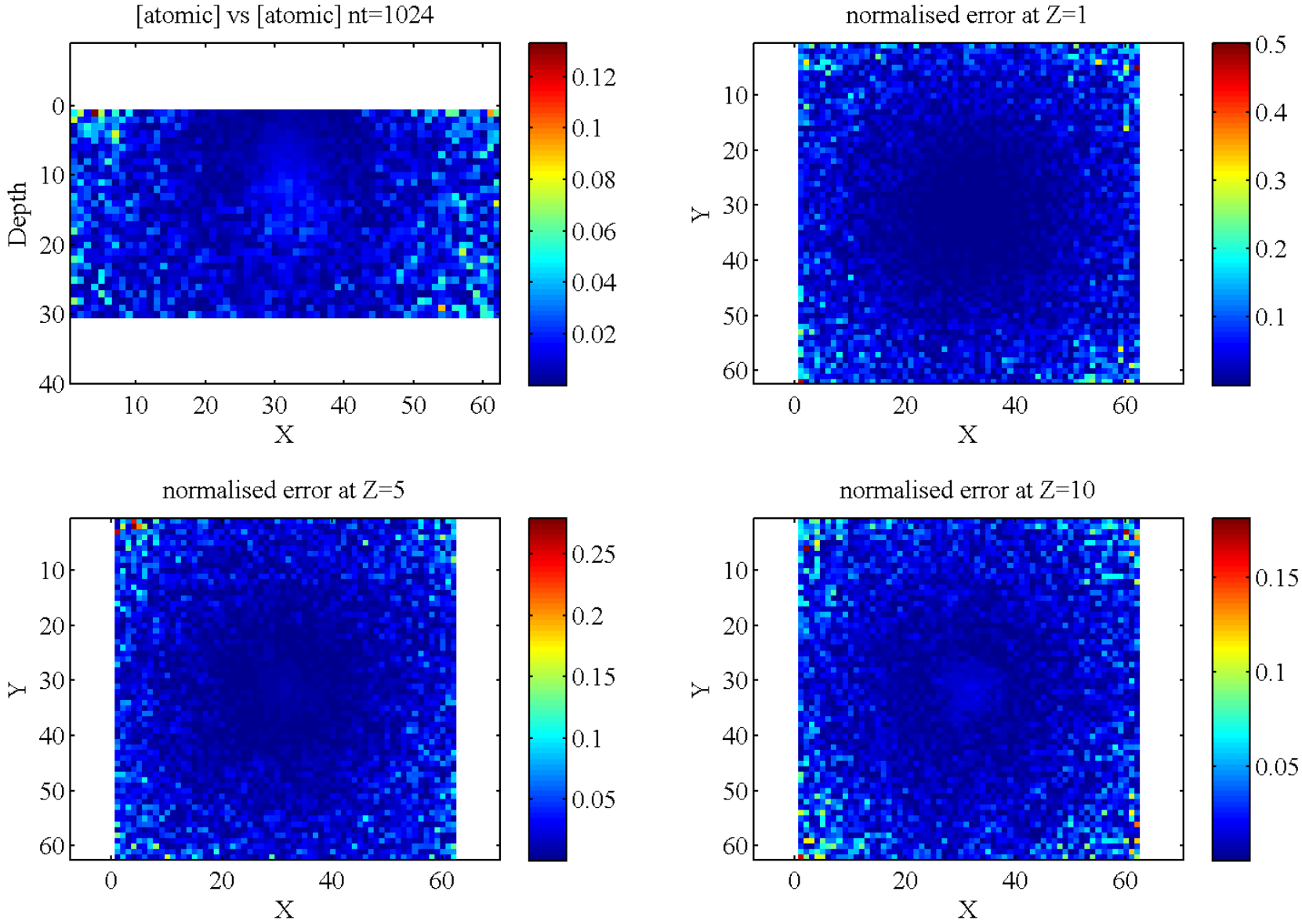
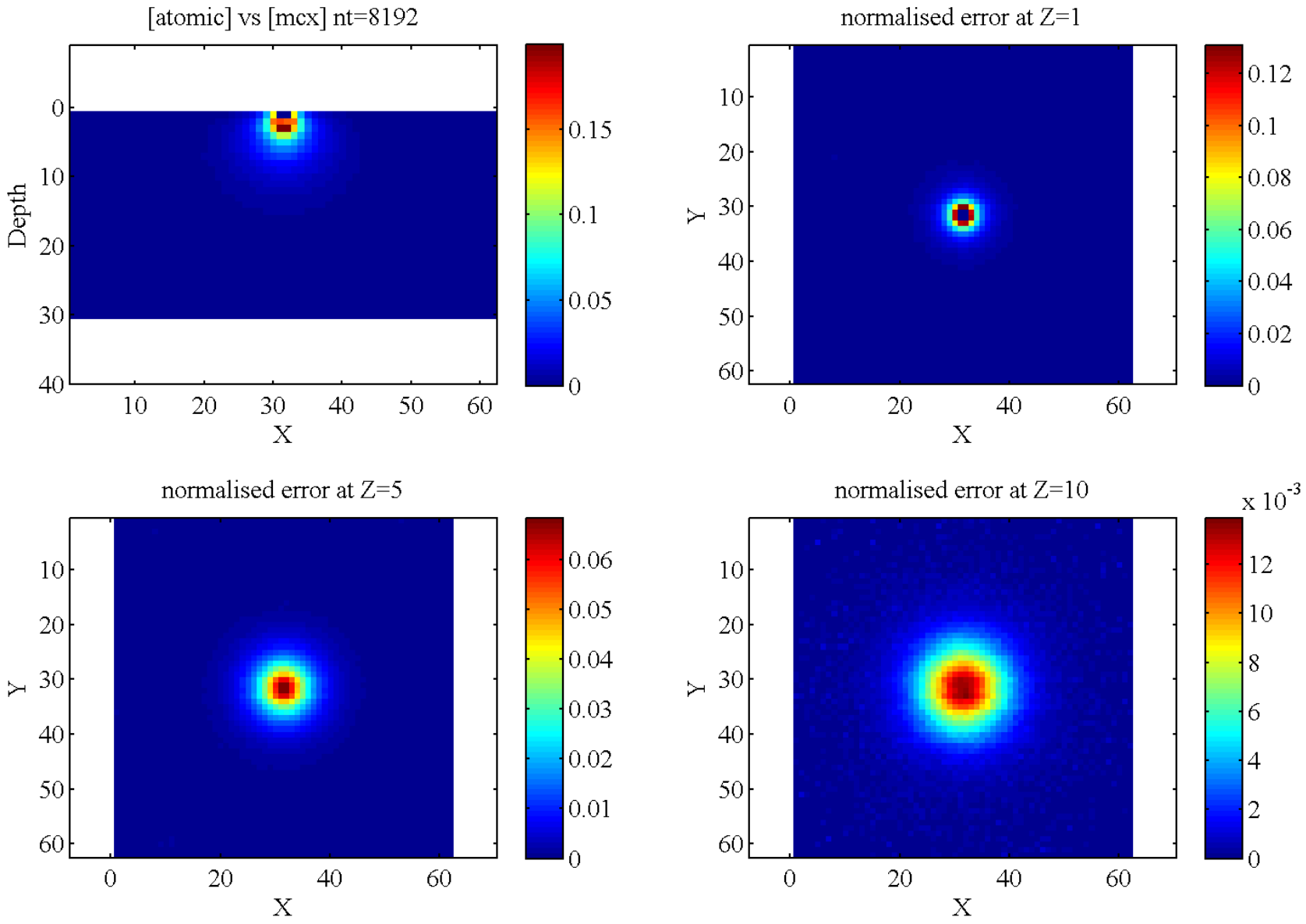
MCX comparison

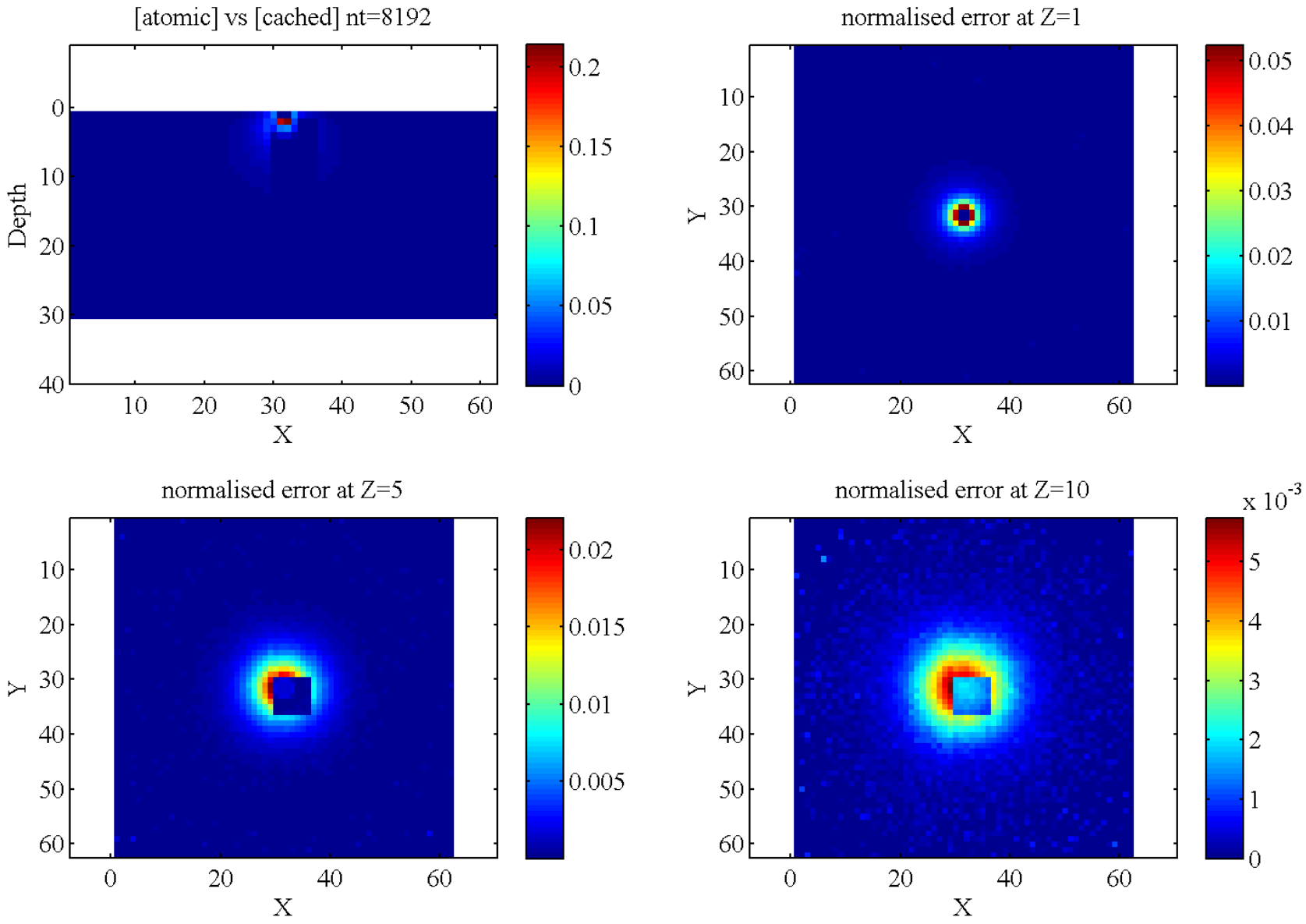
- atomic (thread=8192) is compared with atomic(thread=1024), mcx(thread=8192), cached(-R -1,thread=8192),cachedR5(-R 5, thread=8192).
- Voxel-wise normalized error is used;

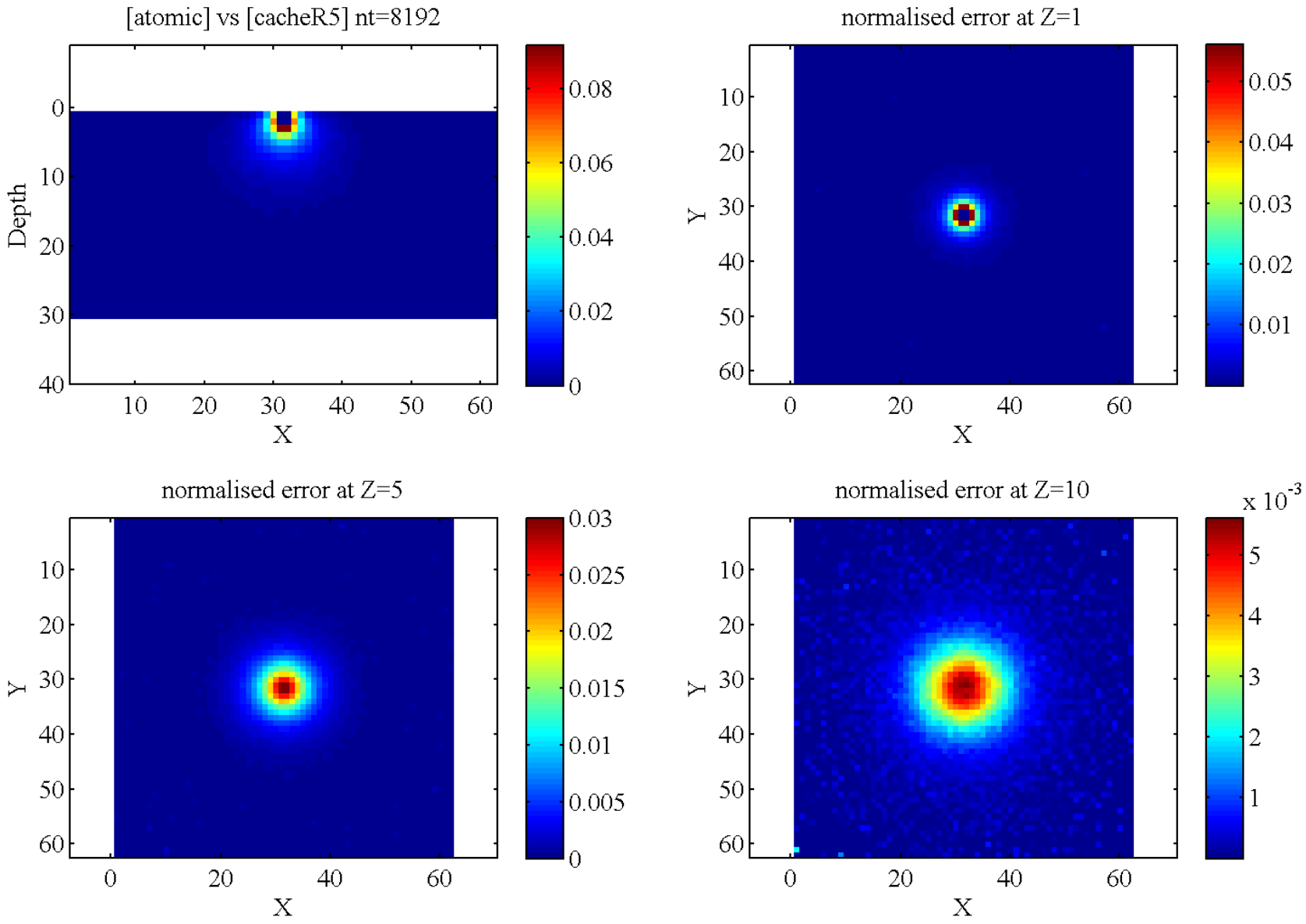
  error=abs(voxel(mcx)-voxel(atomic)/voxel(atomic)
- Note that the different color scale is used for each figure.

  - Same thread number is compared except atomic comparison.
  - Normalized error of limited region is shown, since normalized error of whole region becomes very large (see the figures in second part)
  - distance from probe <= 30mm.


[atomic] vs [atomic] nt=1024
Depth
X
0
10
20
30
40
10
20
30
40
50
60
0.12
0.1
0.08
0.06
0.04
0.02
normalised error at Z=1
Y
X
10
20
30
40
50
60
0
20
40
60
0.5
0.4
0.3
0.2
0.1
normalised error at Z=5
Y
X
10
20
30
40
50
60
0
20
40
60
0.25
0.2
0.15
0.1
0.05
normalised error at Z=10
Y
X
10
20
30
40
50
60
0
20
40
60
0.15
0.1
0.05


[atomic] vs [mcx] nt=8192
Depth
X
normalised error at Z=1
Y
X
normalised error at Z=5
Y
X
normalised error at Z=10
x 10^-3
Y
X


[atomic] vs [cached] nt=8192
Depth
X
0
10
20
30
40
50
60
0.2
0.15
0.1
0.05
normalised error at Z=1
Y
0.04
0.03
0.02
0.01
normalised error at Z=5
0.02
0.015
0.005
normalised error at Z=10
x 10-3
5
4
3
2
1


[atomic] vs [cacheR5] nt=8192
Depth
X
0
10
20
30
40
50
60
0.08
0.06
0.04
0.02
normalised error at Z=1
Y
0.05
0.04
0.03
0.02
0.01
normalised error at Z=5
0.03
0.025
0.02
0.015
0.01
0.005
normalised error at Z=10
x 10-3
5
4
3
2
1

MCX comparison II

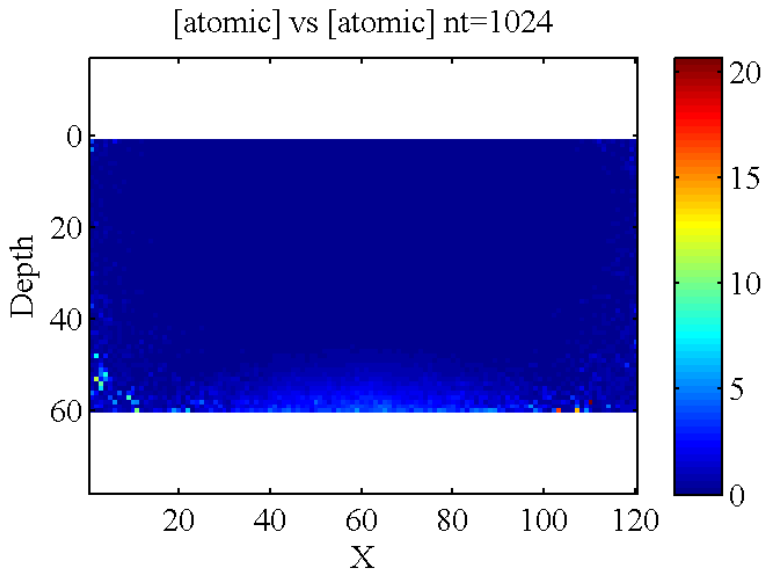
- Normalized error of whole region is shown.

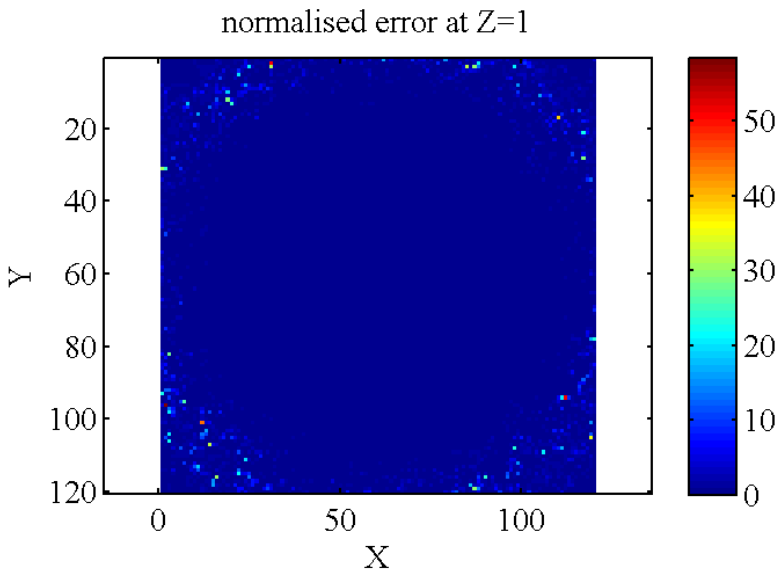
  Notice that the value of color bar corresponds to the max error

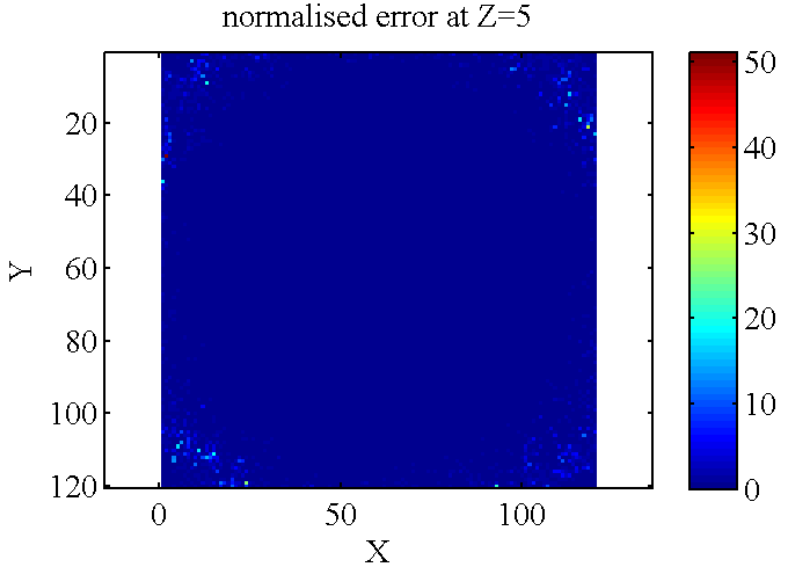
- Voxel-wise normalized error is used.

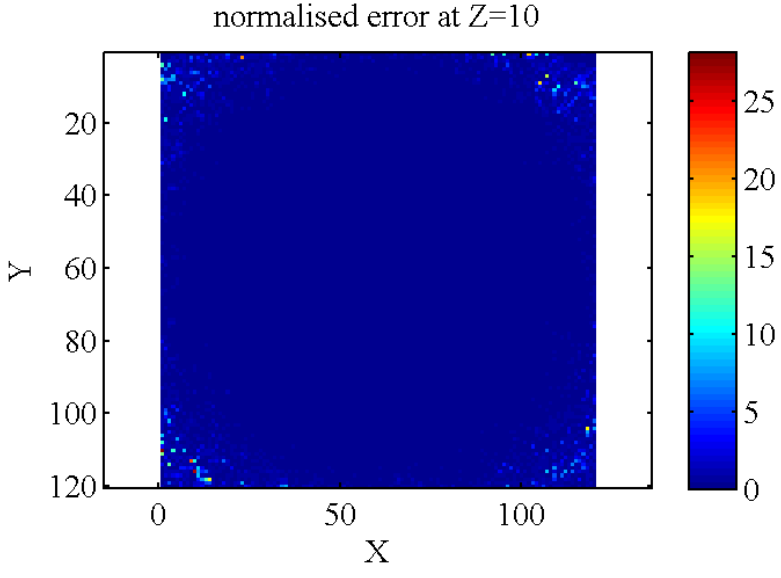
  error=abs(voxel(mcx)-voxel(atomic)/voxel(atomic)

  if voxel(atomic)< 1, division is not done

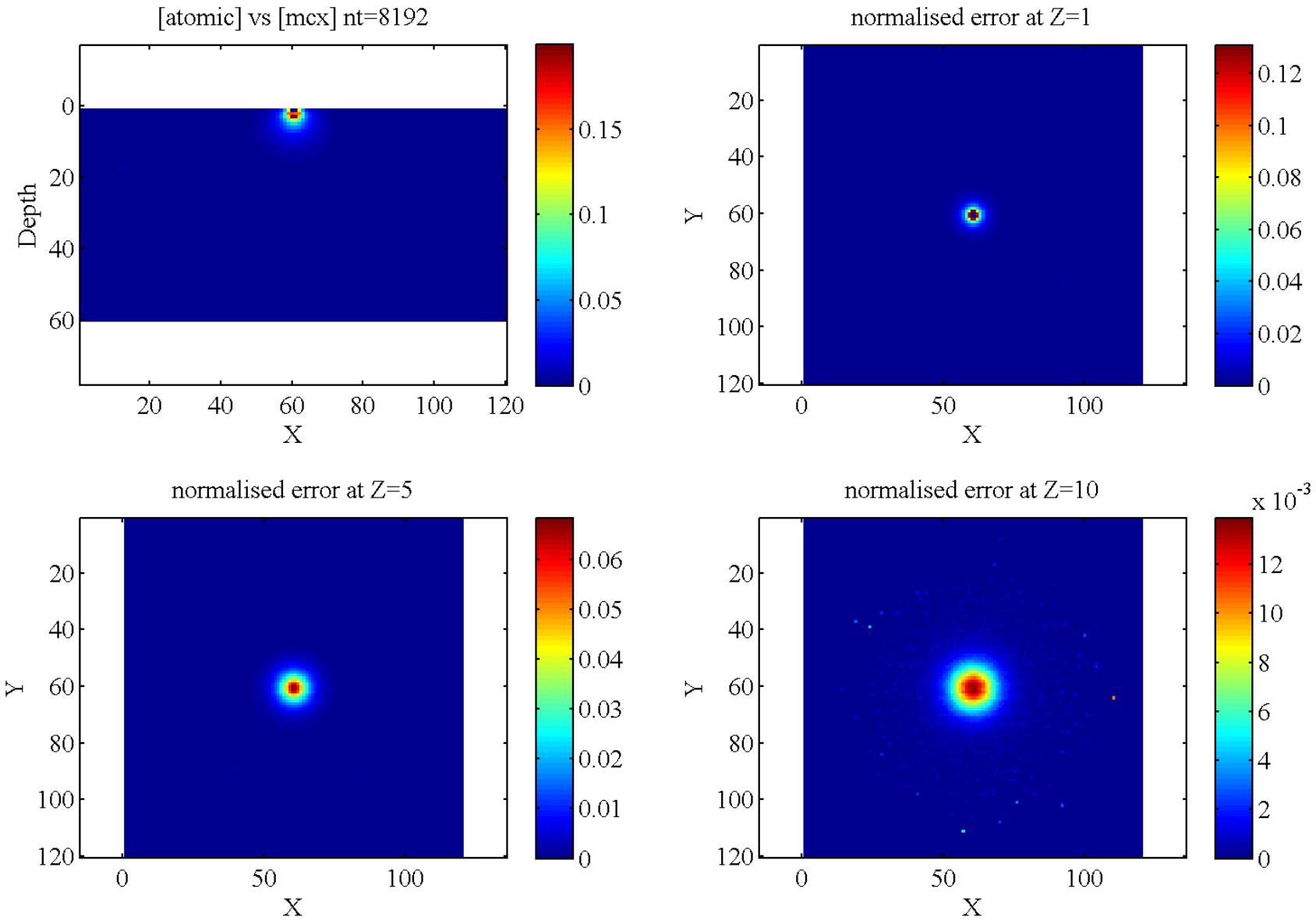


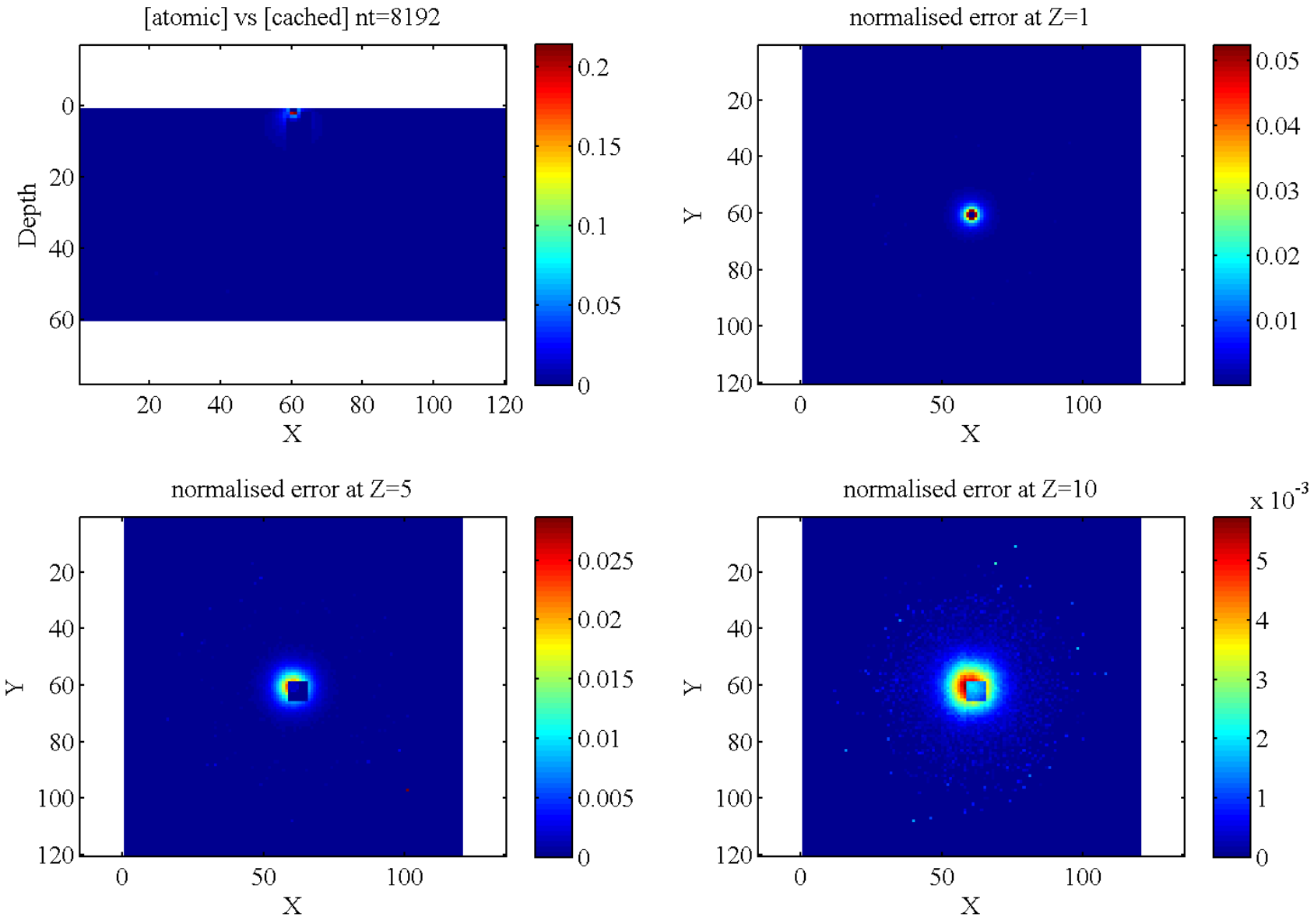


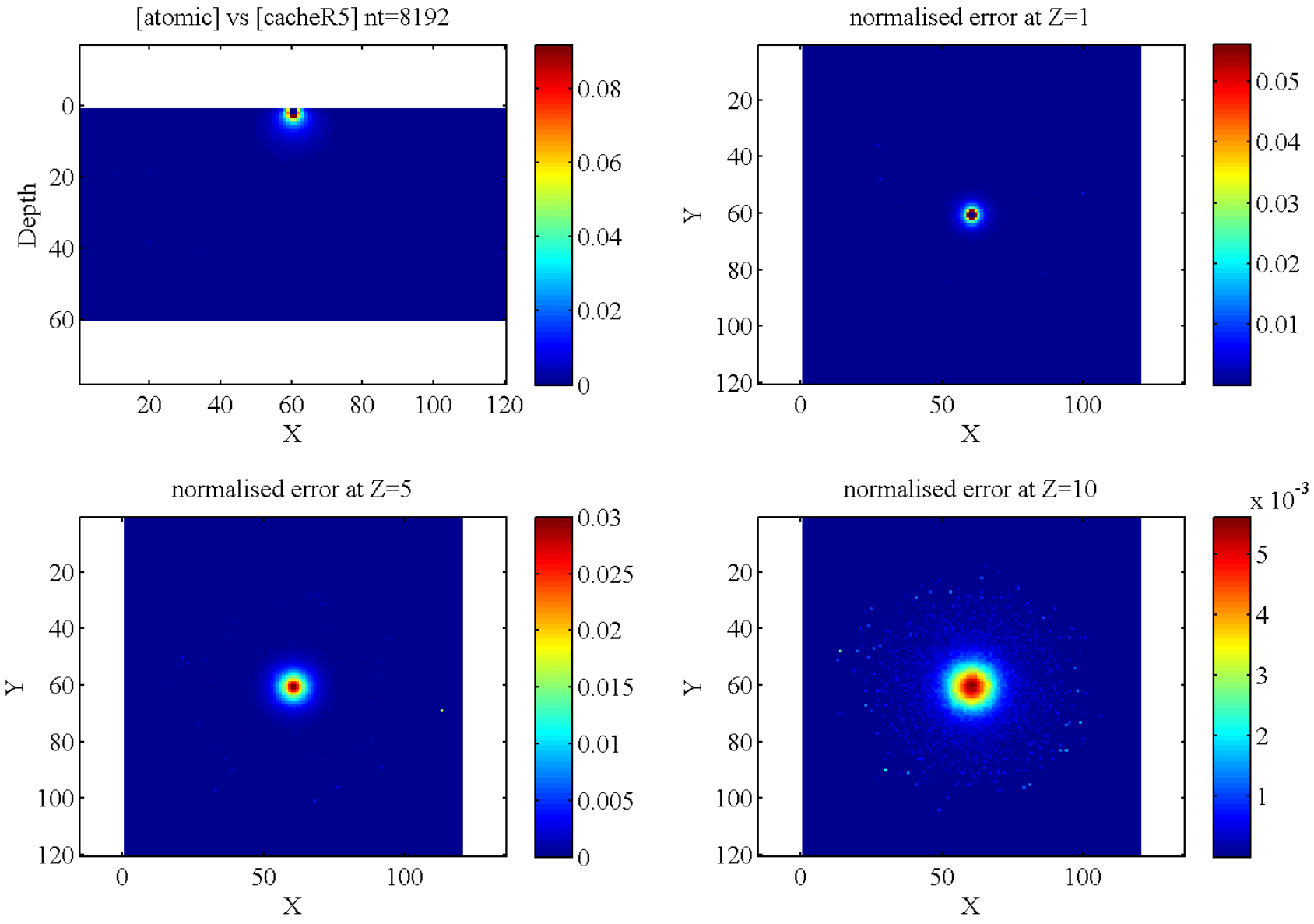




The number of thread makes big difference around boundary of medium in atomic.


[atomic] vs [mcx] nt=8192
Depth
X
0
20
40
60
80
100
120
0.15
0.1
0.05
normalised error at Z=1
Y
0.12
0.08
0.06
0.04
0.02
normalised error at Z=5
0.03
0.01
normalised error at Z=10
x 10^-3
12
10
8
6
4
2


[atomic] vs [cached] nt=8192
Depth
X
0
20
40
60
80
100
120
0.2
0.15
0.1
0.05
normalised error at Z=1
Y
0.05
0.04
0.03
0.02
0.01
normalised error at Z=5
0.025
0.02
0.015
0.01
0.005
normalised error at Z=10
x 10^-3
5
4
3
2
1


[atomic] vs [cacheR5] nt=8192
Depth
X
0
20
40
60
80
100
120
0.08
0.06
0.04
0.02
normalised error at Z=1
Y
0.05
0.04
0.03
0.02
0.01
normalised error at Z=5
0.03
0.025
0.02
0.015
0.01
0.005
normalised error at Z=10
x 10^-3
5
4
3
2
1