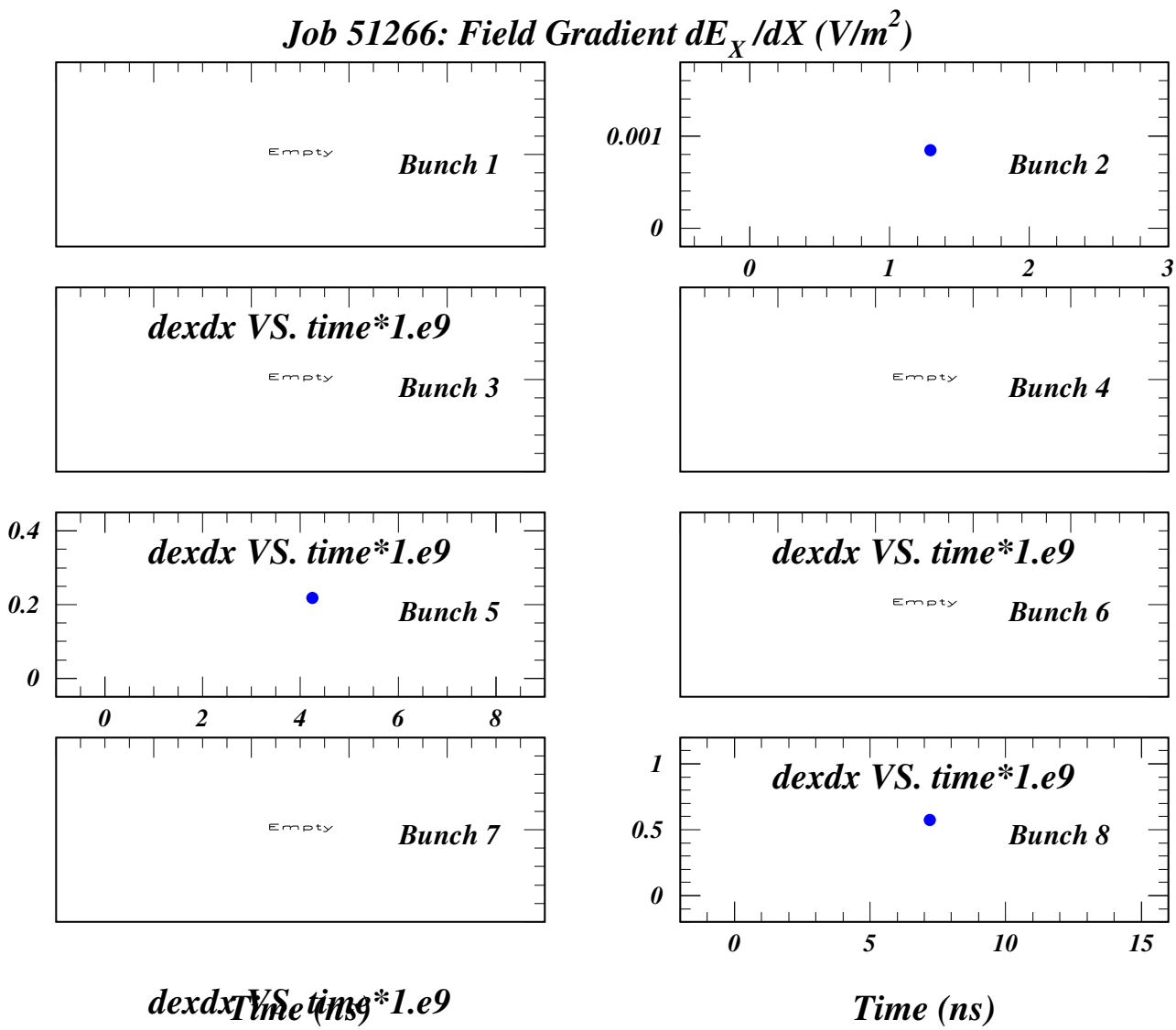

17/01/02 10.42
x 10 -3
Central 20-sigma density at peak bunch current (10^12 m^-3)
0.225
0.2
0.175
0.15
0.125
0.1
0.075
0.05
0.025
0
Electron Density (10^12 m^-3)
0
100
200
300
400
500
Time (ns)

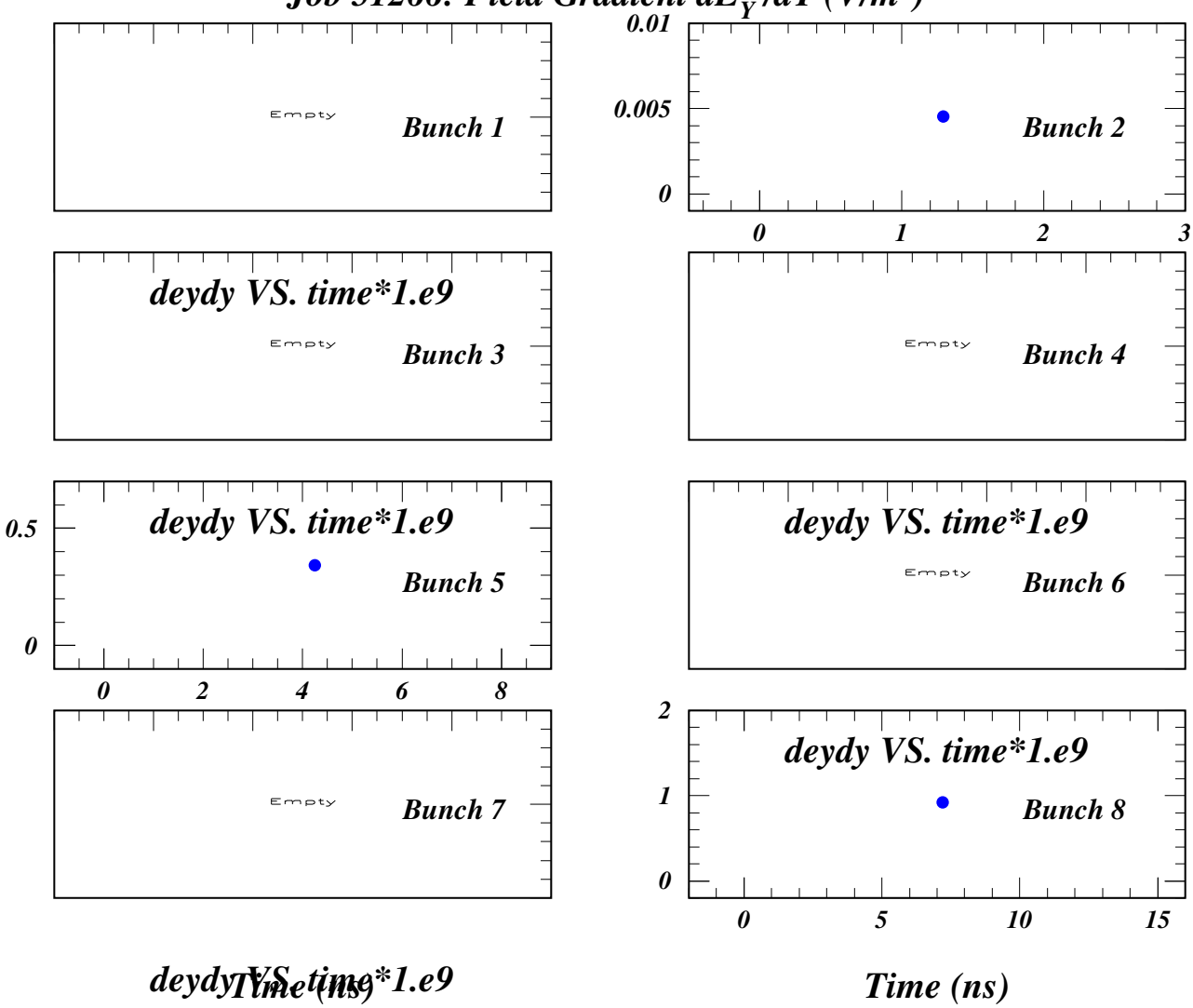

17/01/02 10.42
x 10 -5
Central 100-sigma density at peak bunch current (10^12 m^-3)
Electron Density (10^12 m^-3)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
100
200
300
400
500
Time (ns)

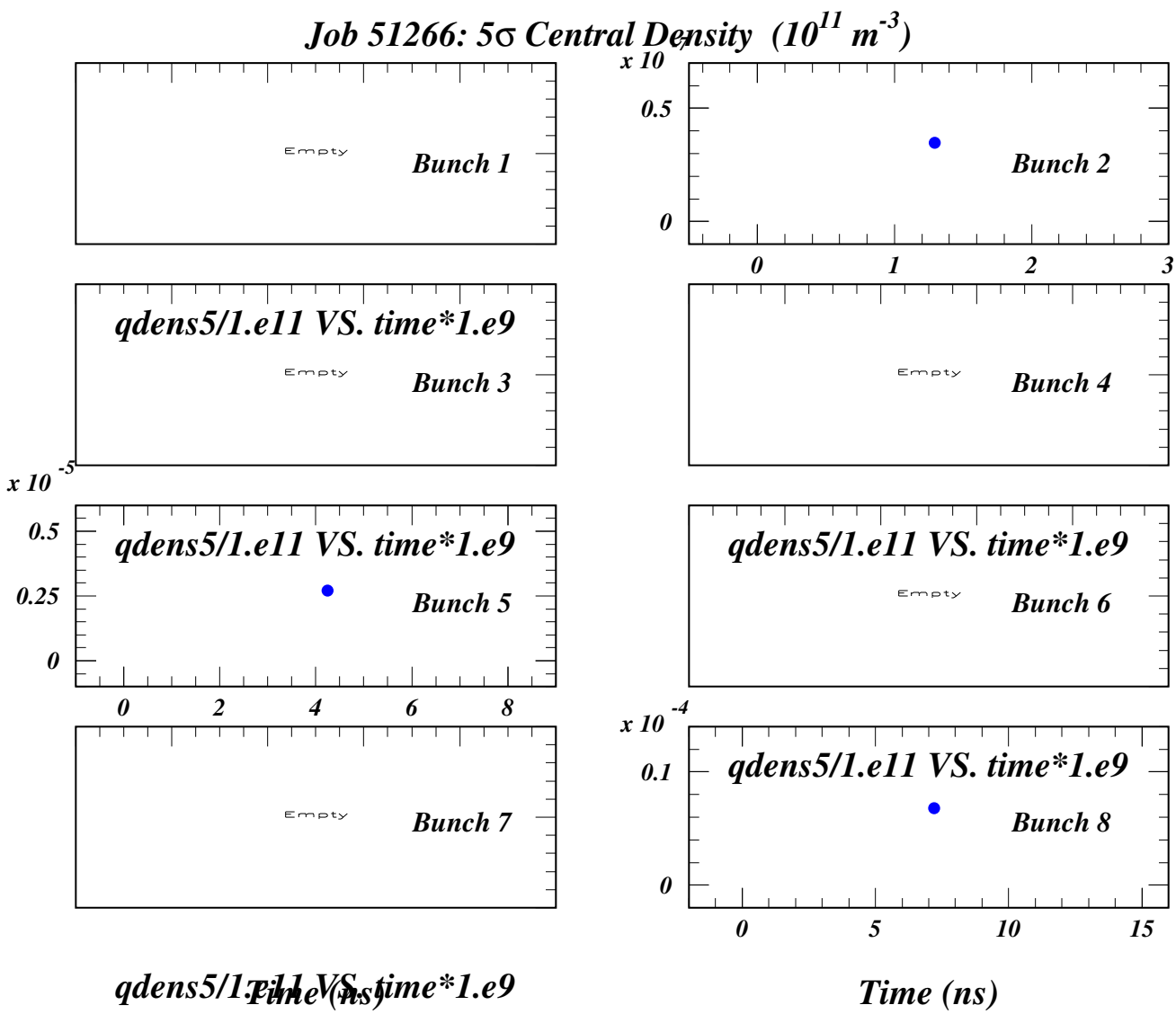

0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
E_X at Center (V/m)
0
200
400
Time (ns)

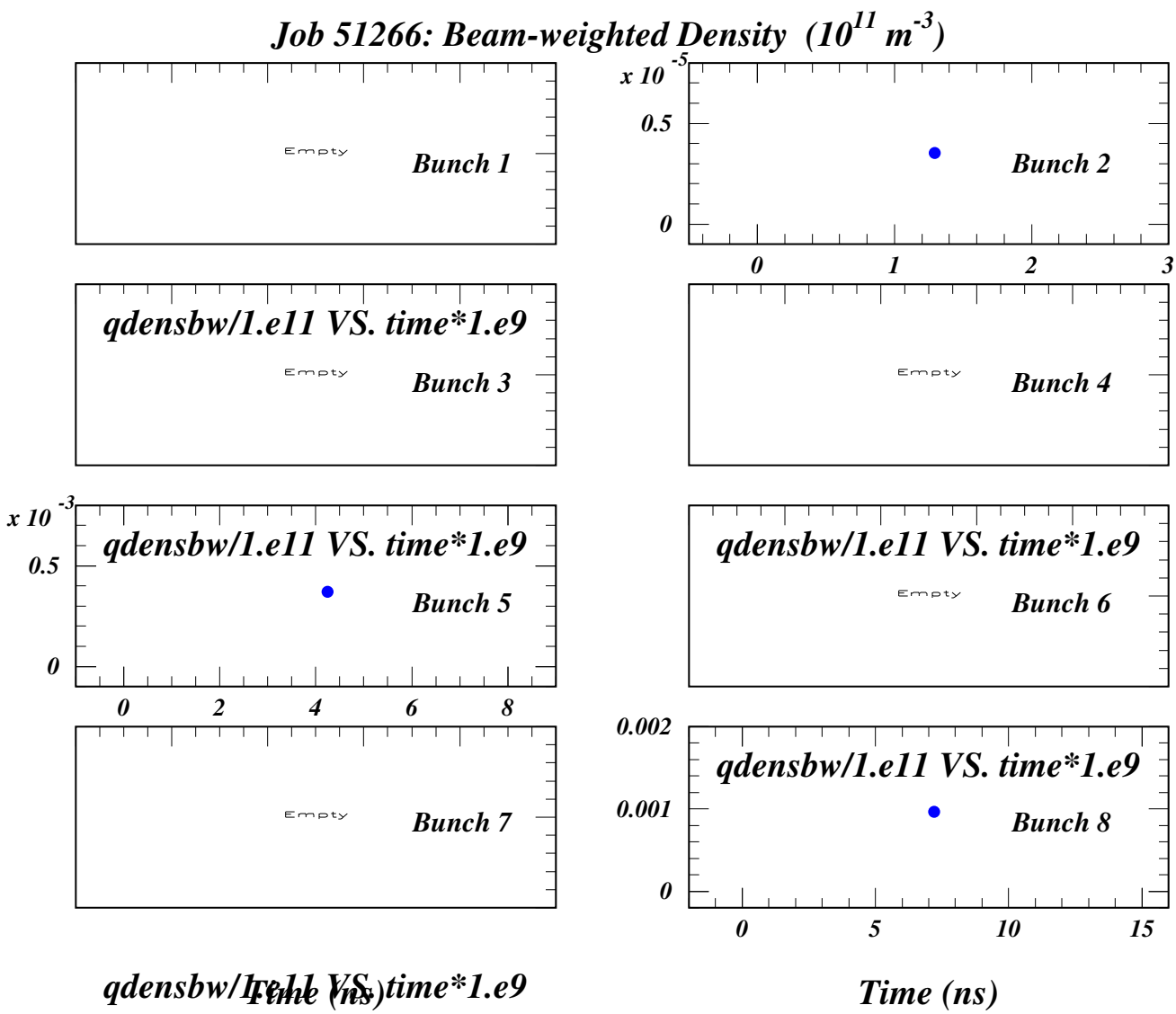

0.3
0.25
0.2
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
E_Y at Center (V/m)
0
200
400
Time (ns)


0.175
0.15
0.125
0.1
0.075
0.05
0.025
0
dE_X/dX at Center (kV/m^2)
0
200
400
Time (ns)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
-0.02
dE_Y/dY at Center (kV/m^2)
0
200
400
Time (ns)


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)