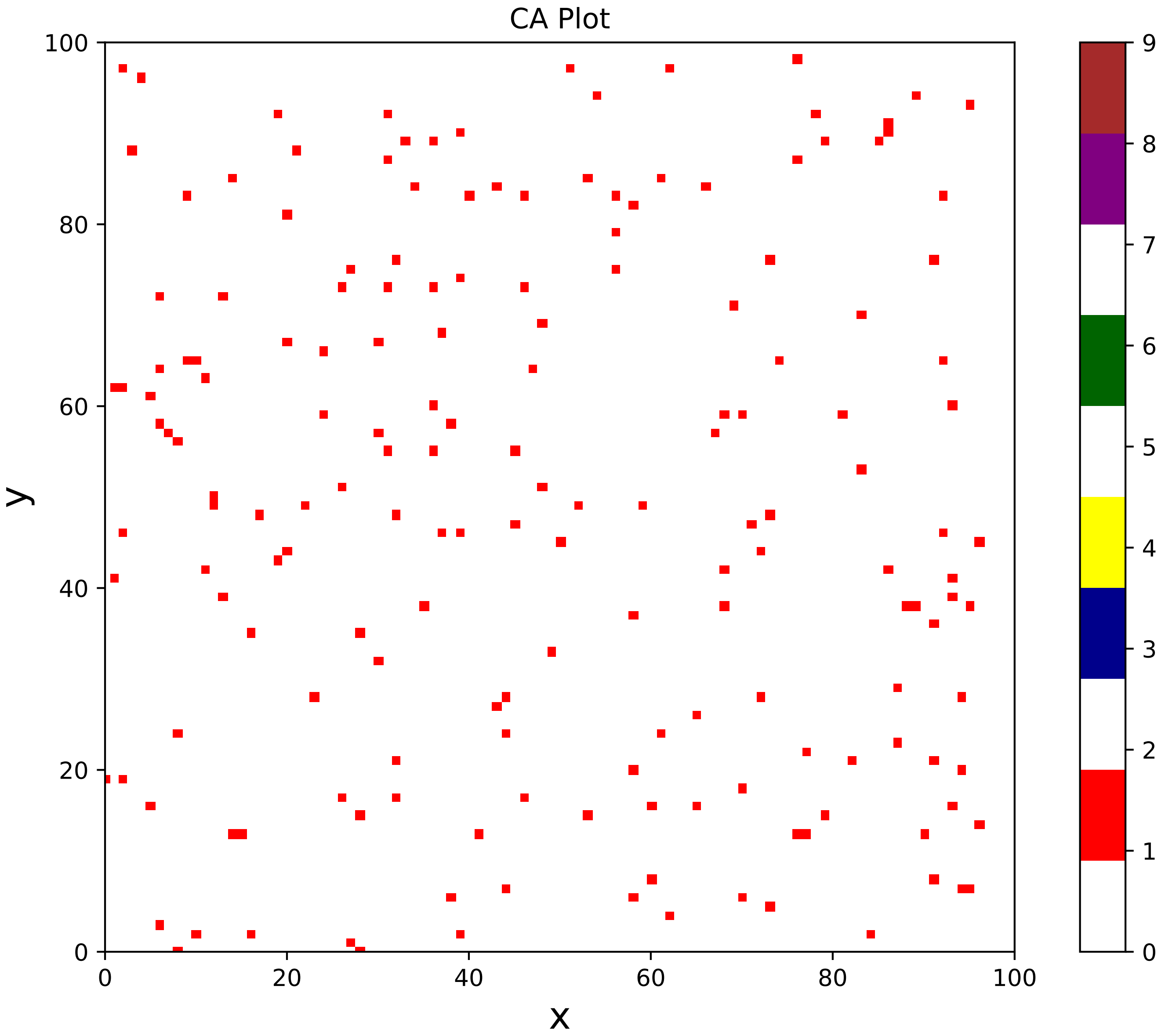
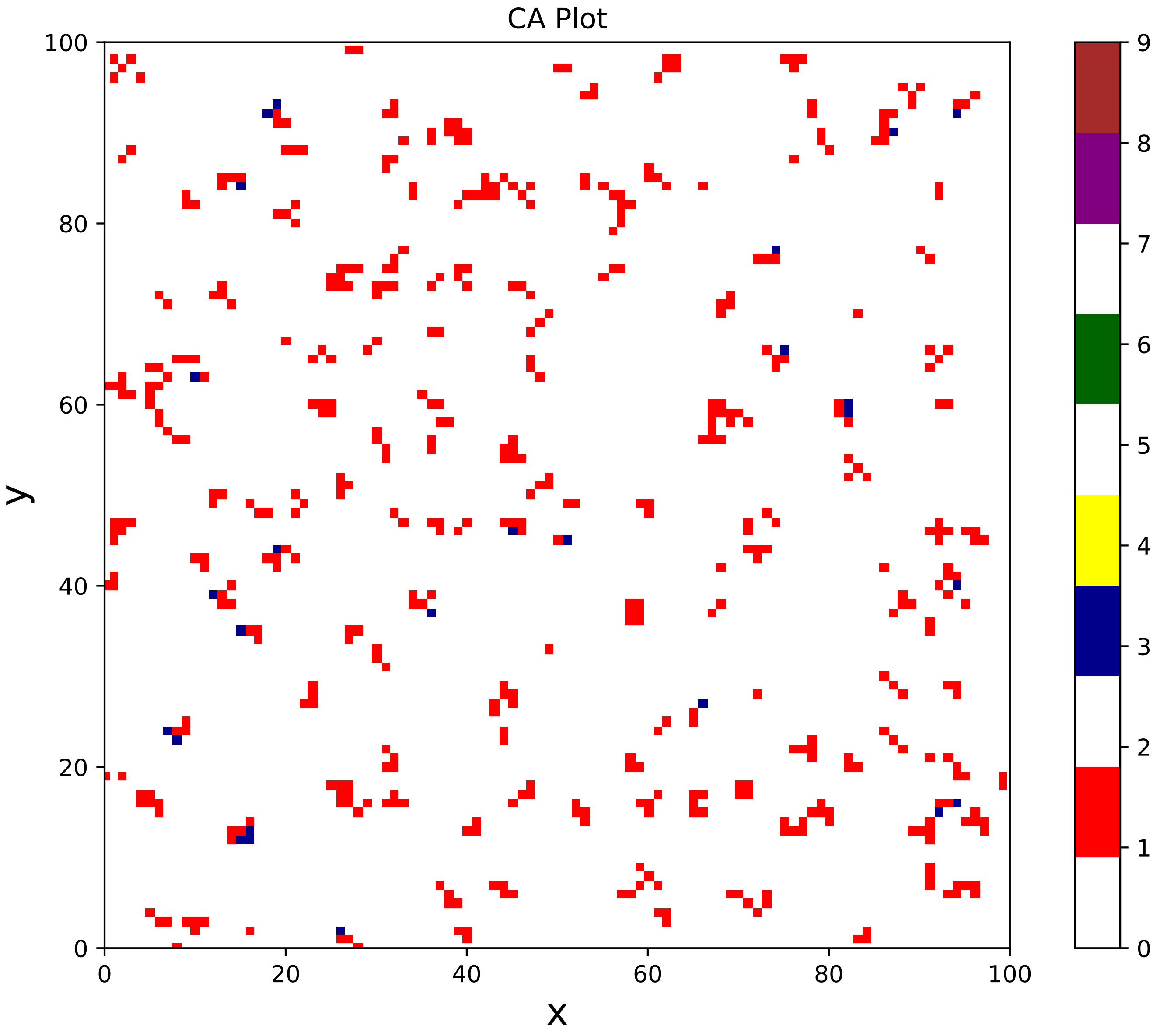
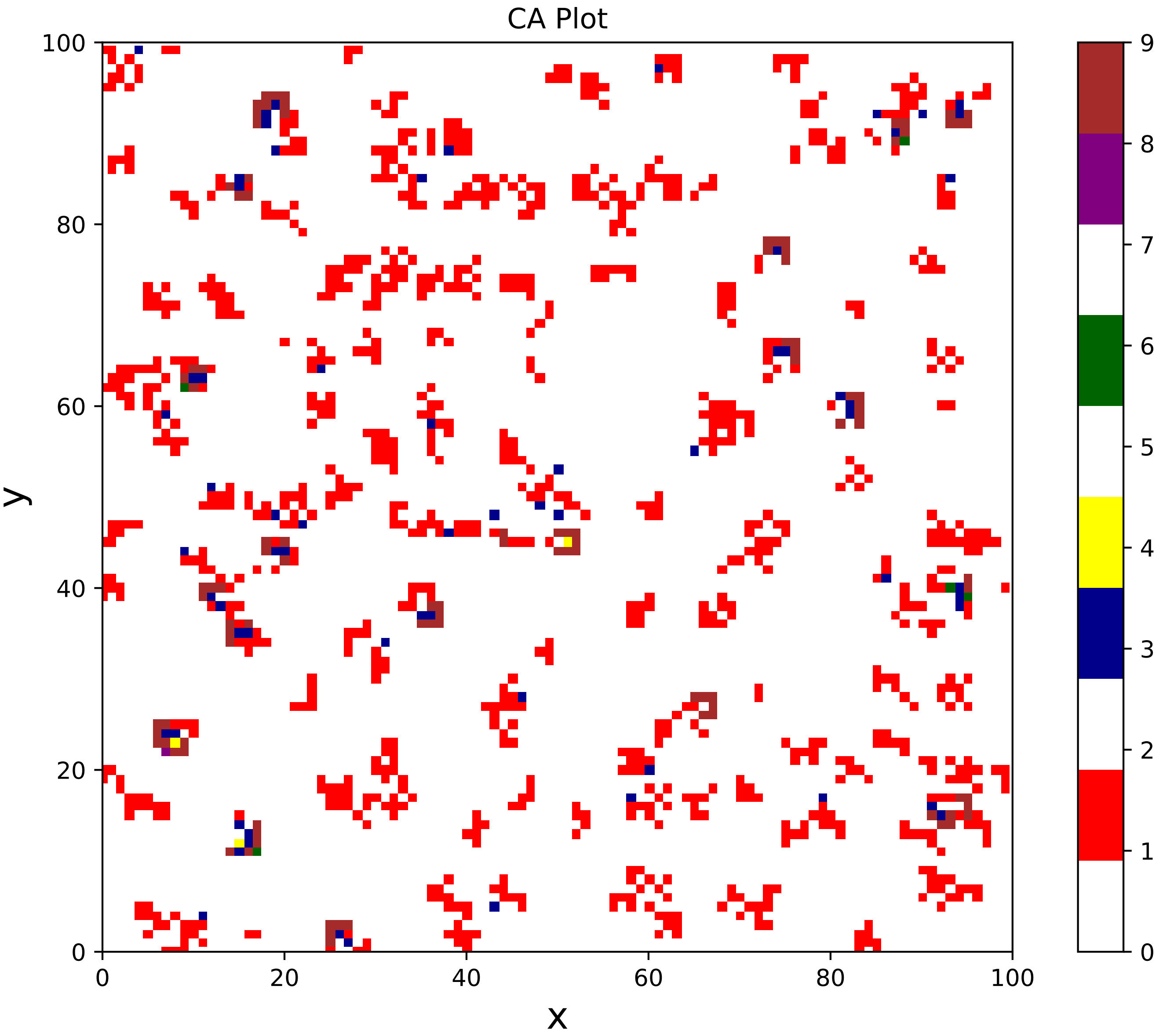
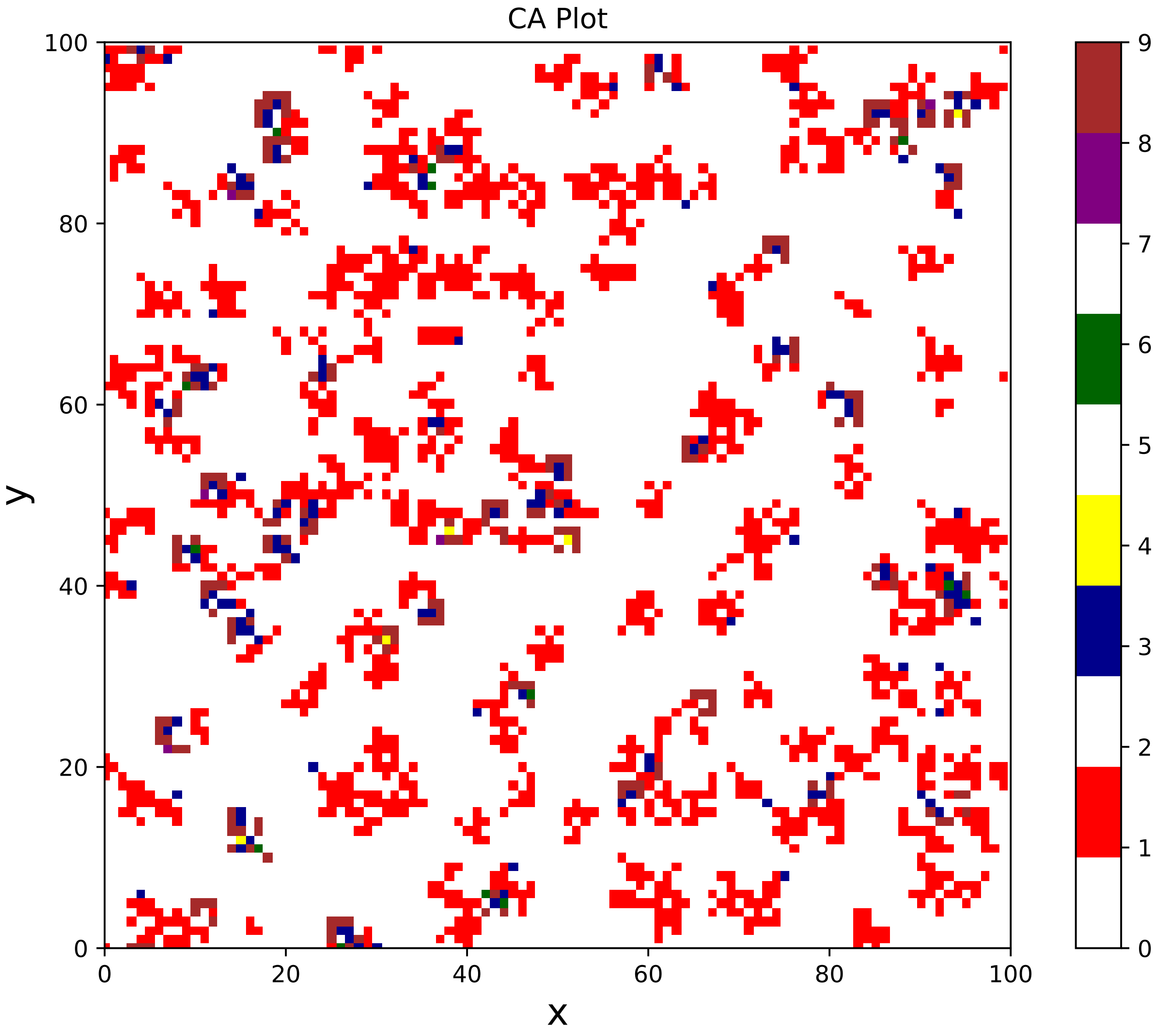
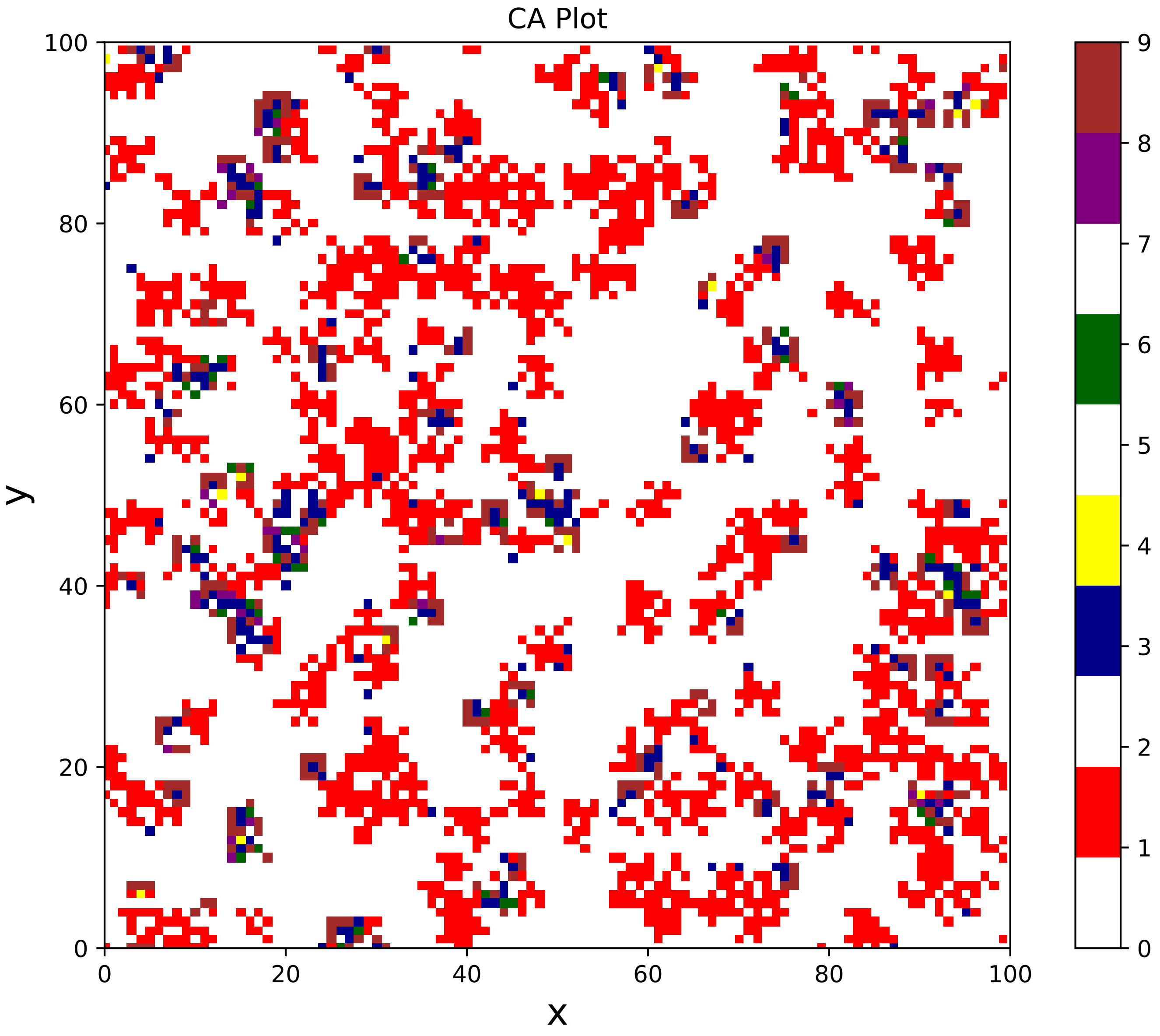
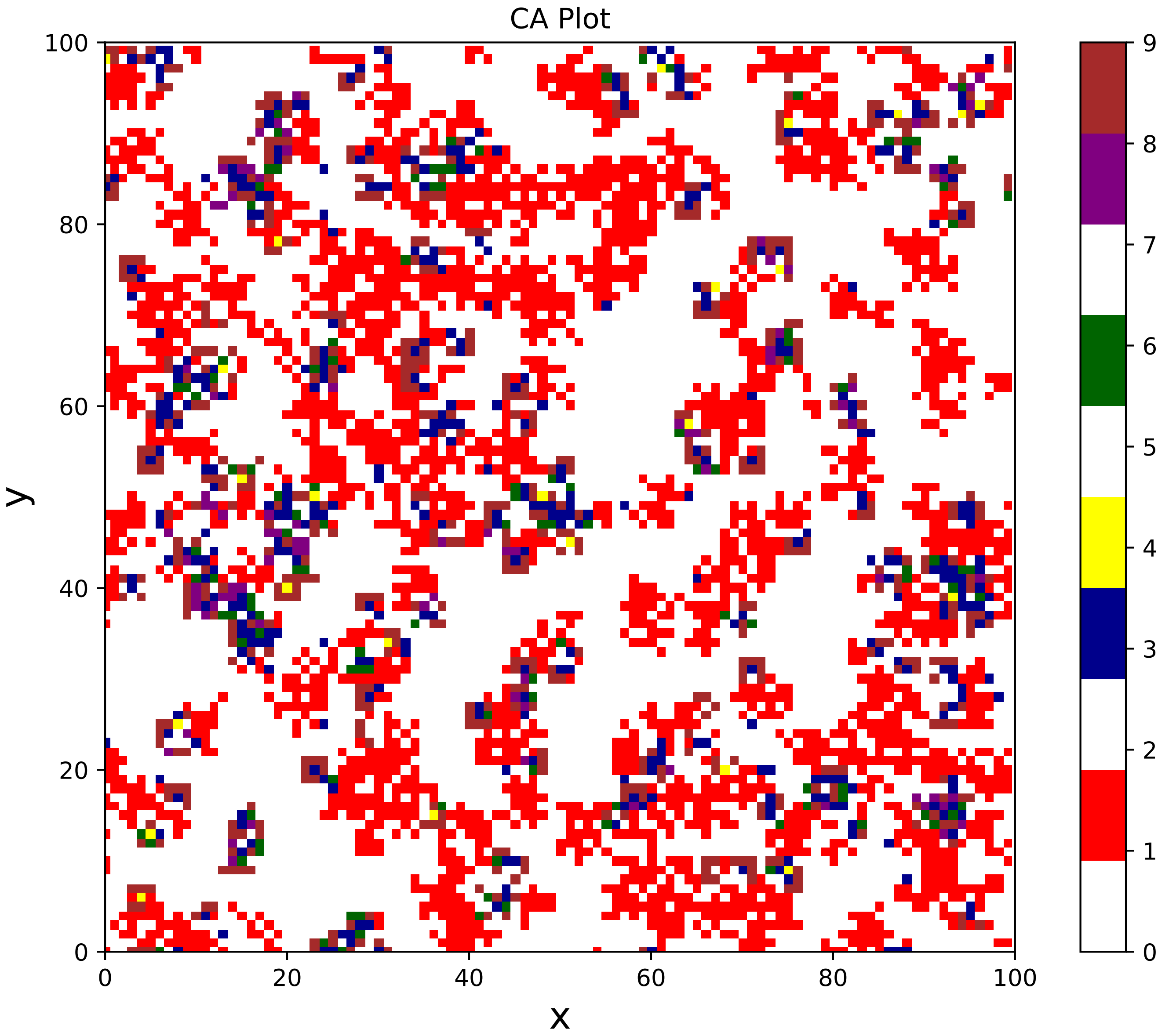

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

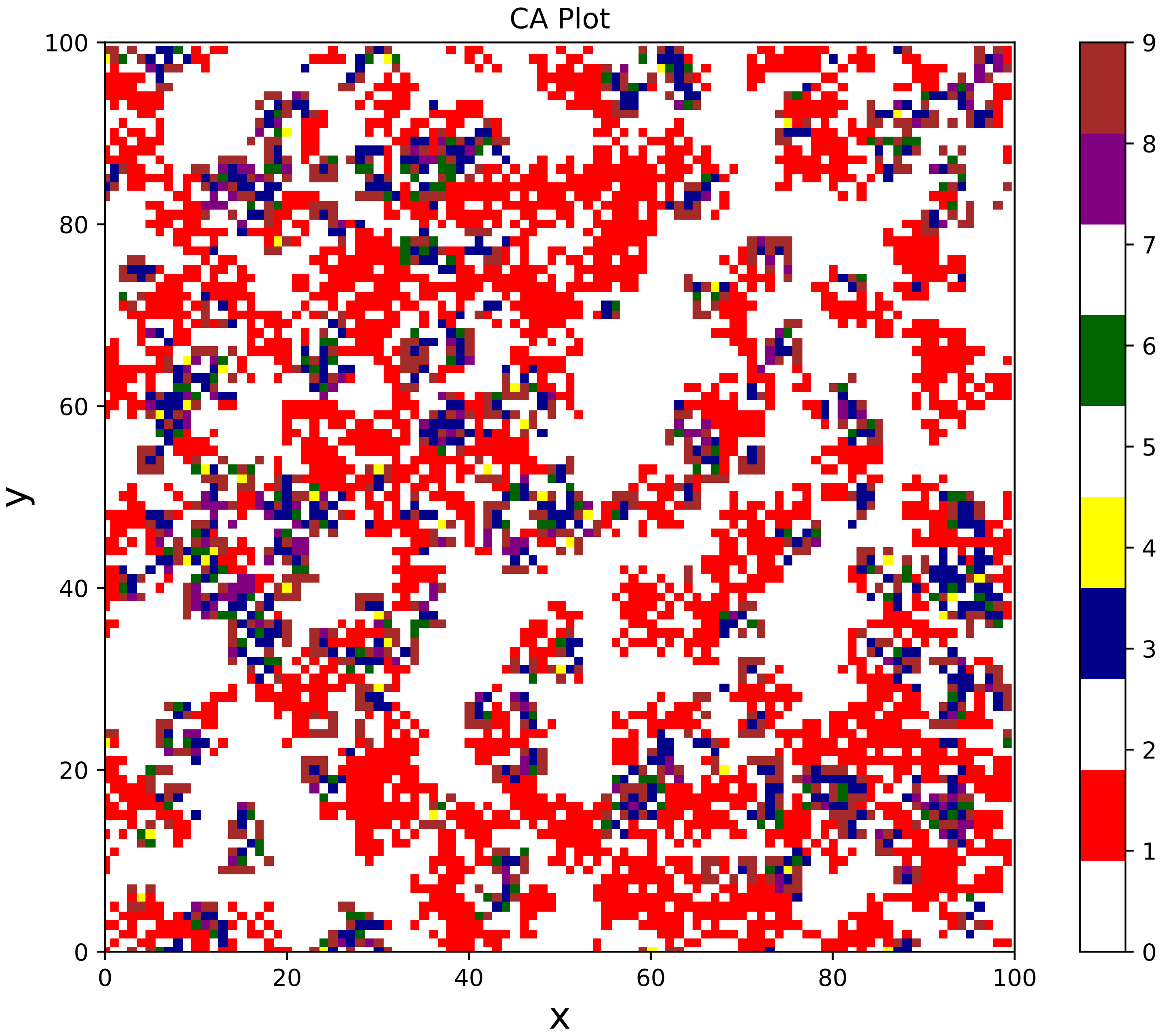

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

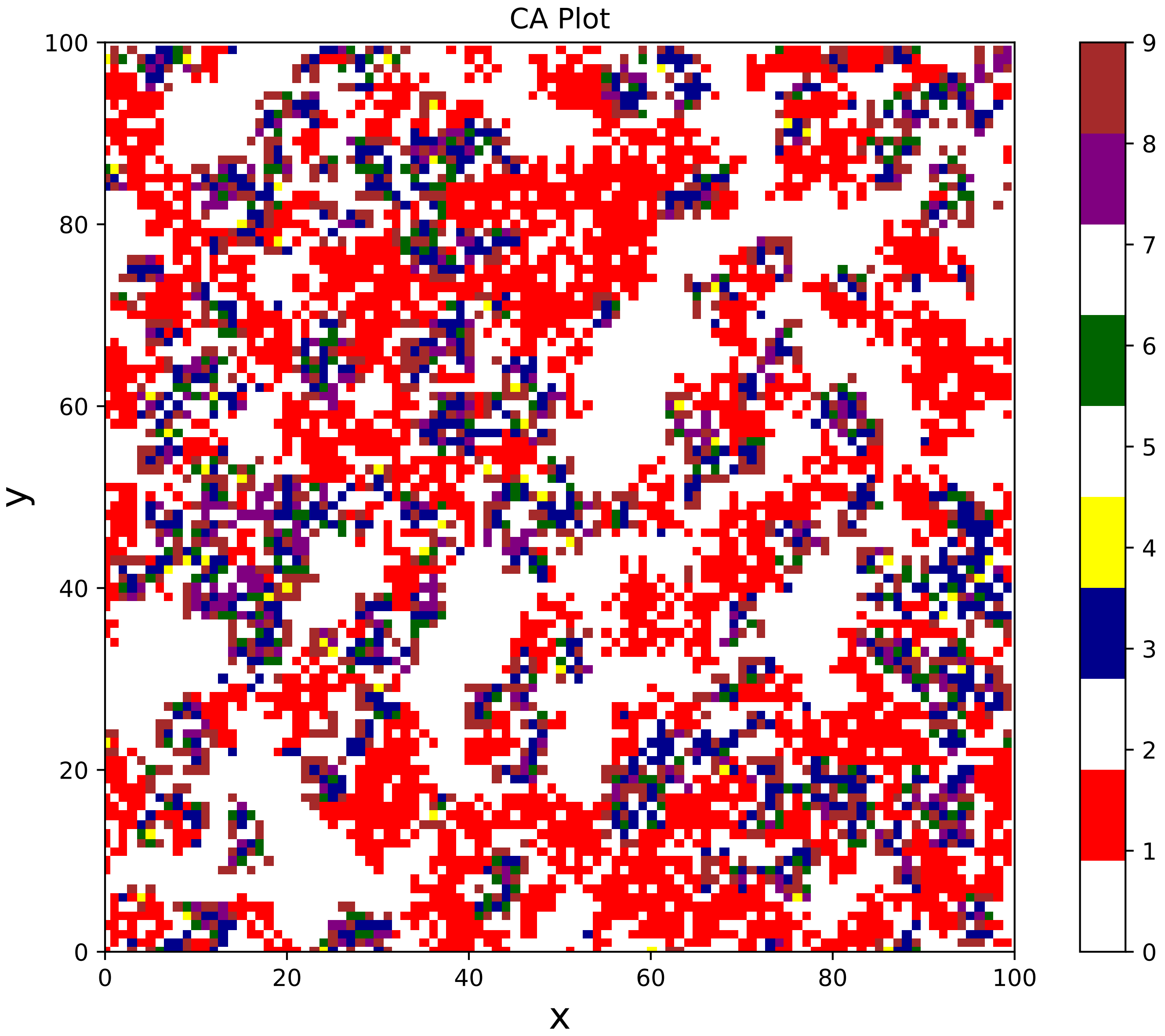

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

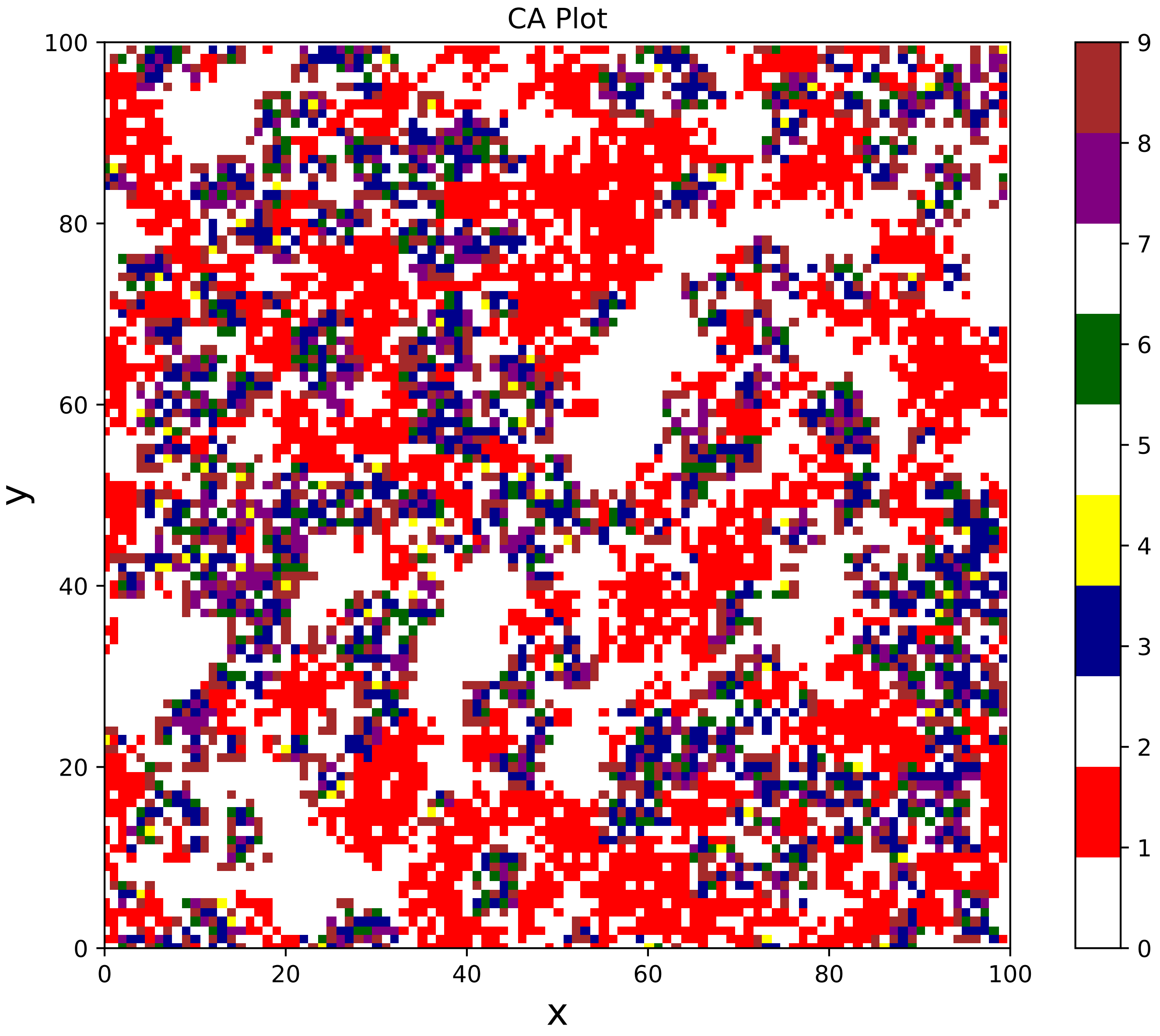

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

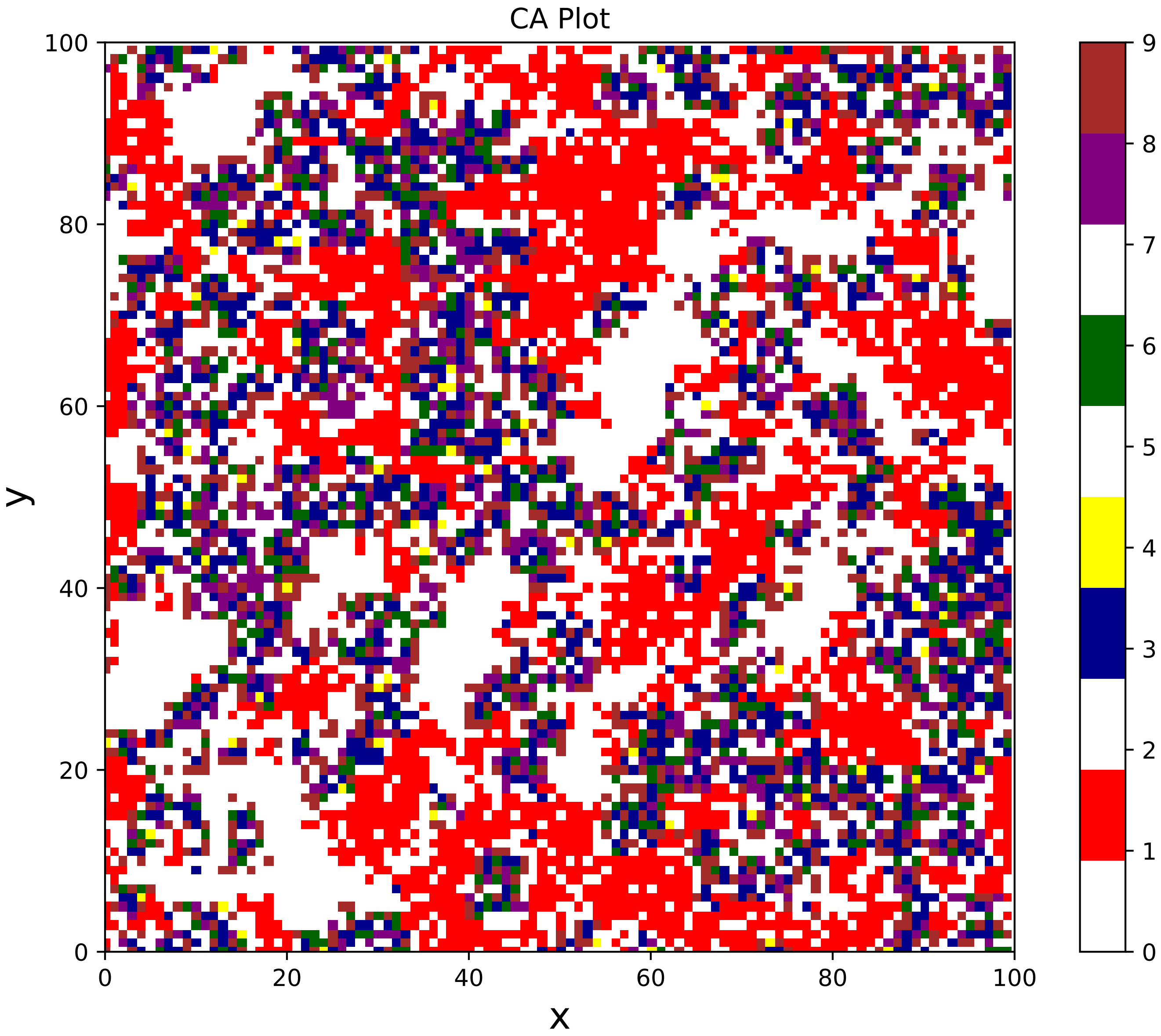

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

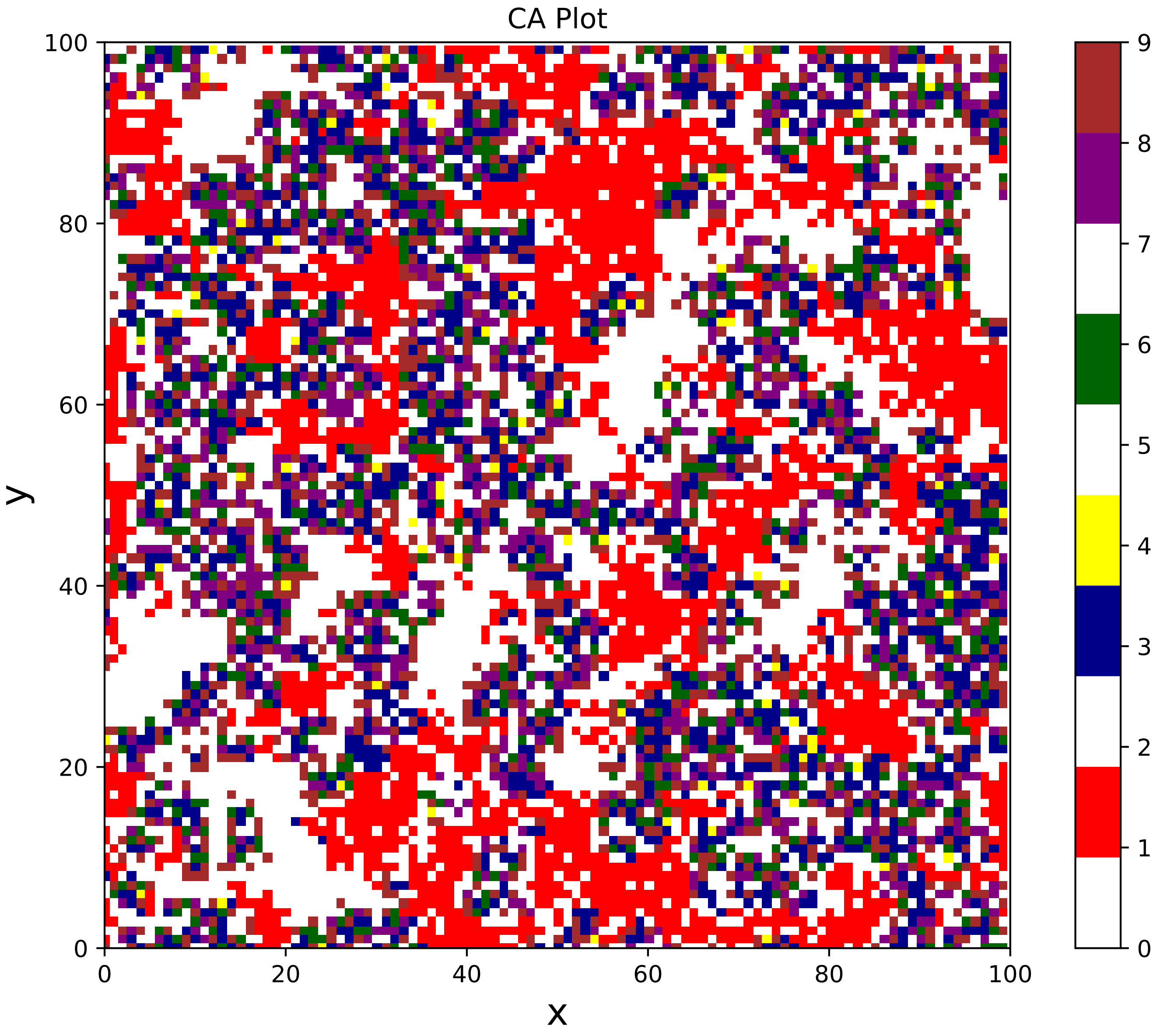

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

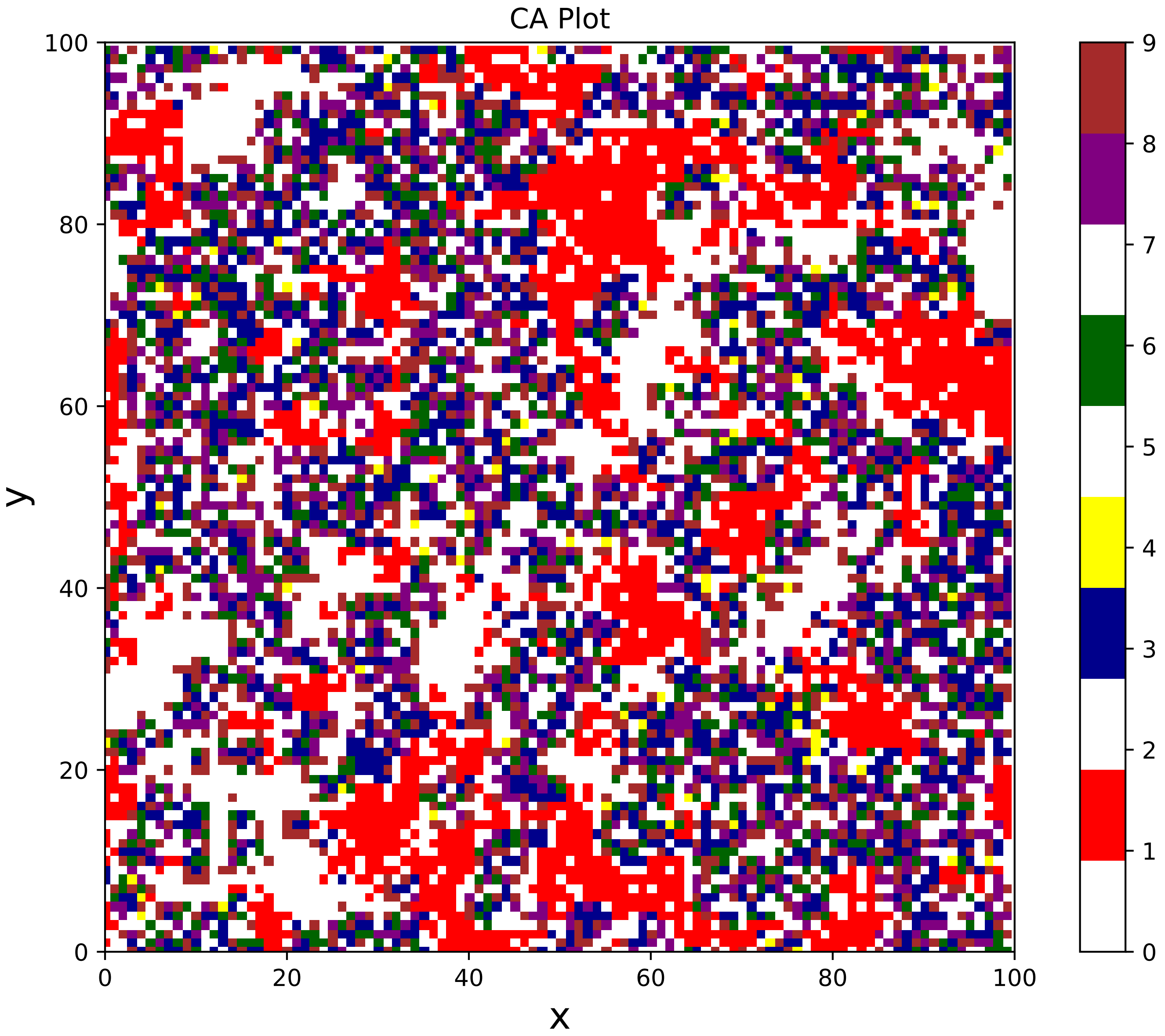

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

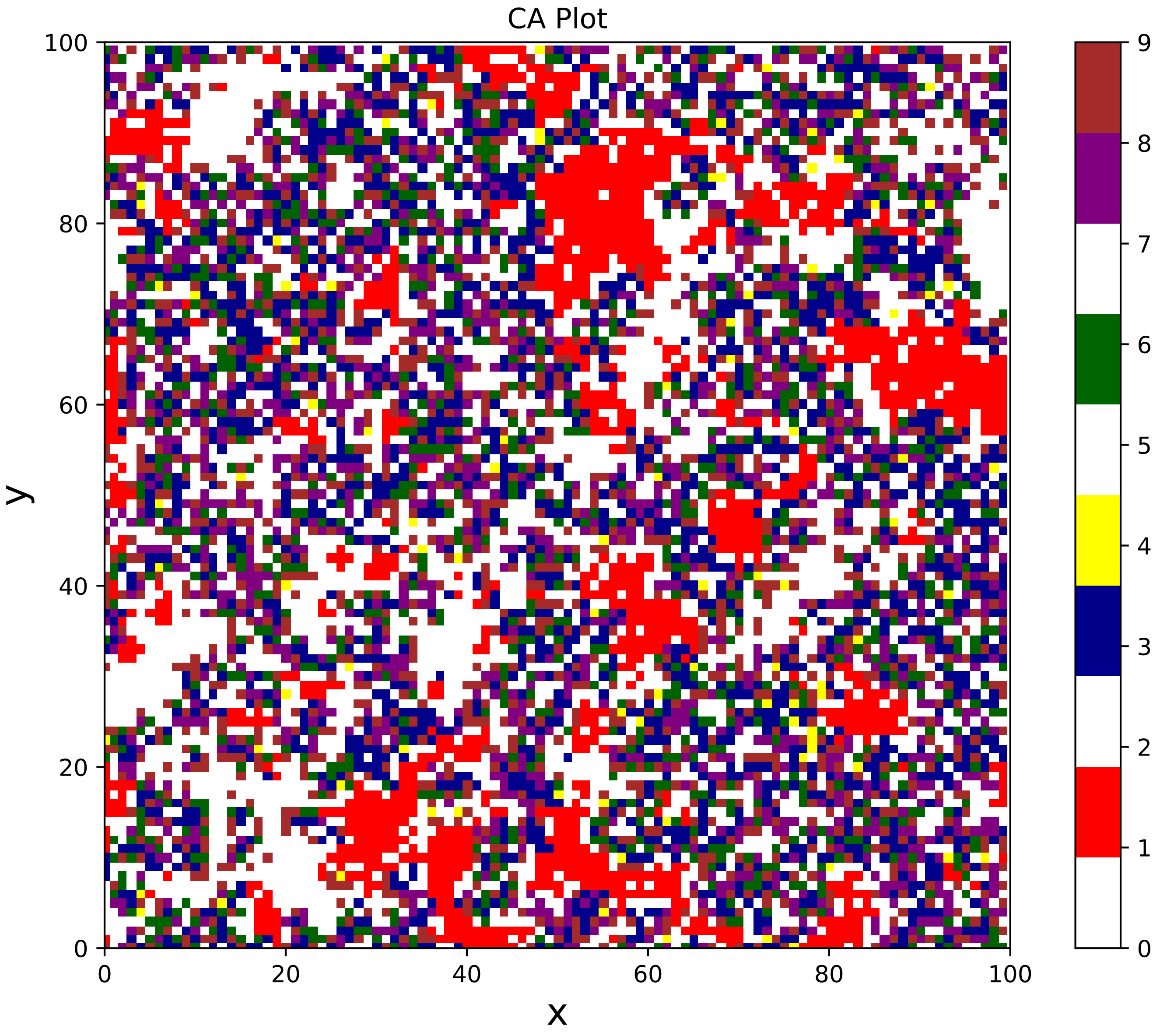

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

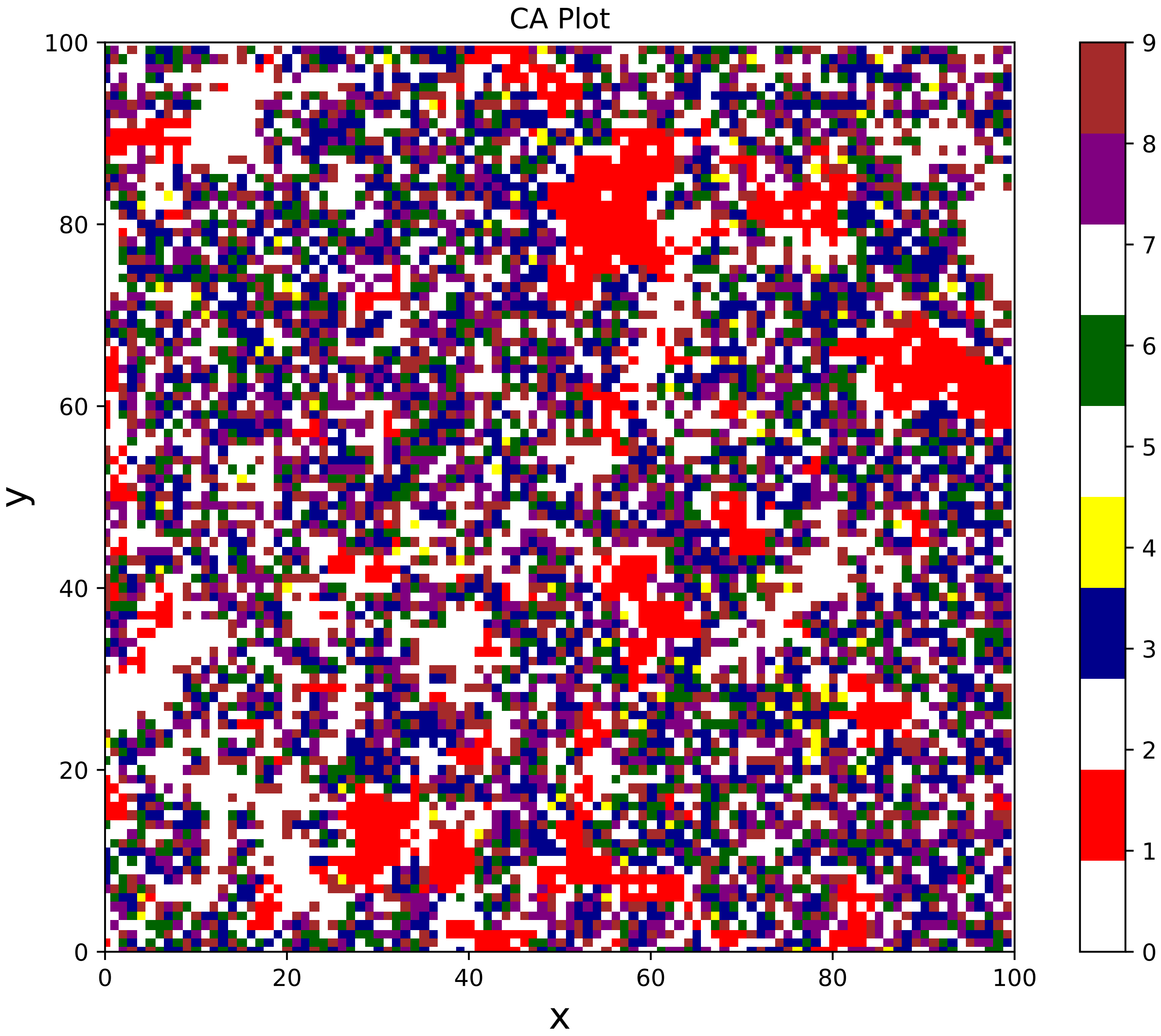

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

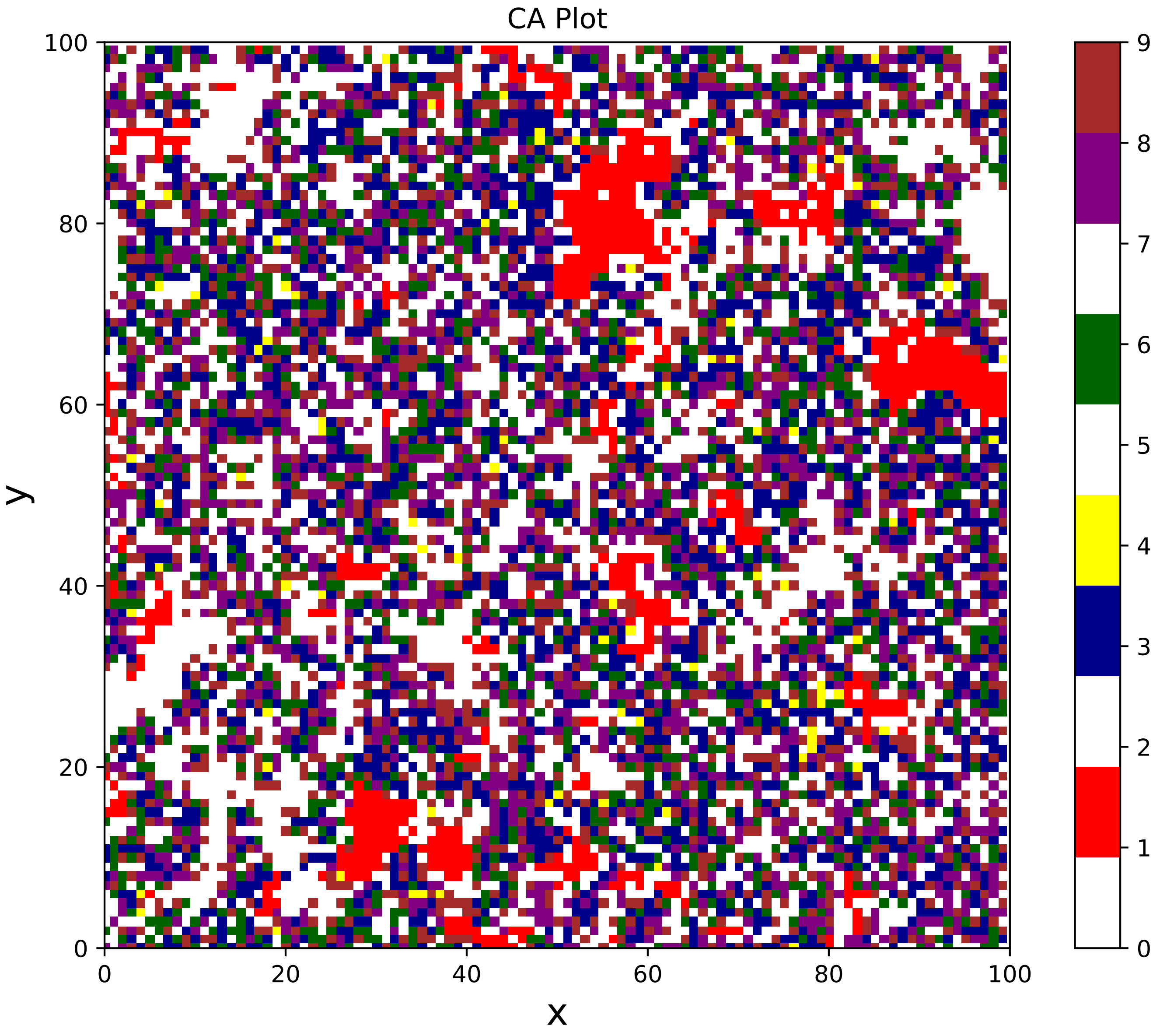

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

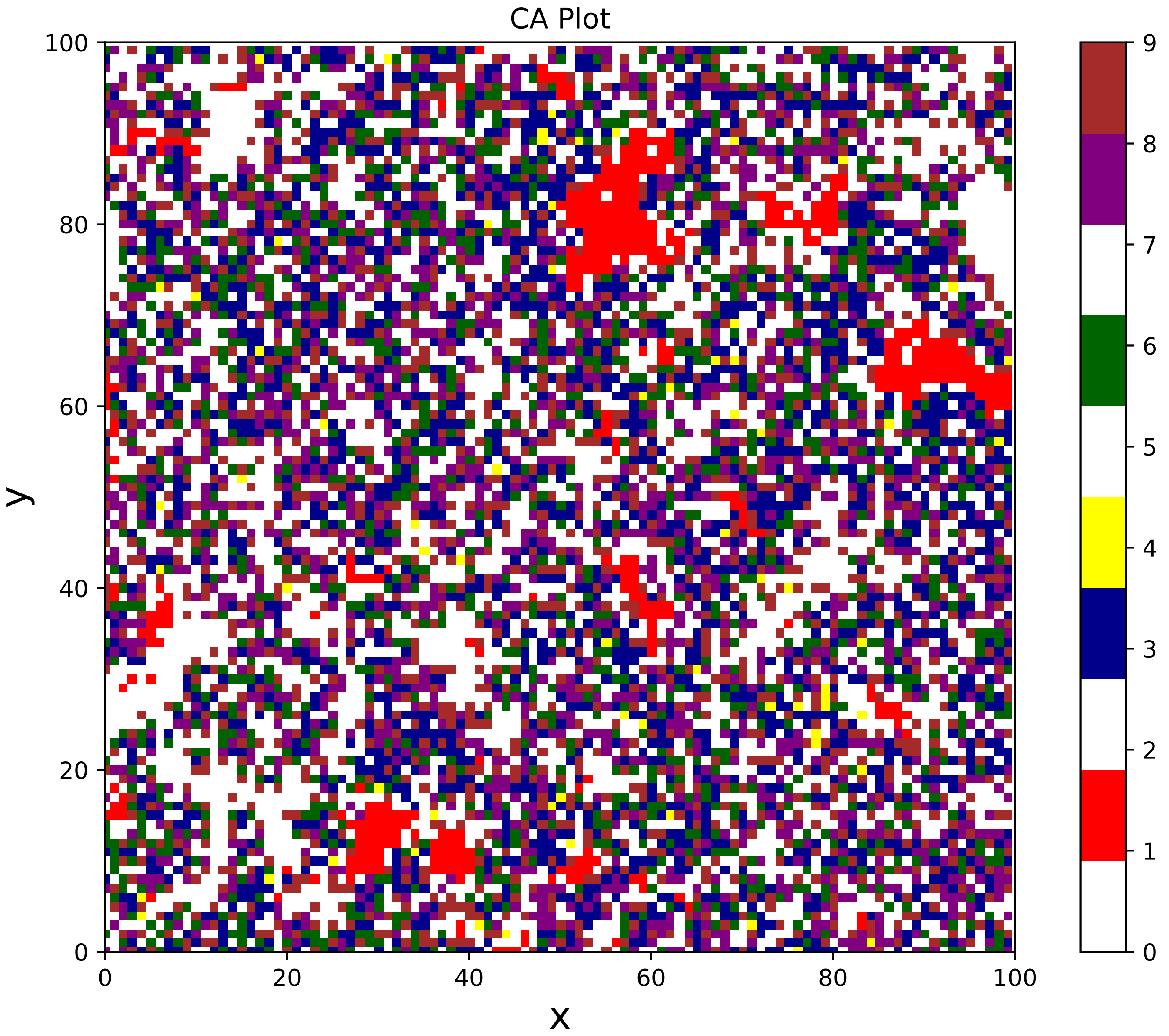

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

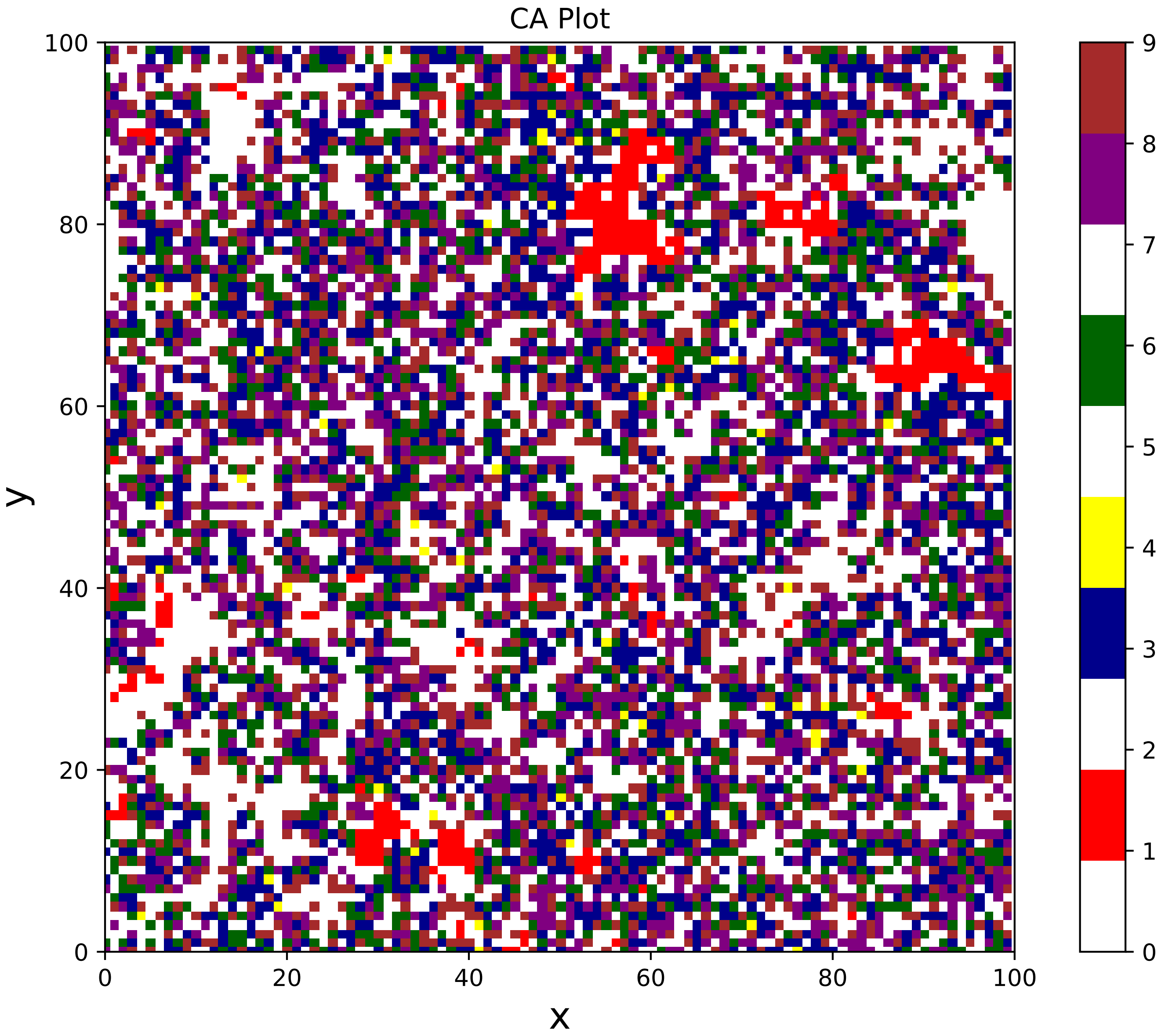

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

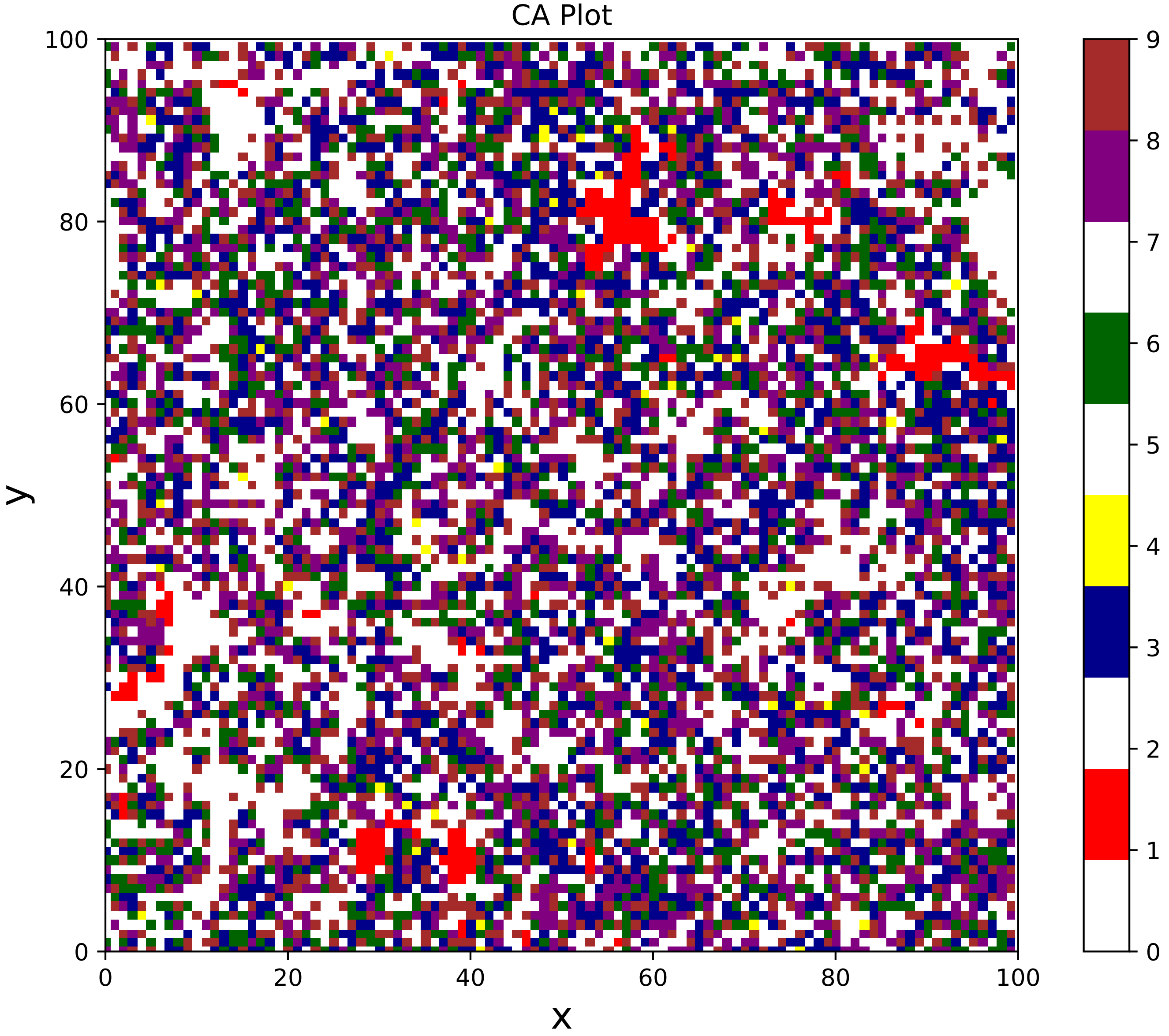

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

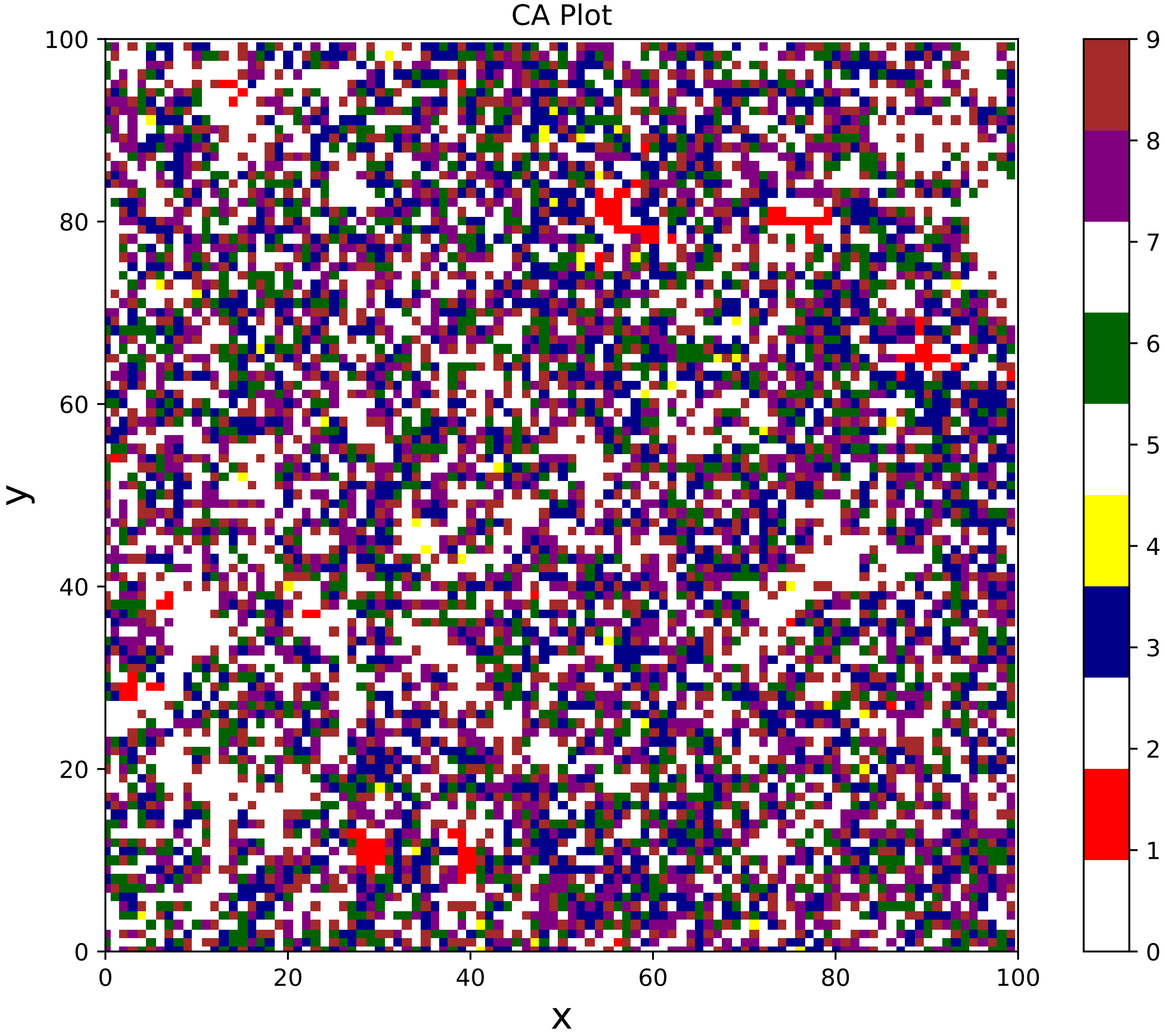

CA Plot
x
y
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

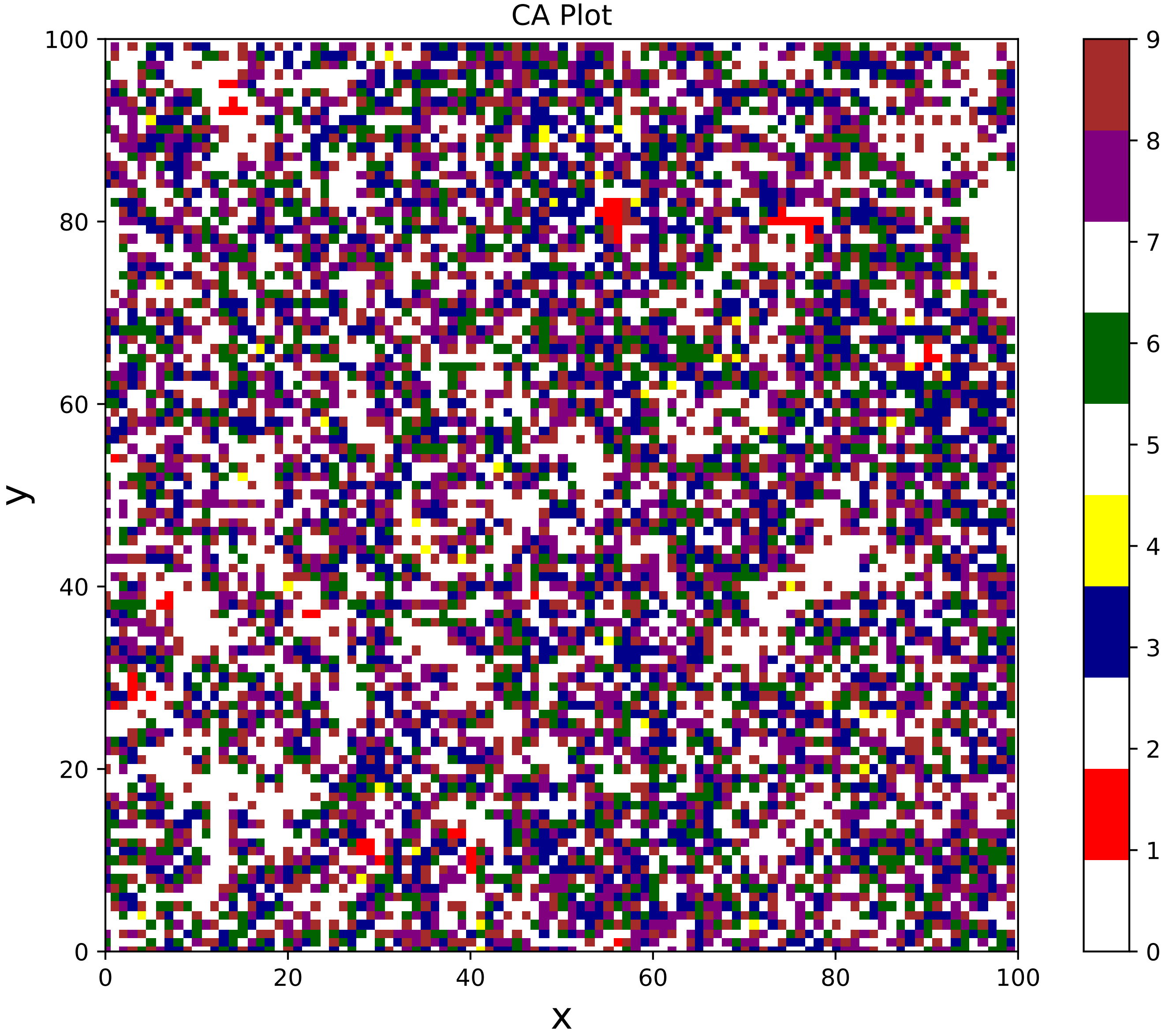

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

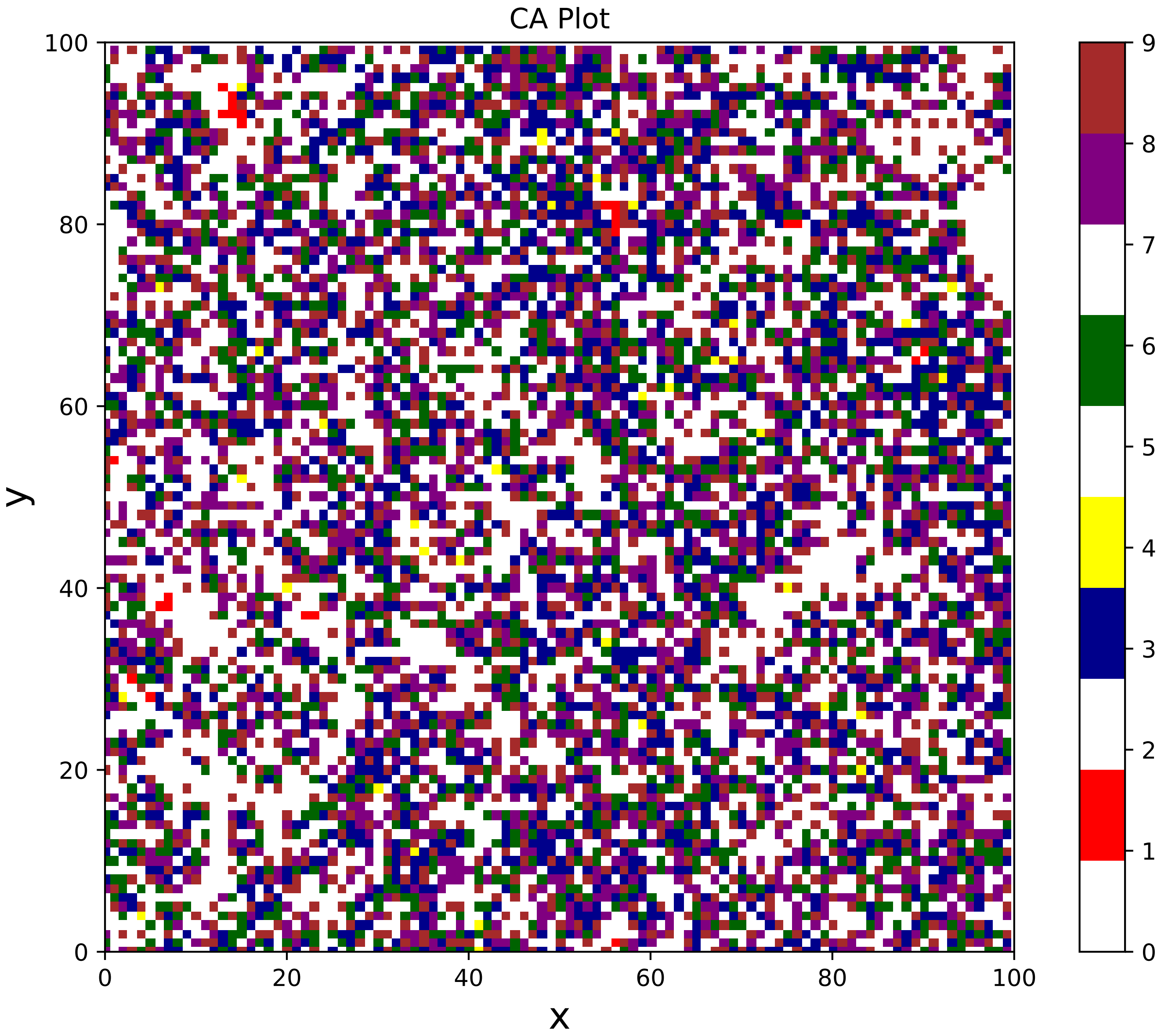

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

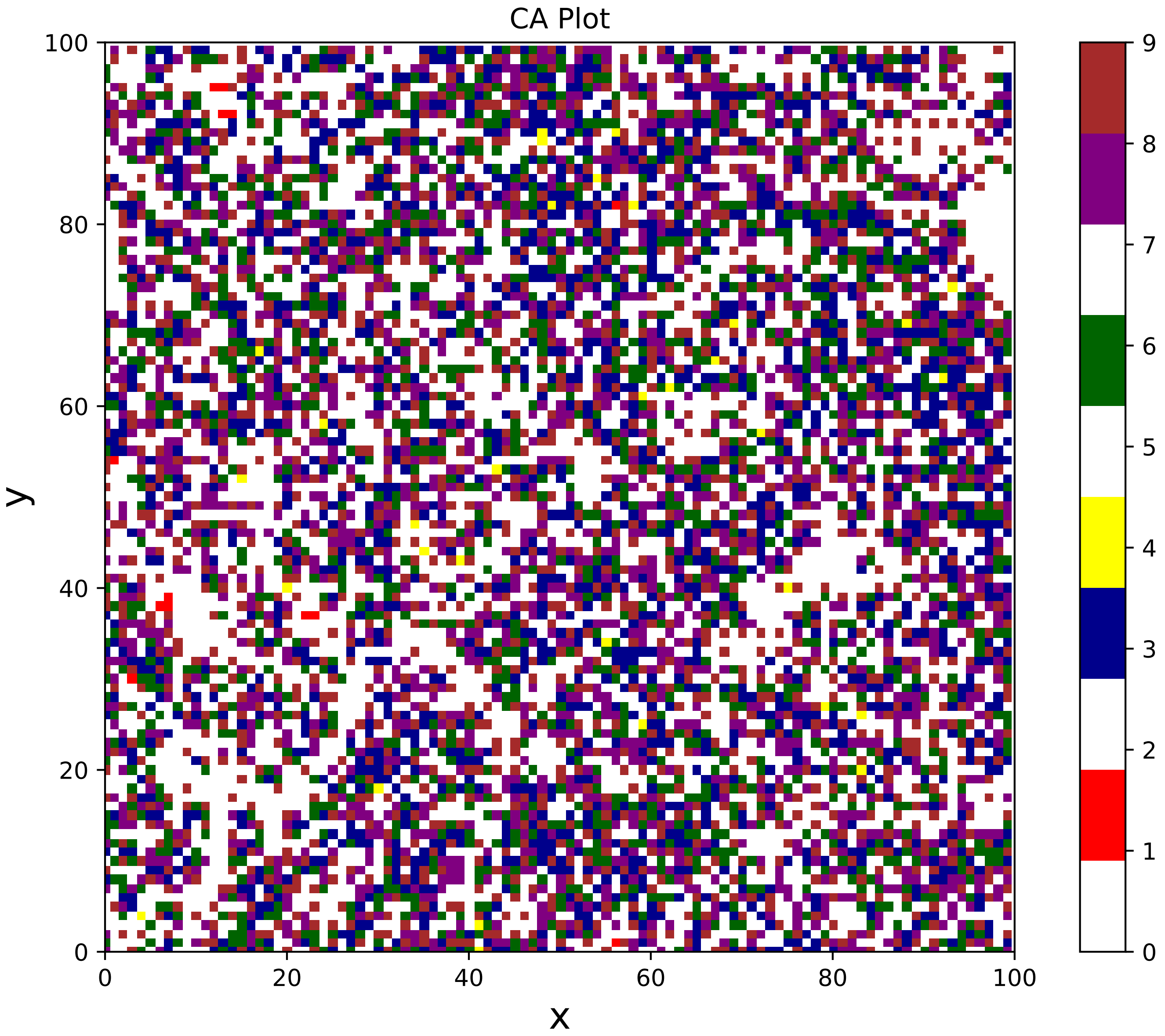

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

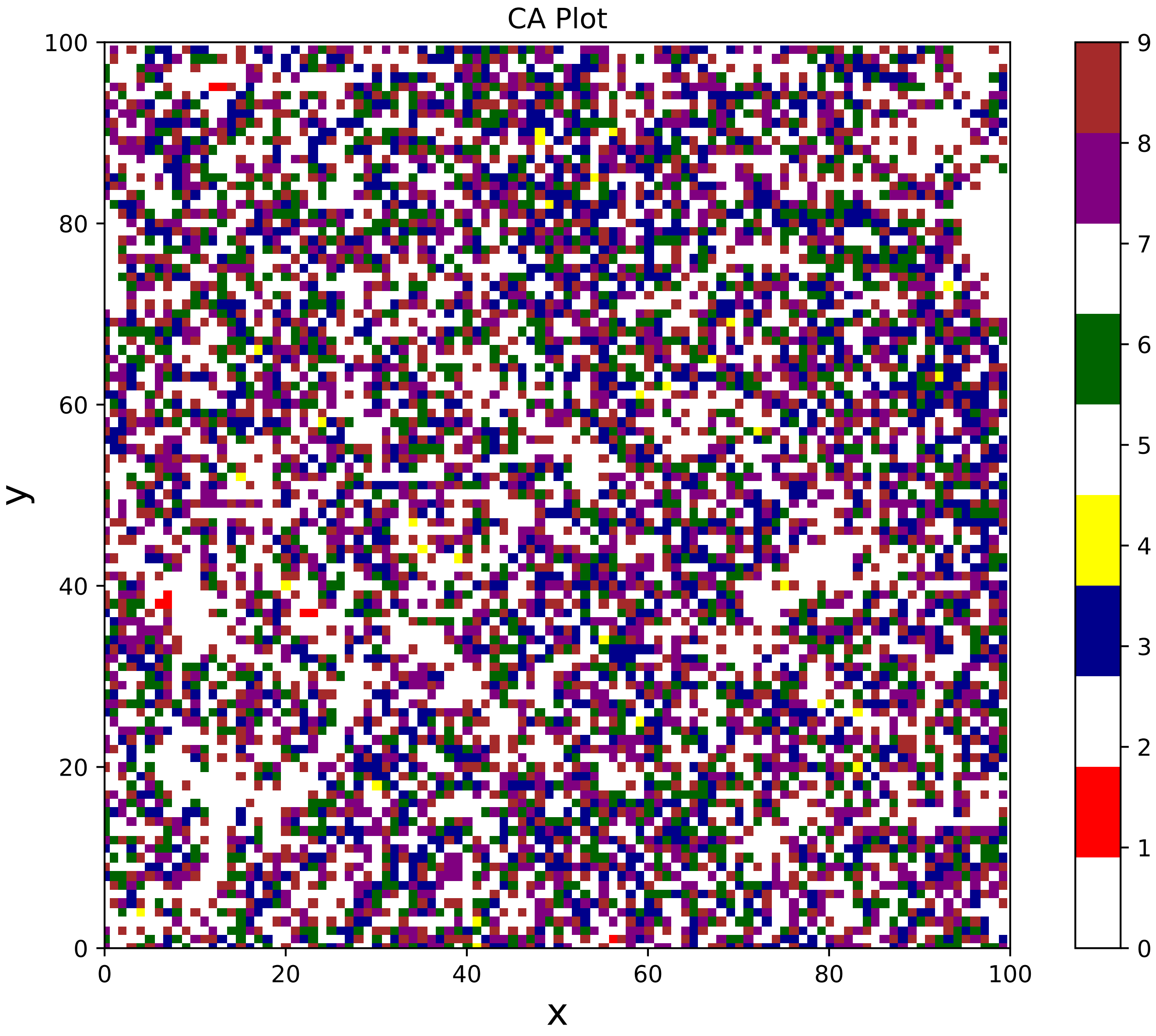

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

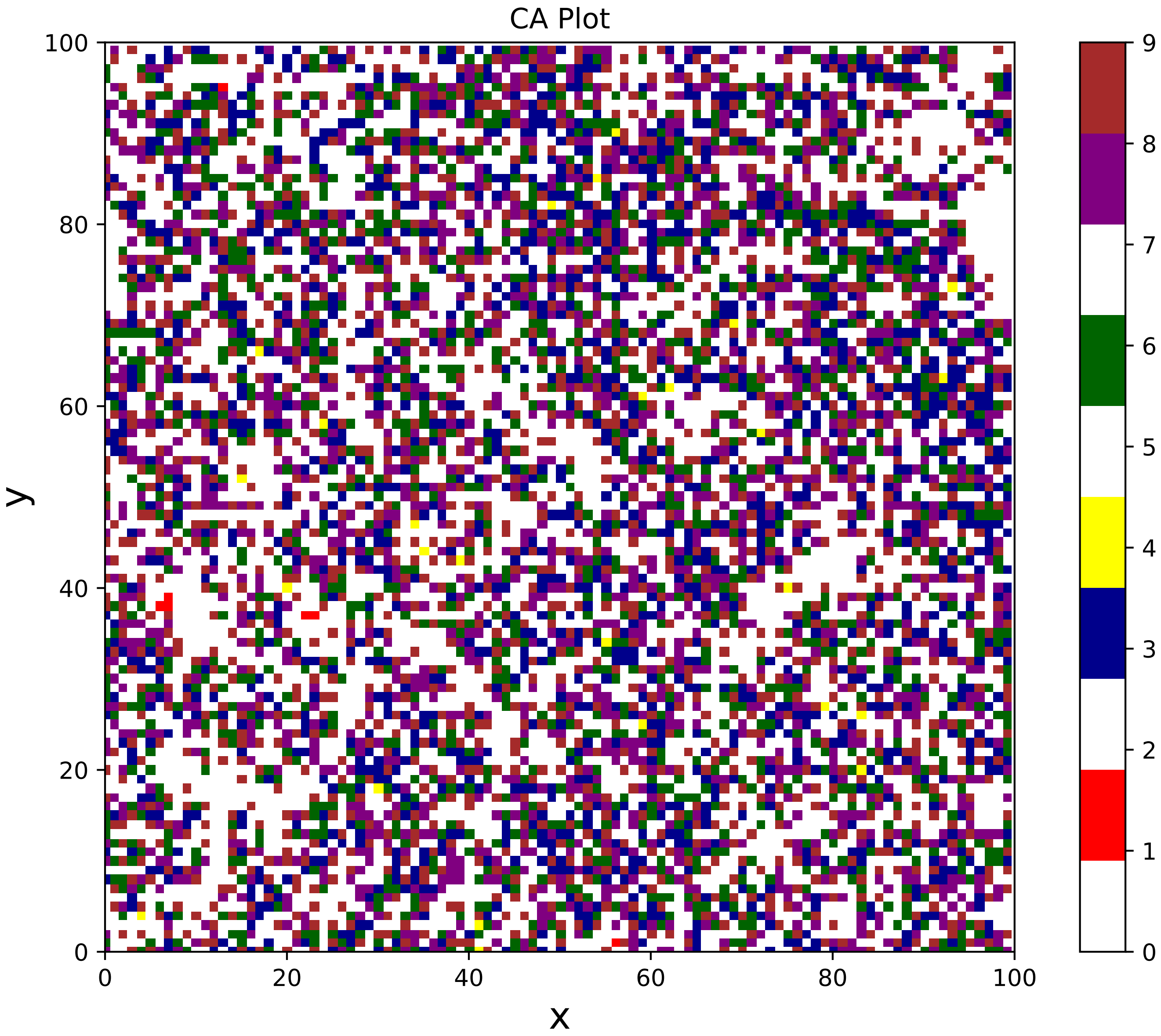

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

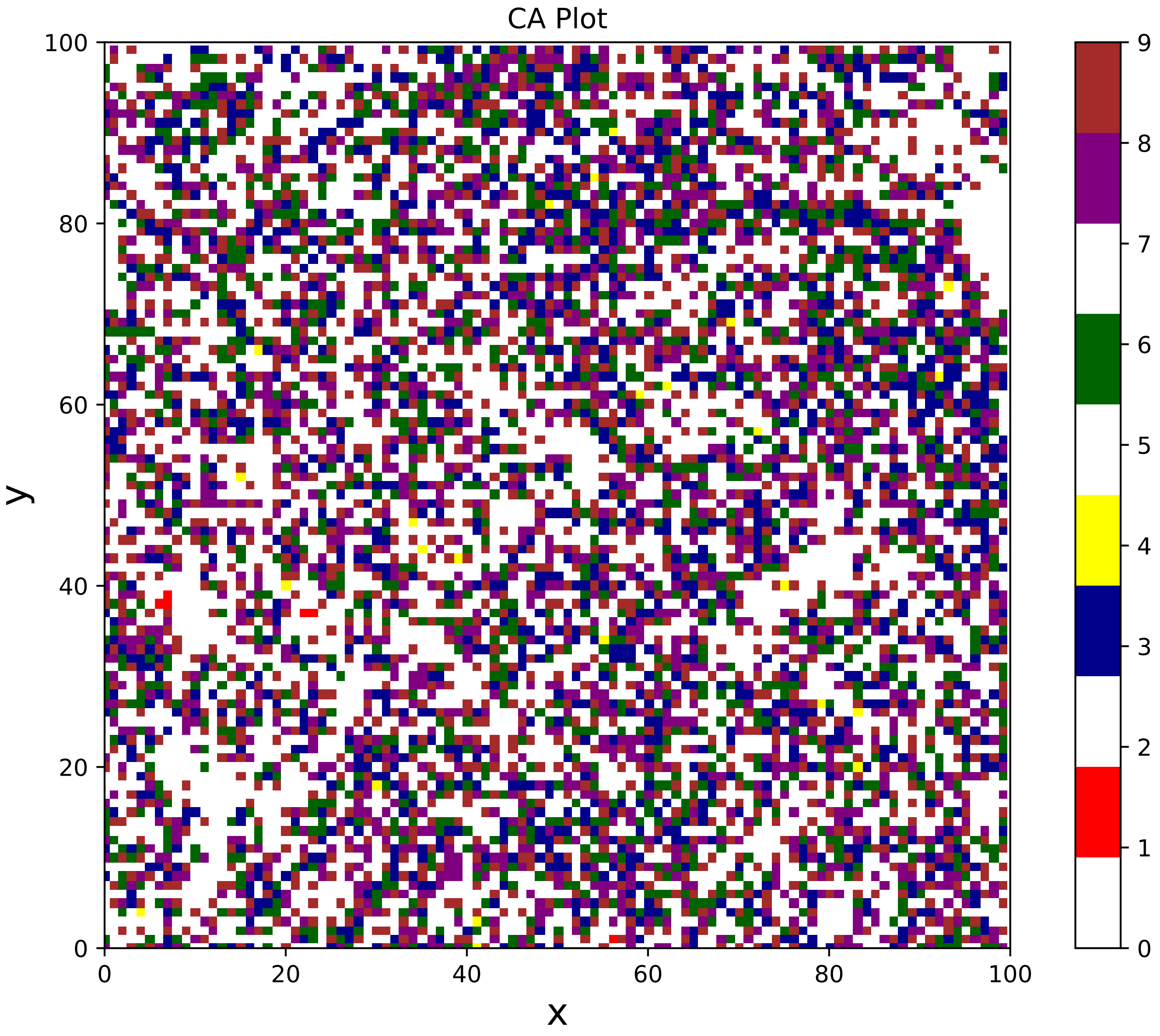

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

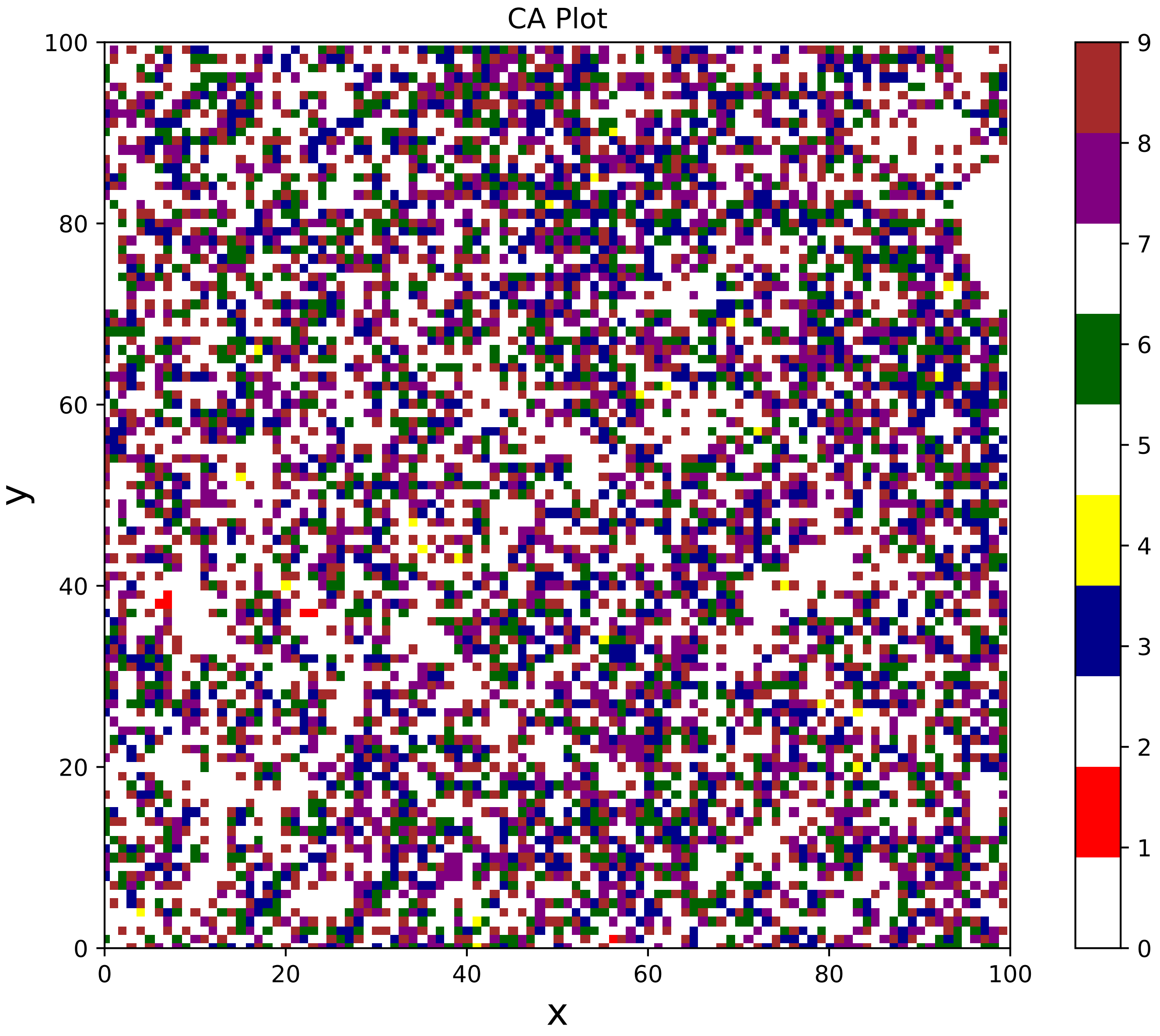

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

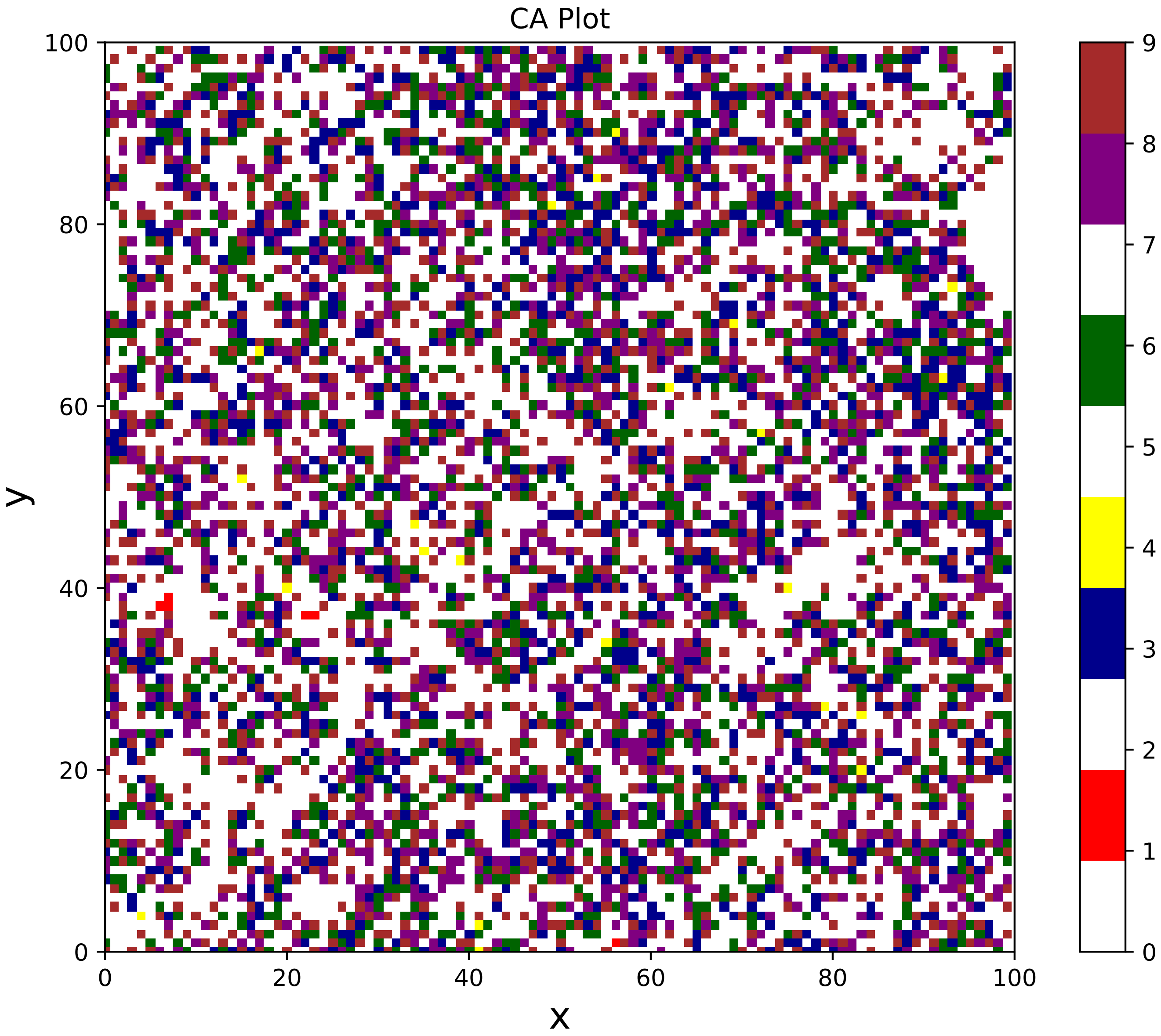

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

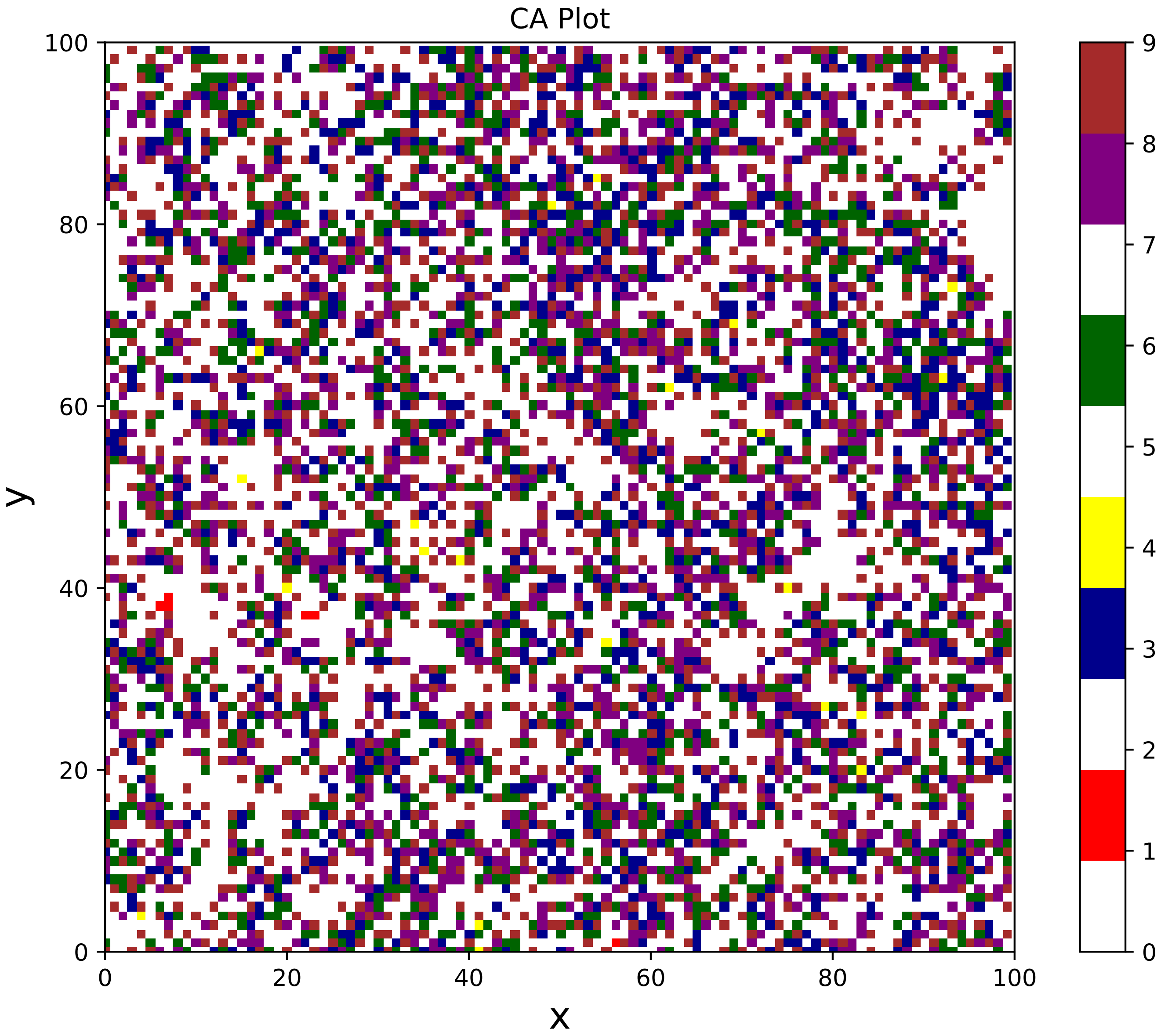

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

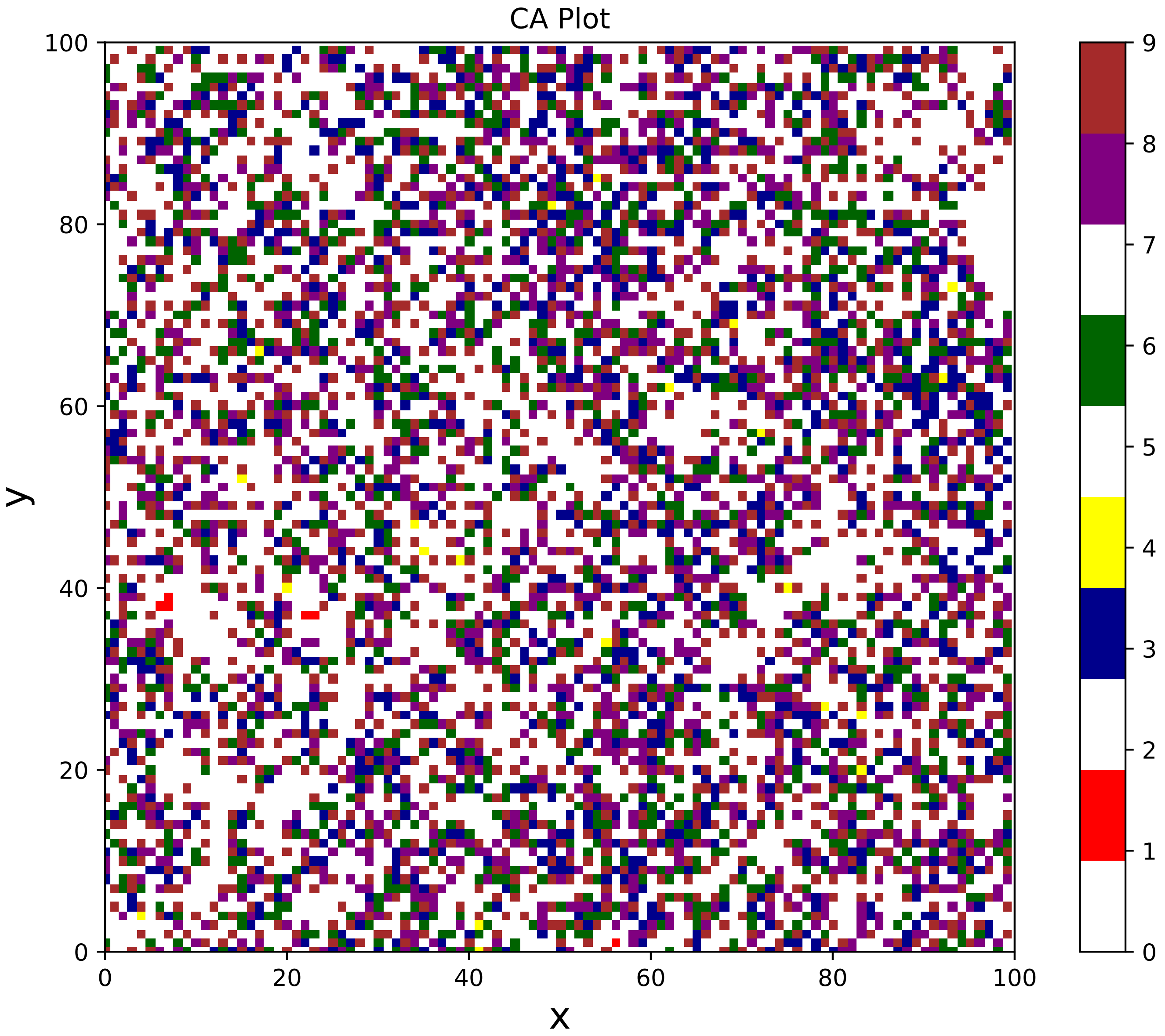

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

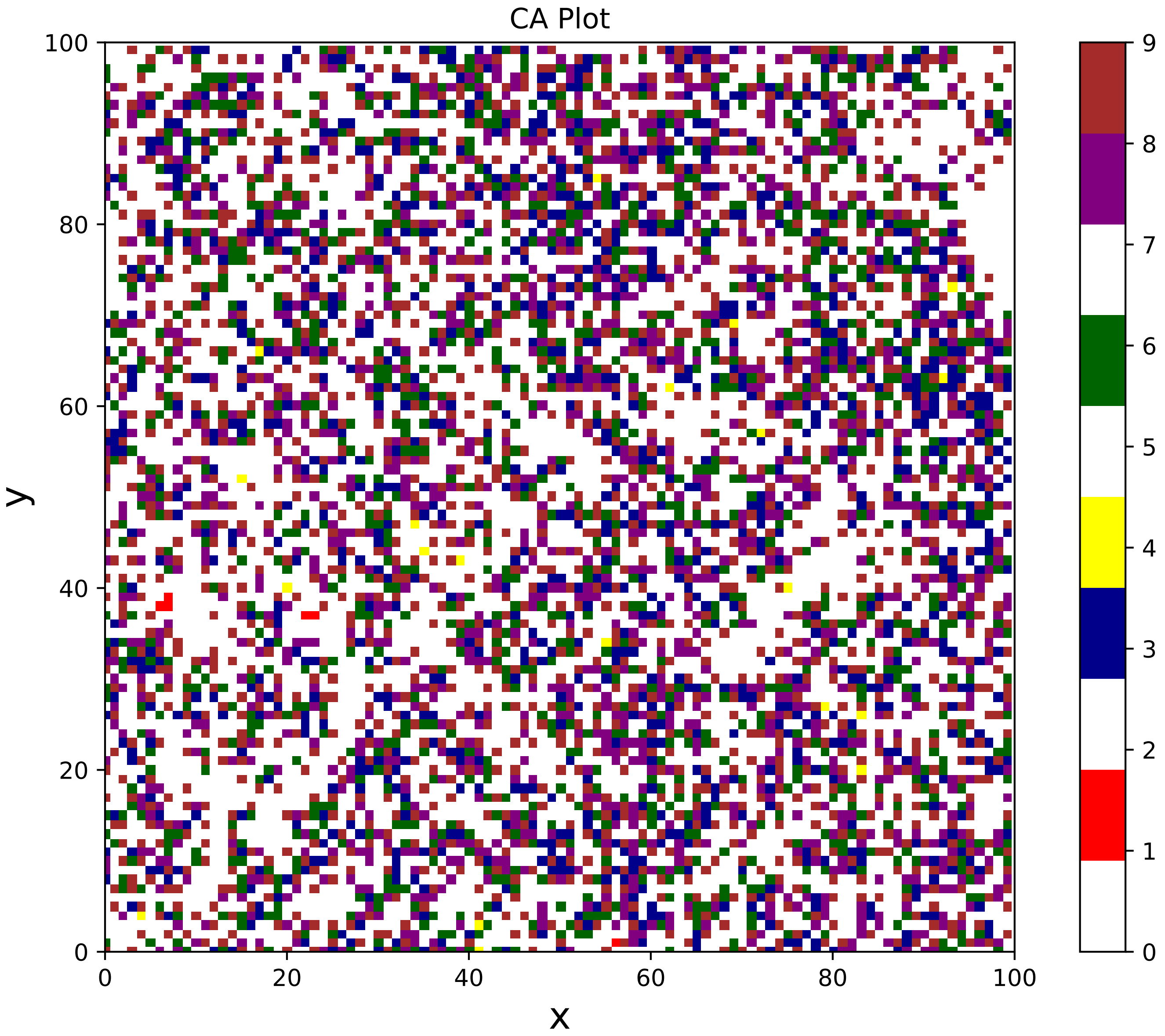

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

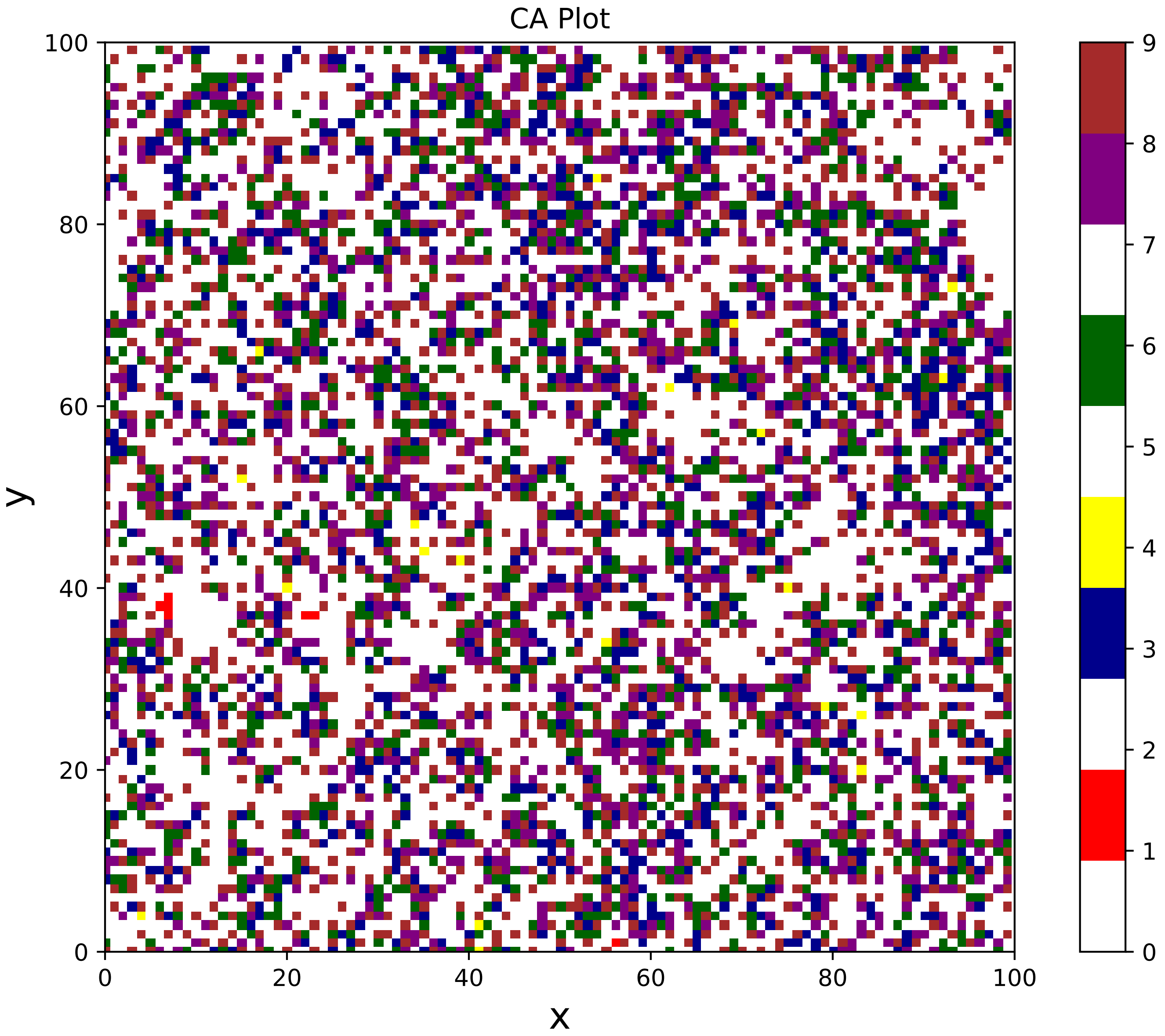

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

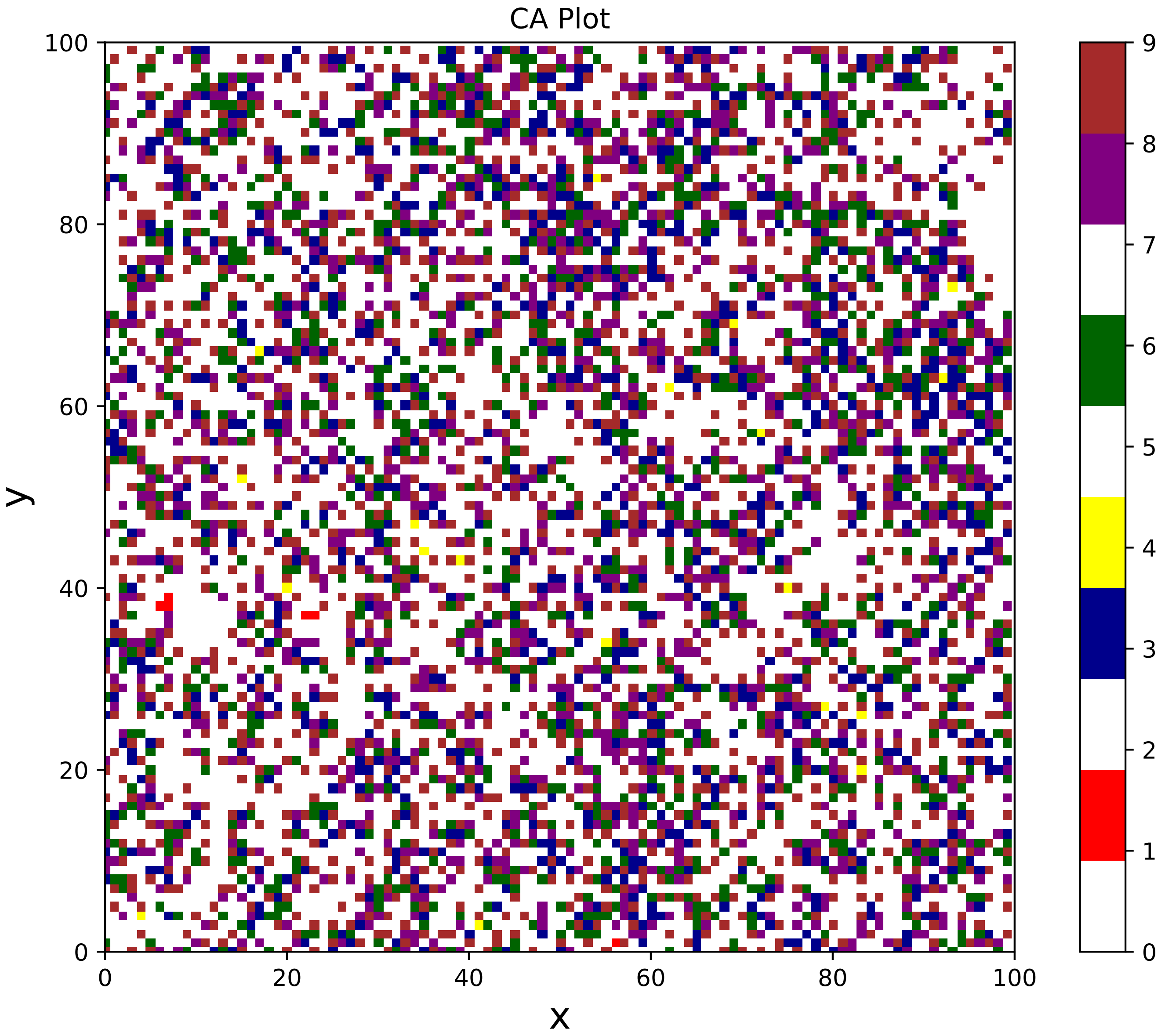

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

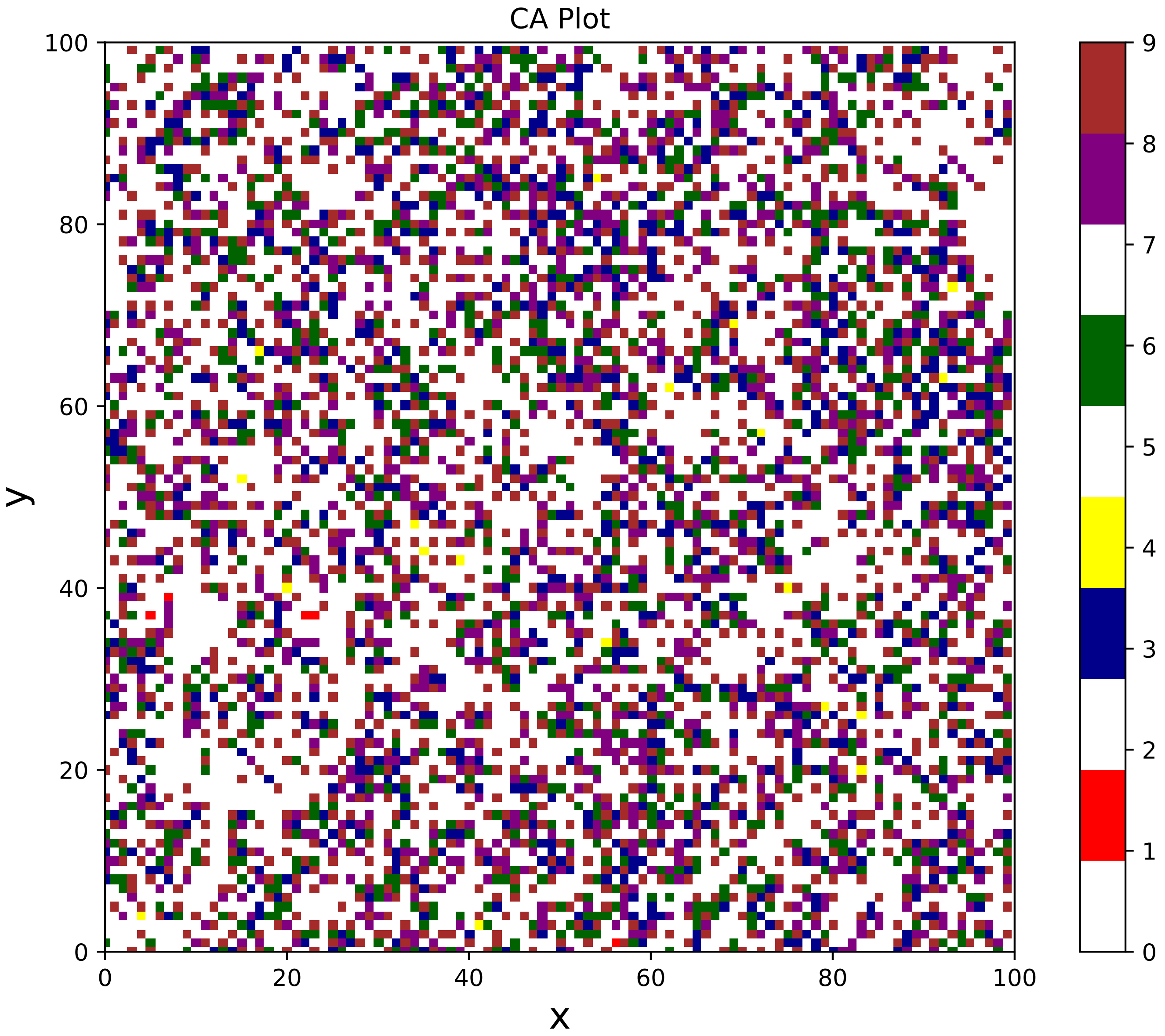

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

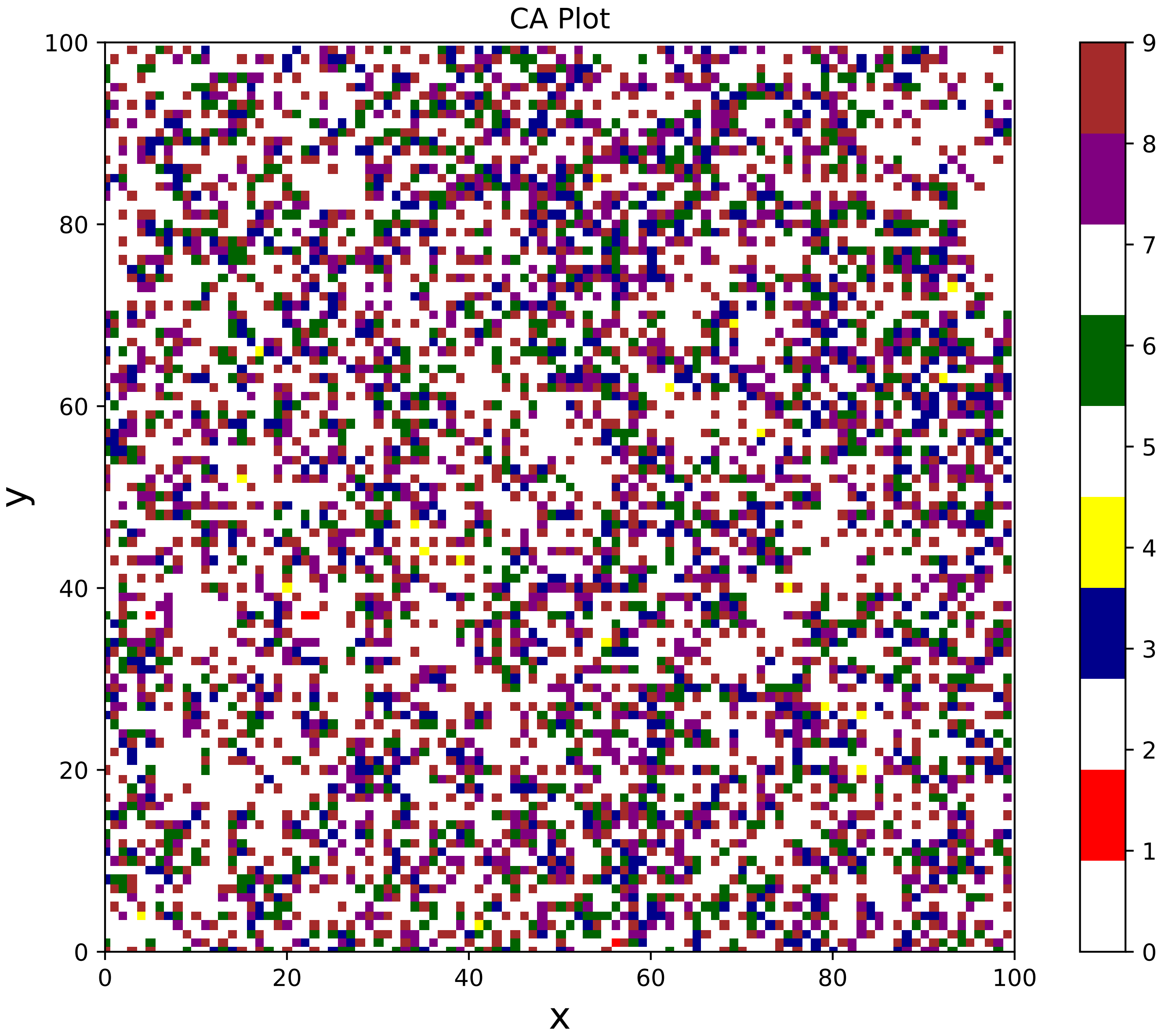

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

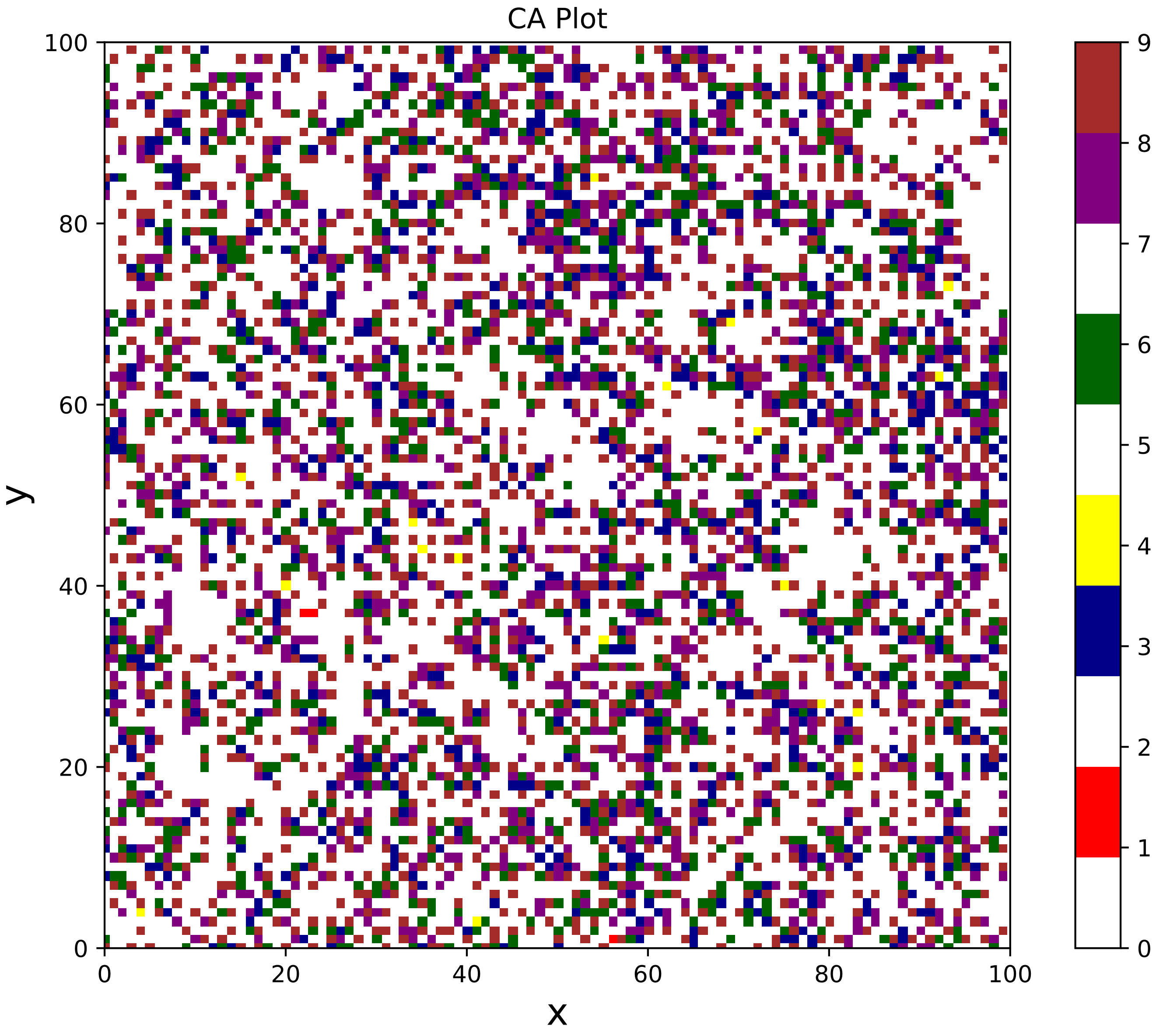

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

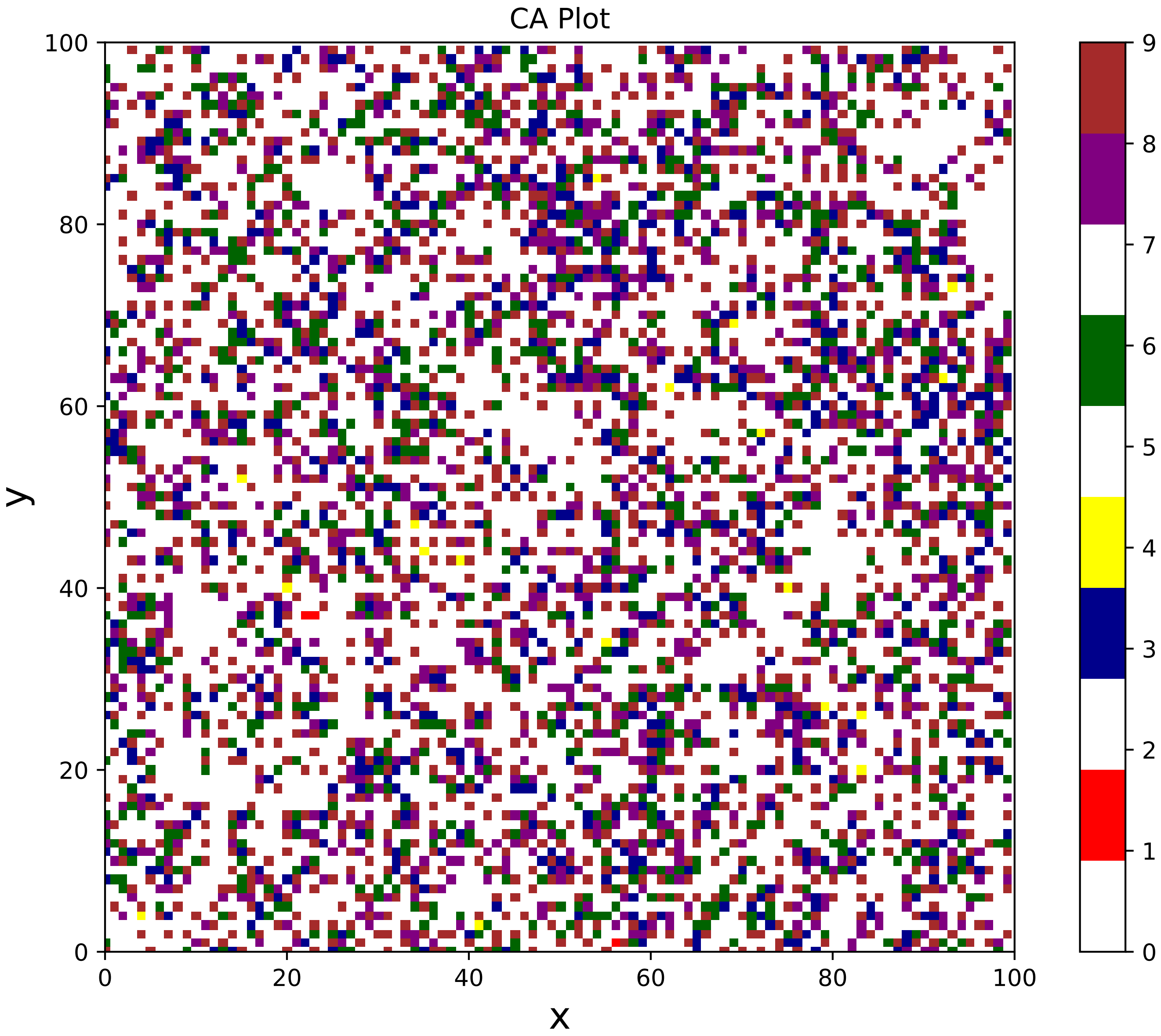

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

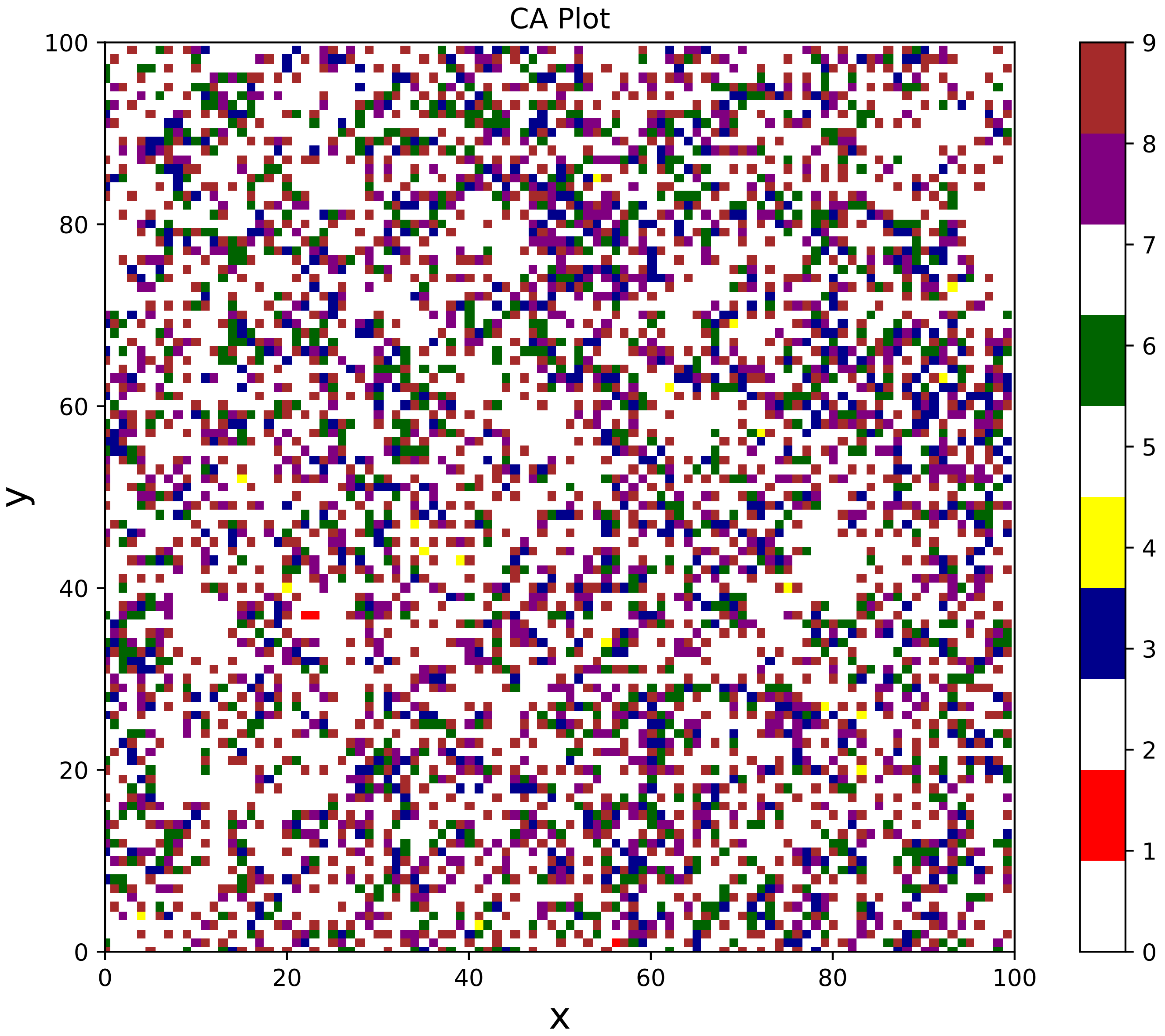

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

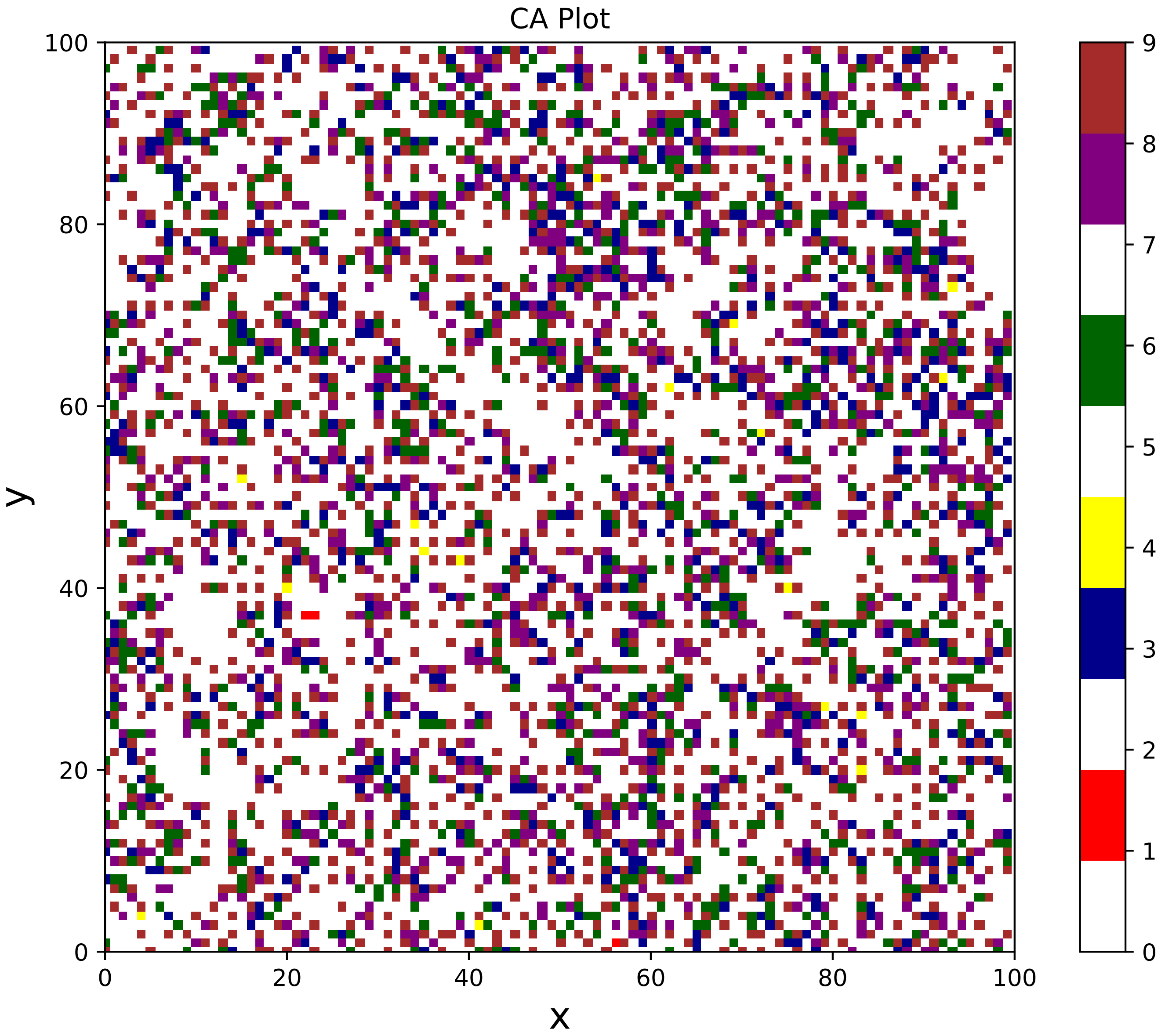

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

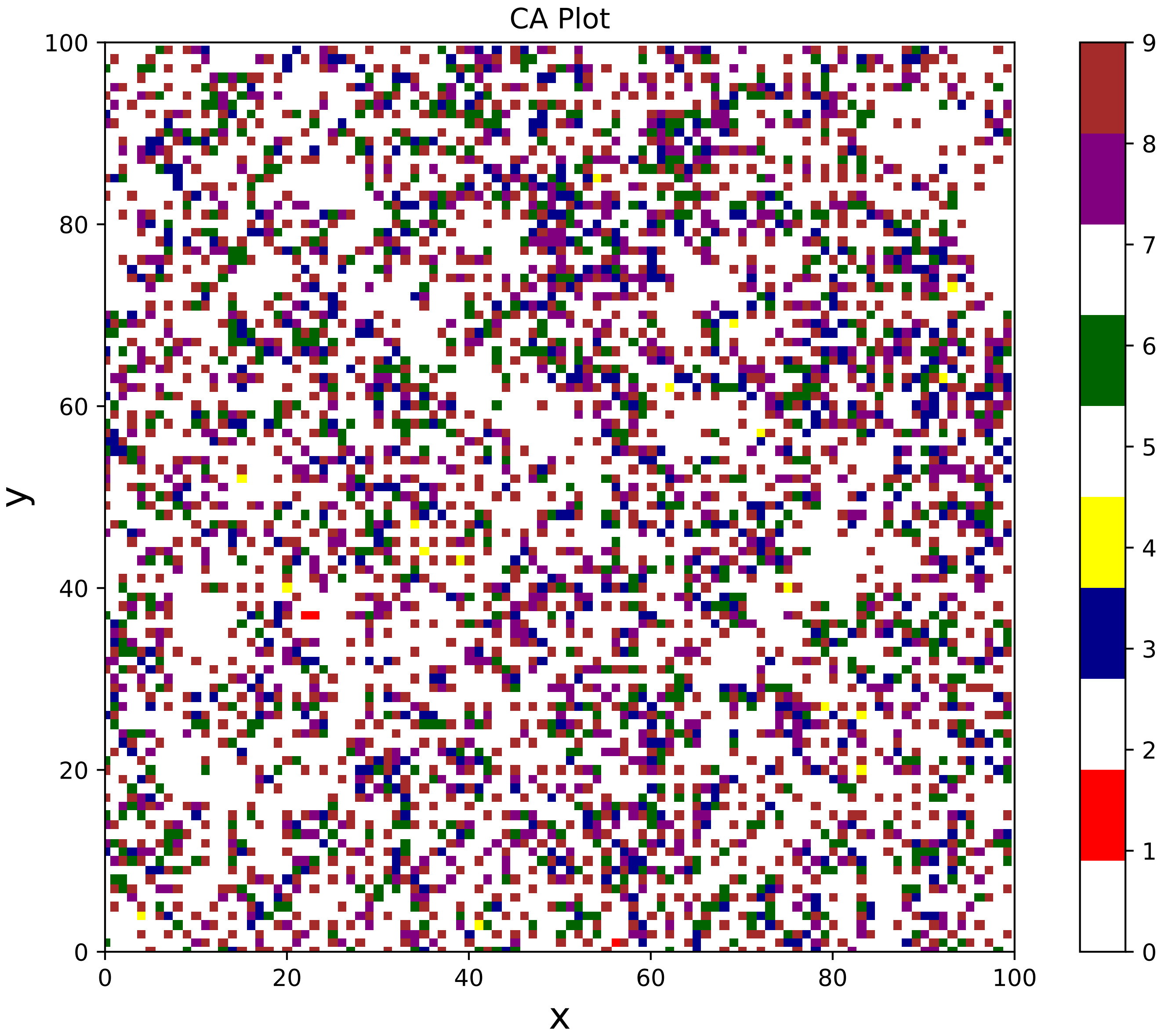

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

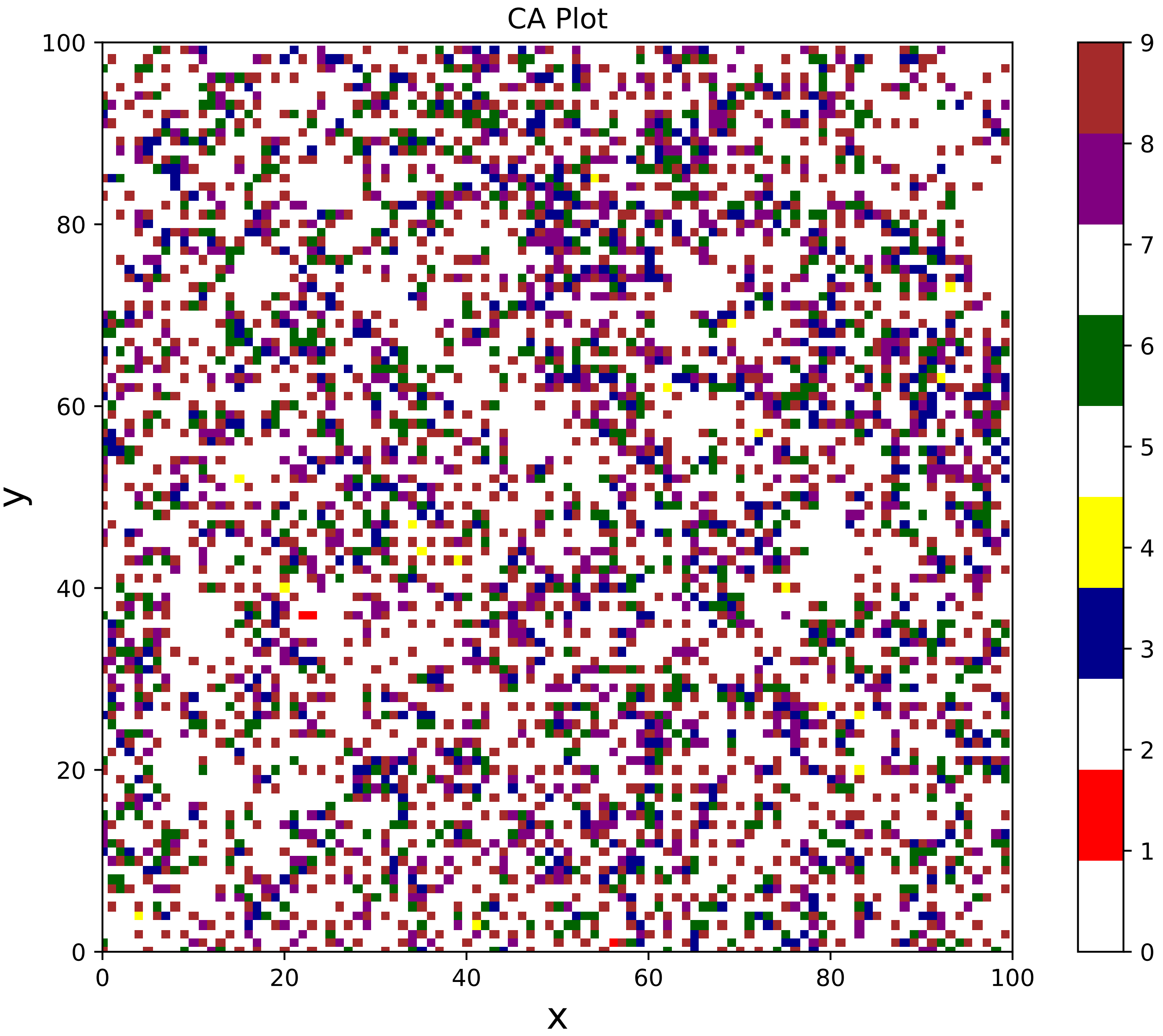

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

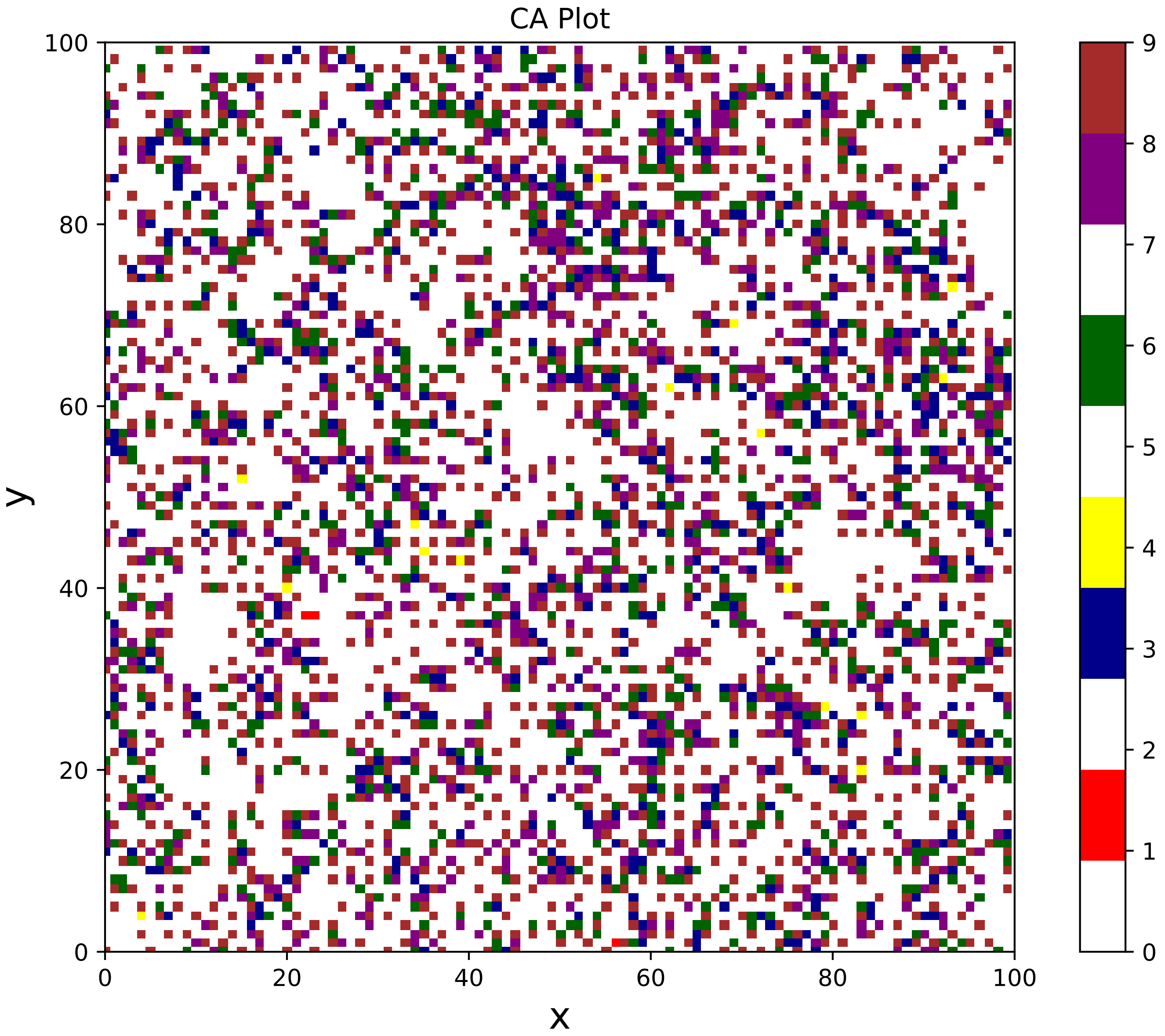

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

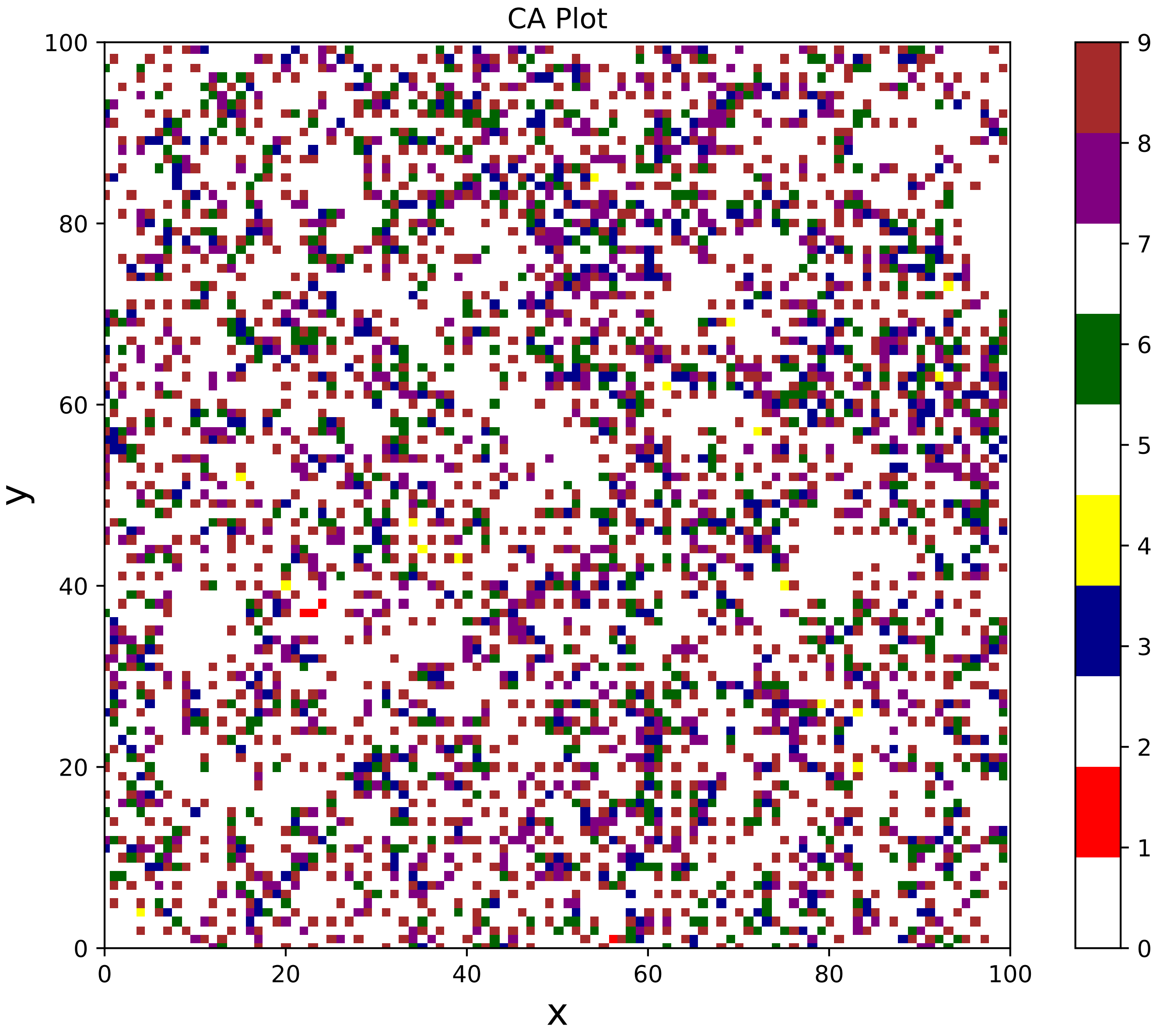

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

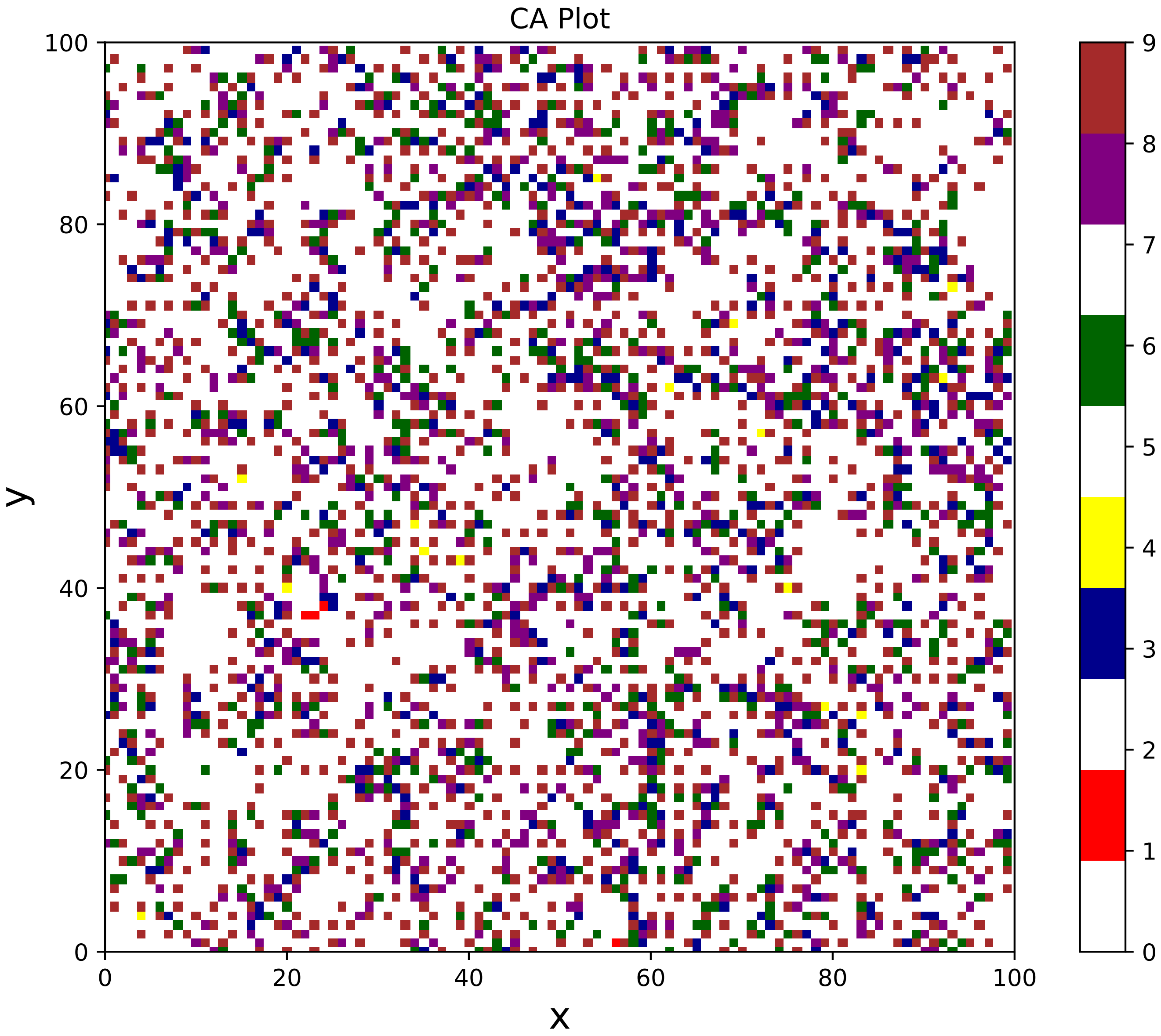

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

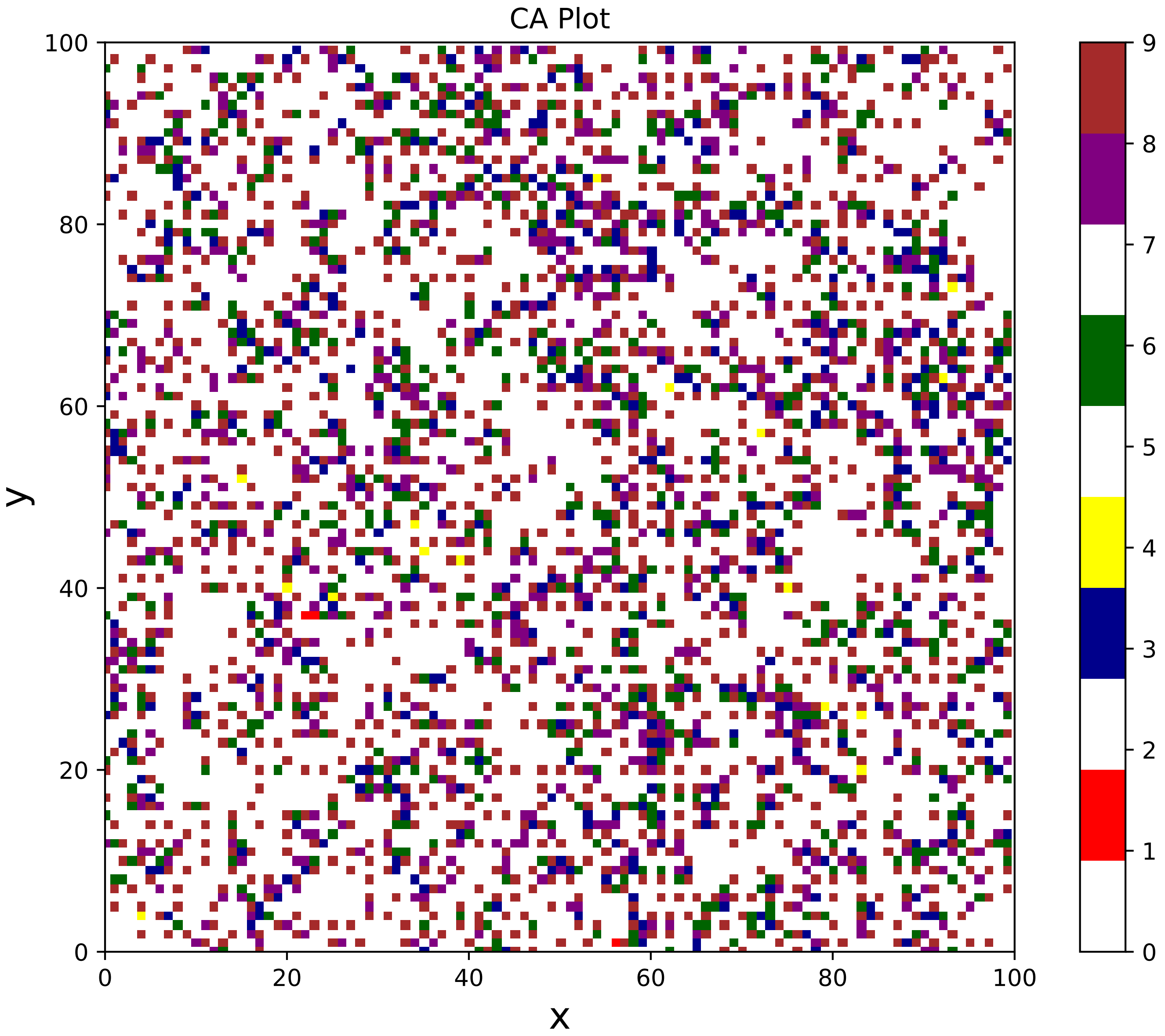

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

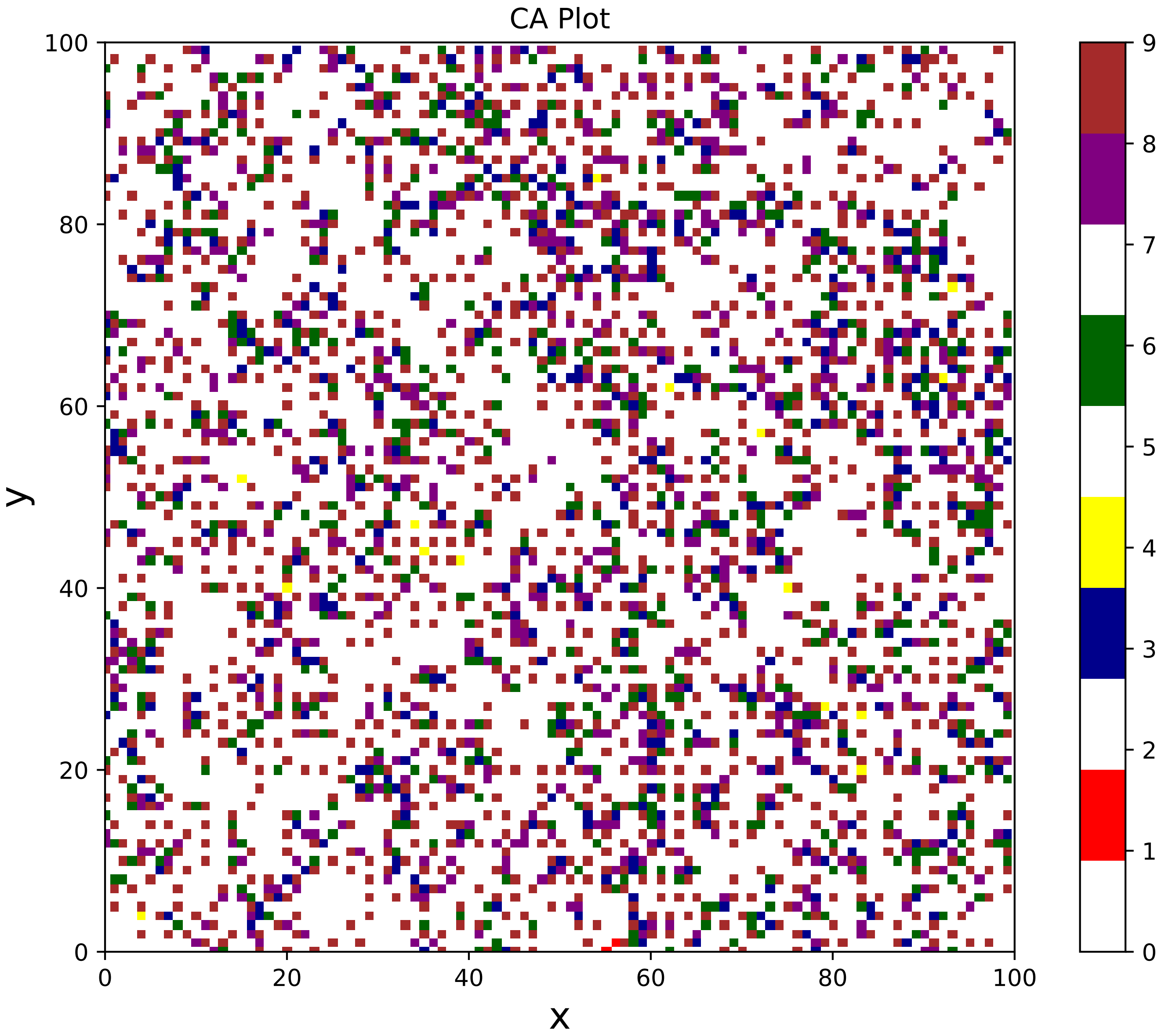

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

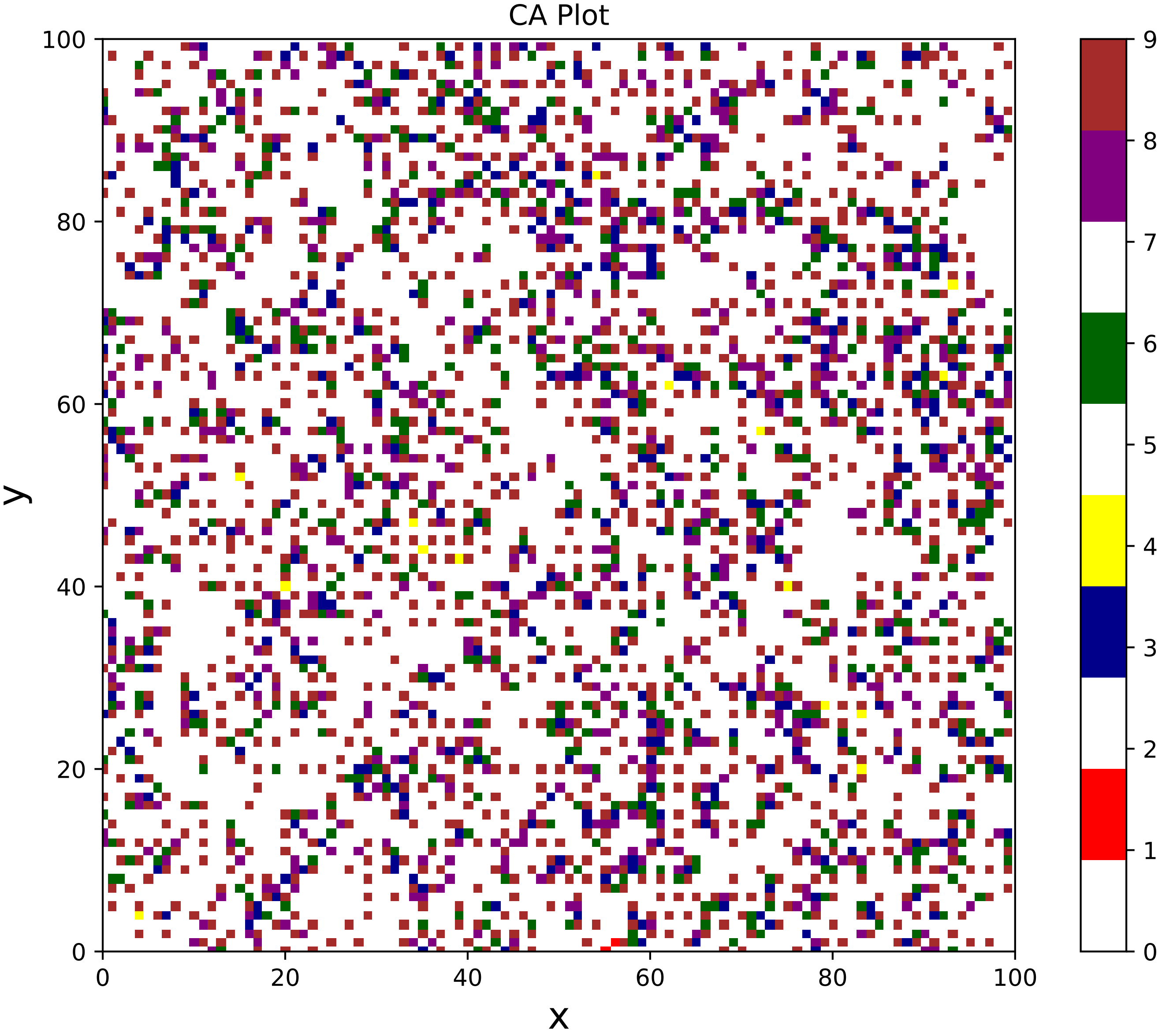

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

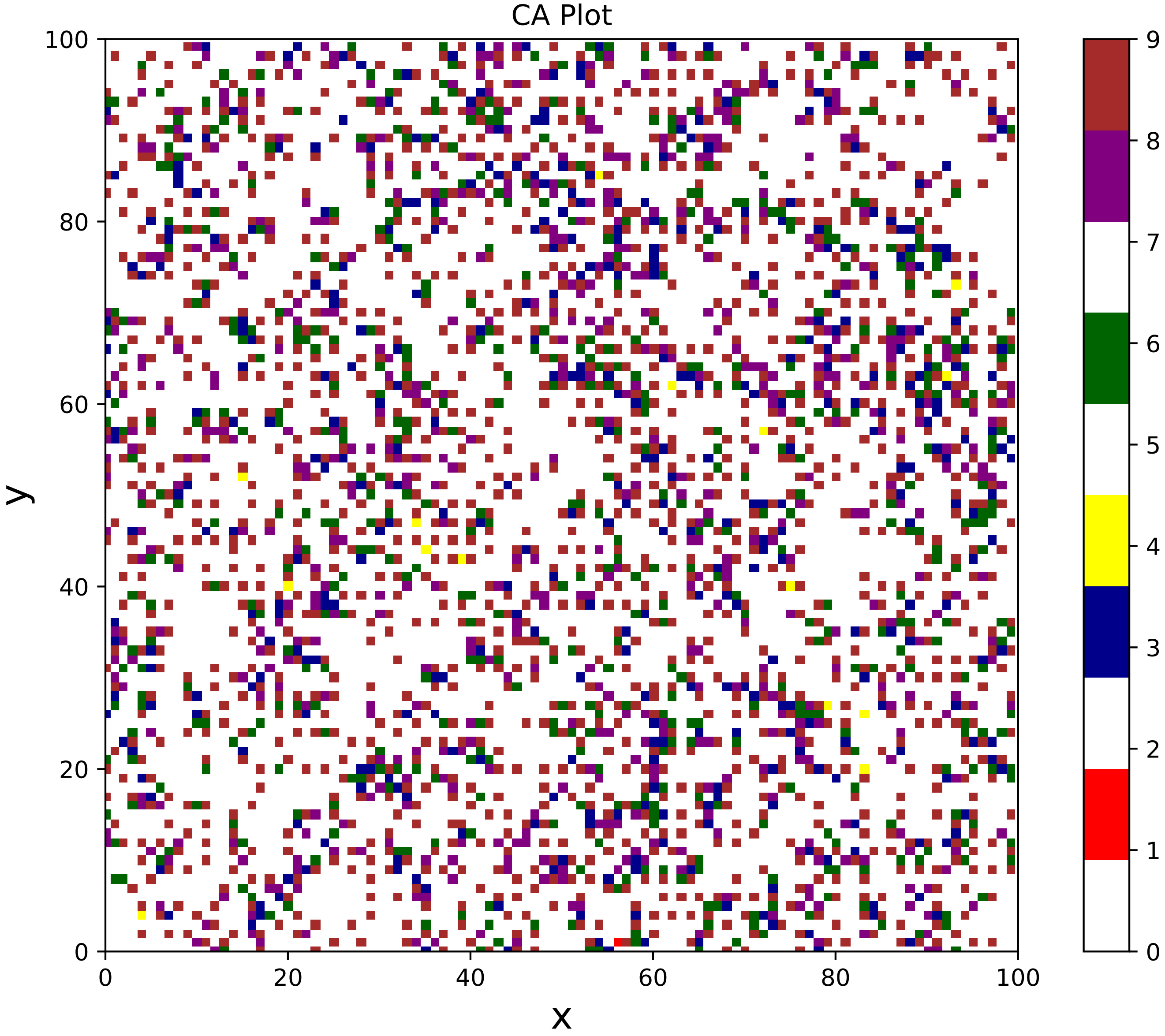

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

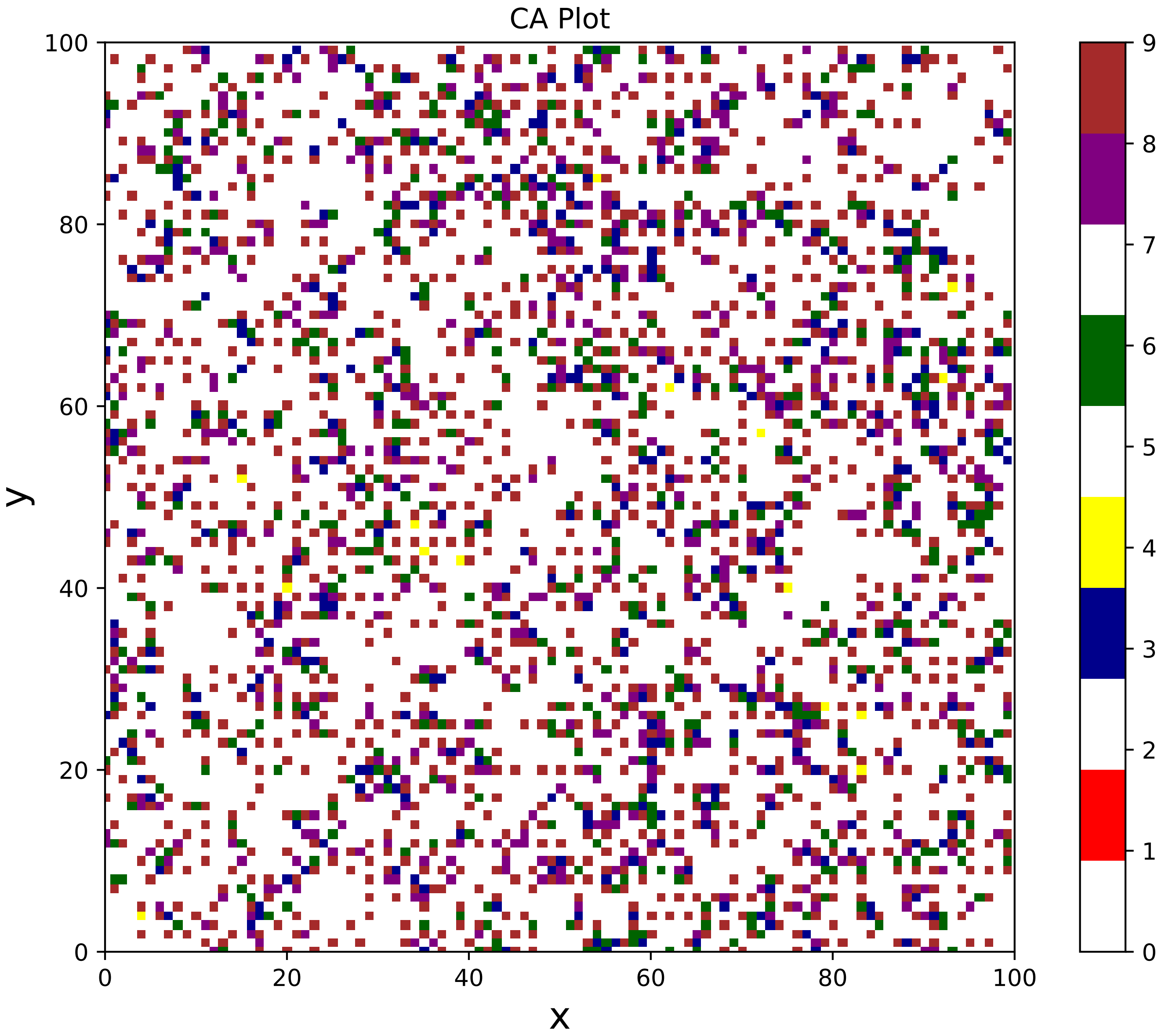

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

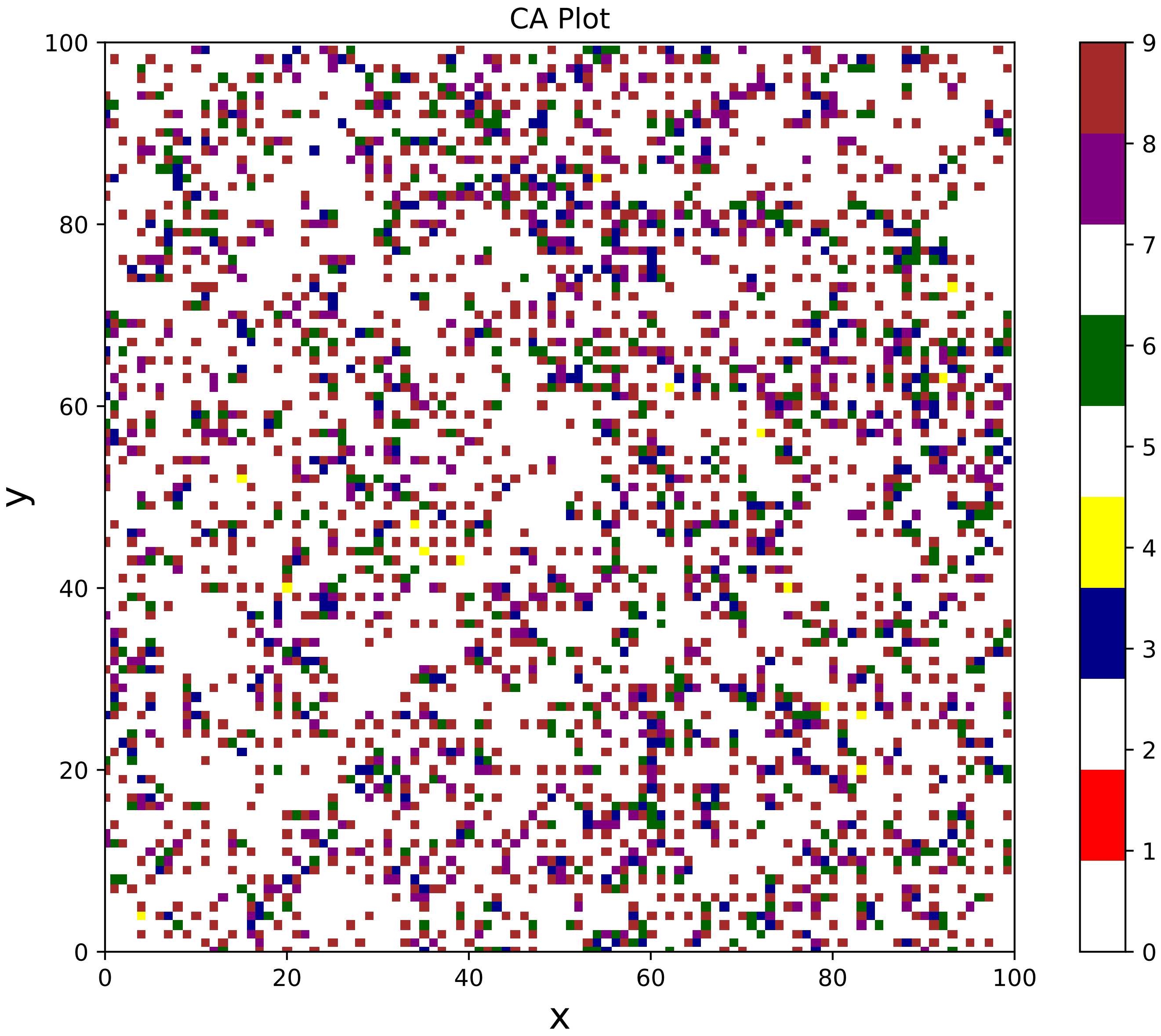

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

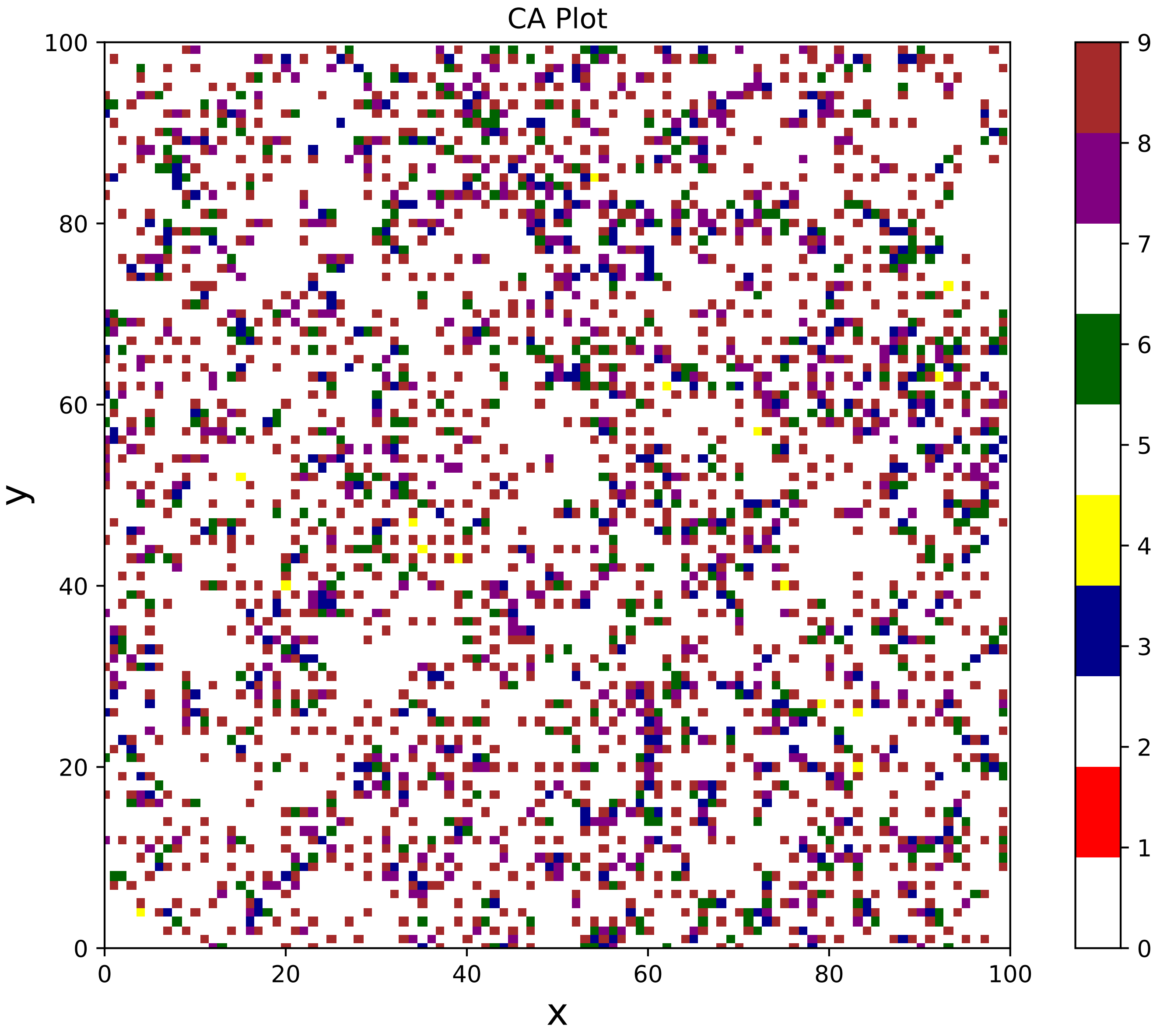

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

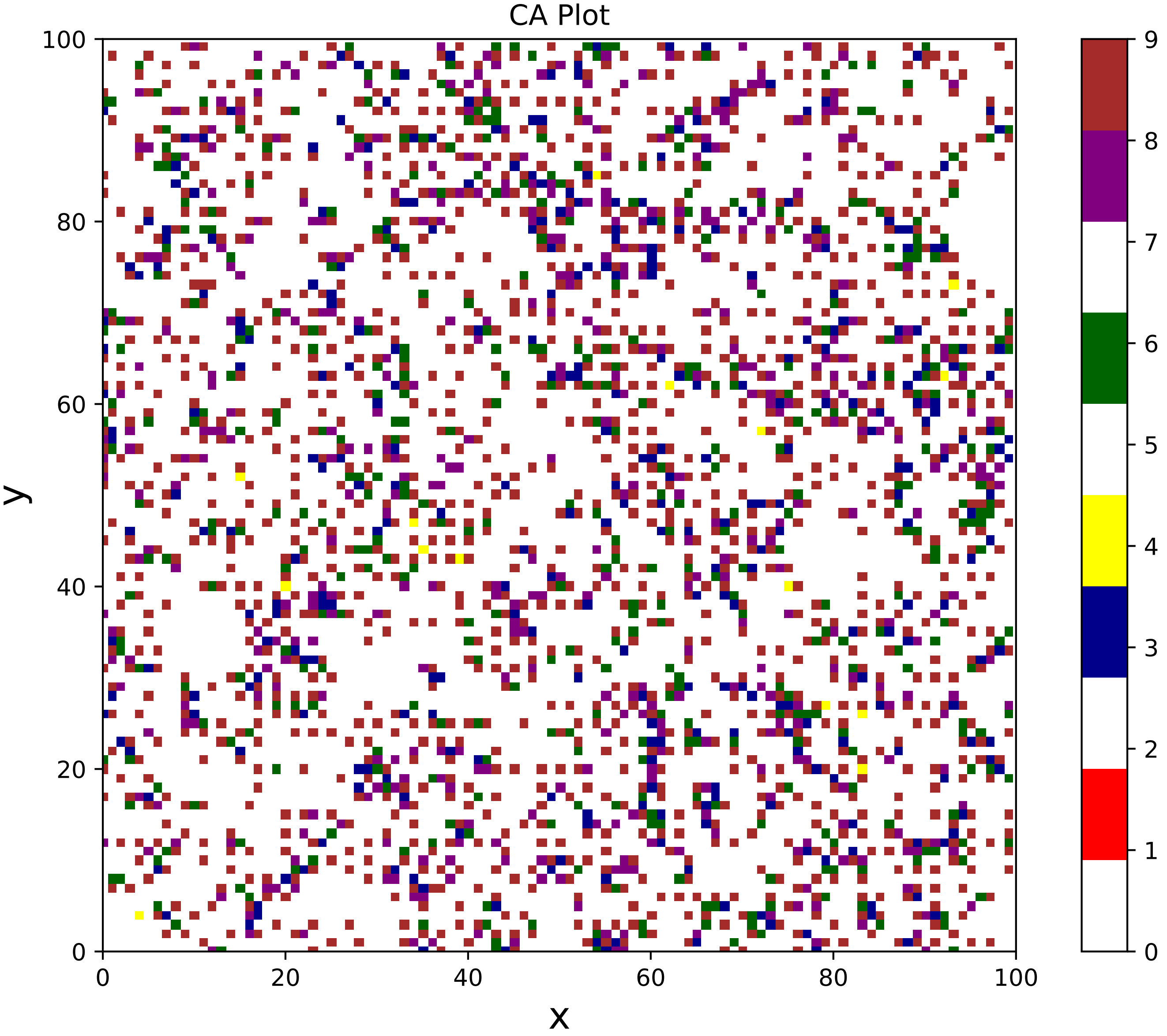

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

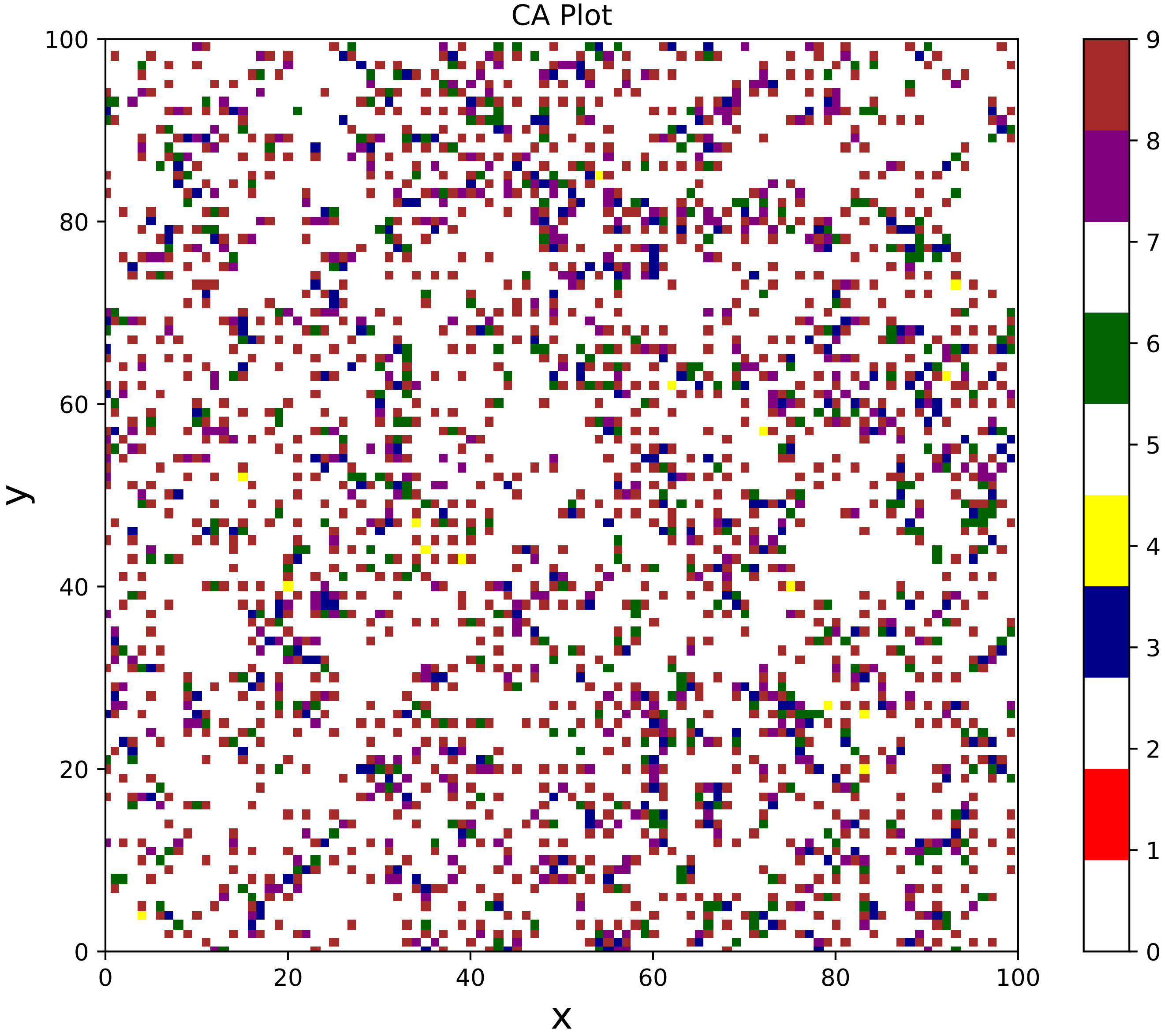

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

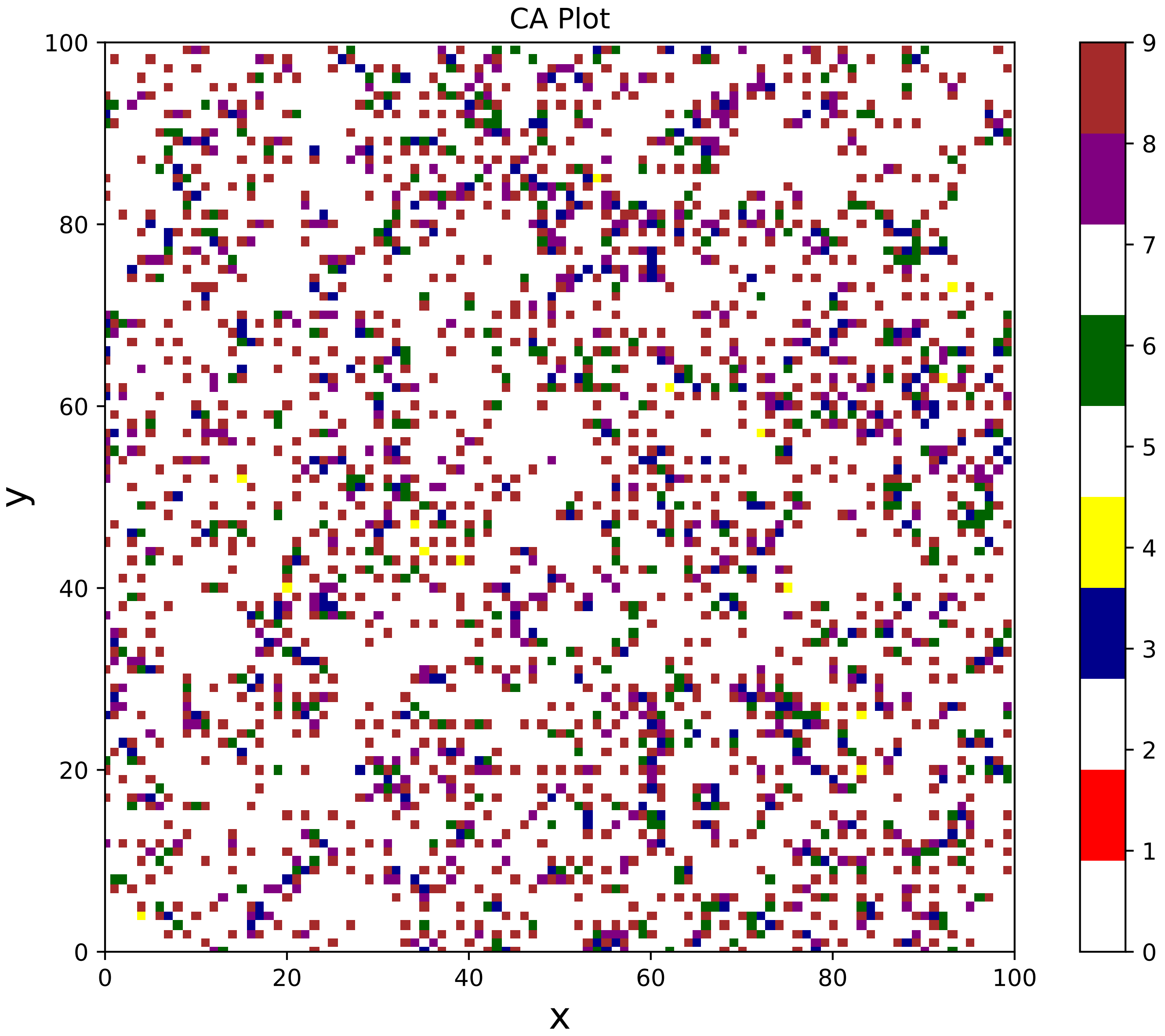

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

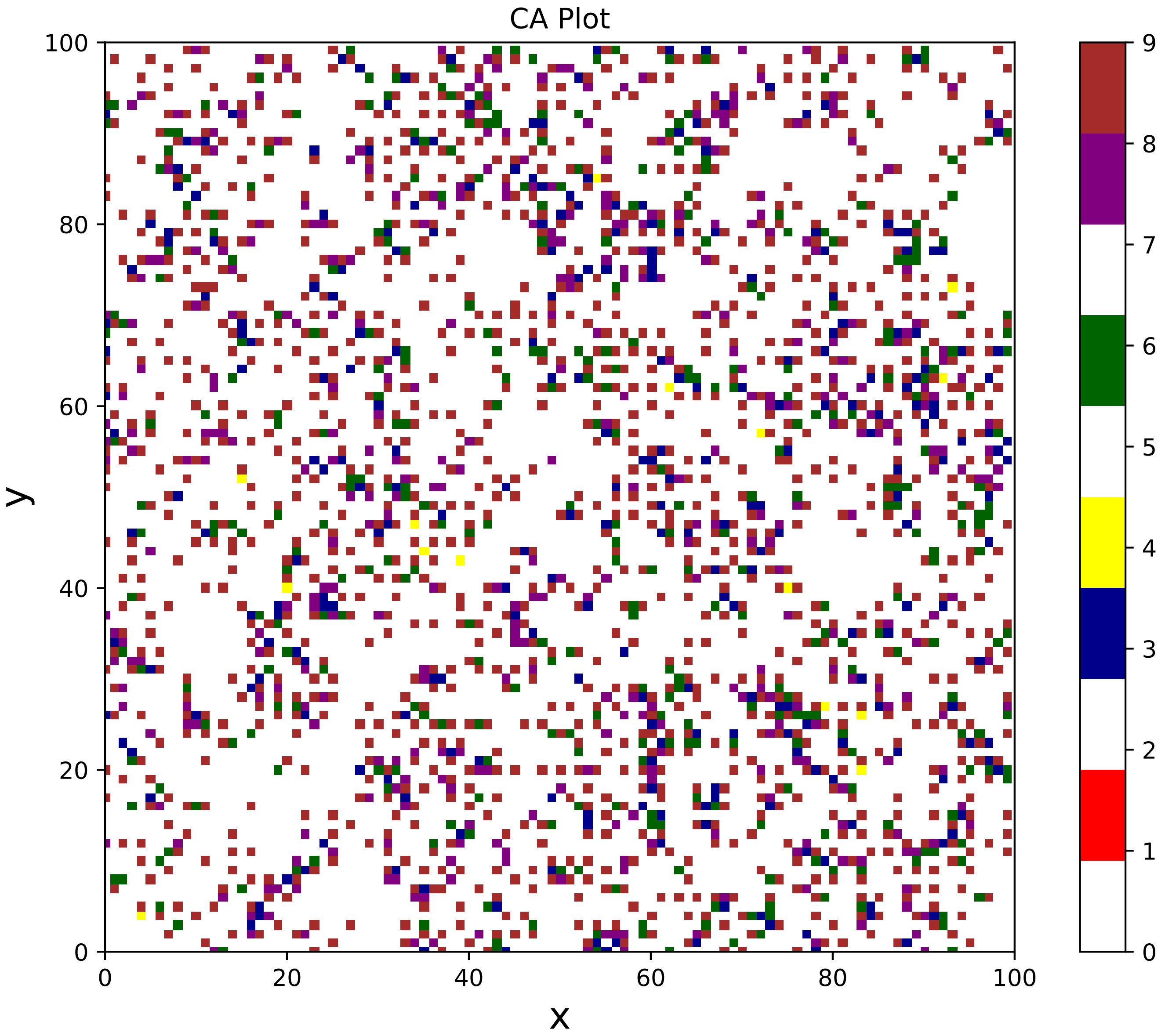

CA Plot
y
100
80
60
40
20
0
x
0
20
40
60
80
100
9
8
7
6
5
4
3
2
1
0

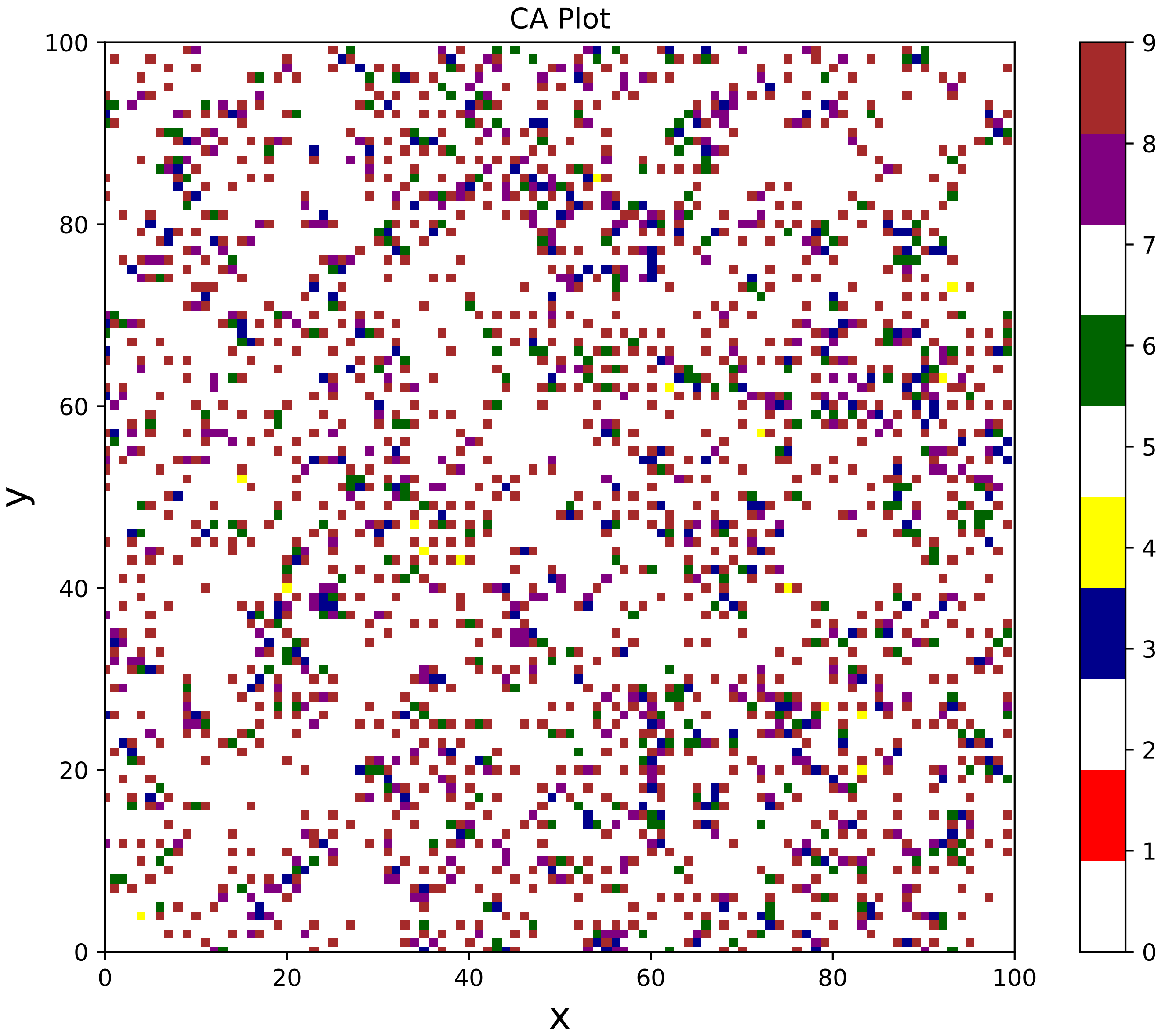

CA Plot
100
80
60
40
20
0
0
20
40
60
80
100
x
y
9
8
7
6
5
4
3
2
1
0

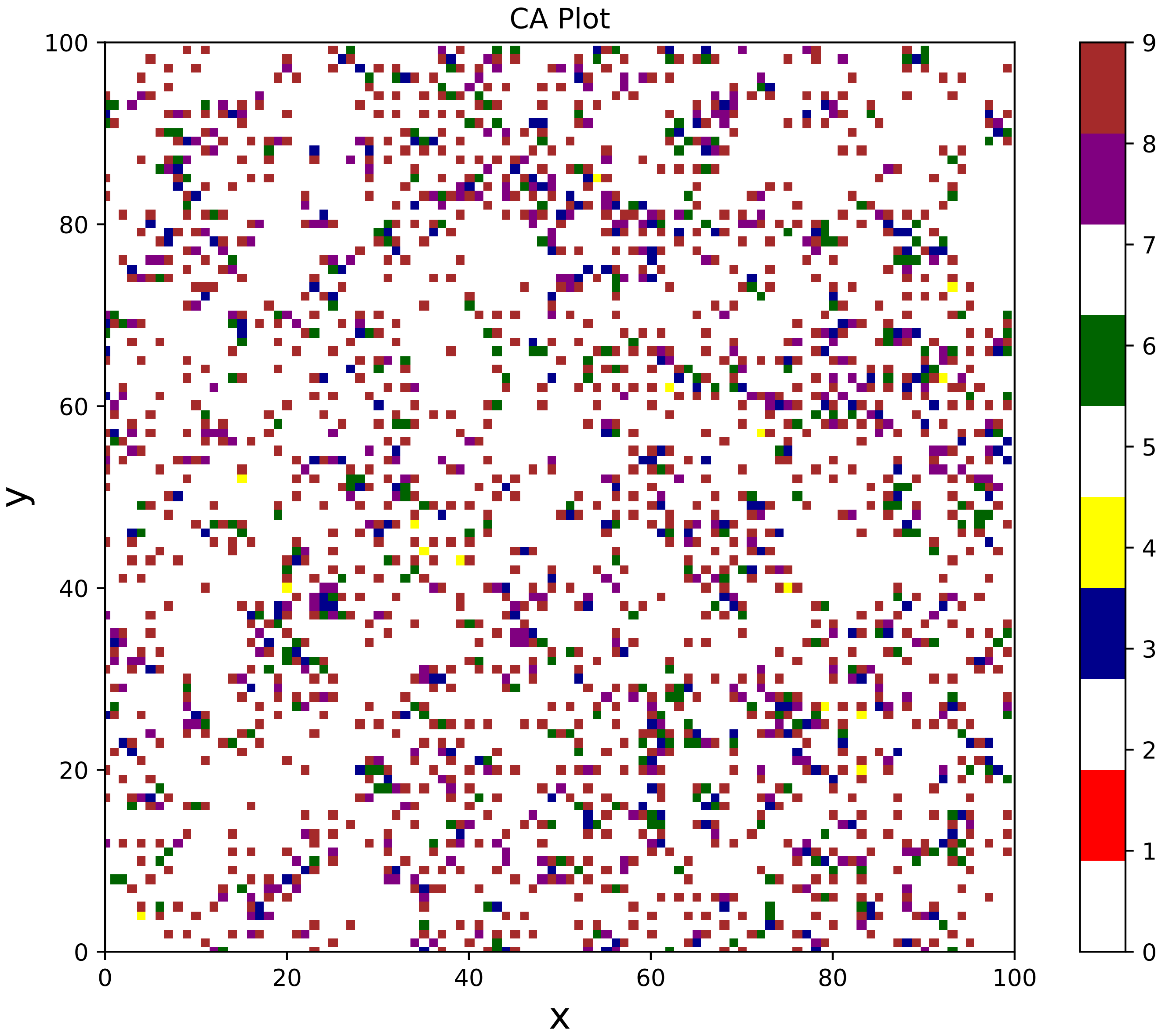

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

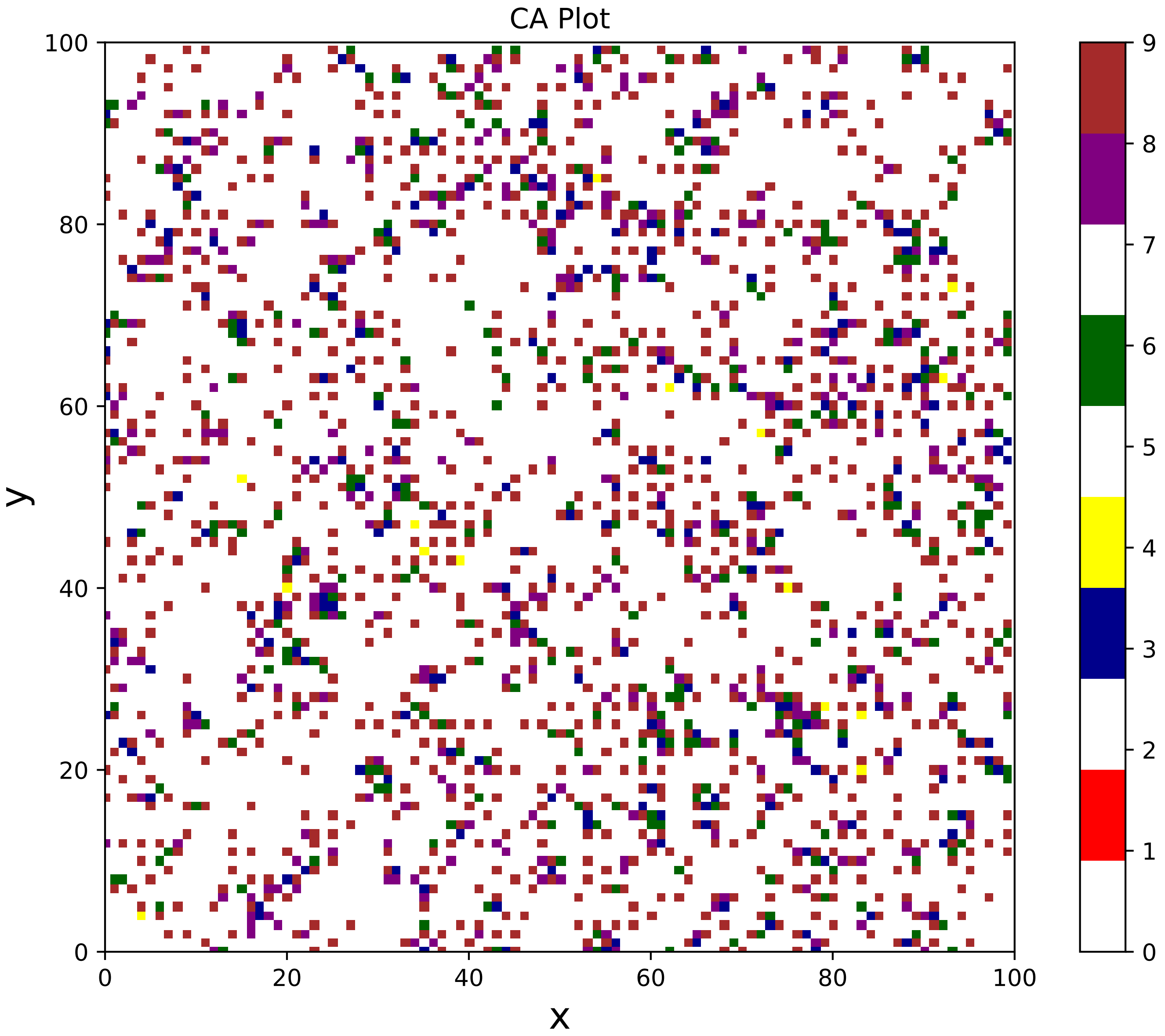

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

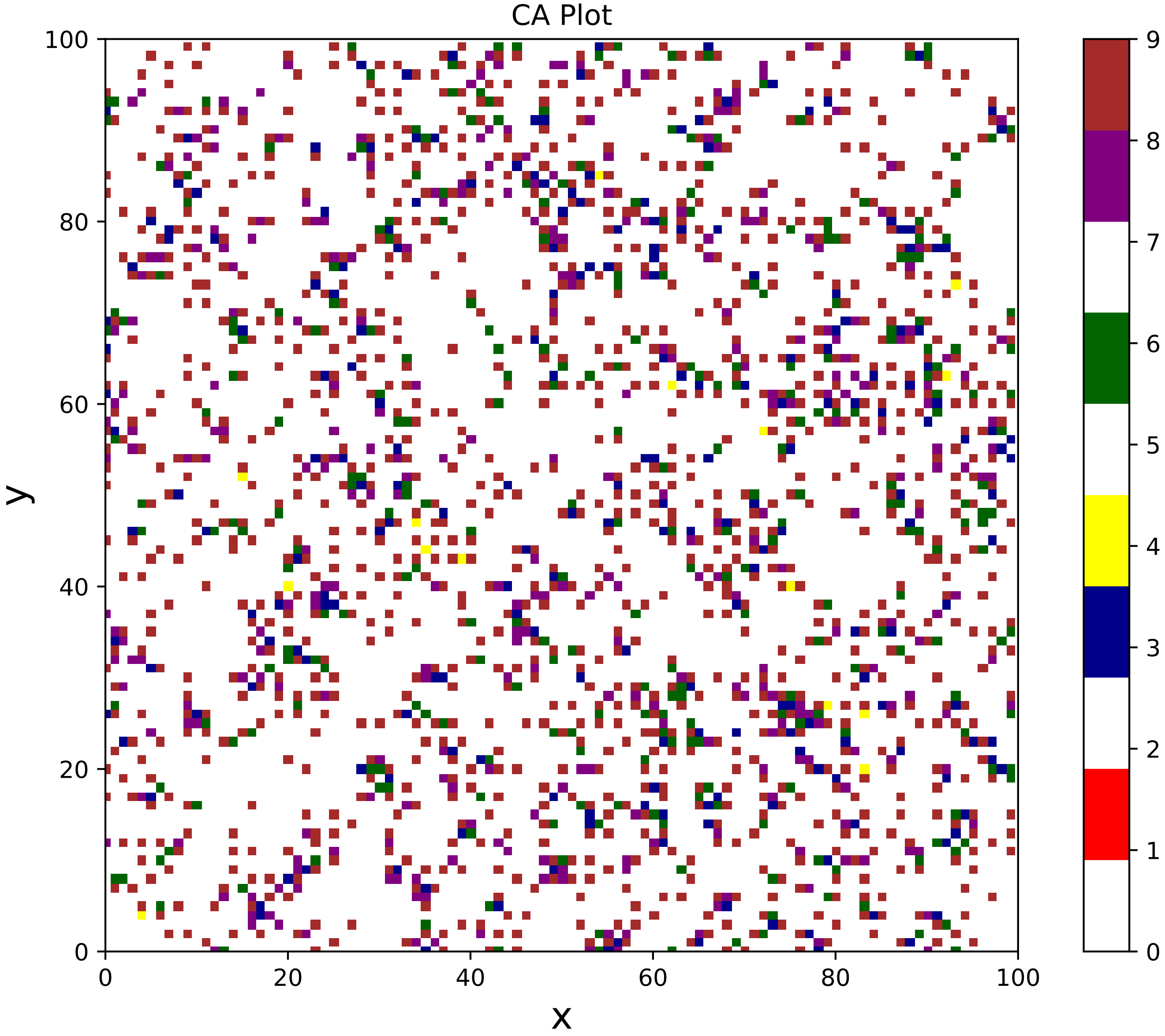

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

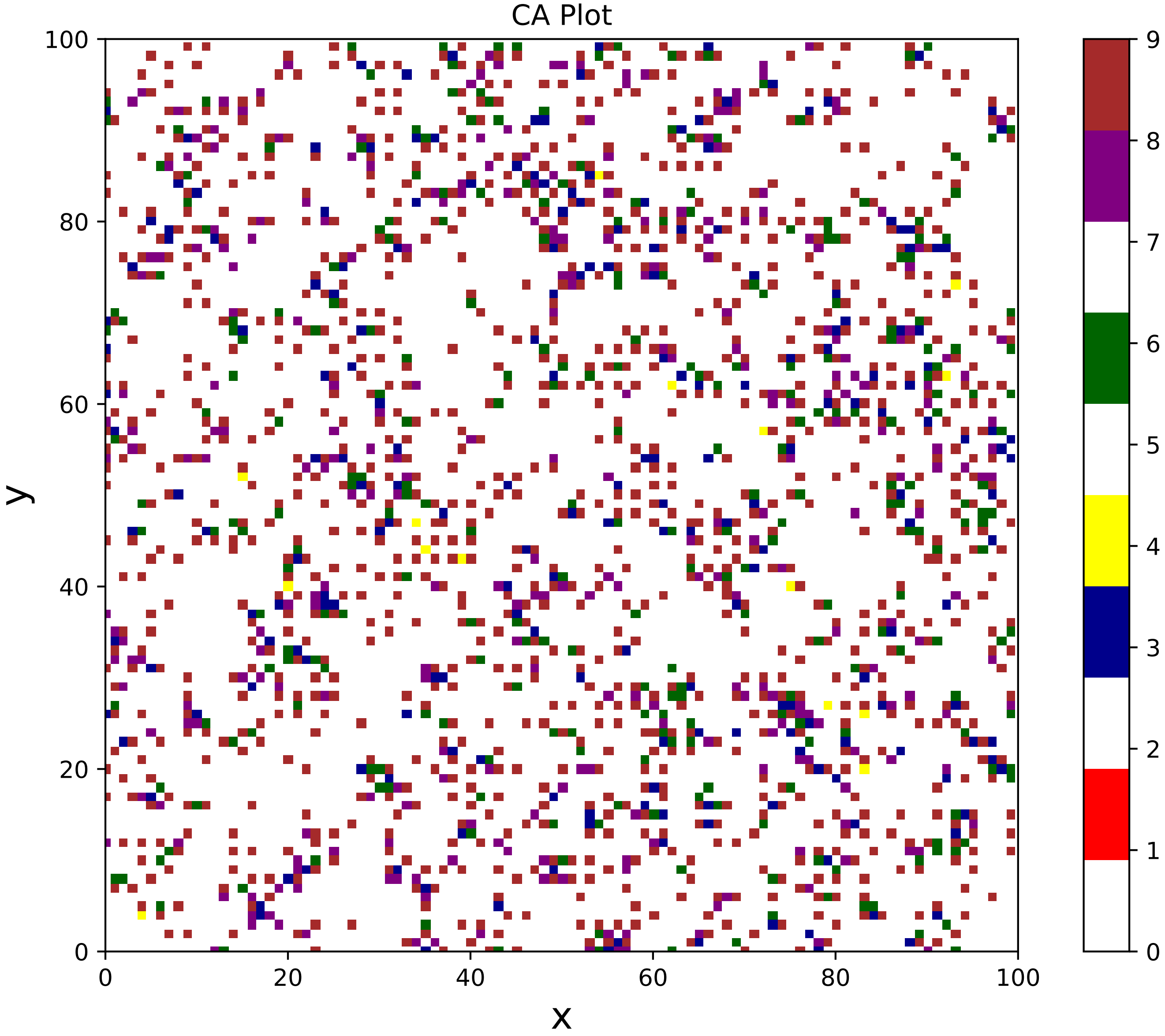

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

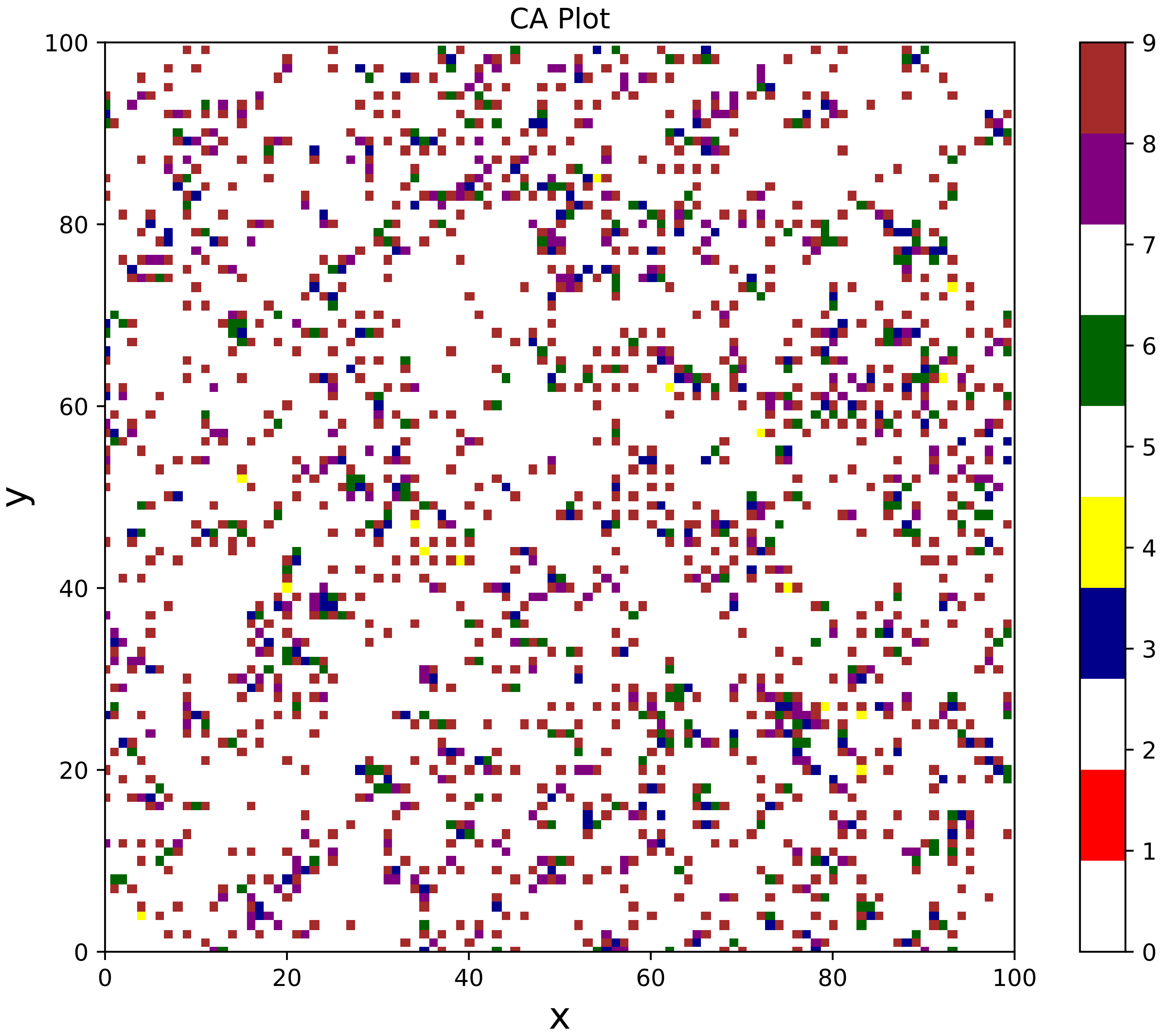

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

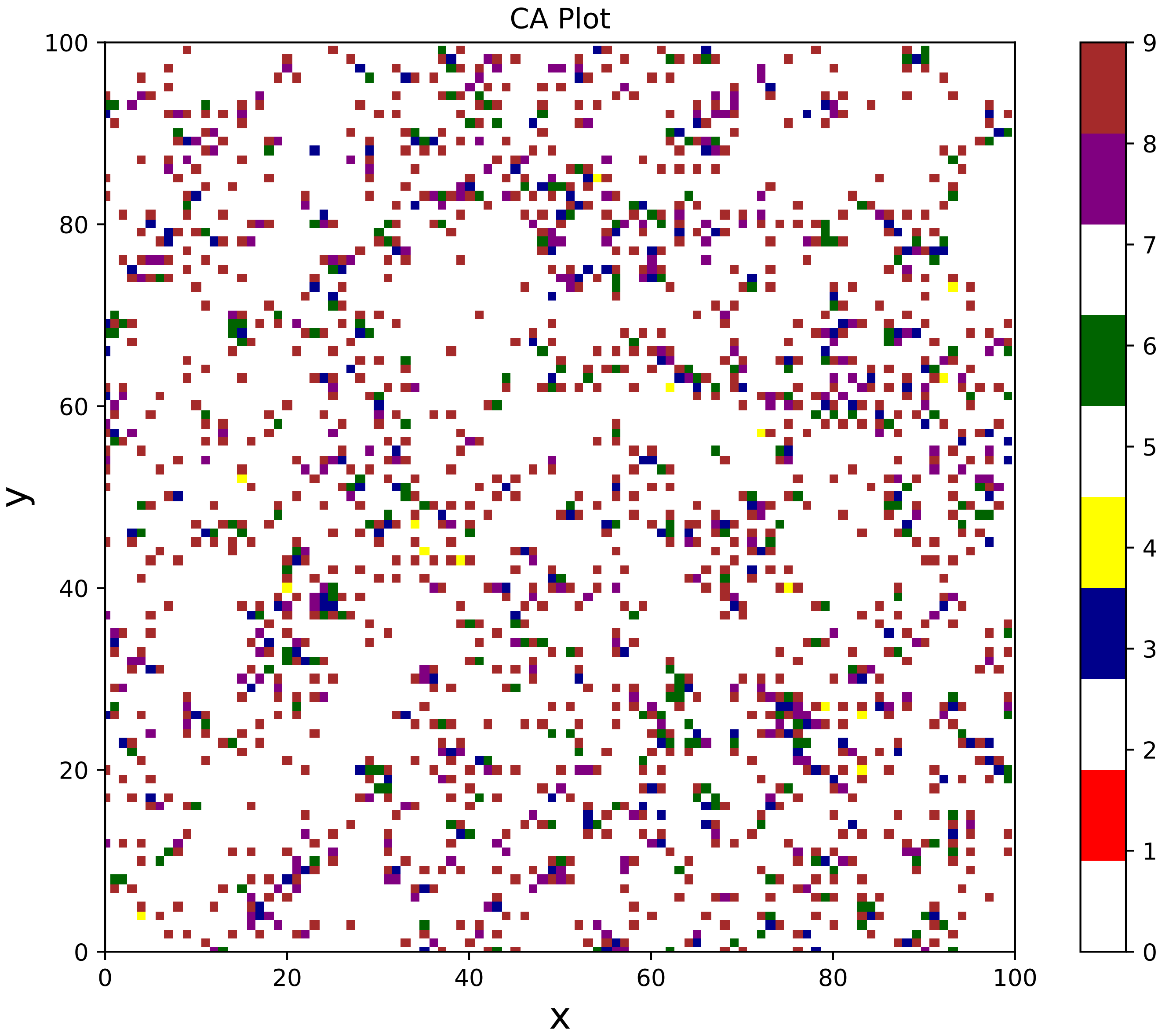

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

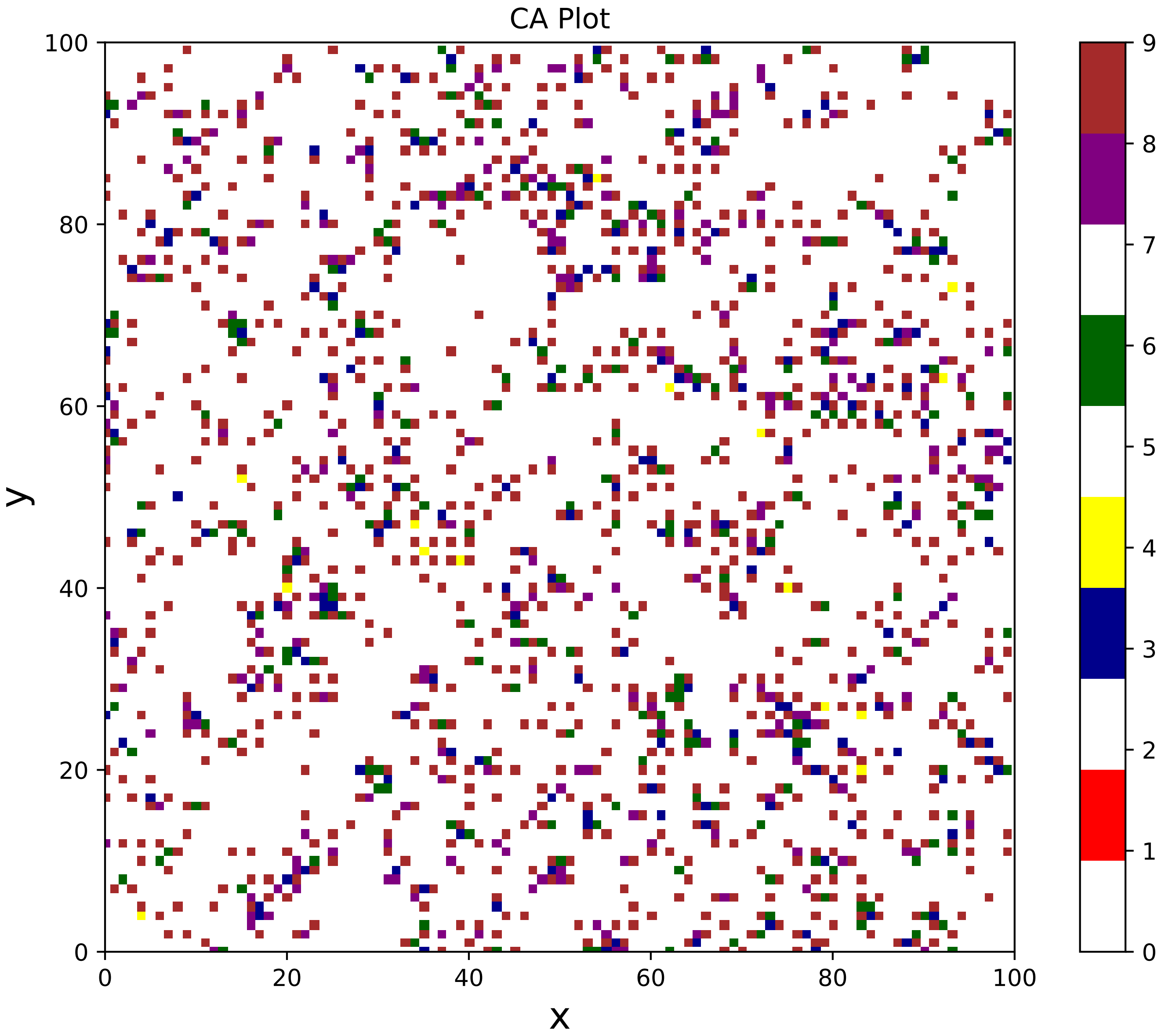

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

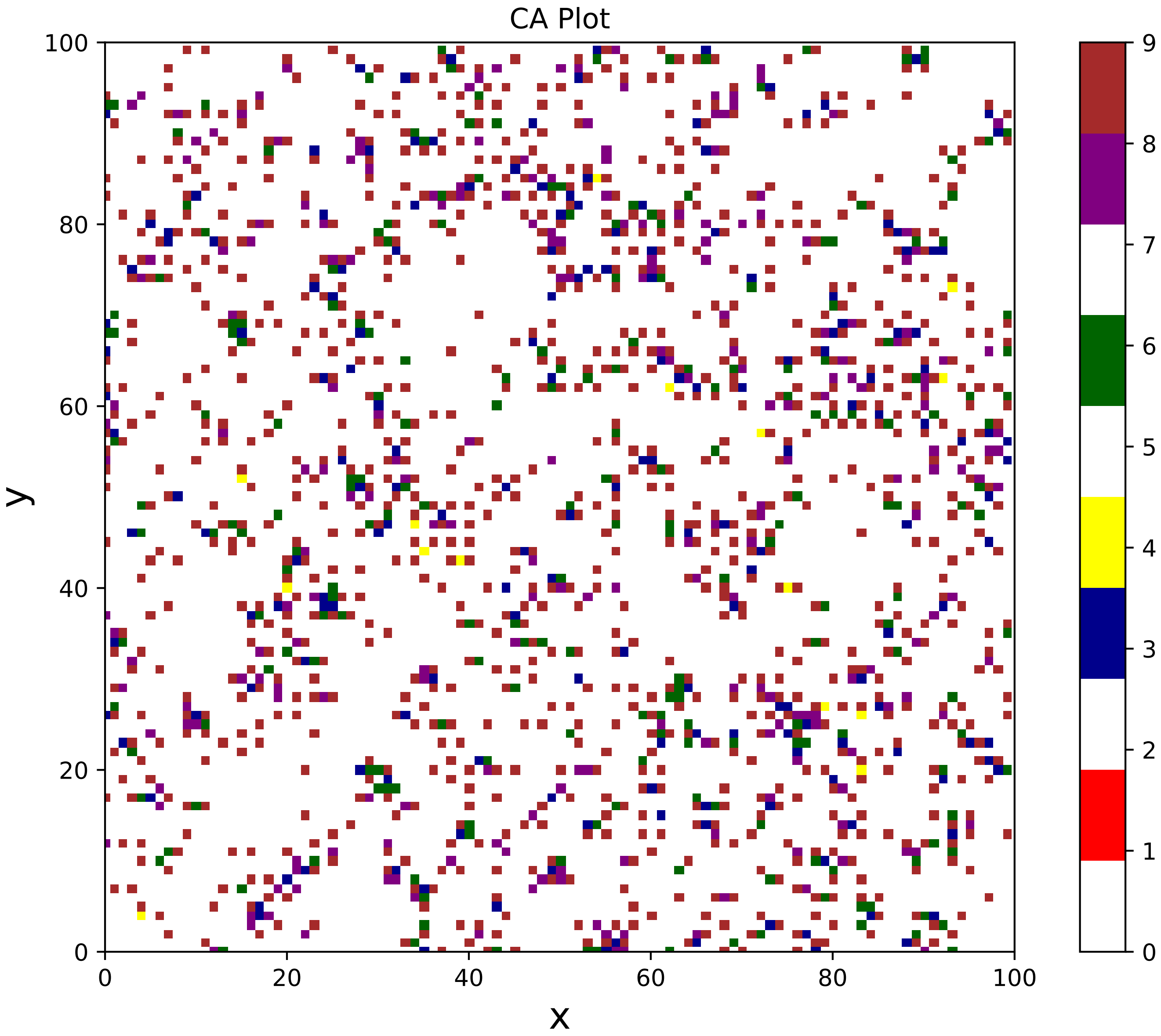

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

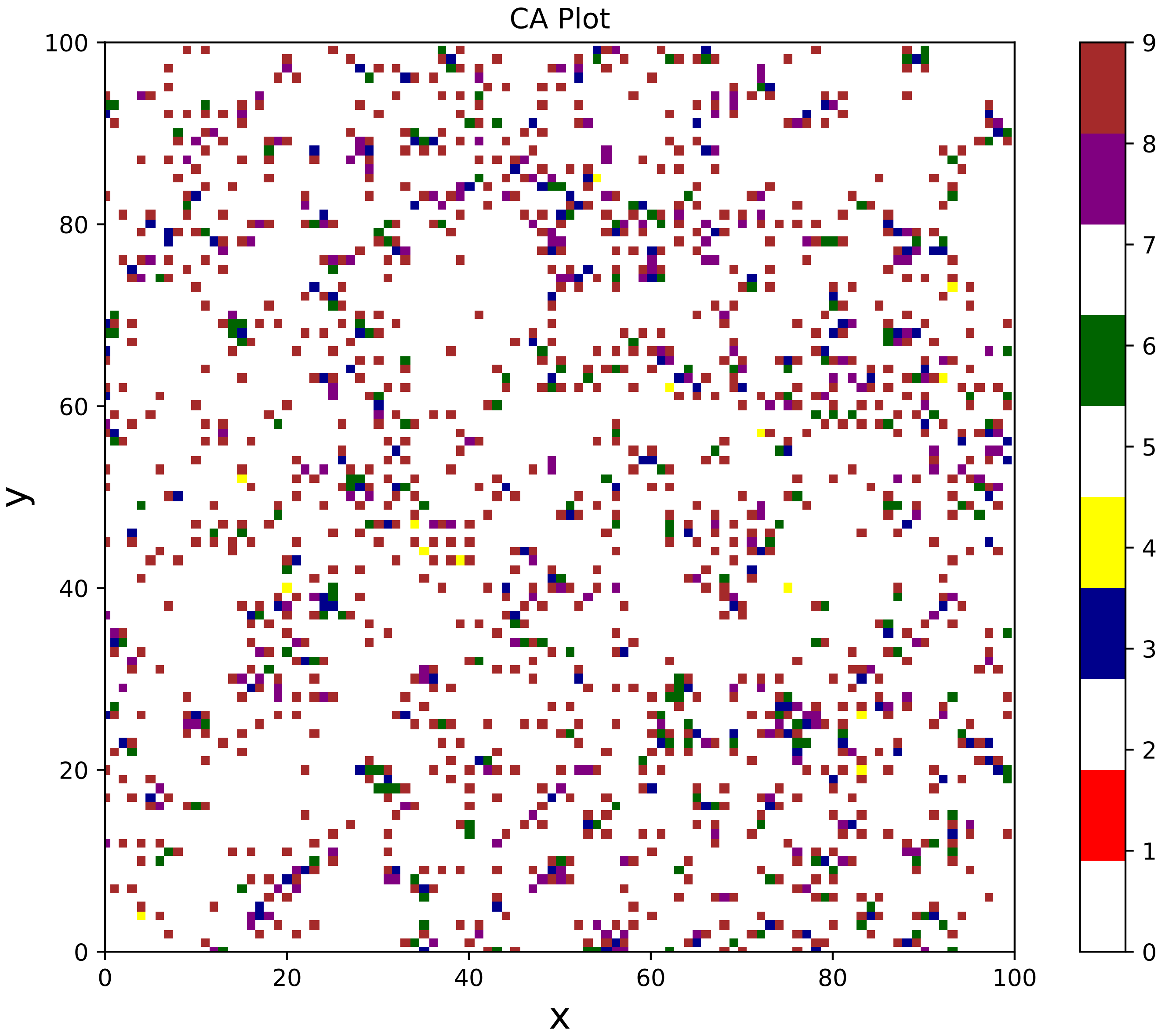

CA Plot
100
80
60
40
20
0
0
20
40
60
80
100
x
y
9
8
7
6
5
4
3
2
1
0

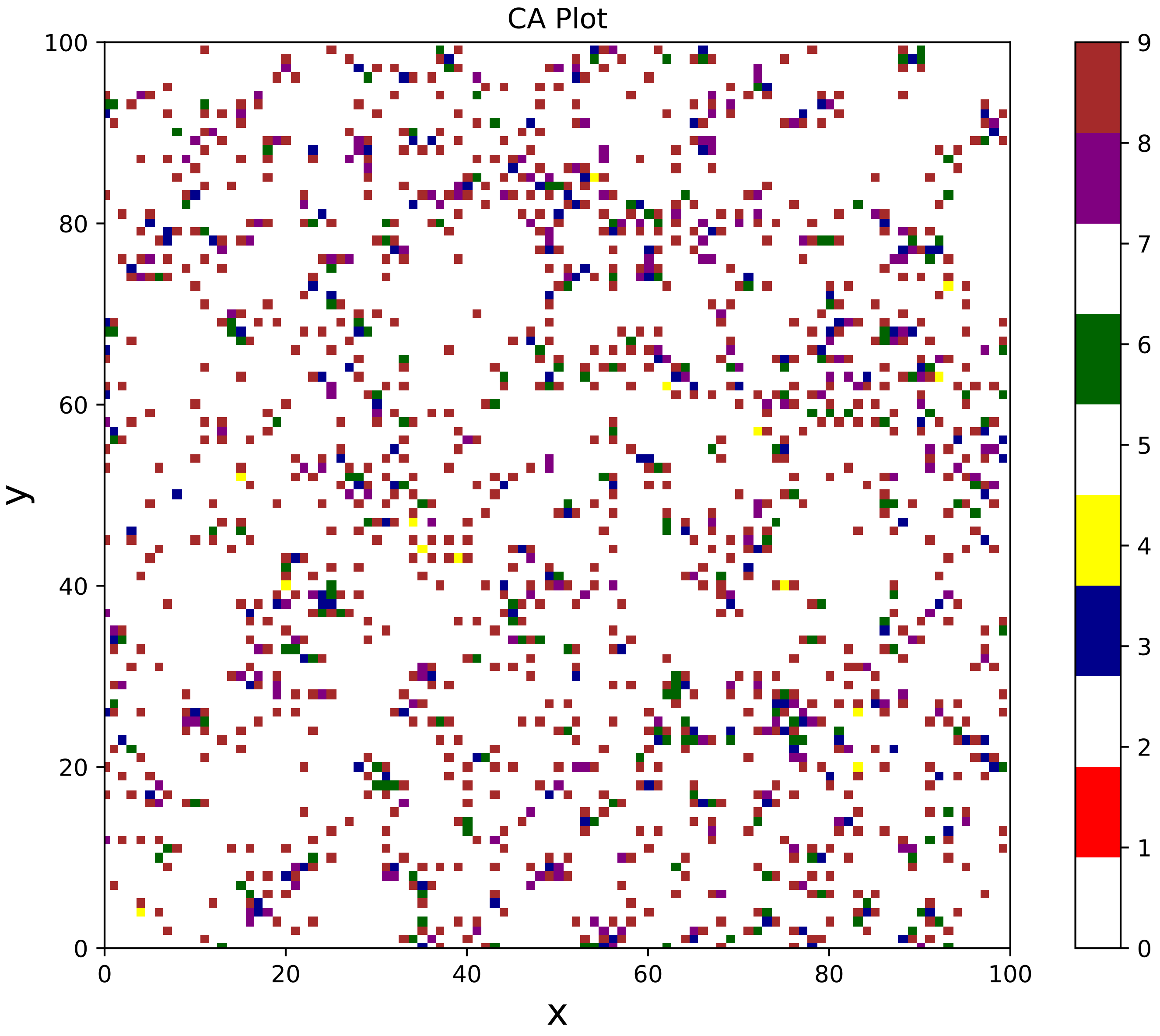

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

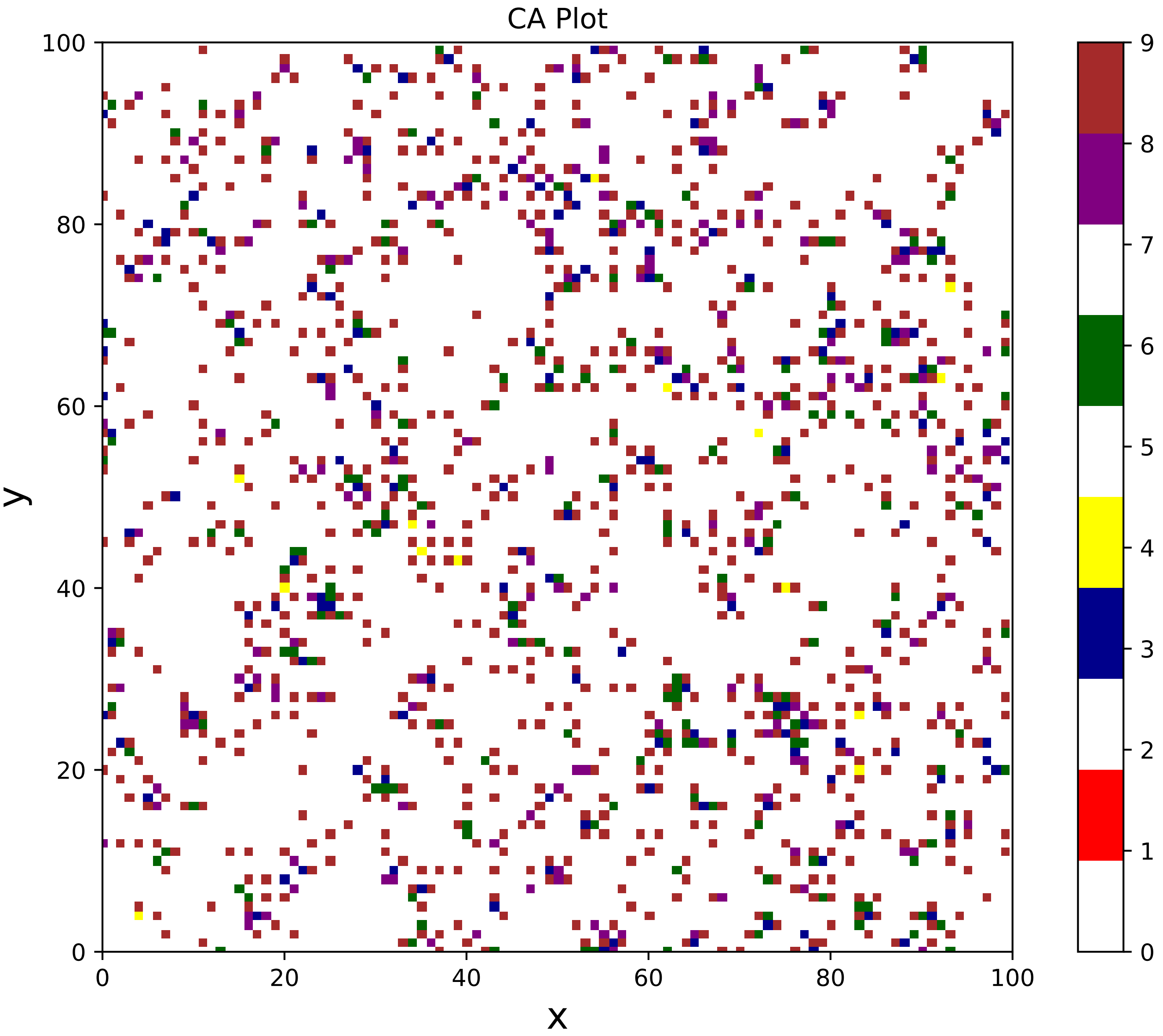

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

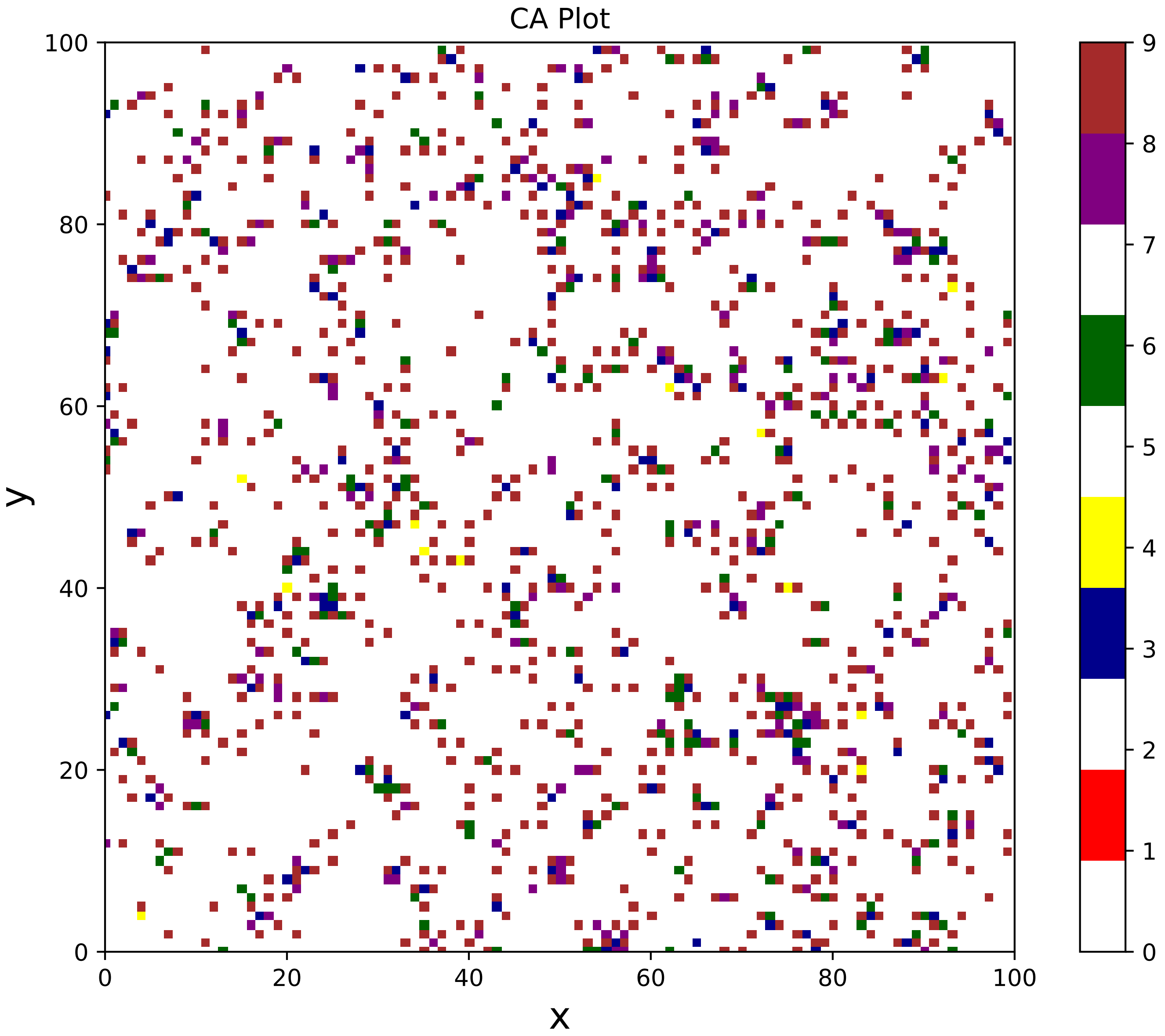

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

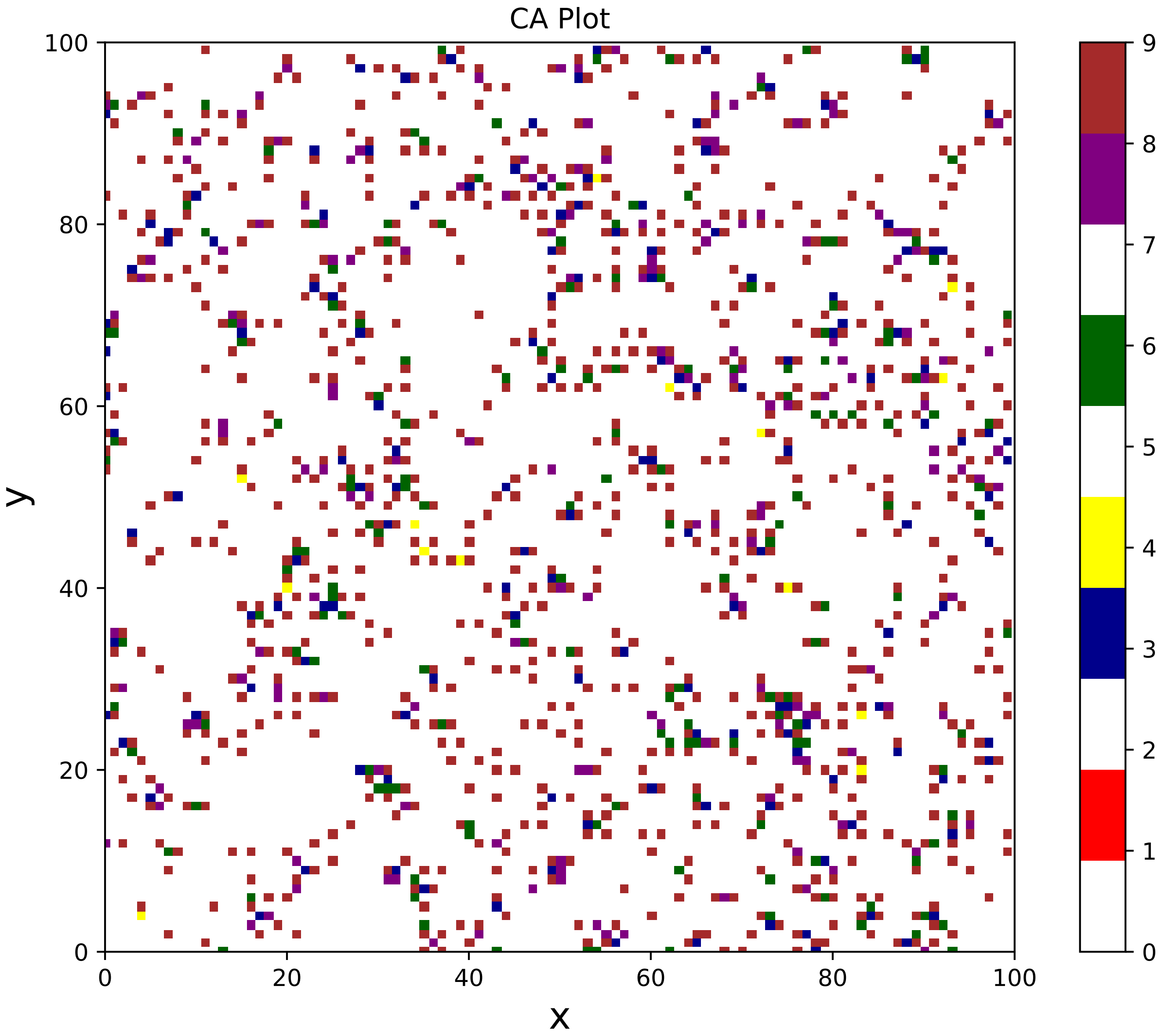

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

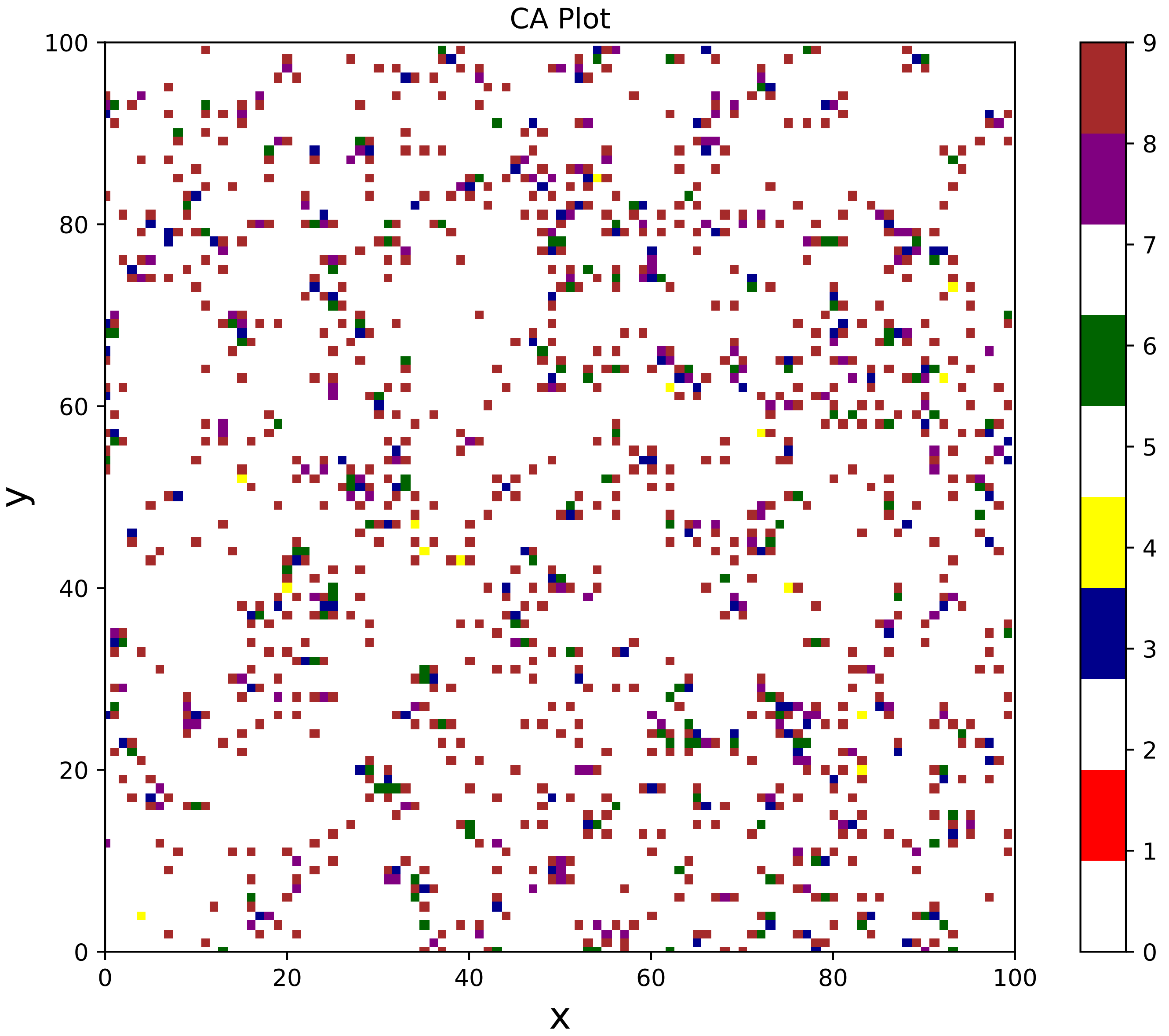

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

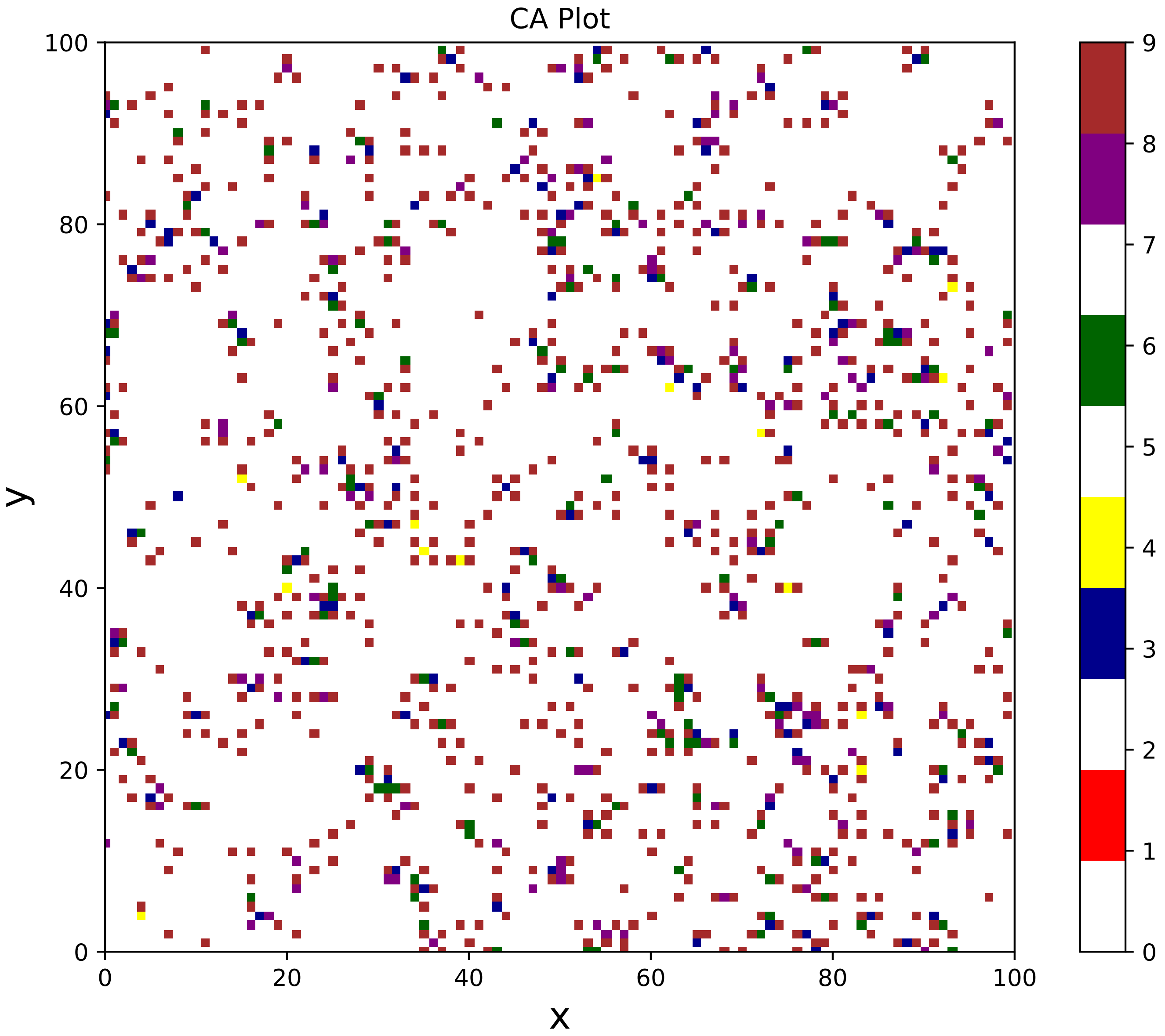

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

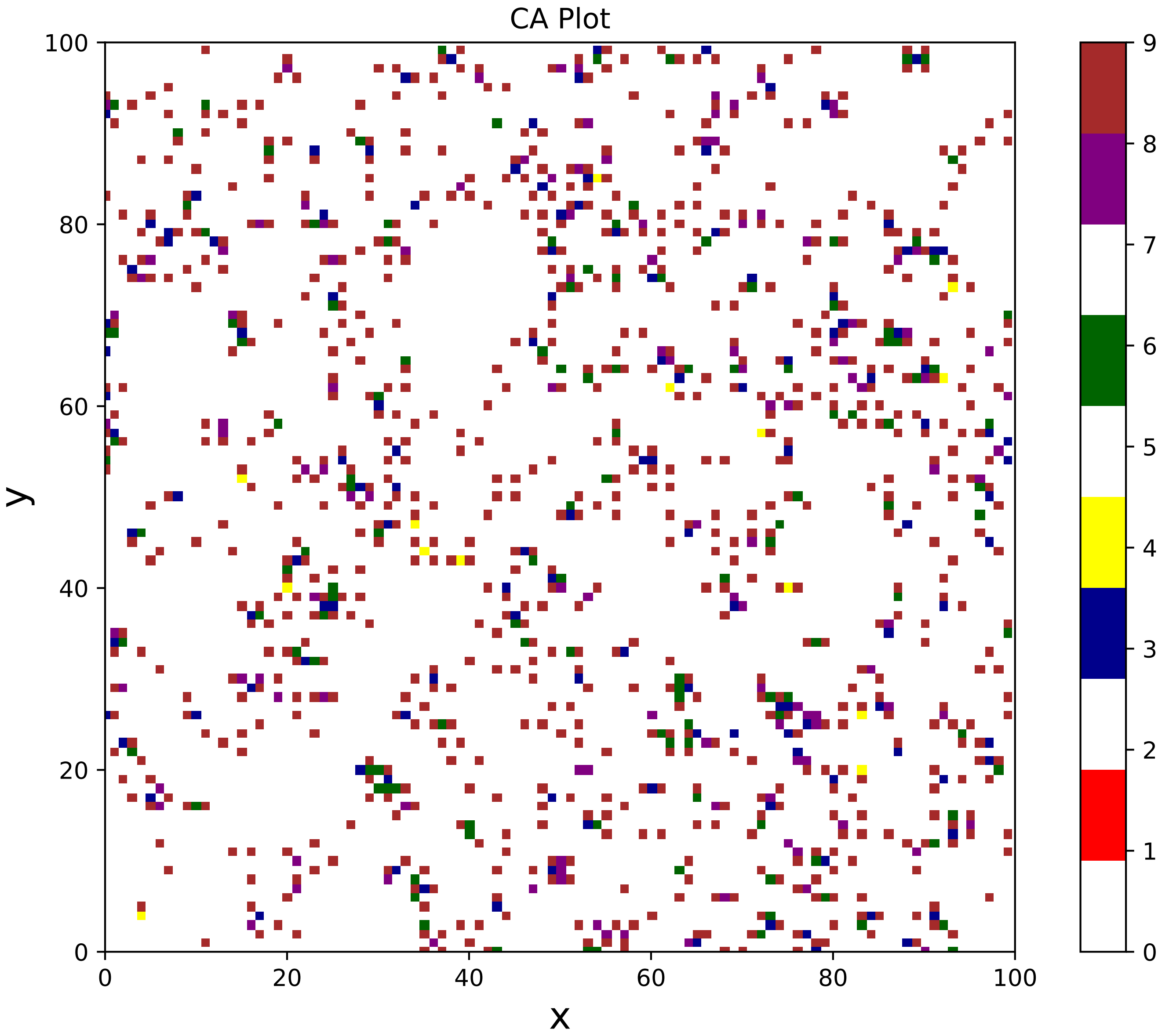

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

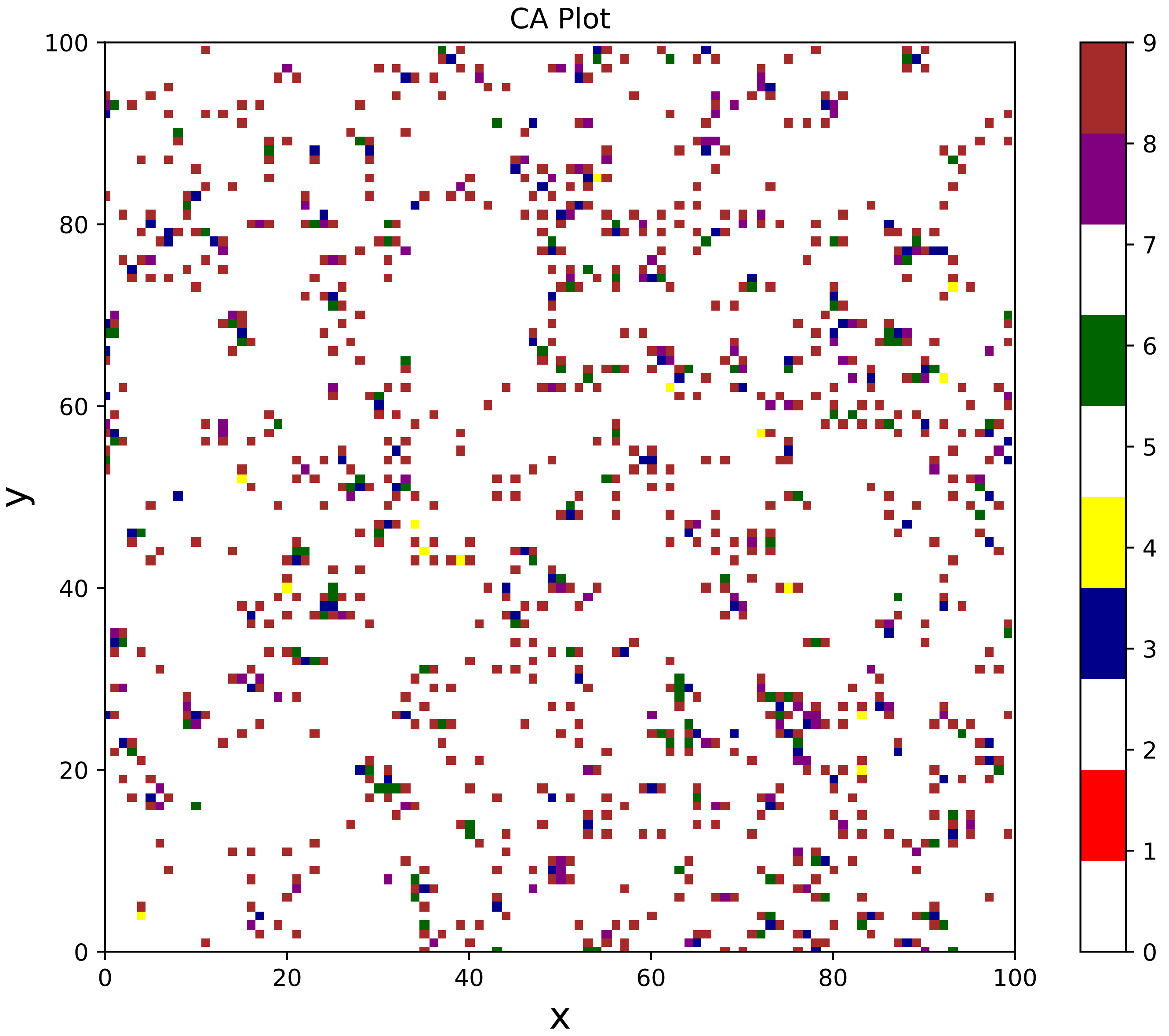

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

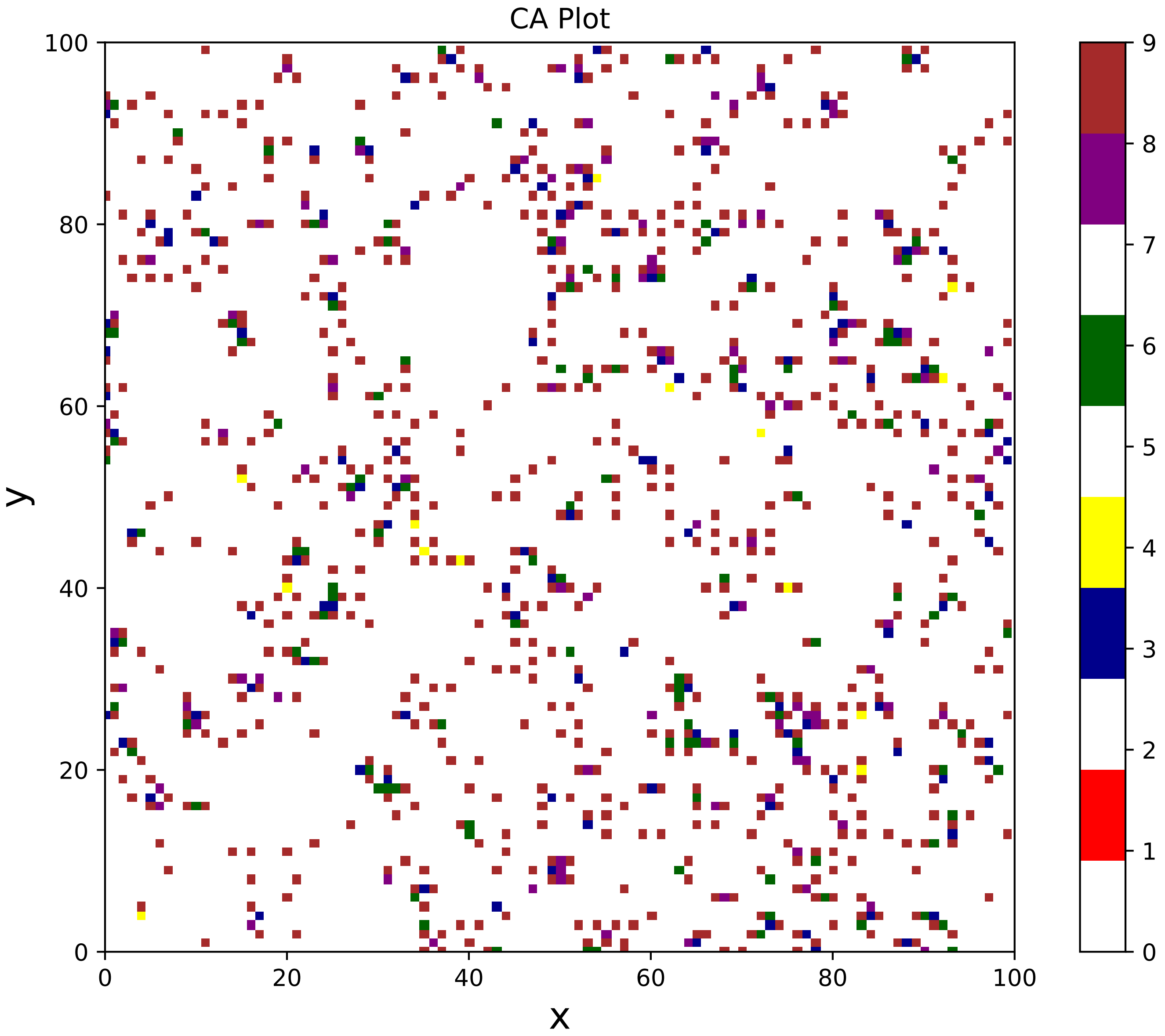

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

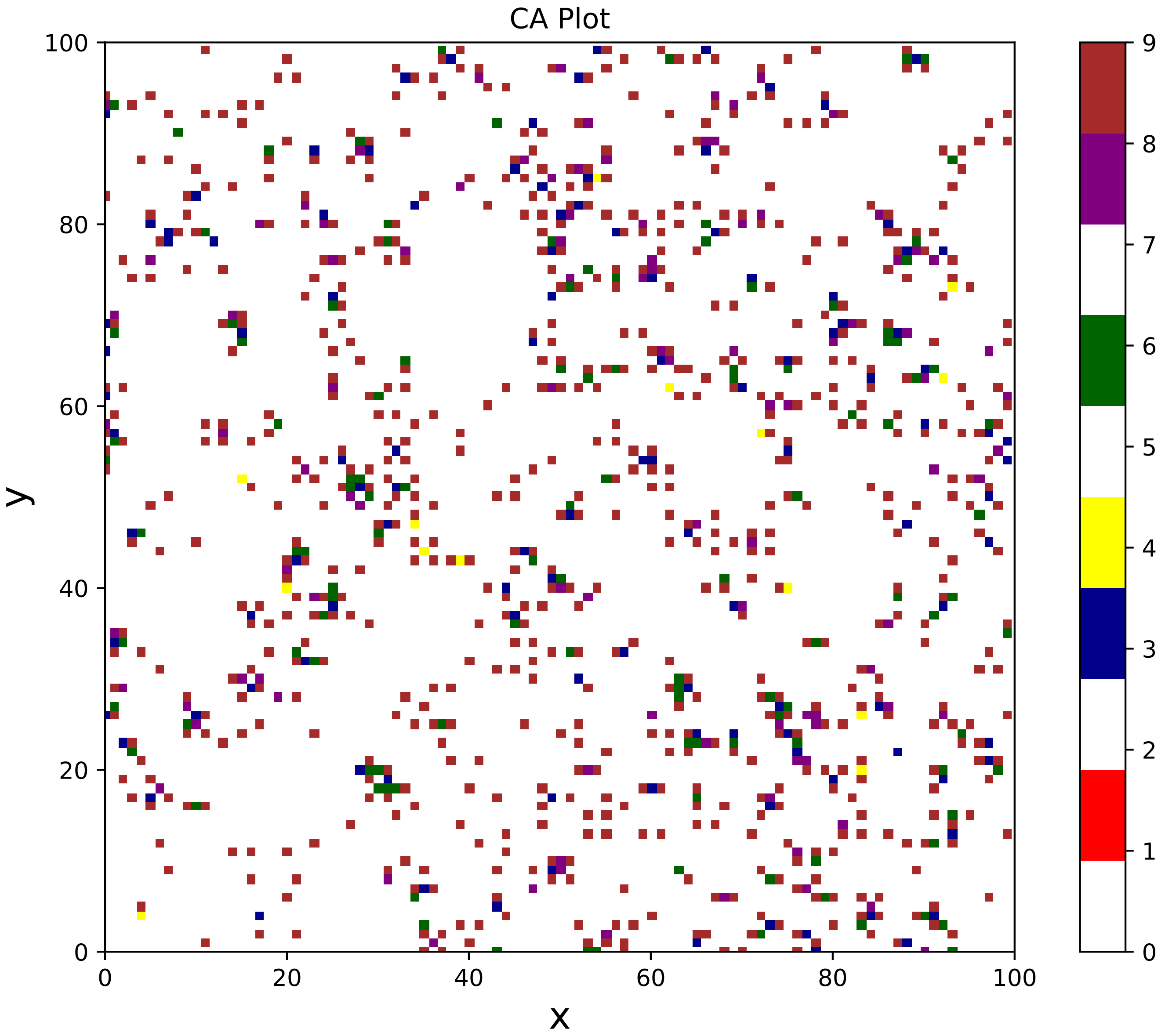

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

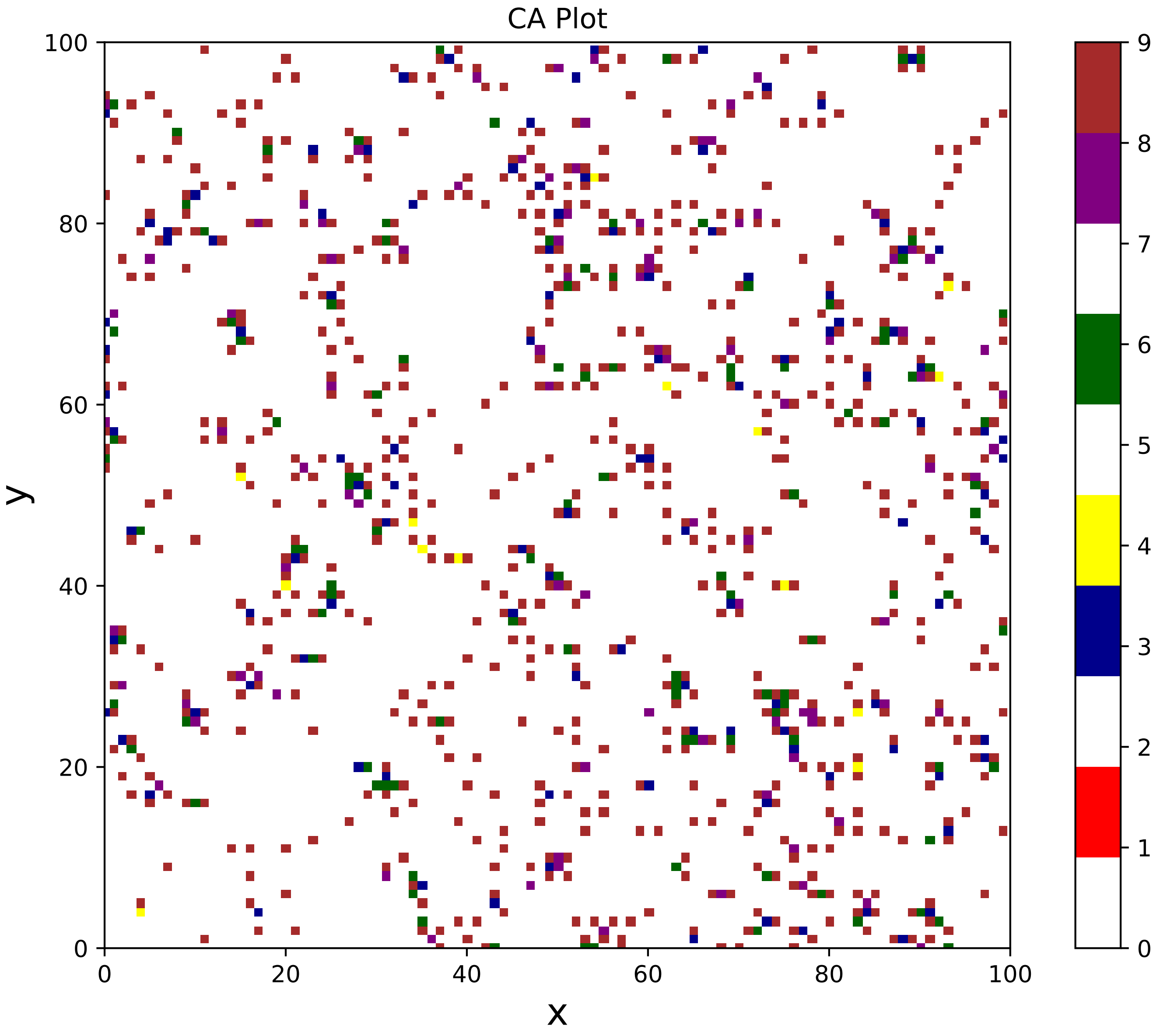

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

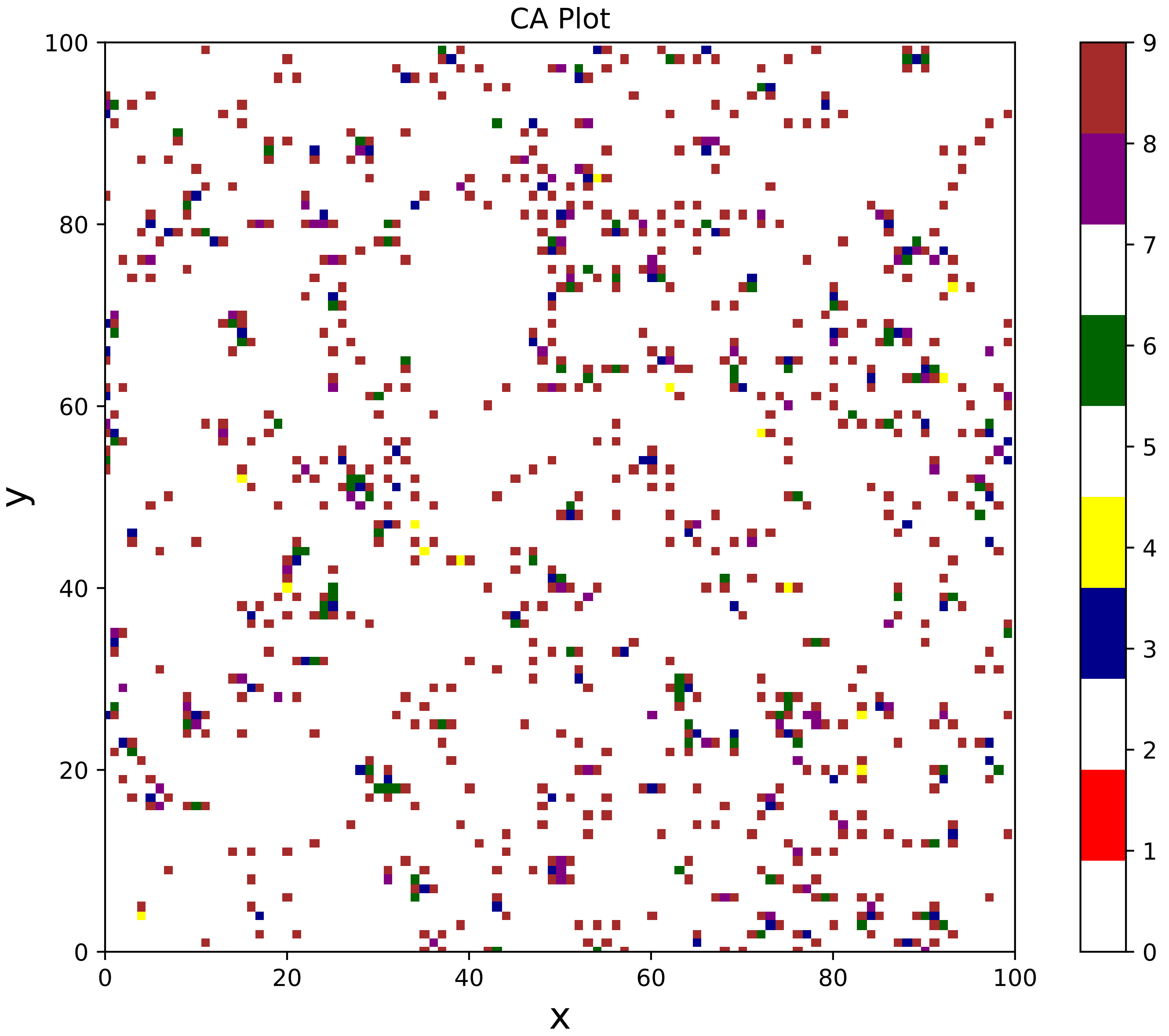

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

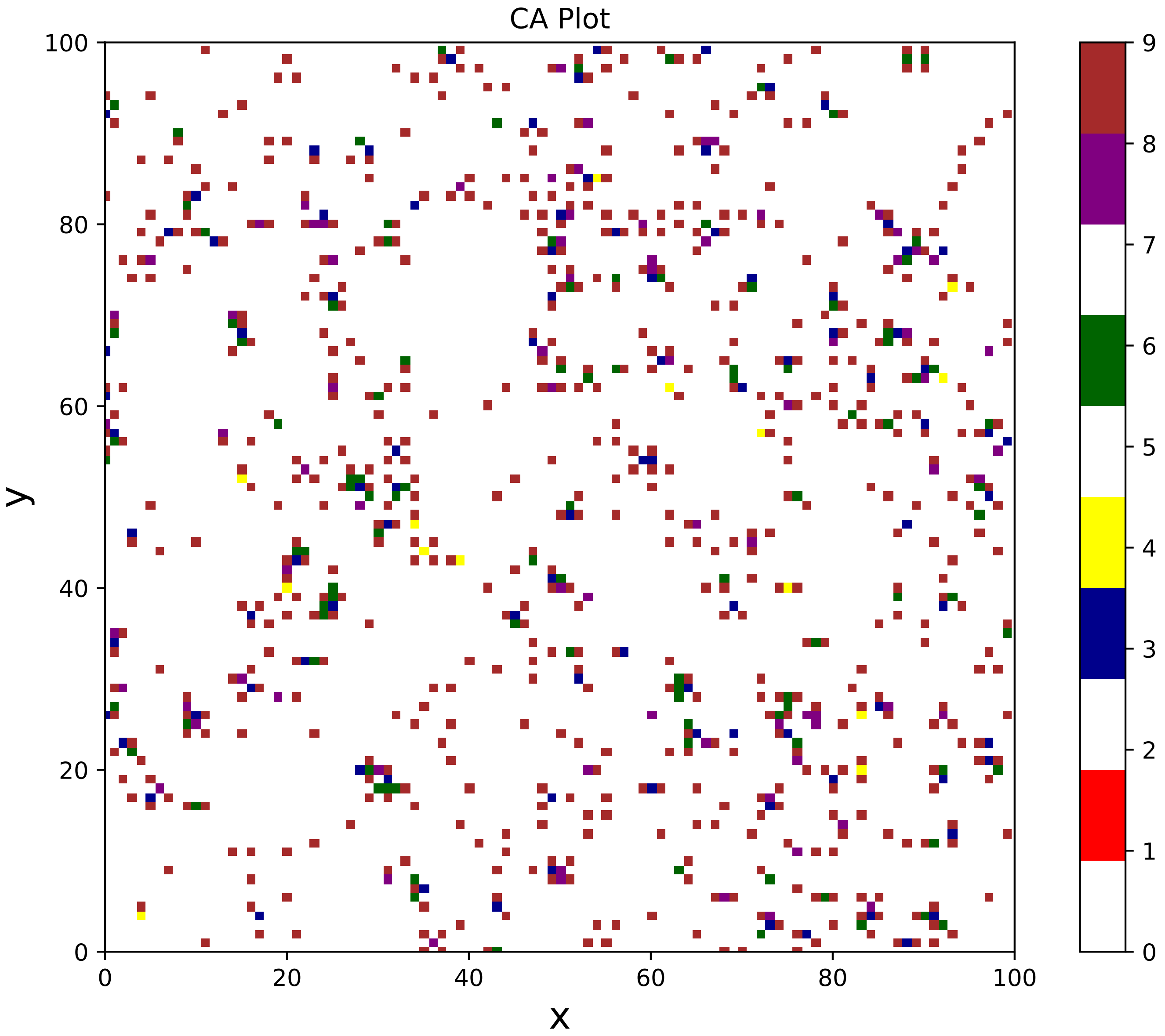

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

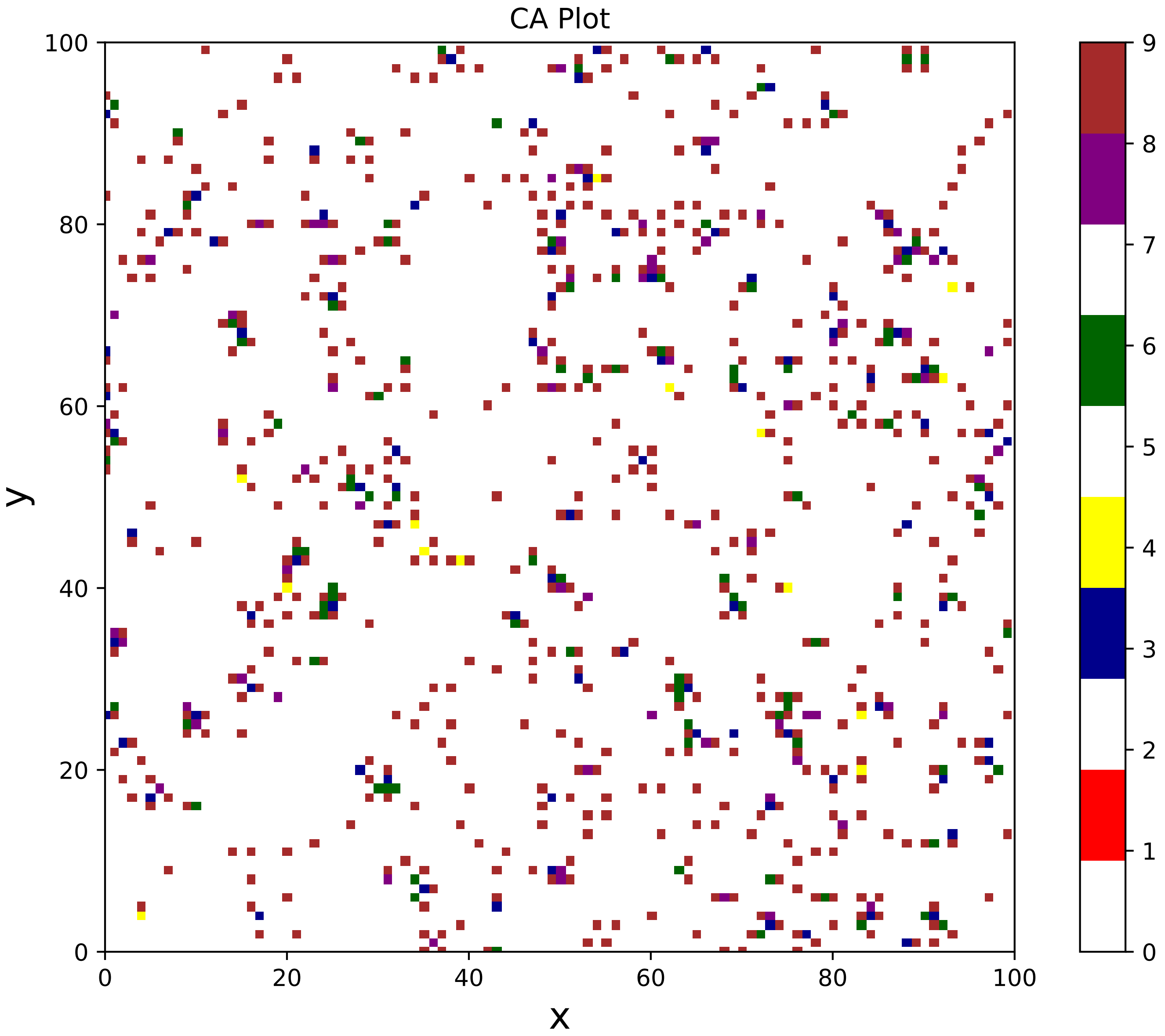

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

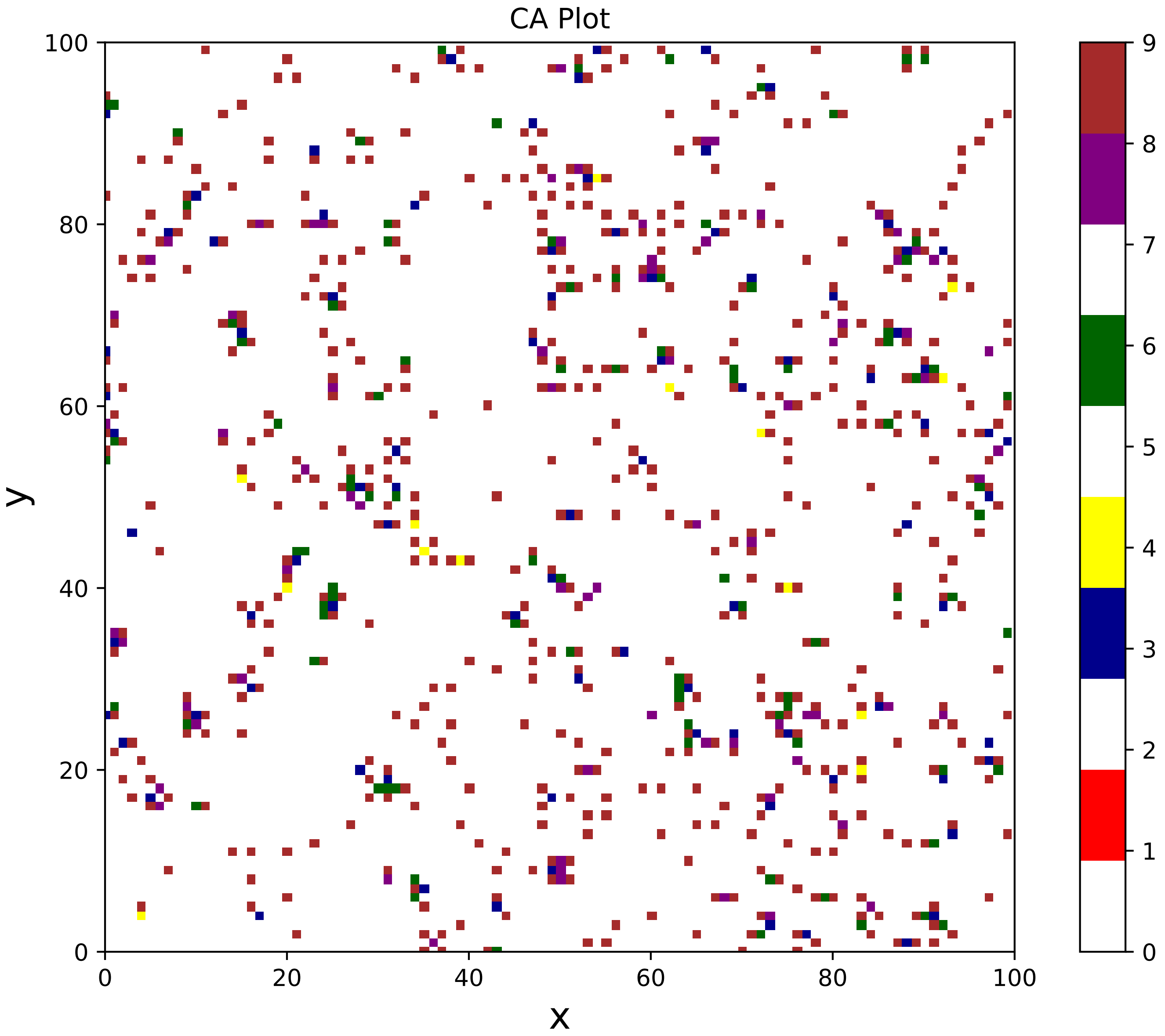

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

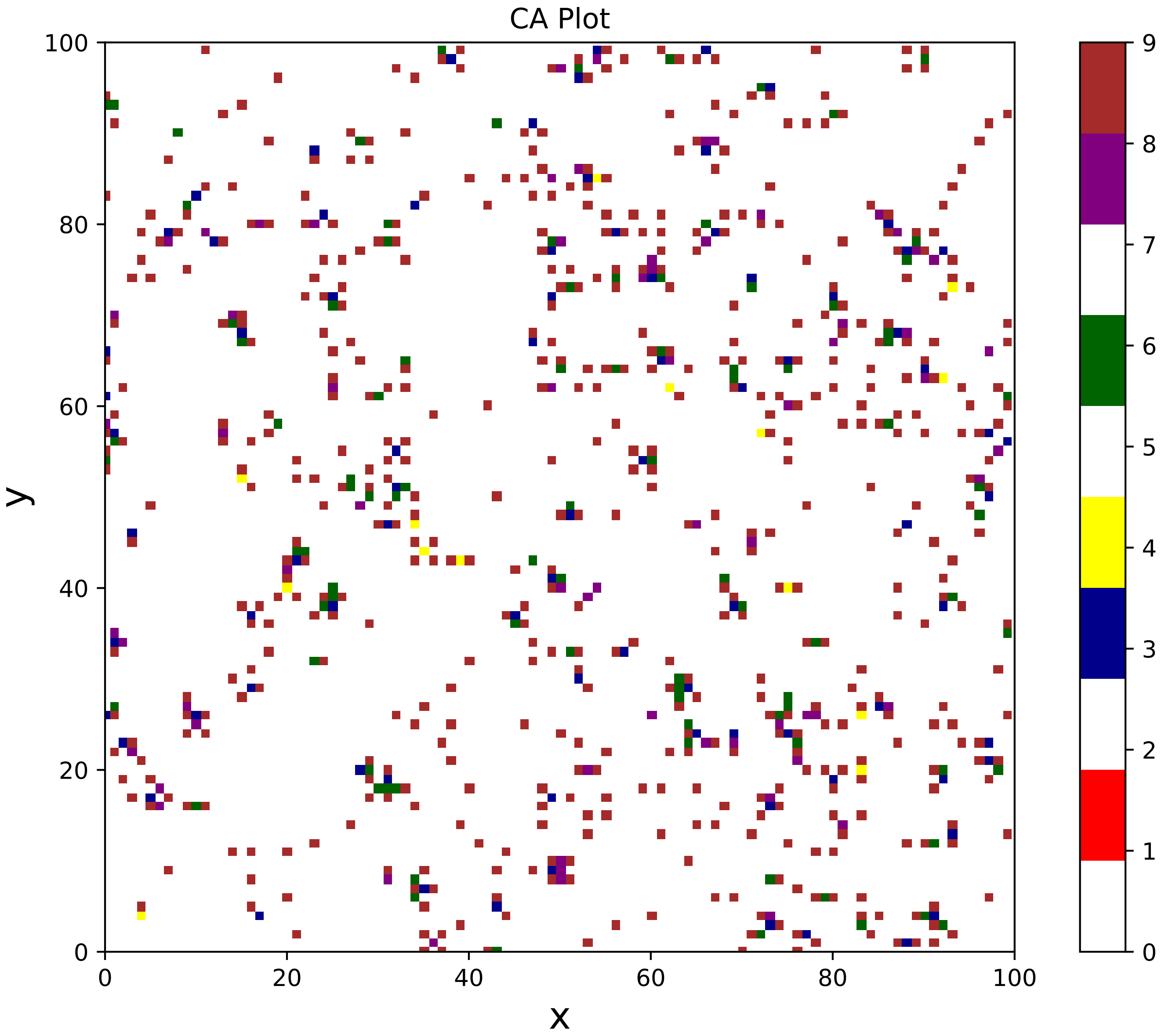

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

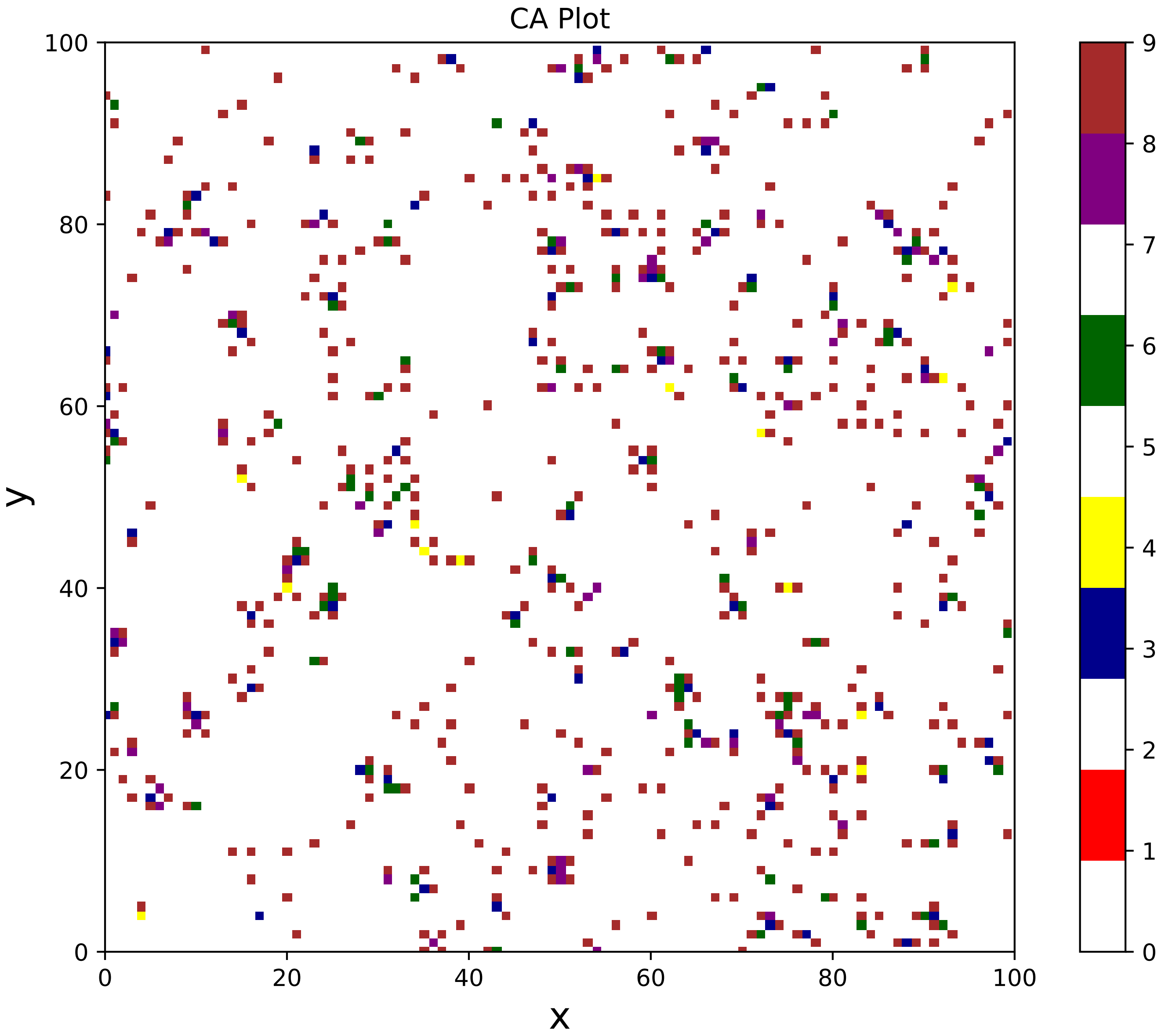

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

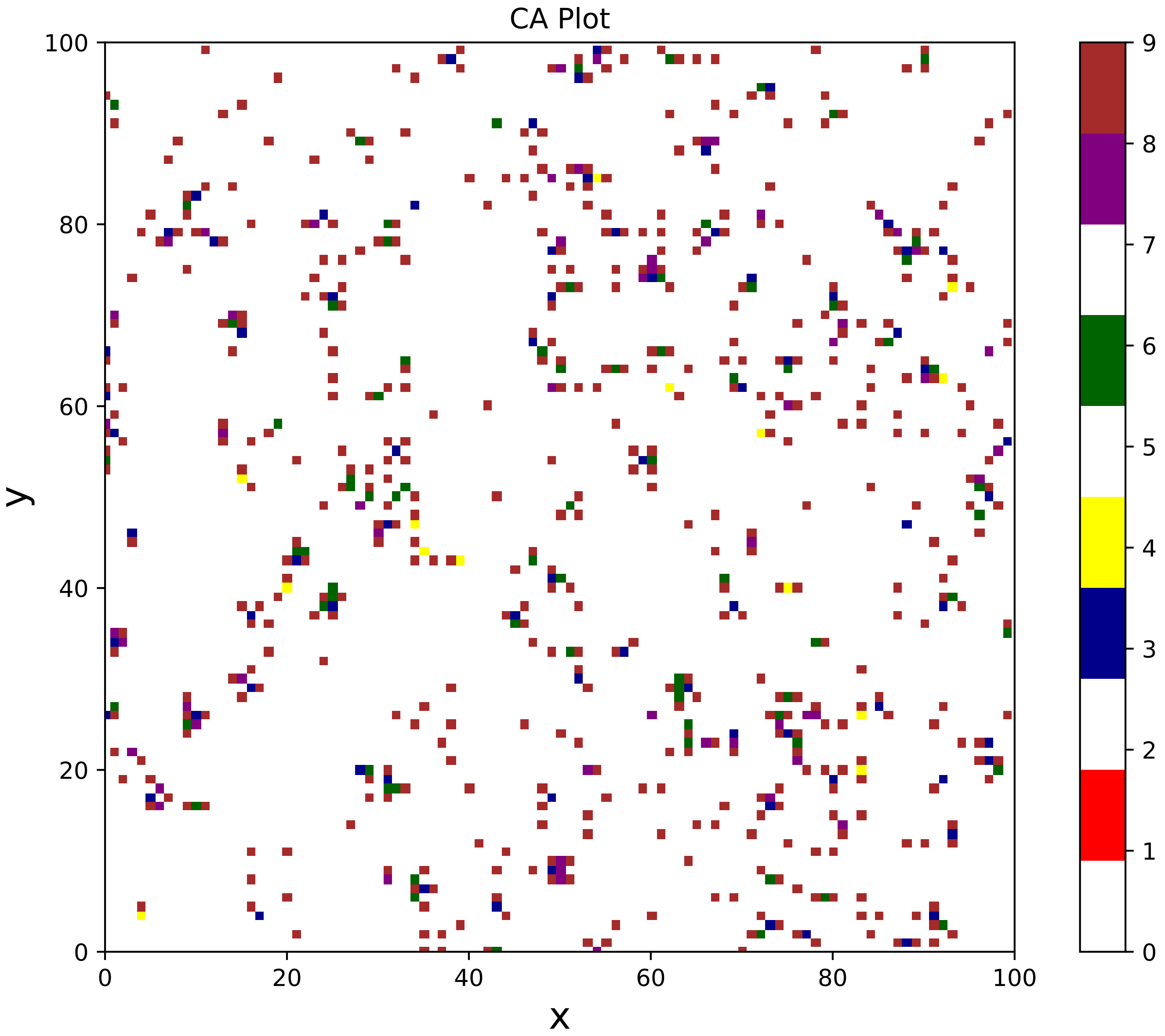

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

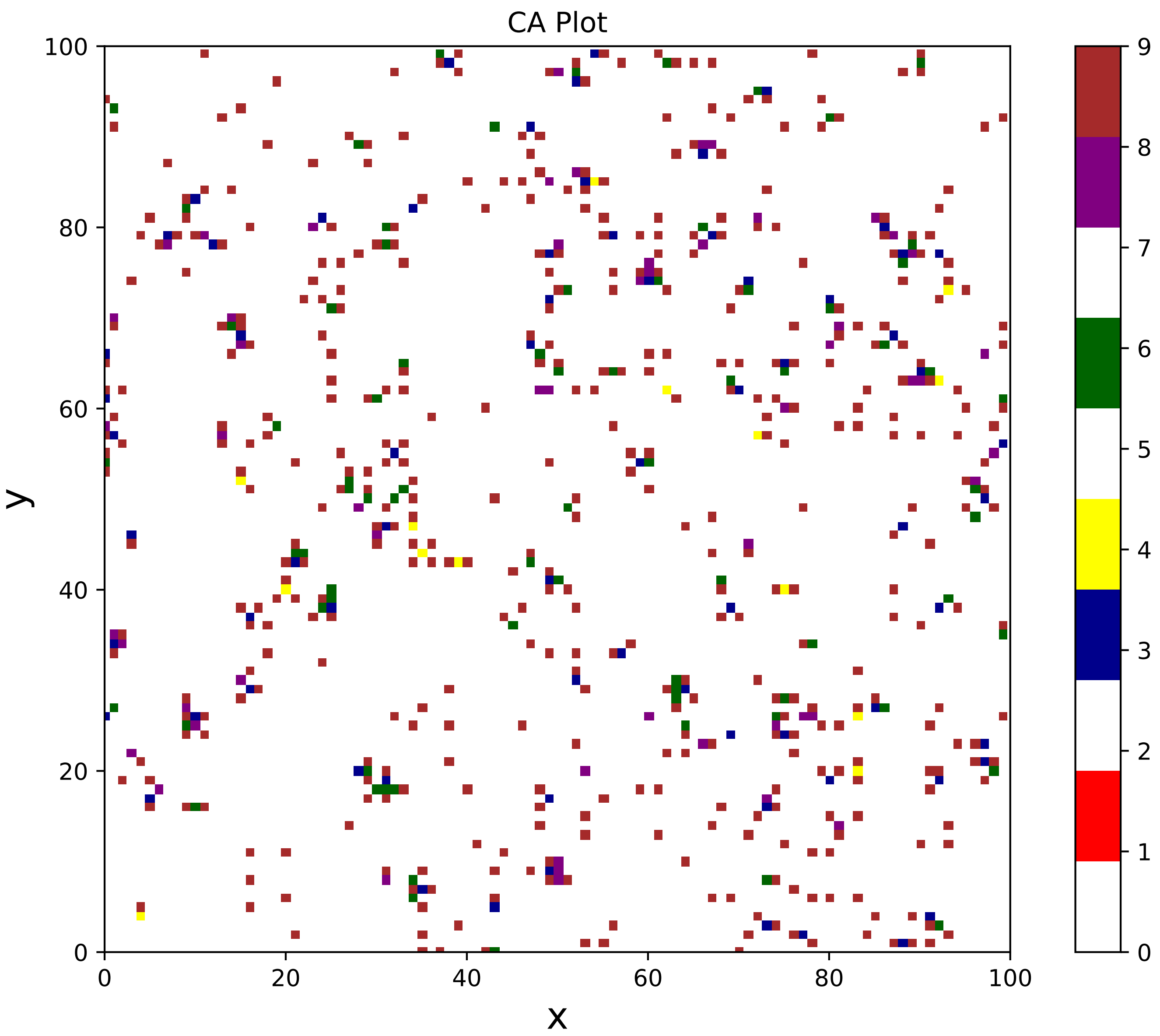

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

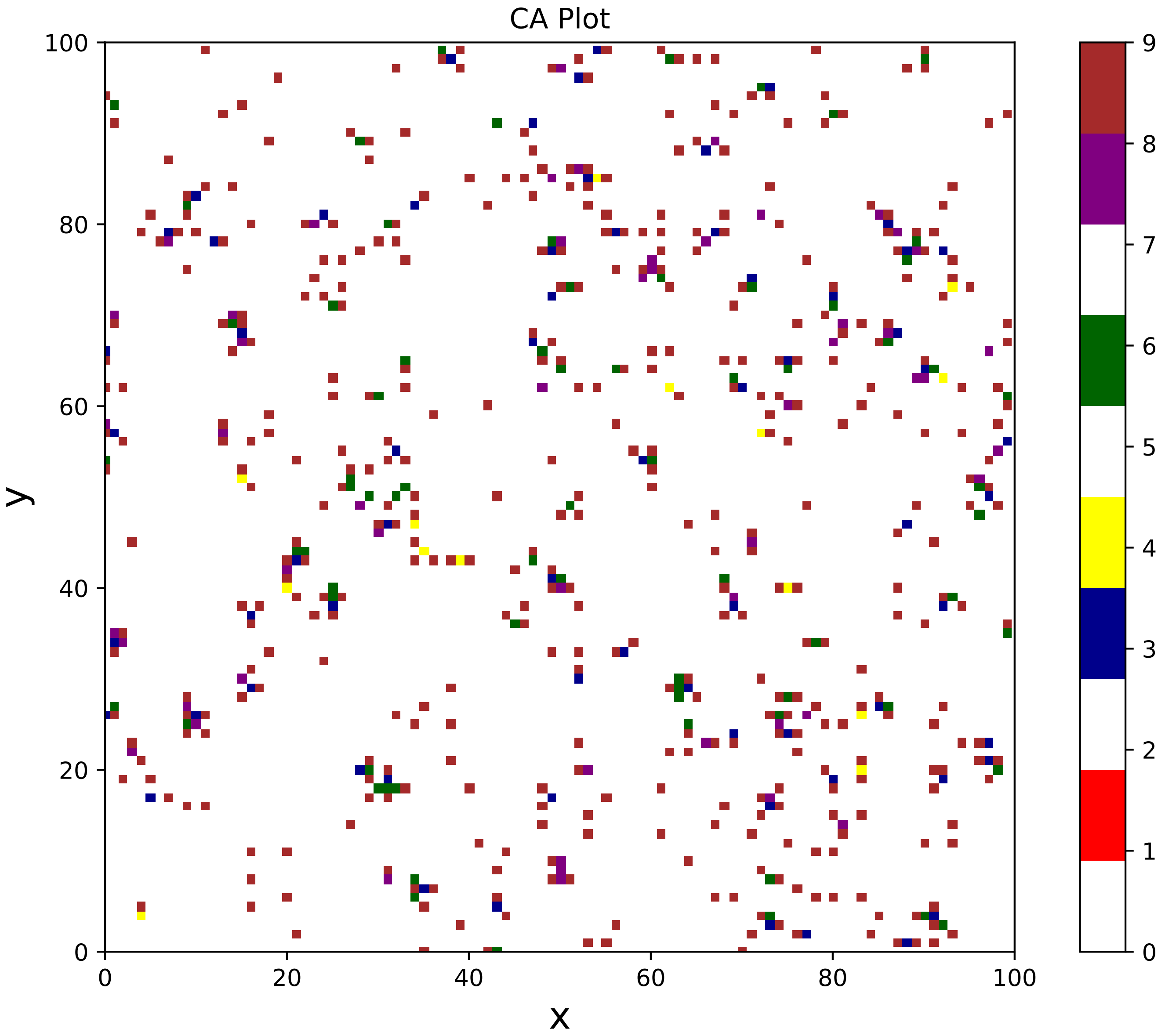

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

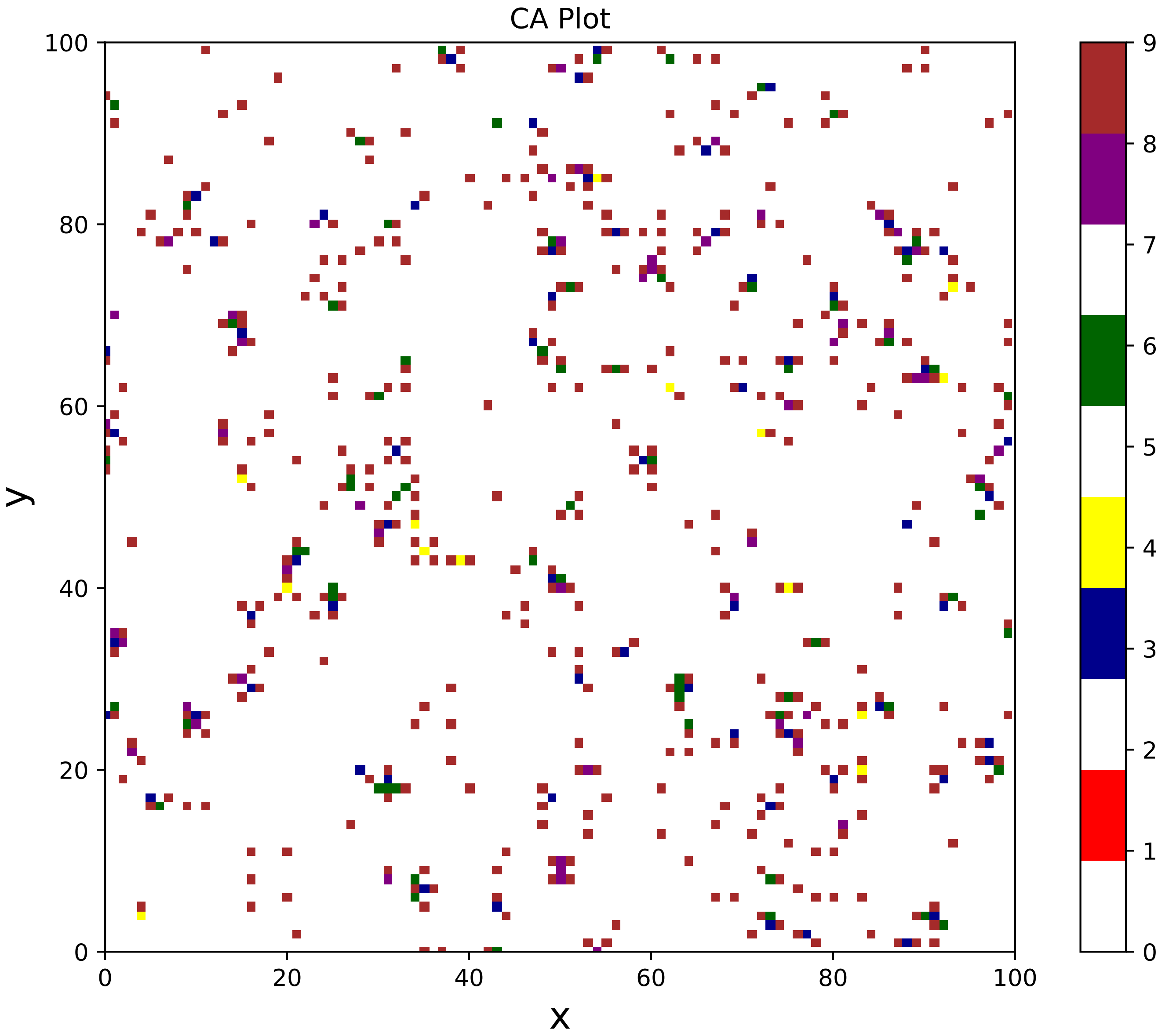

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

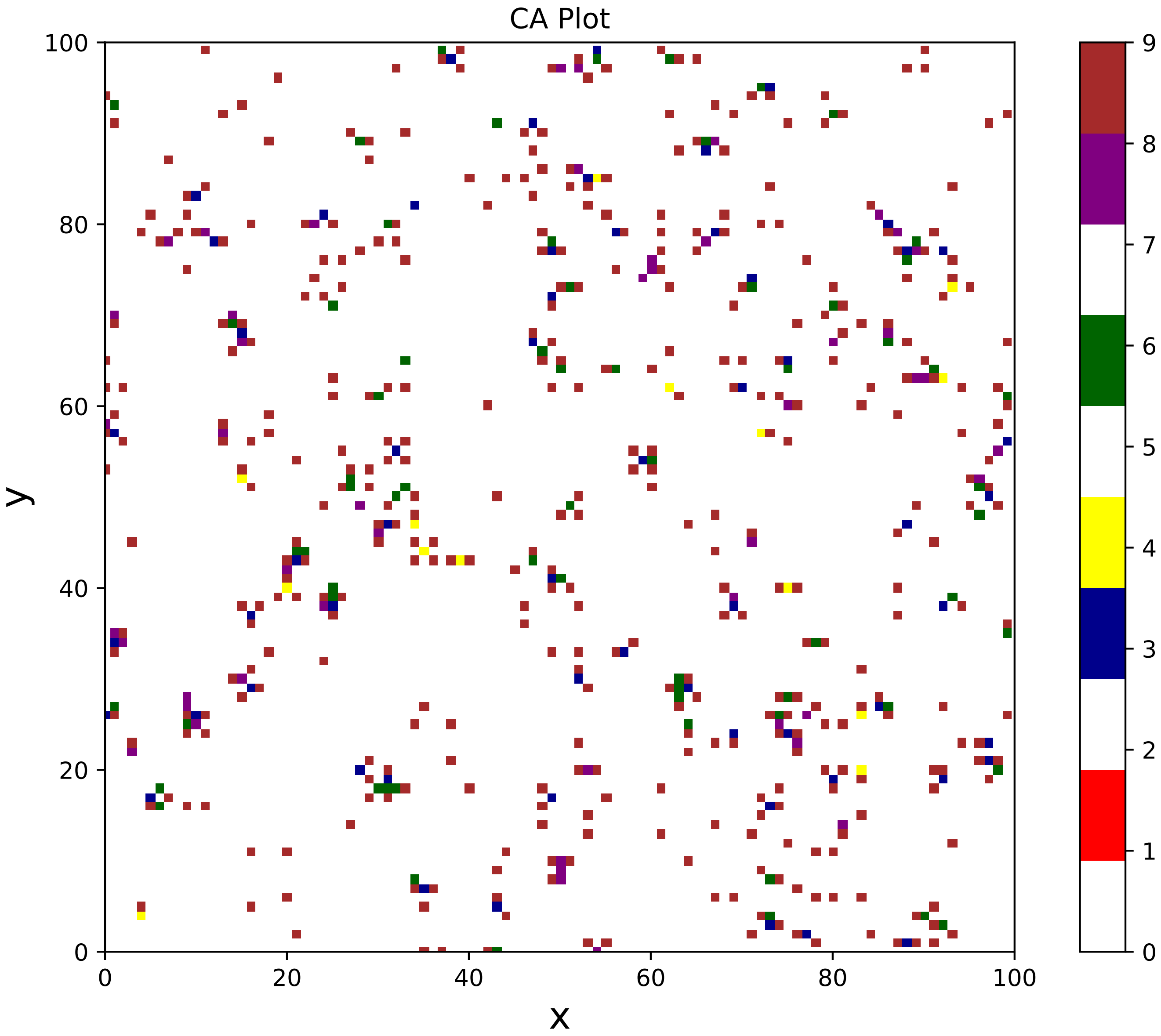

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

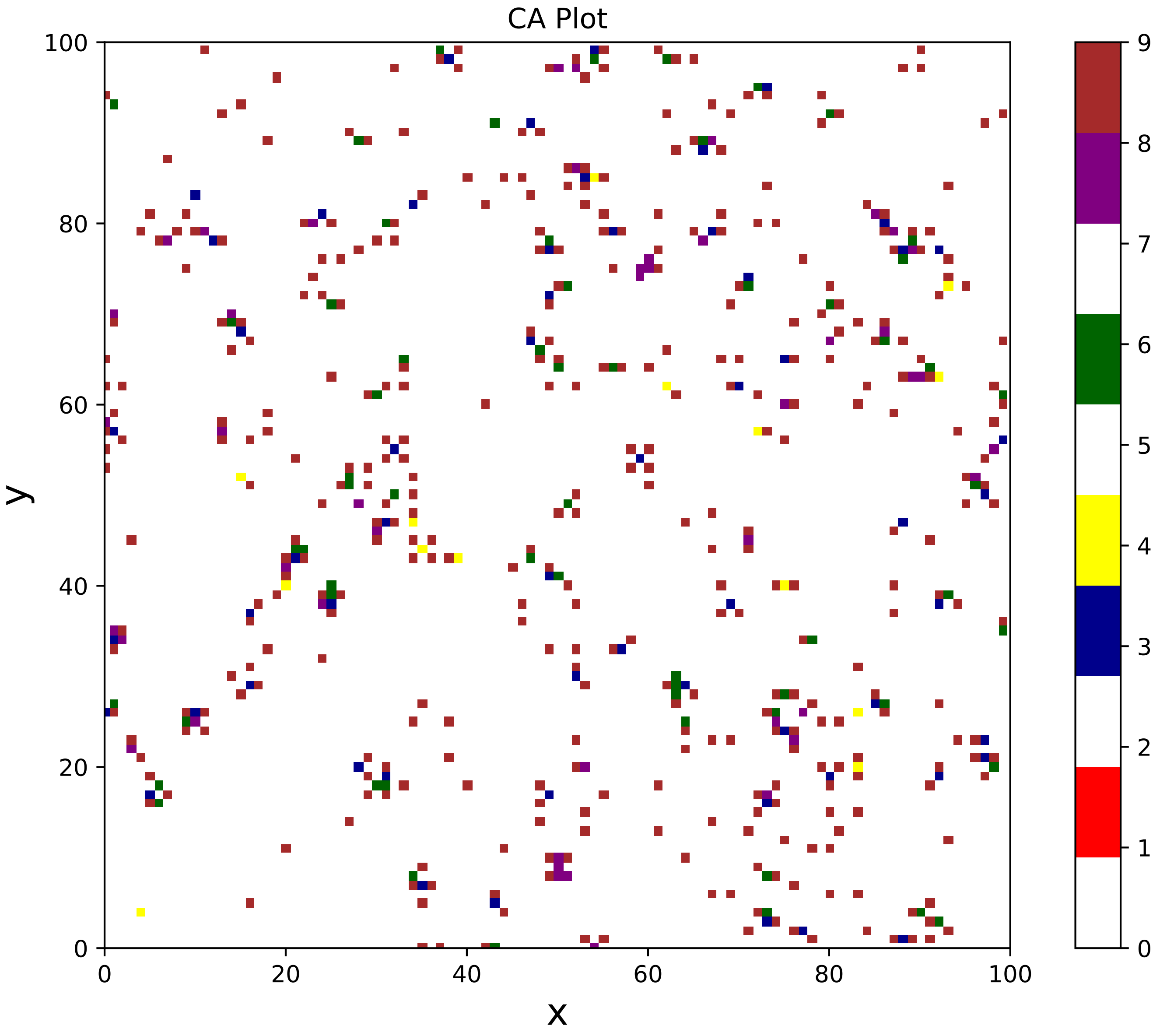

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

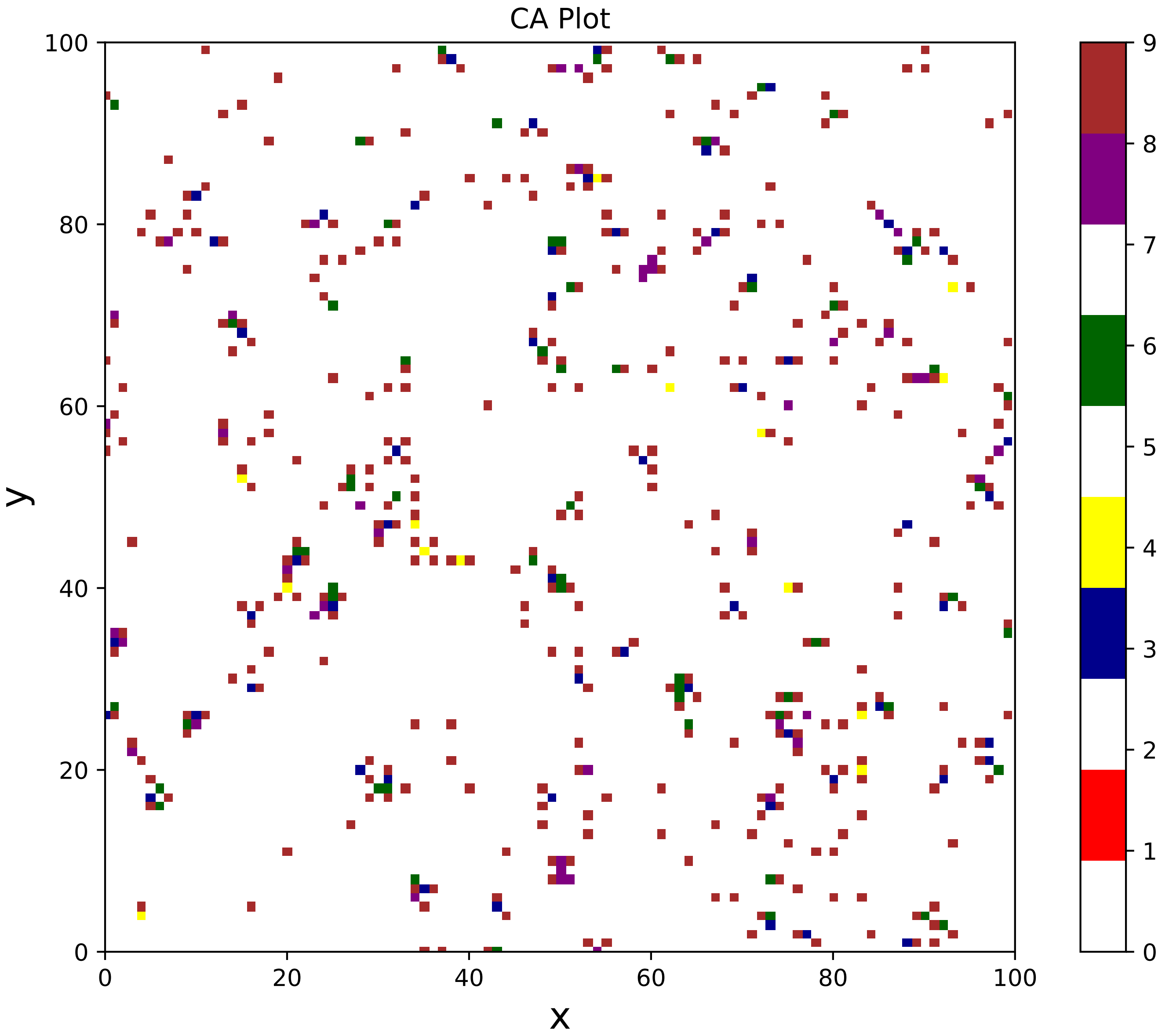

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

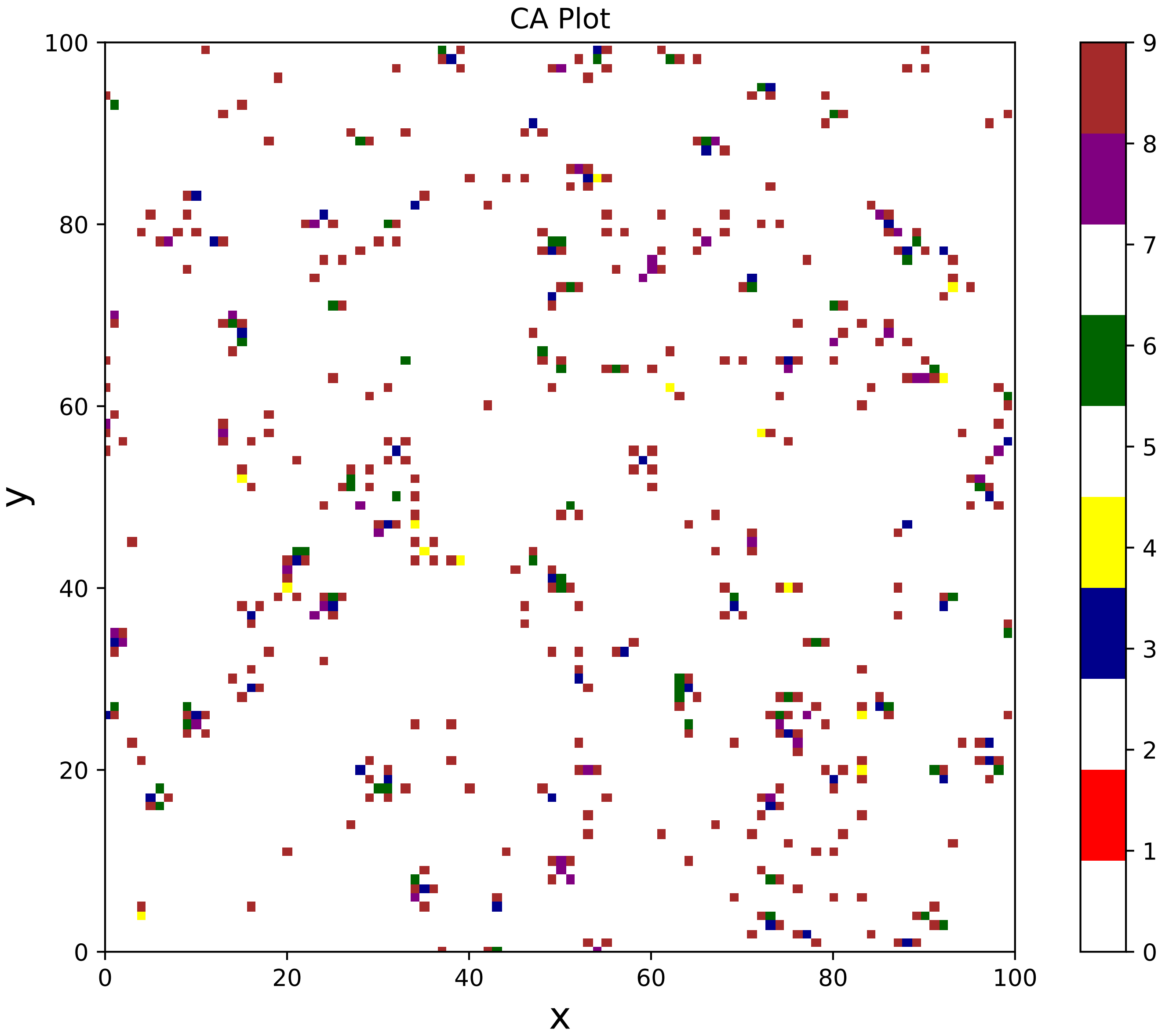

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

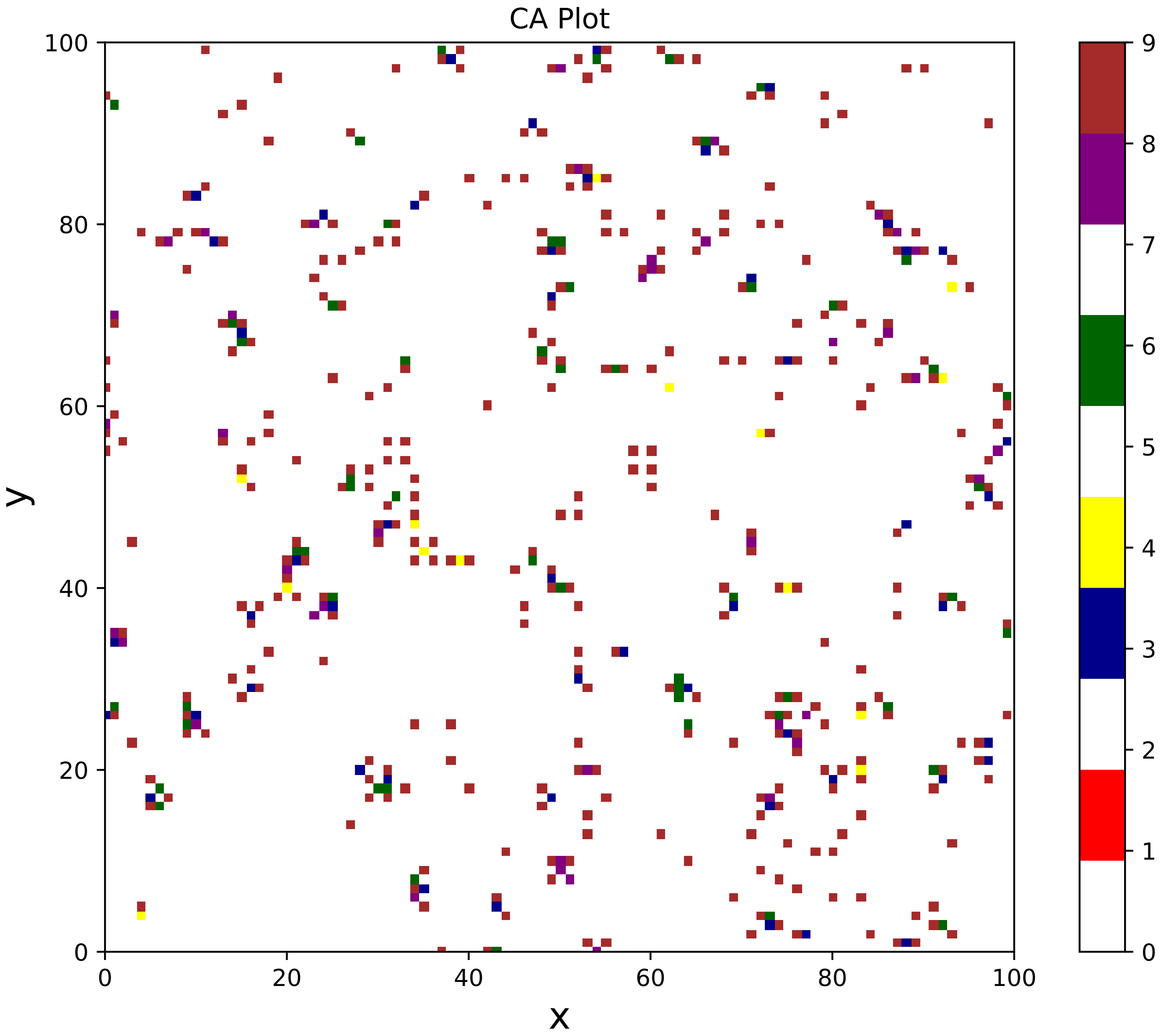

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

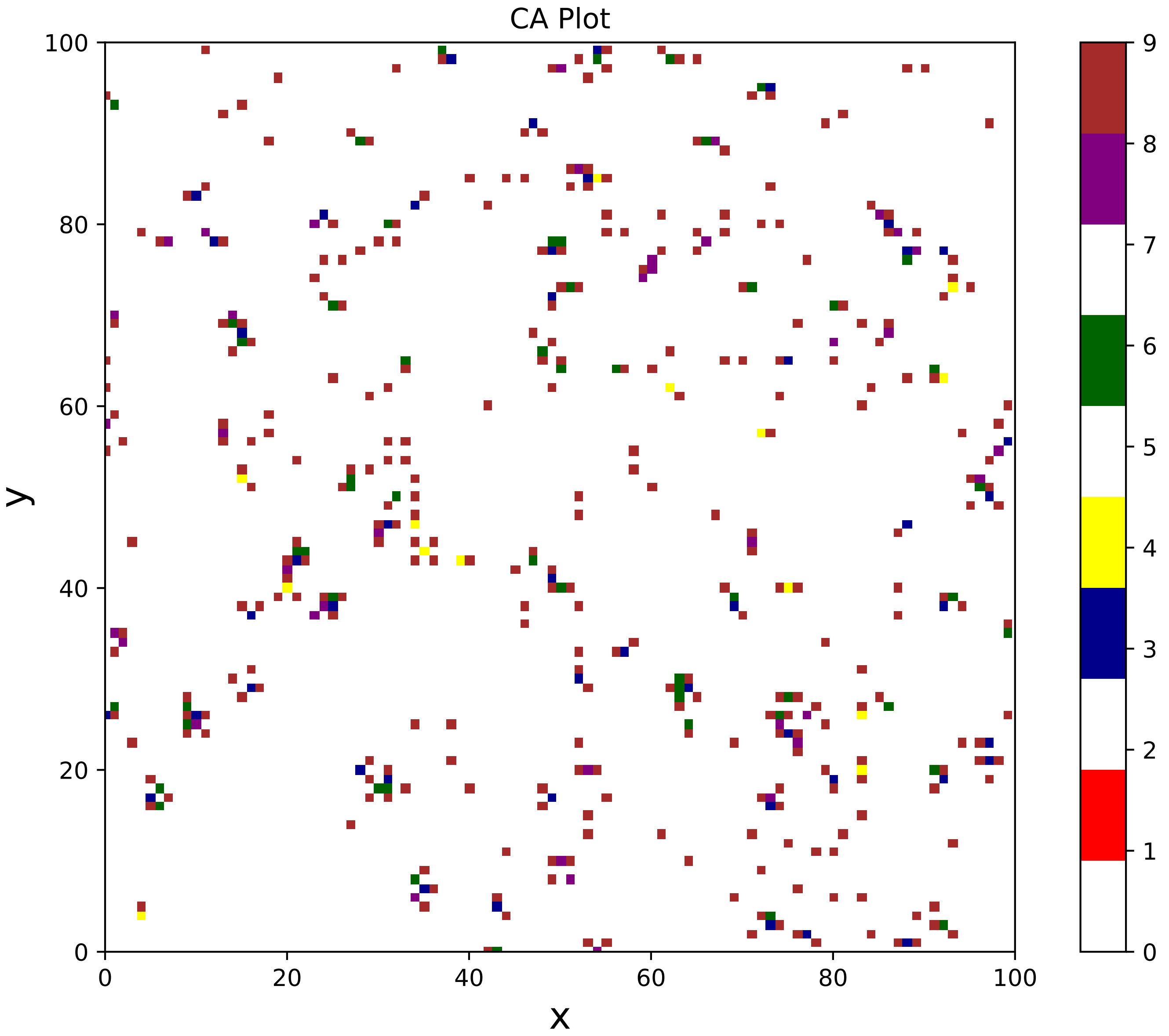

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

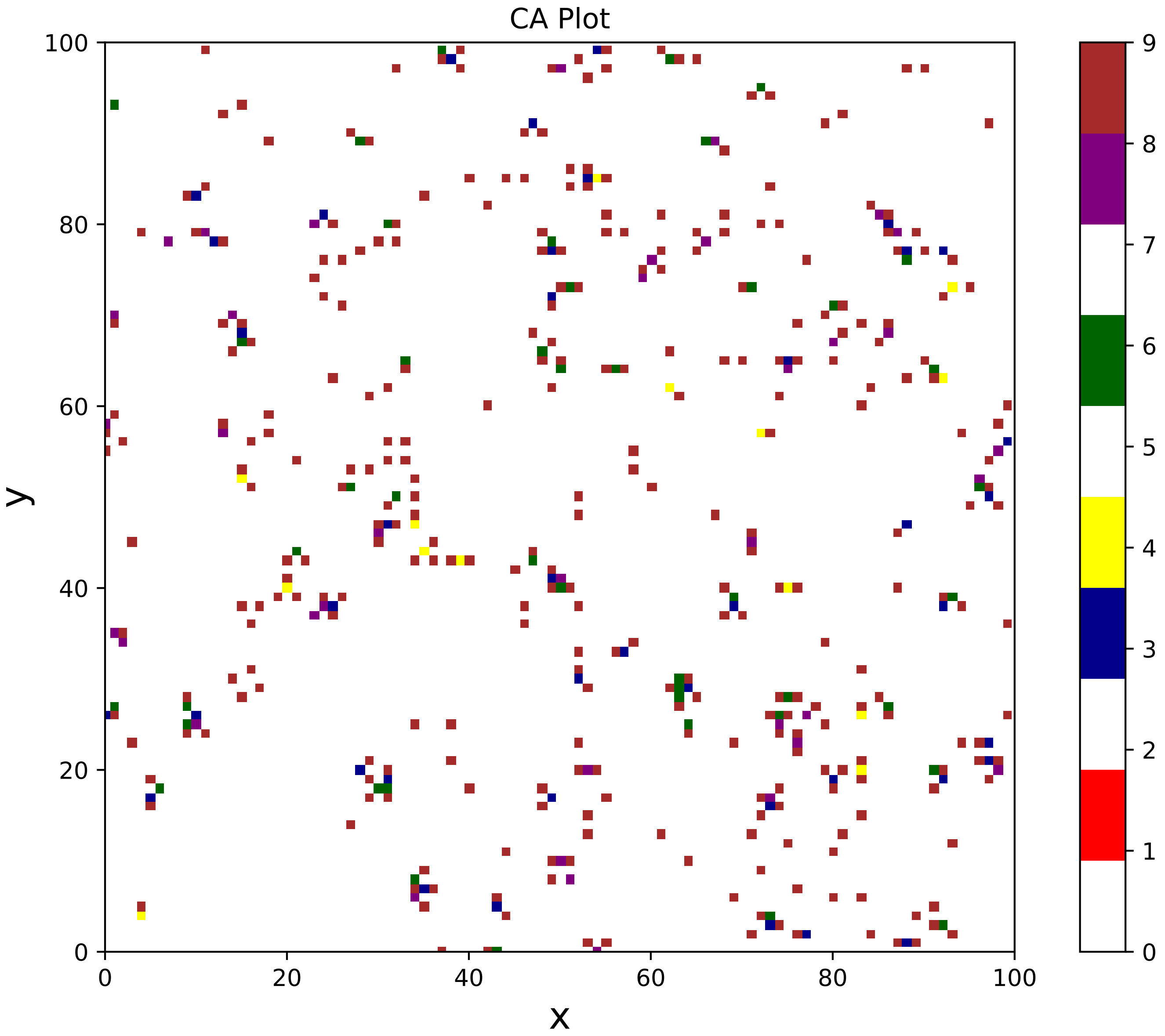

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

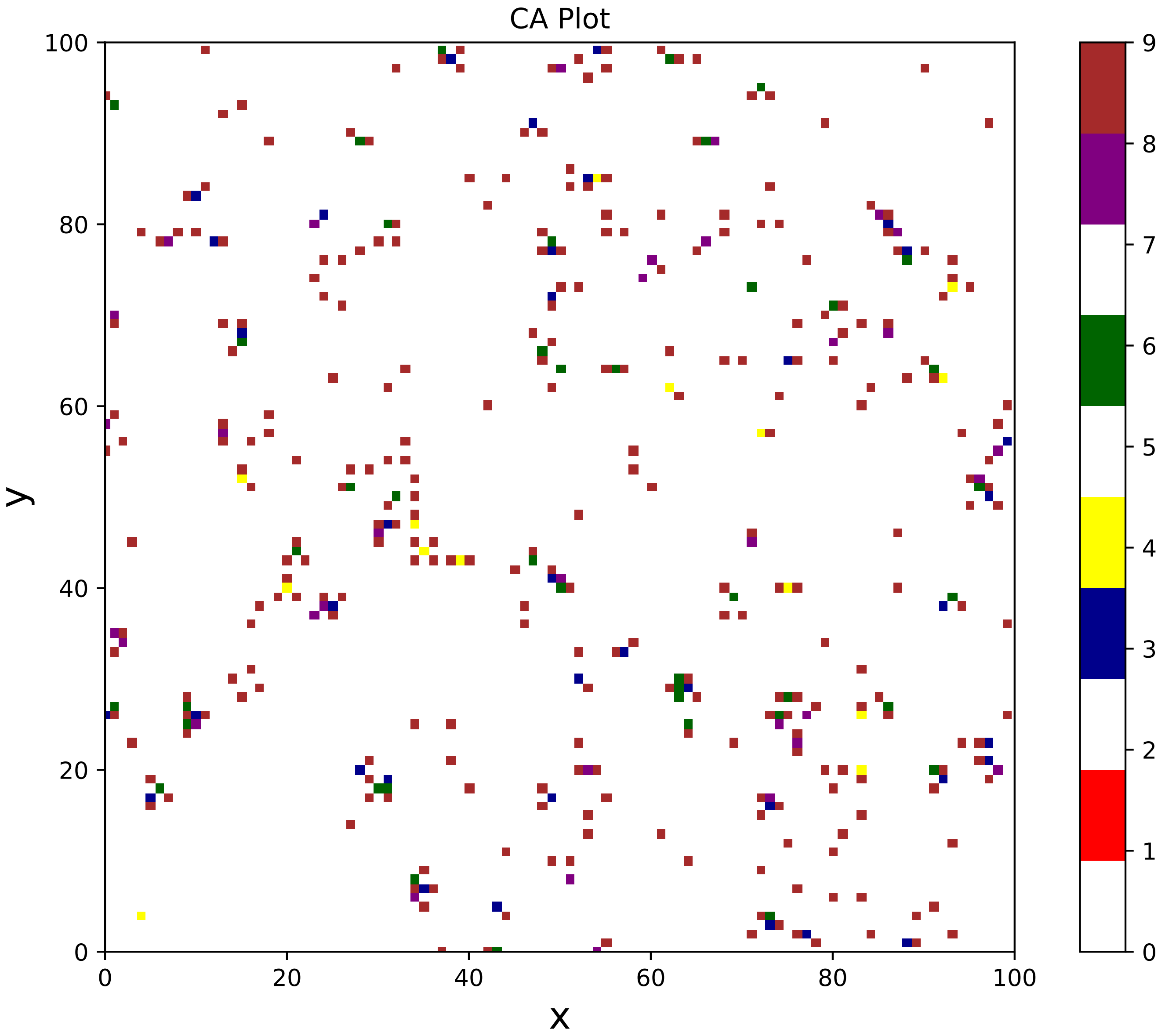

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

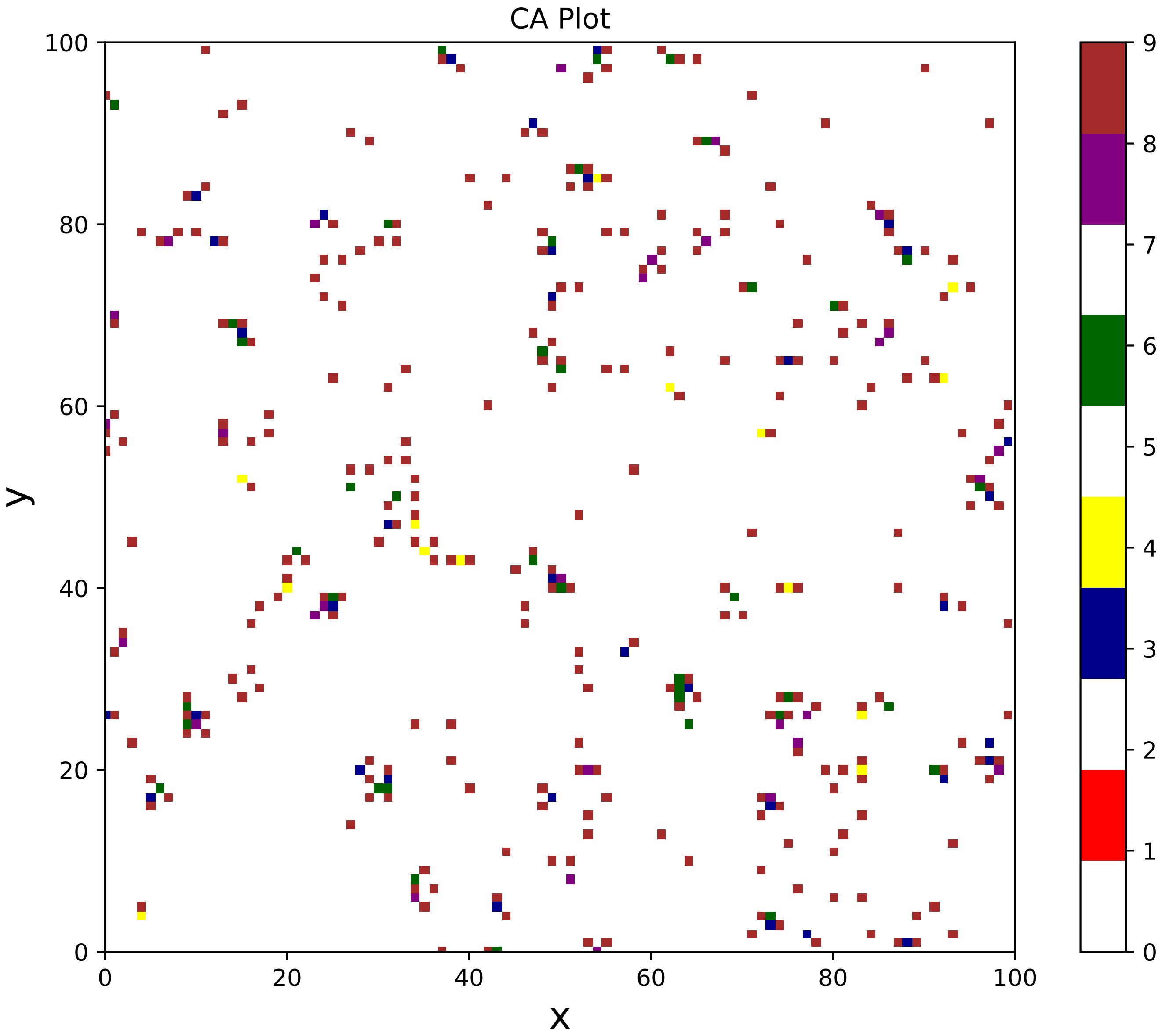

CA Plot
y
x
100
80
60
40
20
0
0
20
40
60
80
100
9
8
7
6
5
4
3
2
1
0

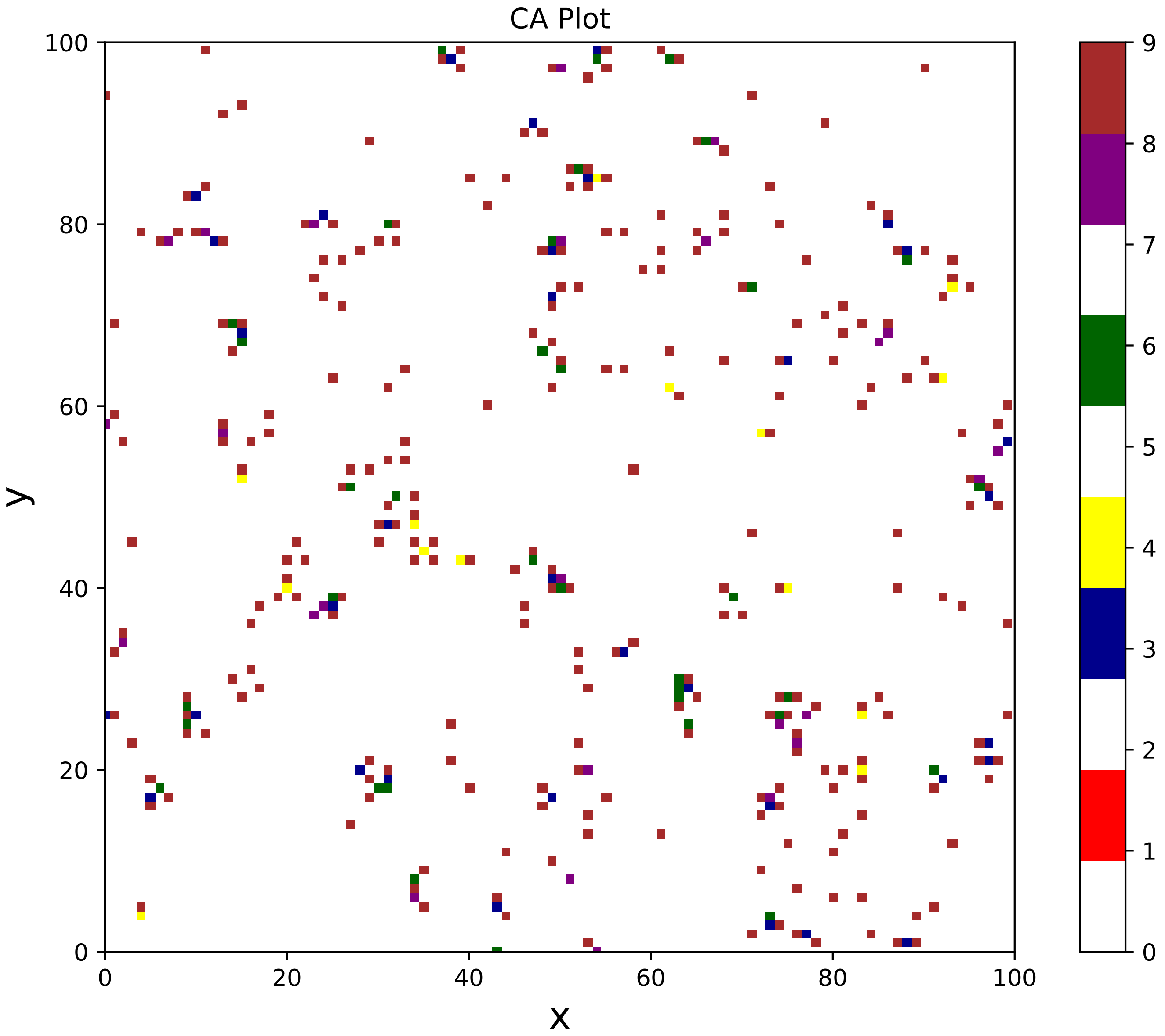

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

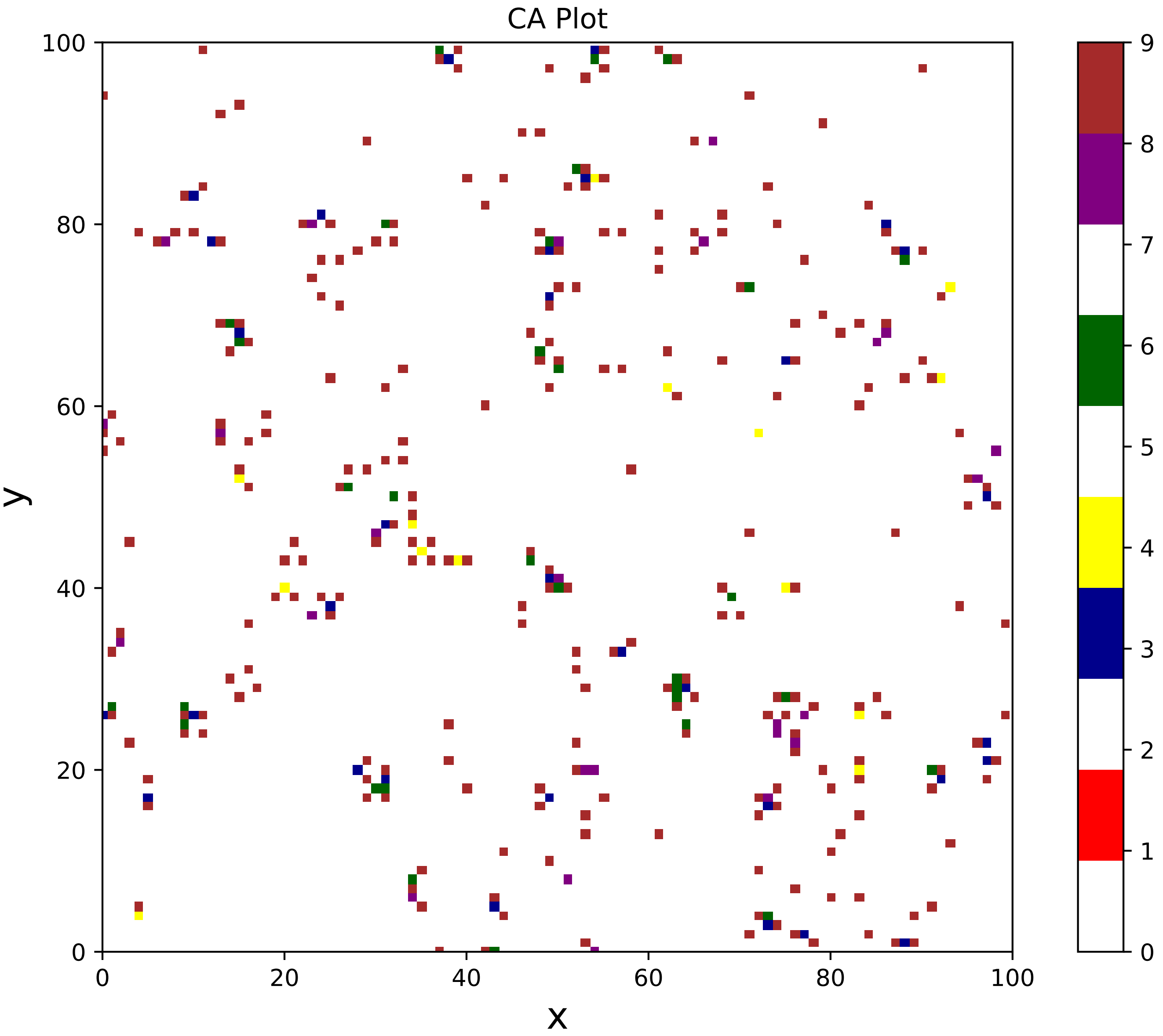

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

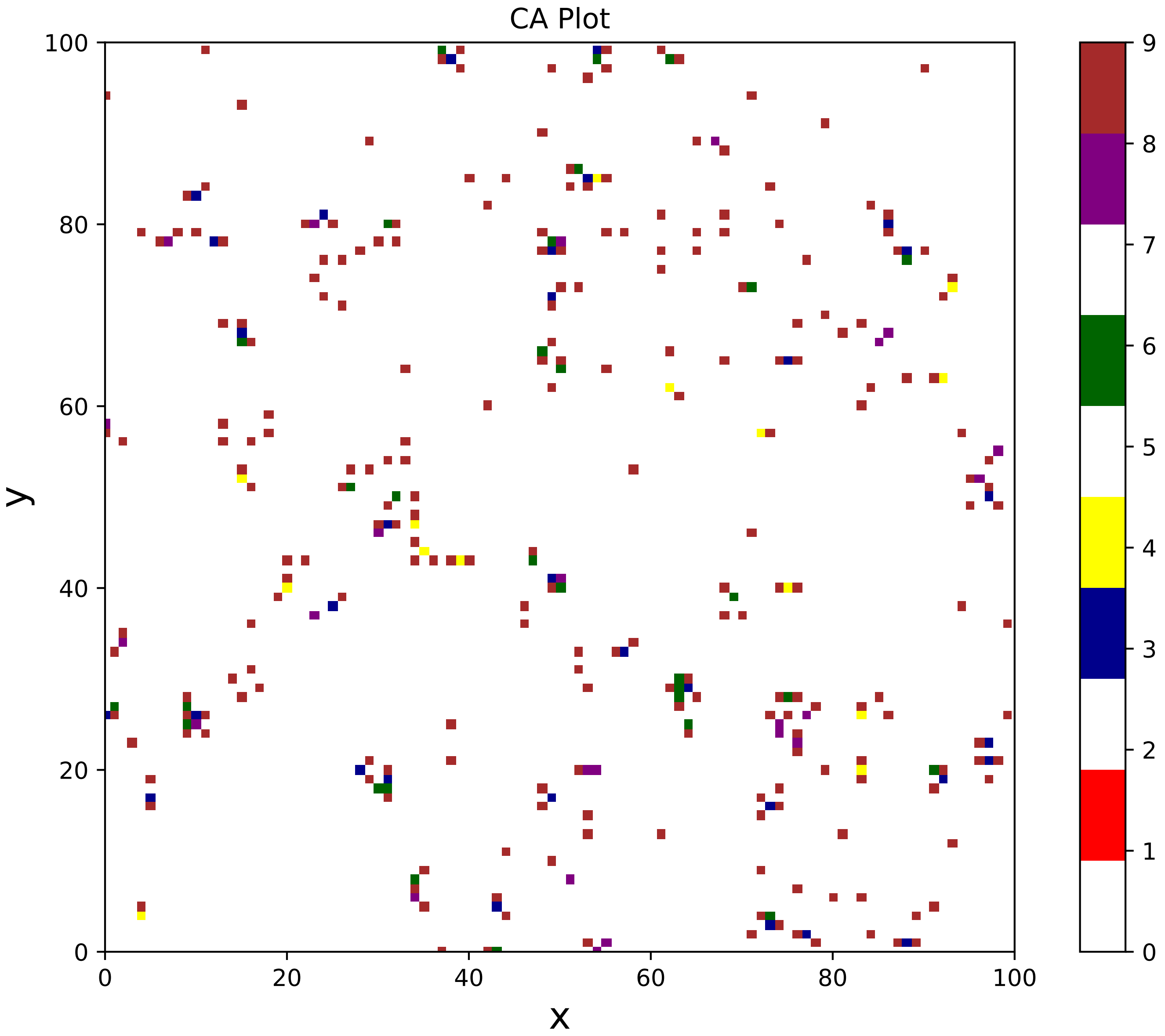

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

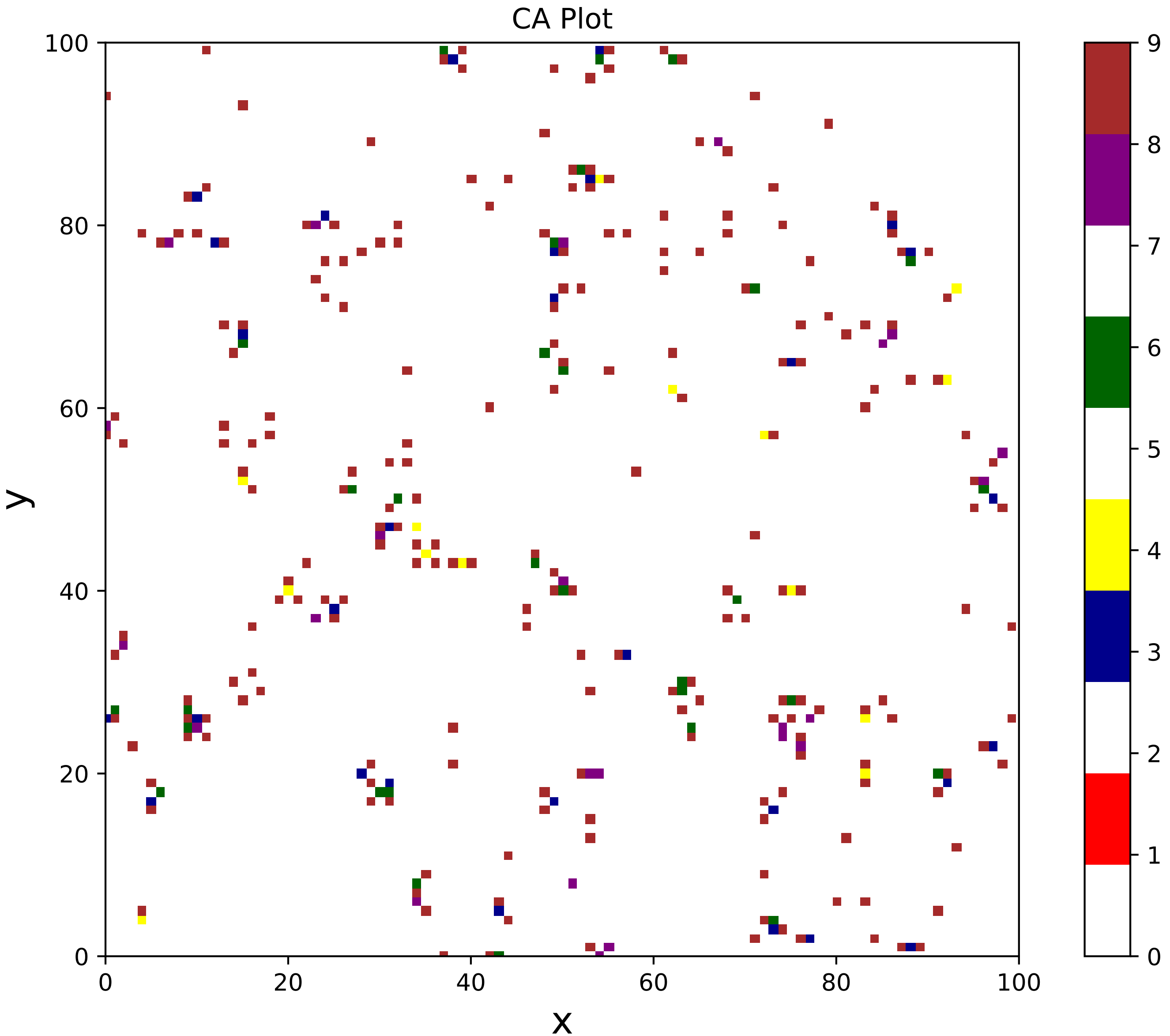

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

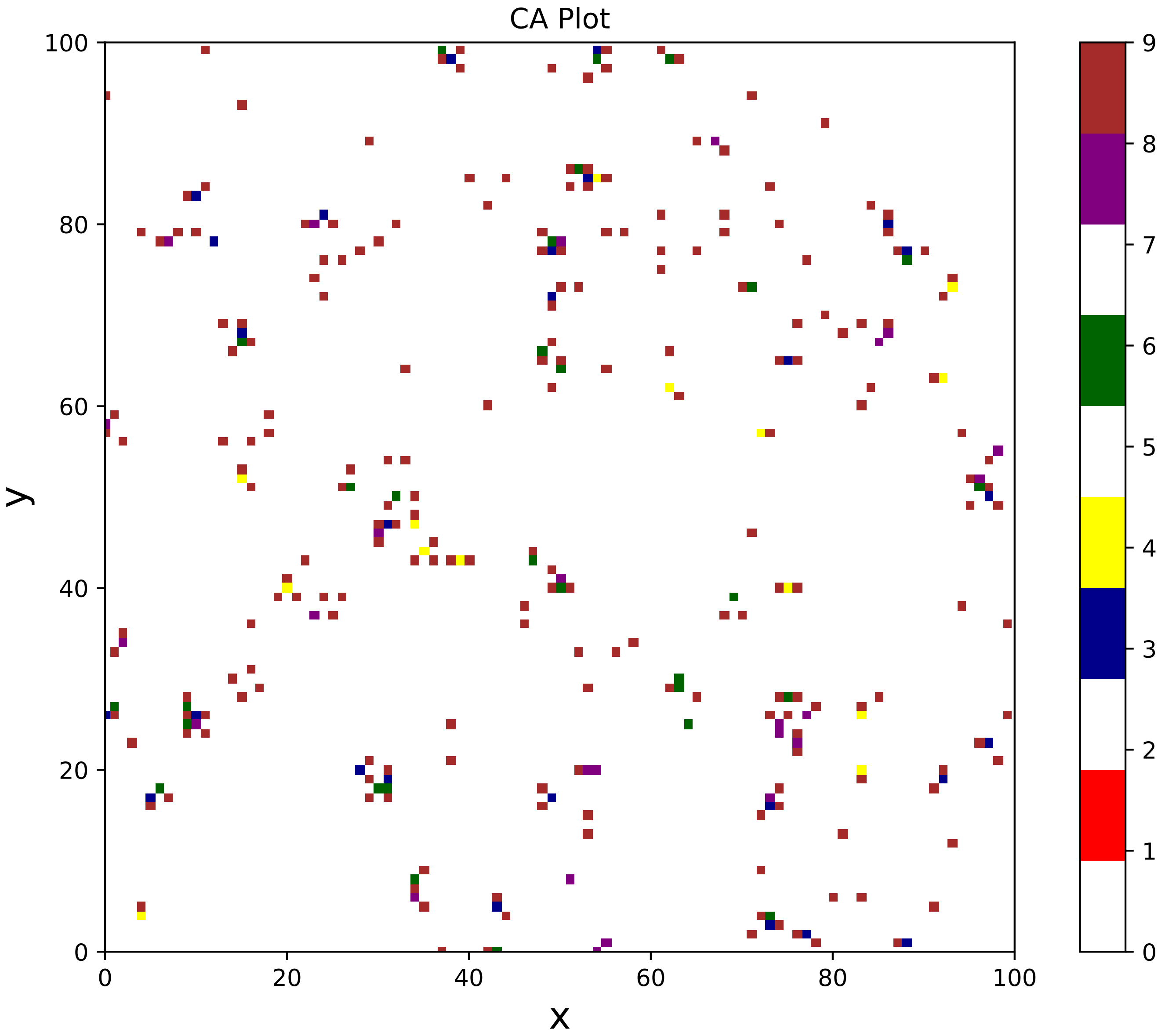

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

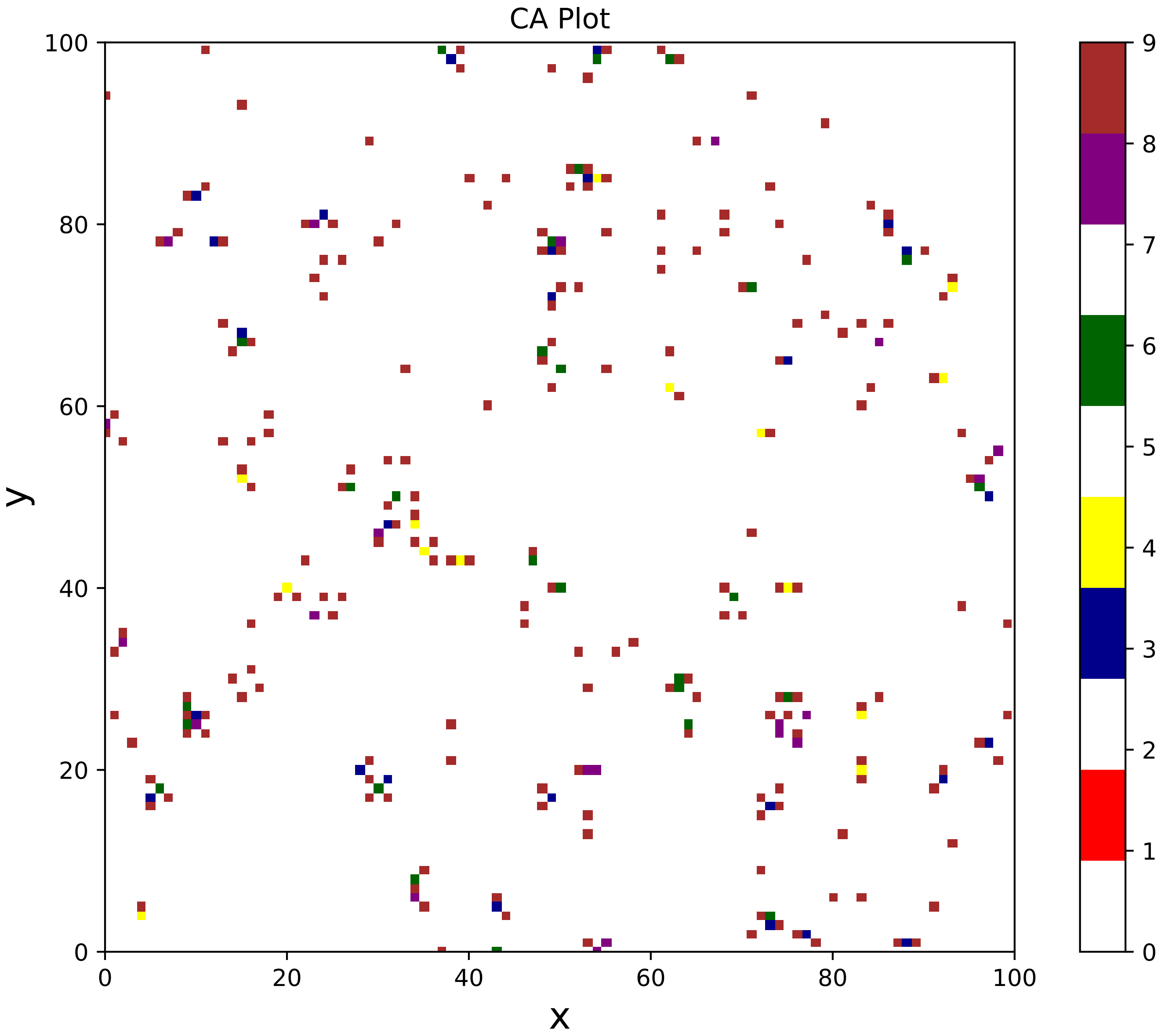

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

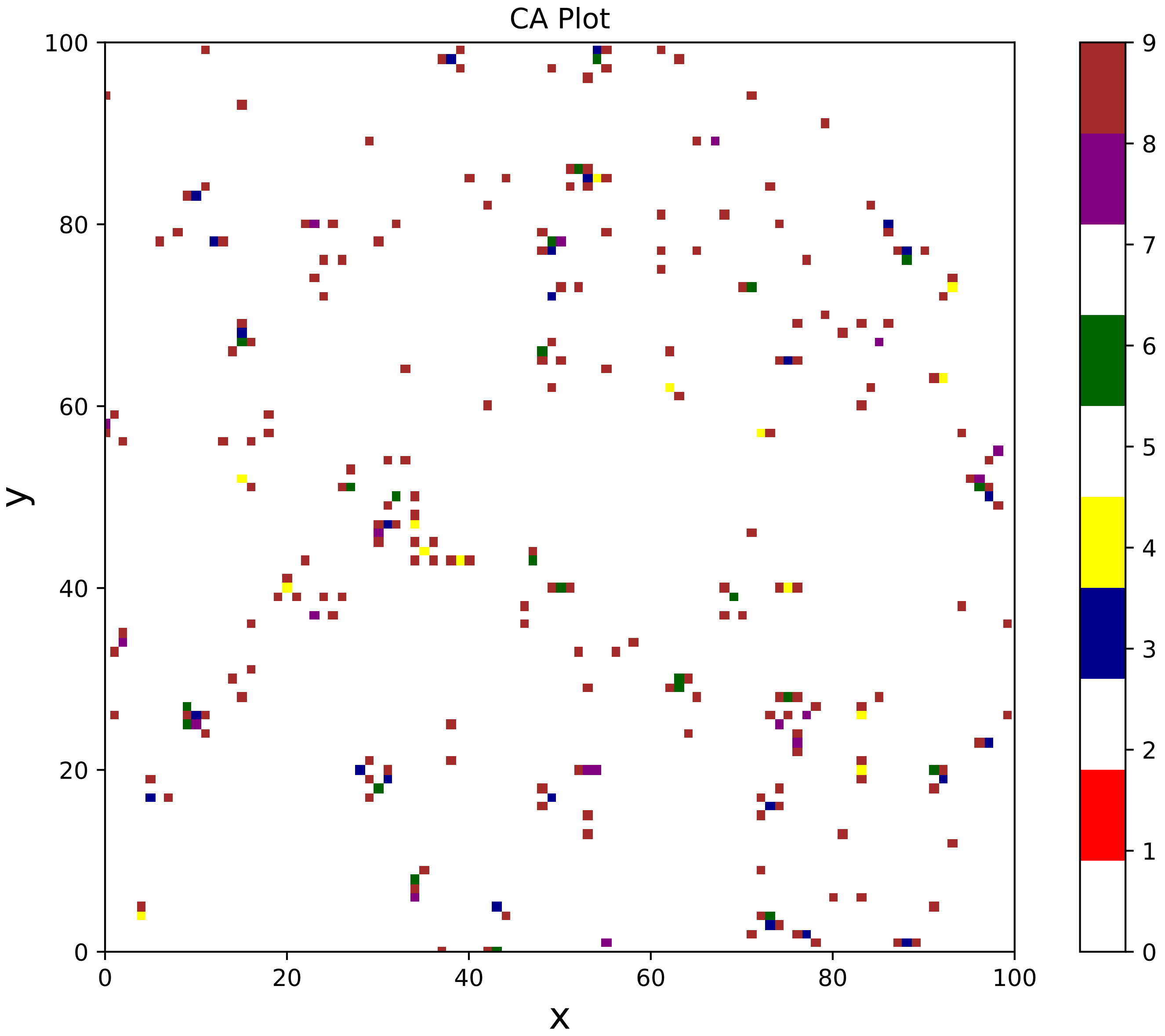
CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

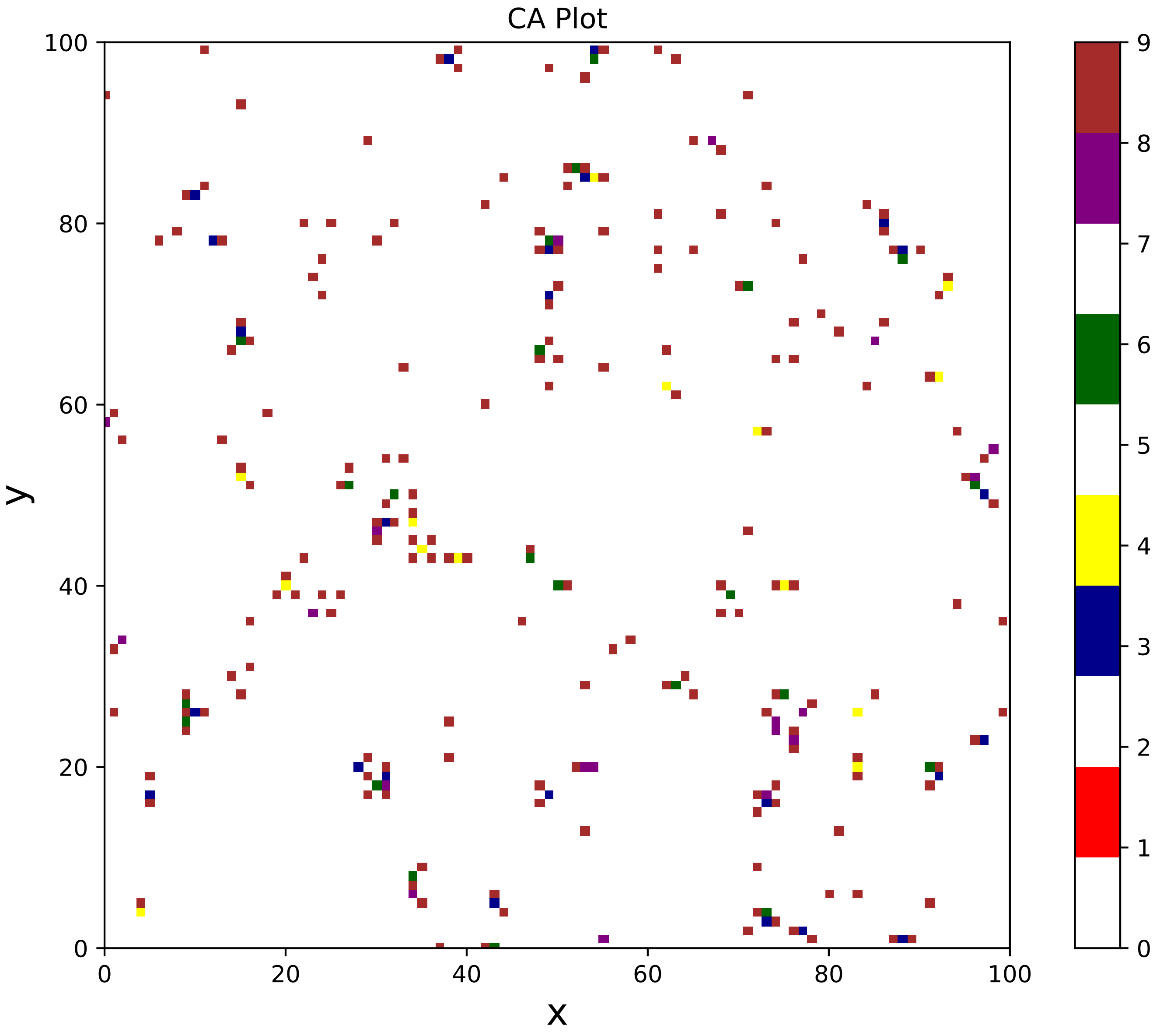

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

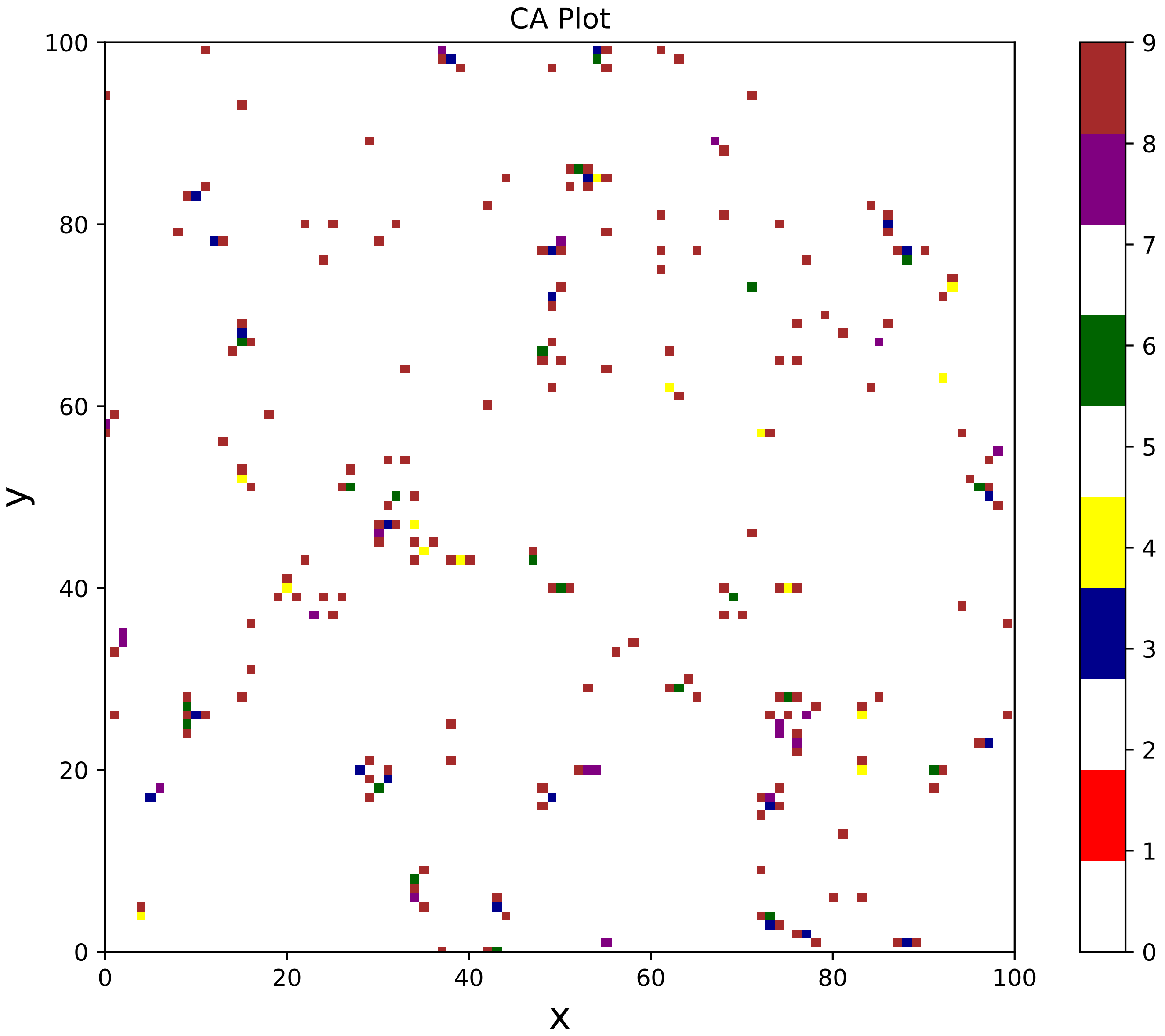

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

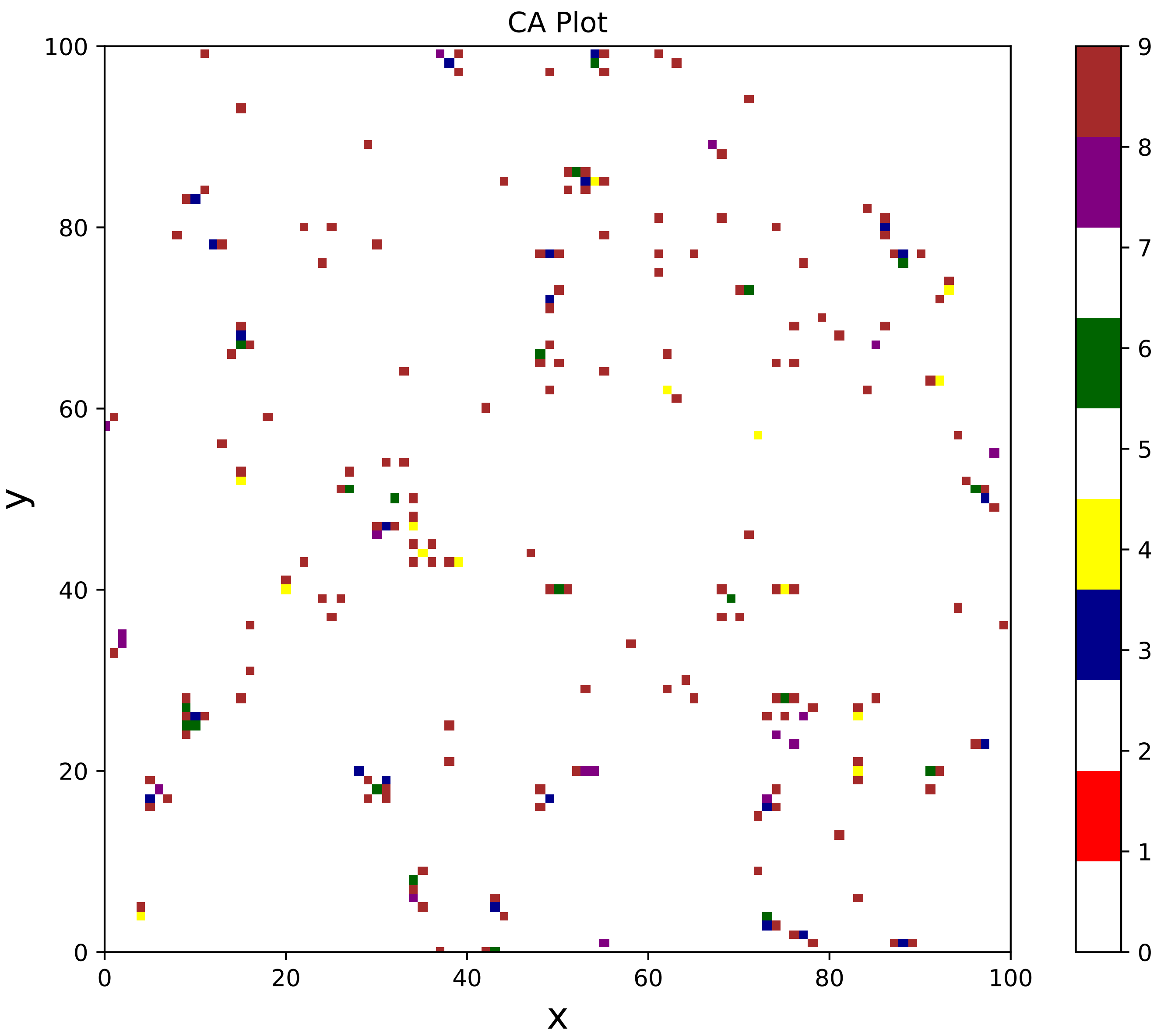

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

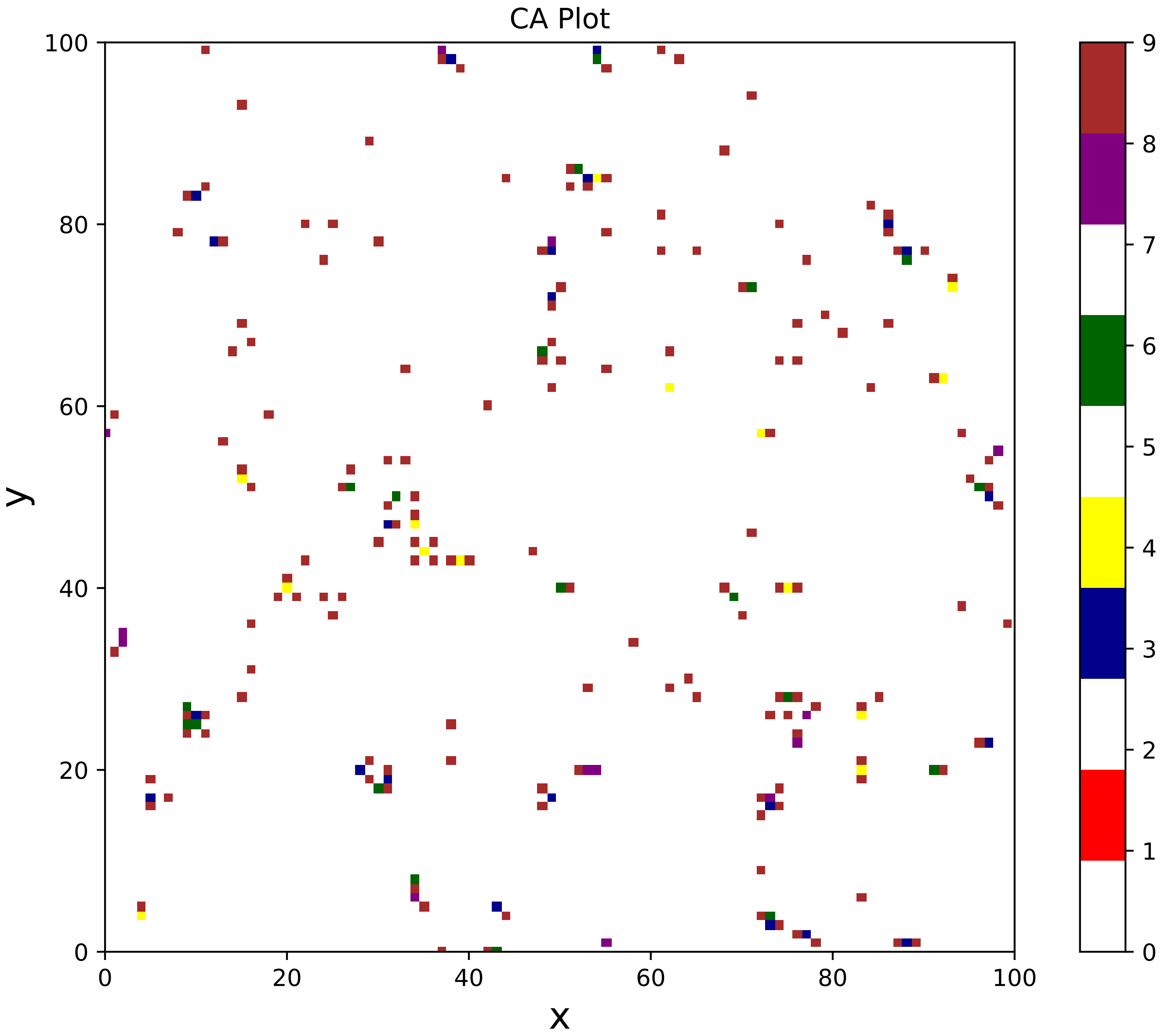

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

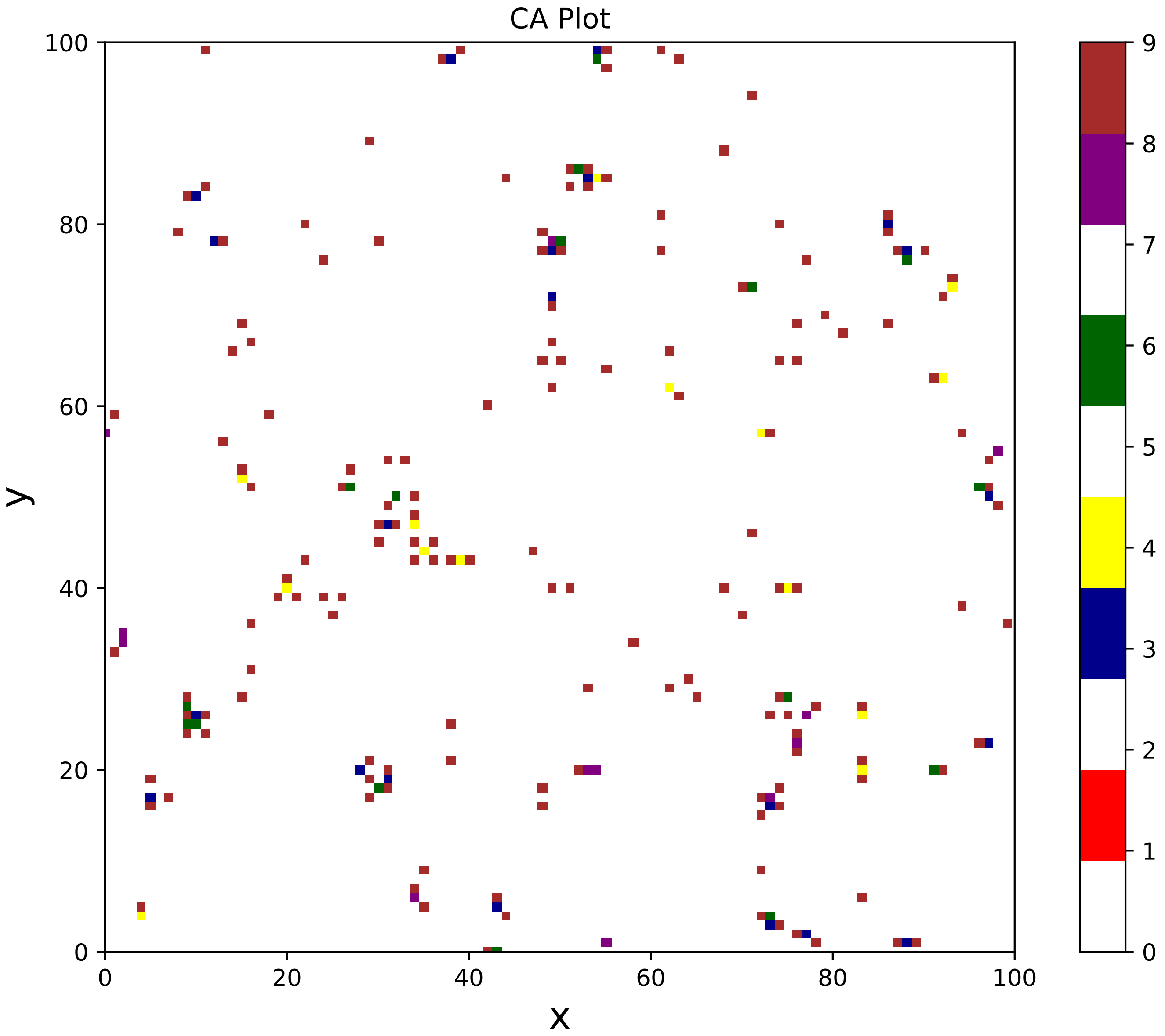

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

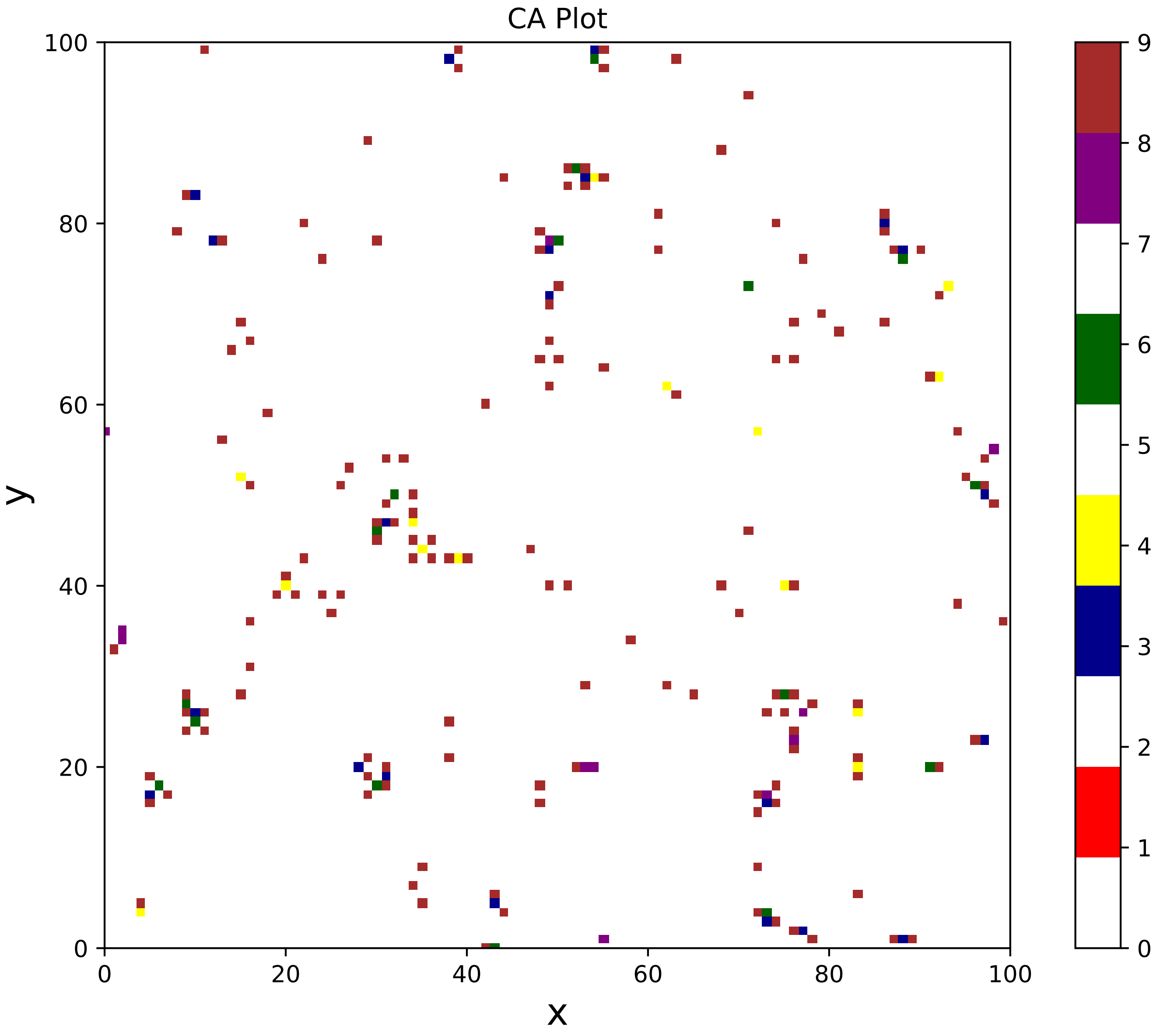

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

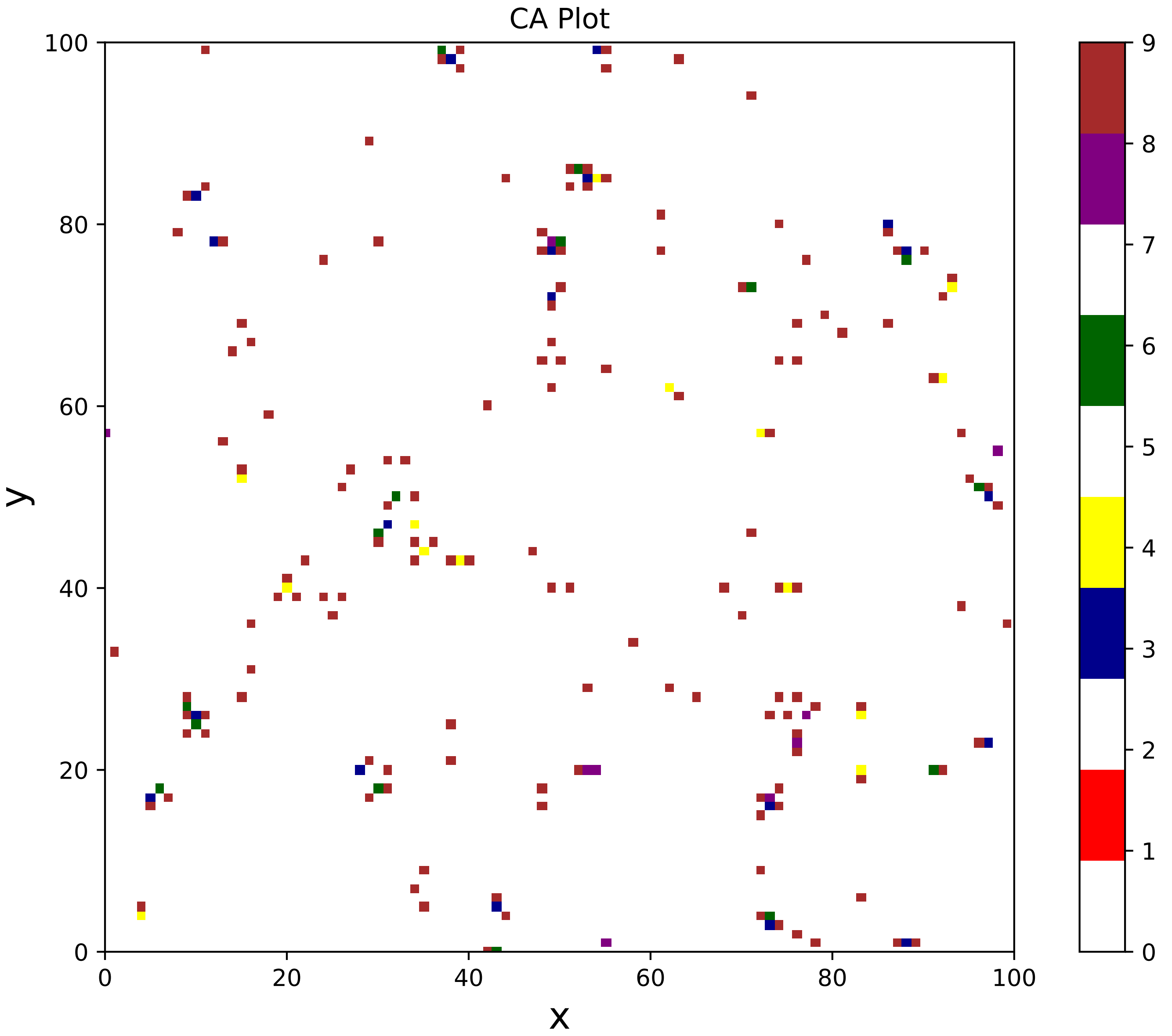

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

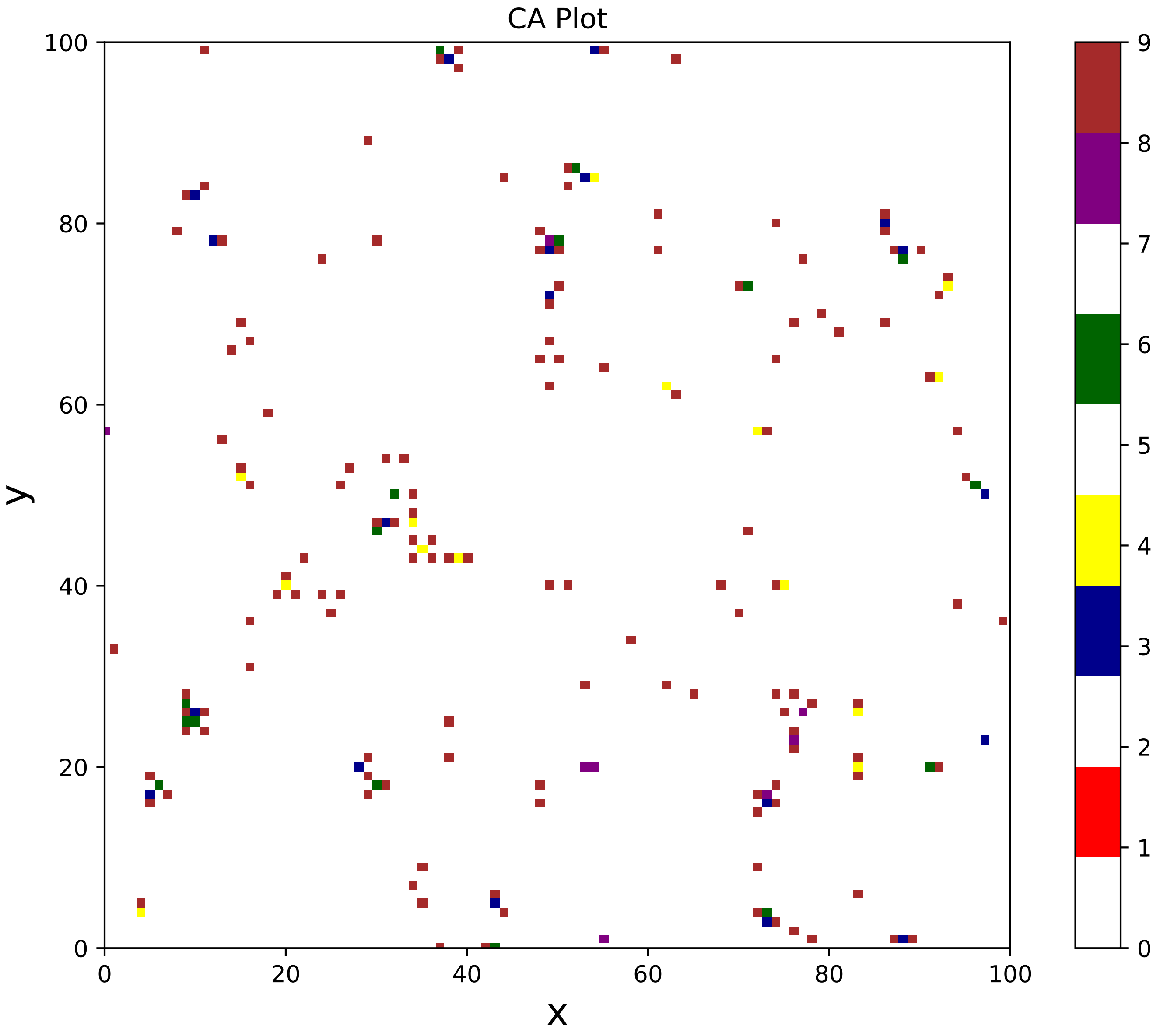

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

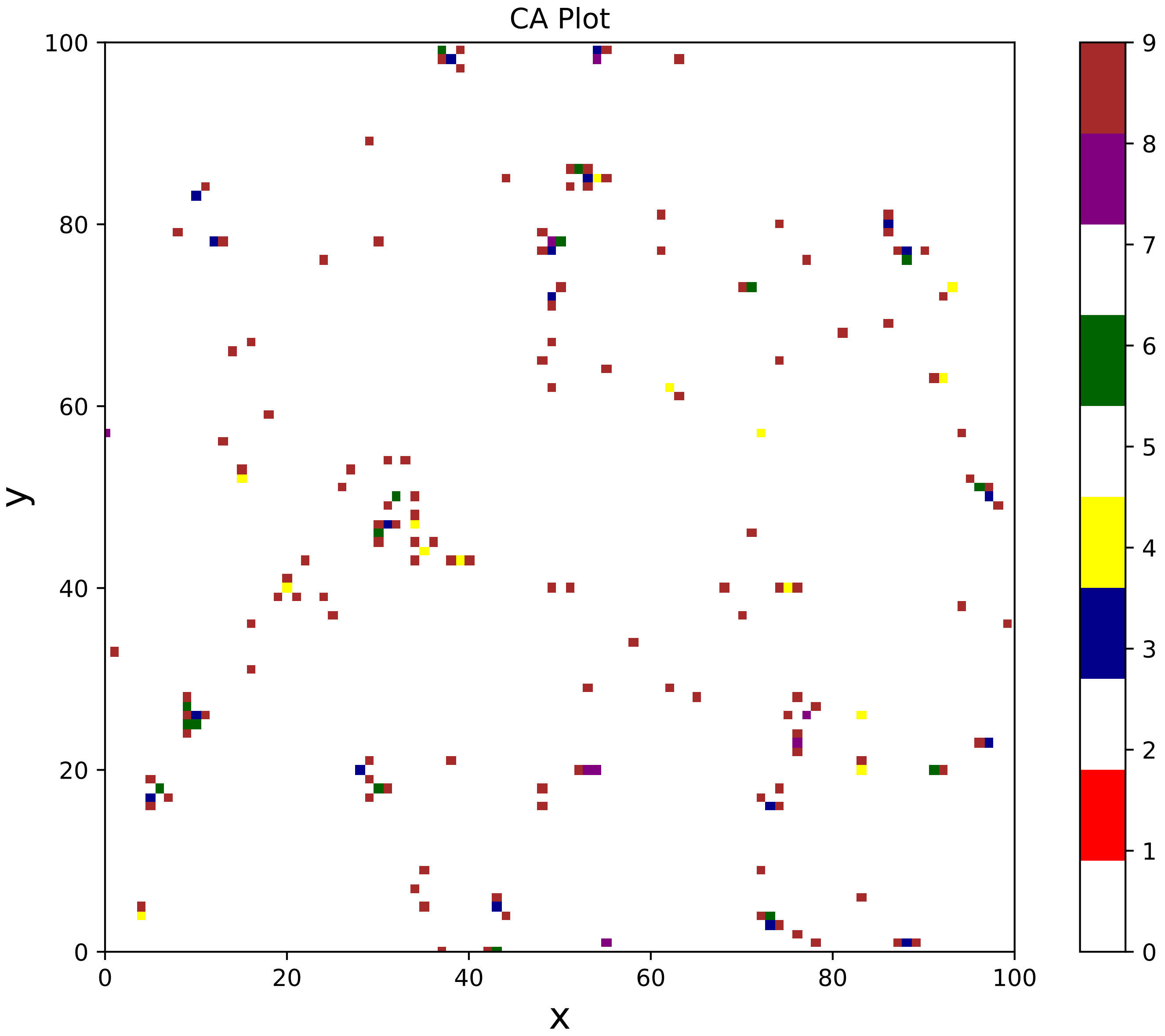

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

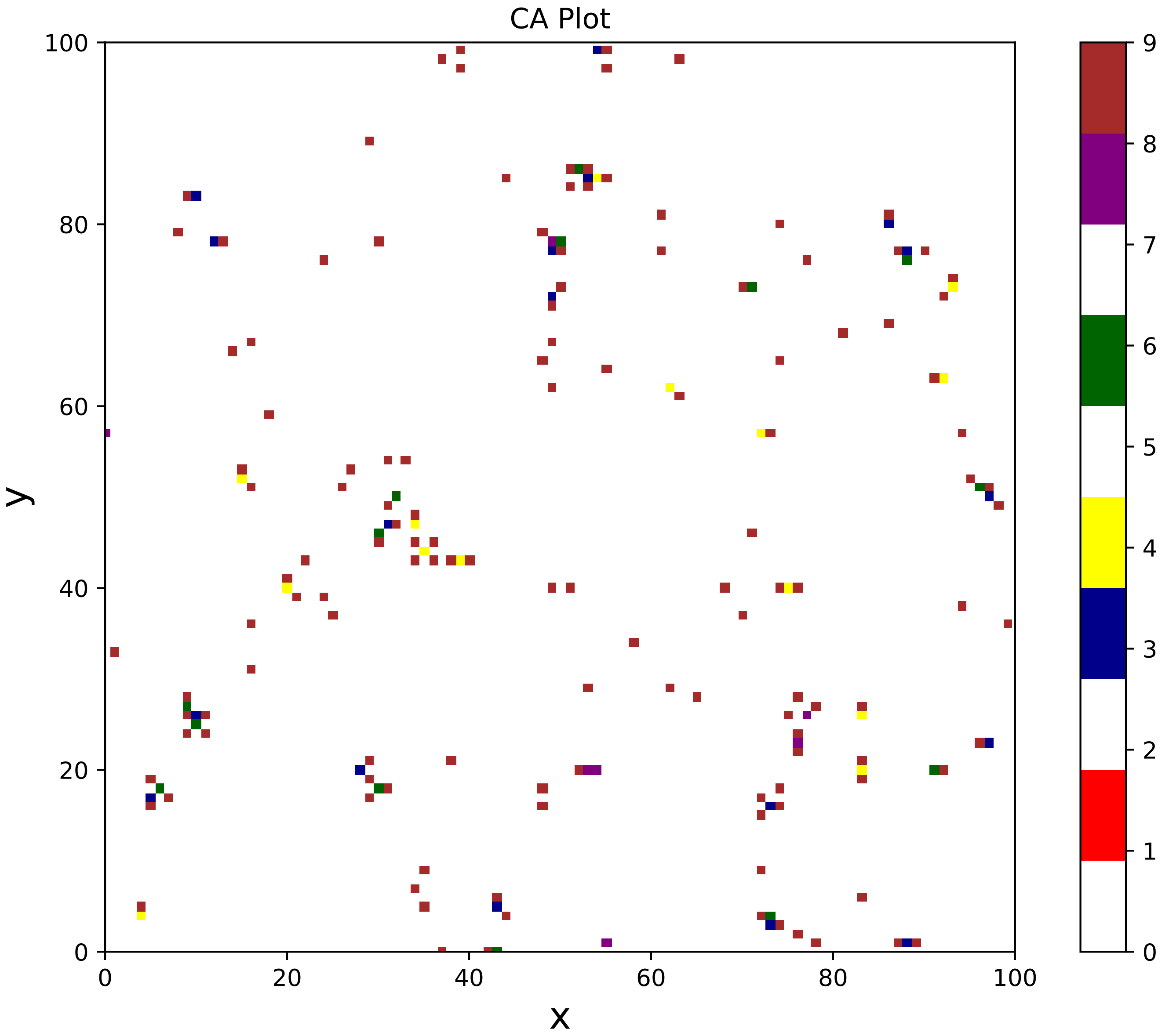

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

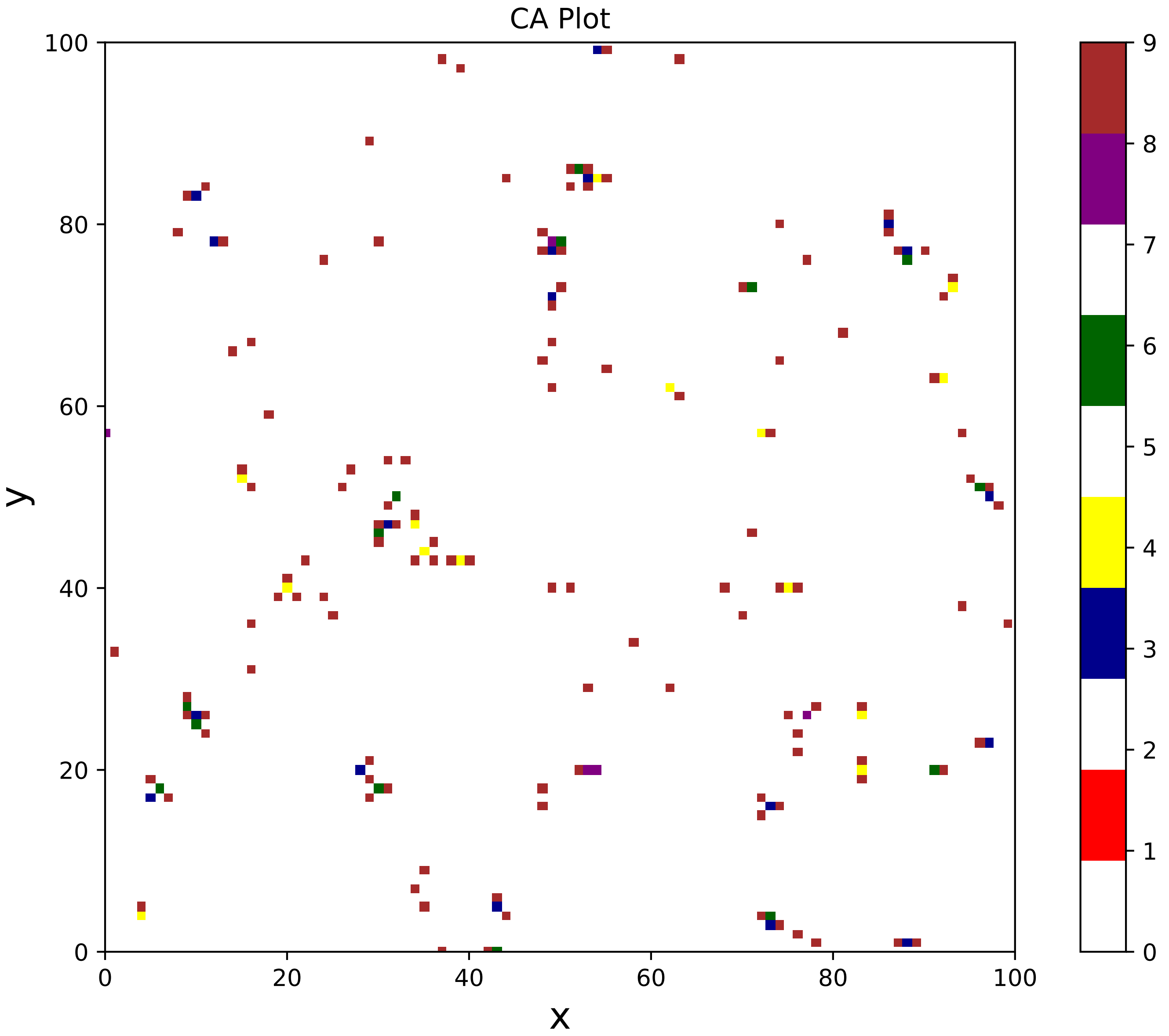

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

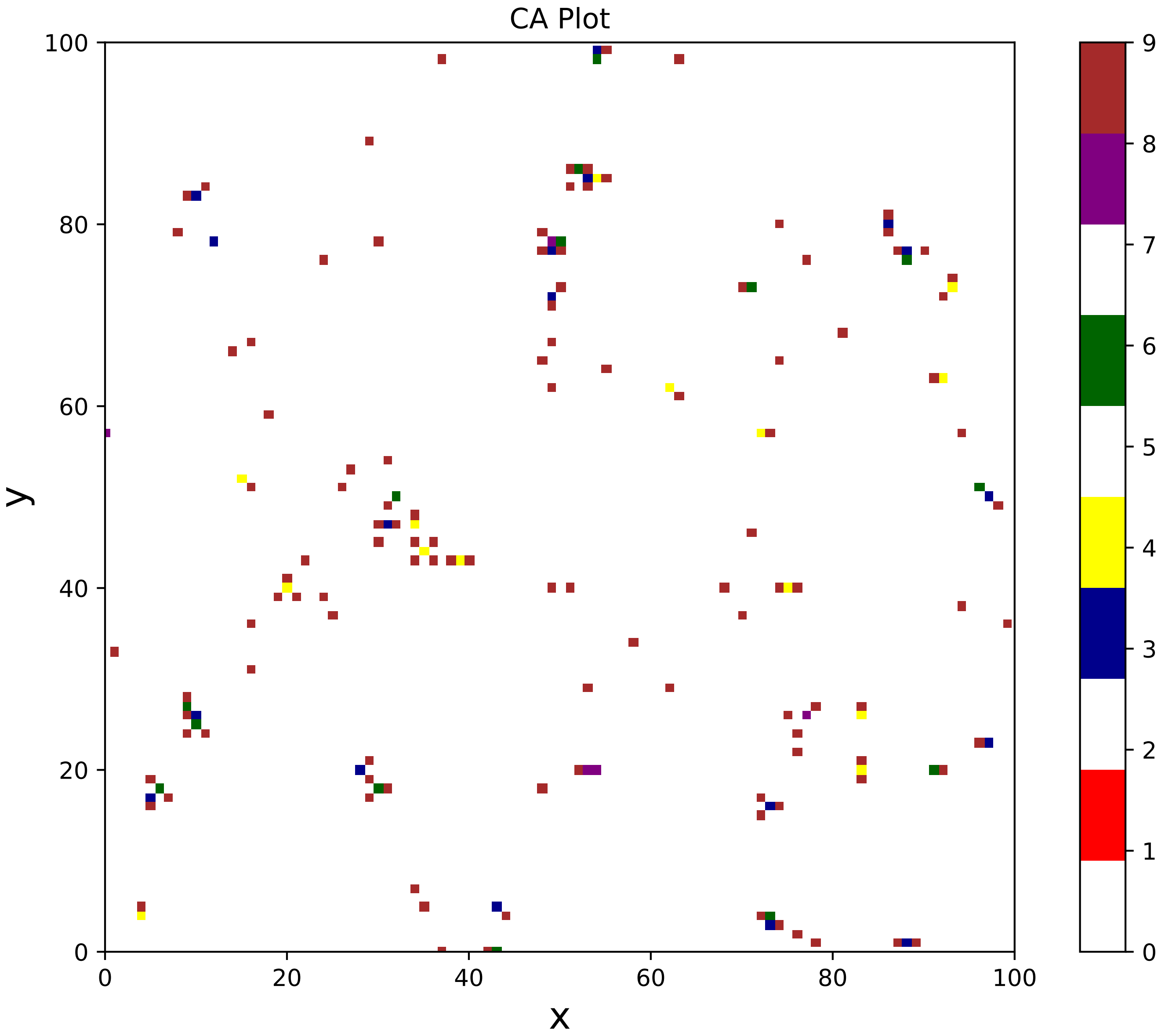

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

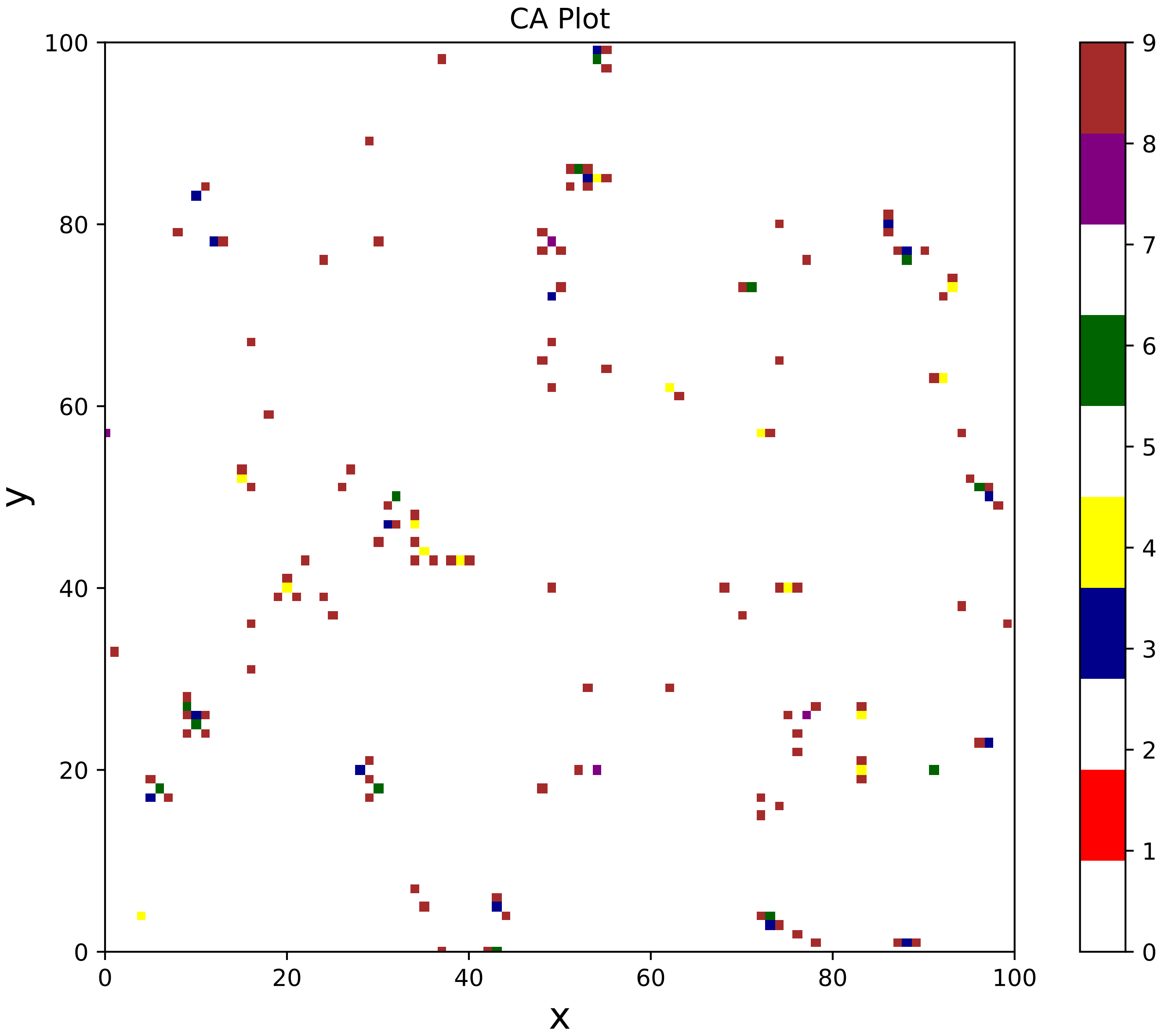

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

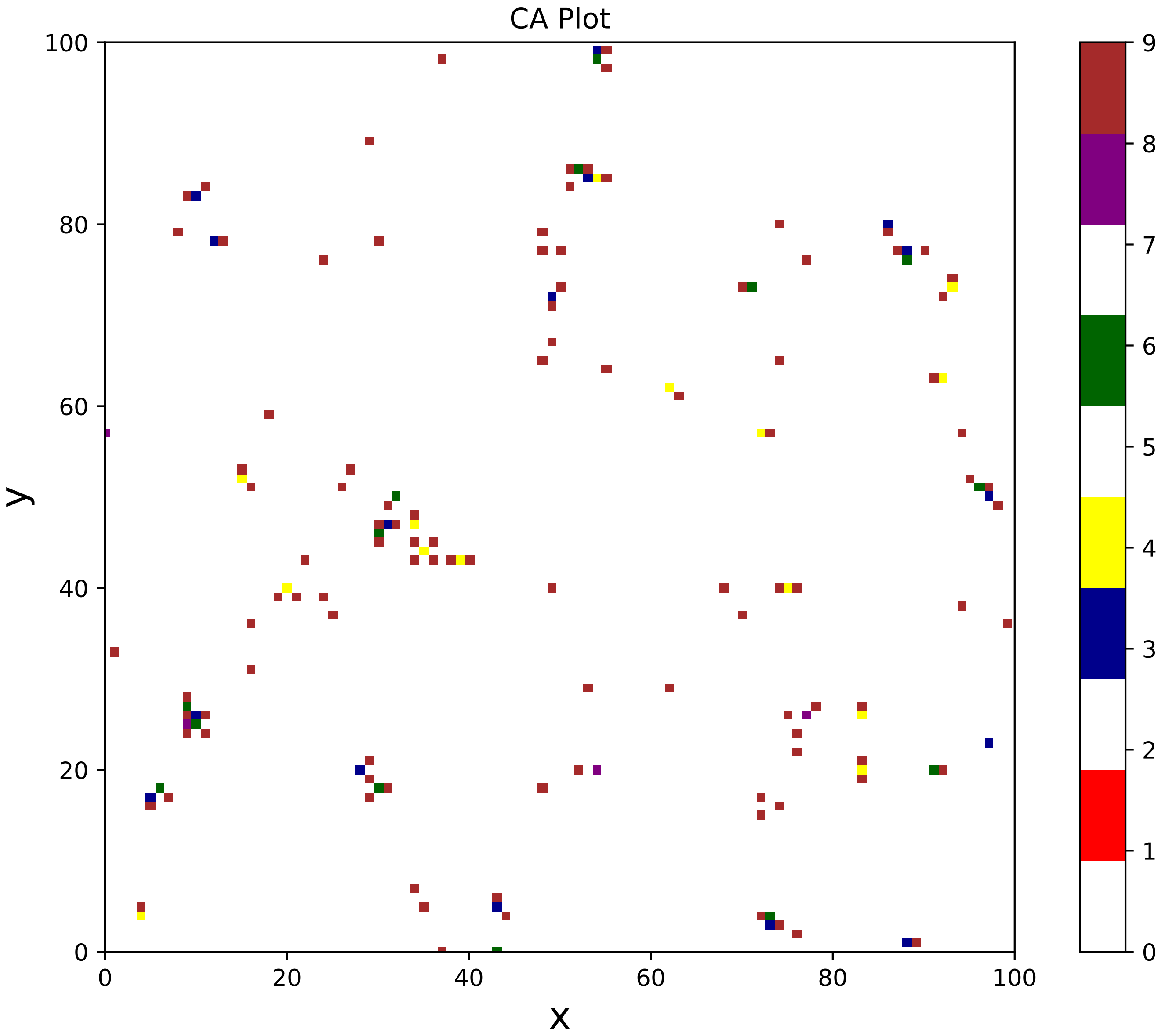

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

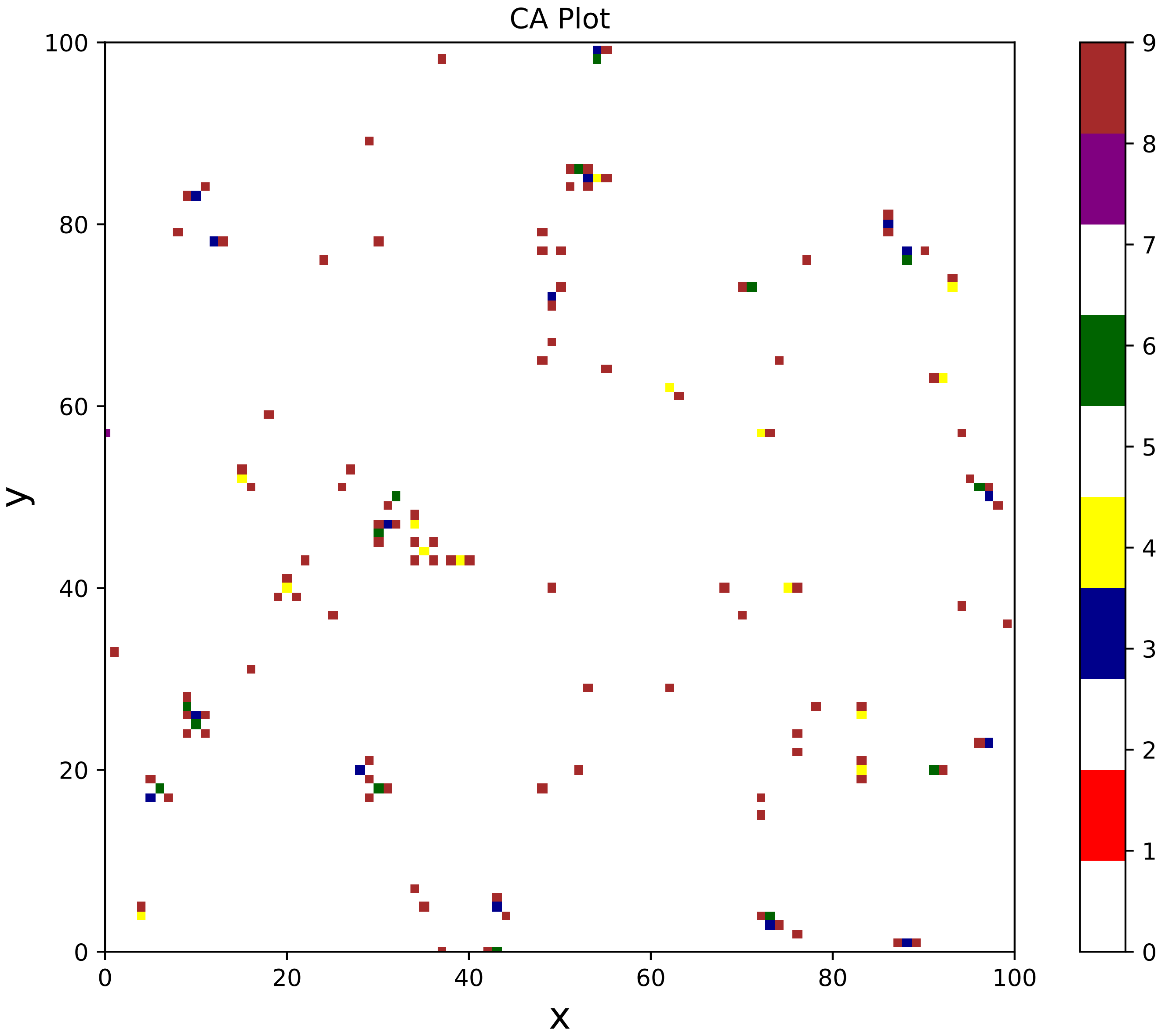

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

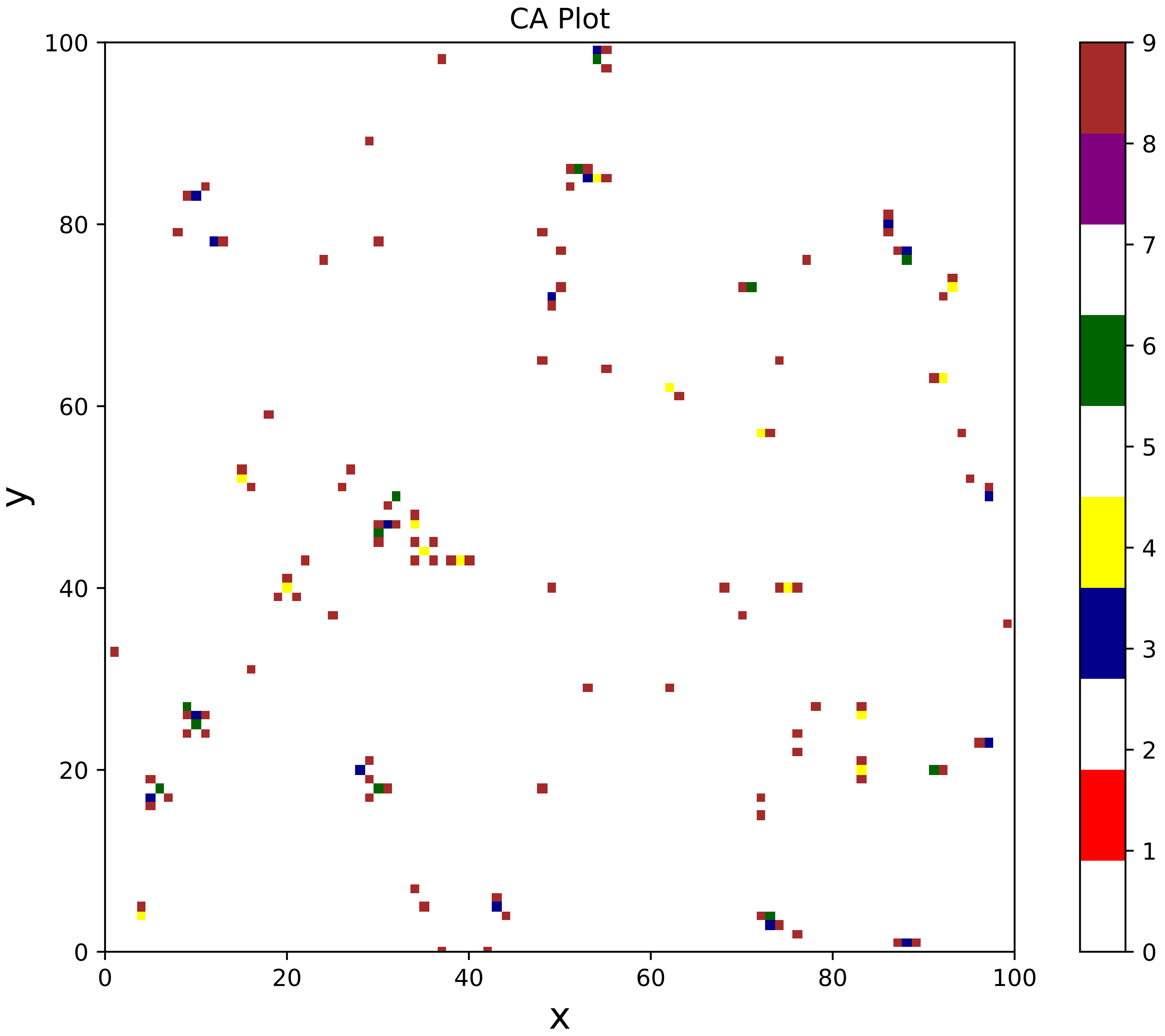

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

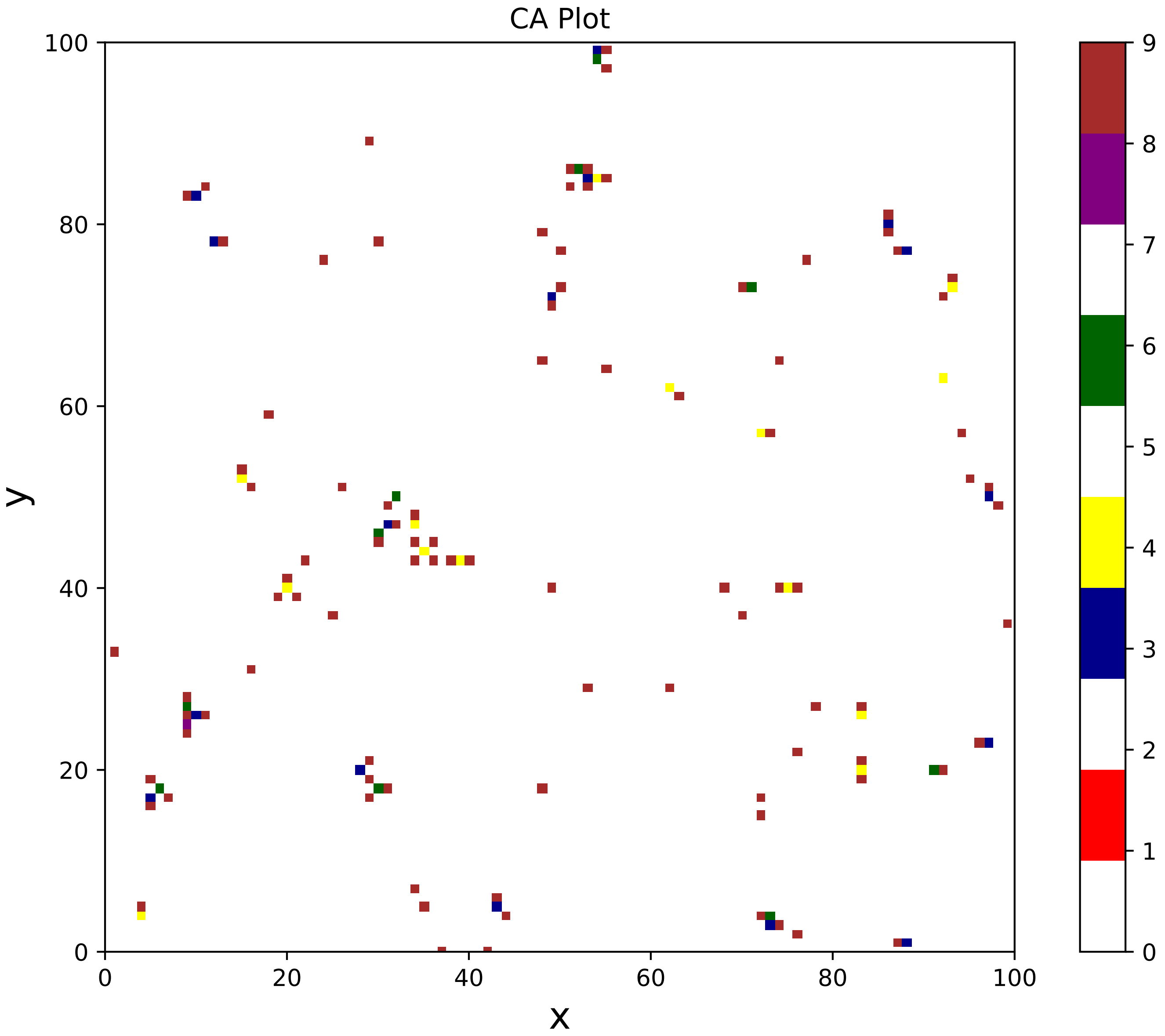

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

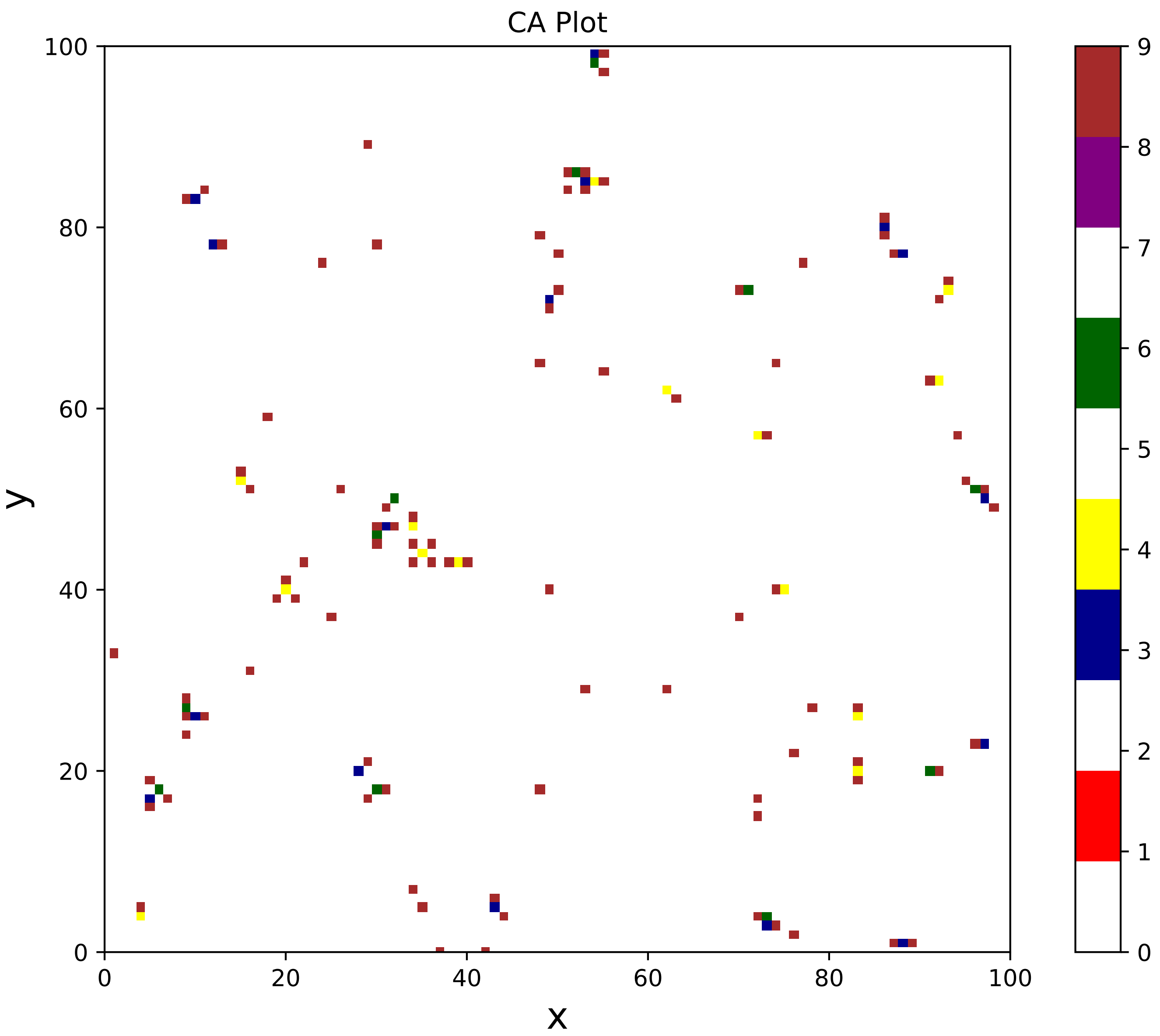

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

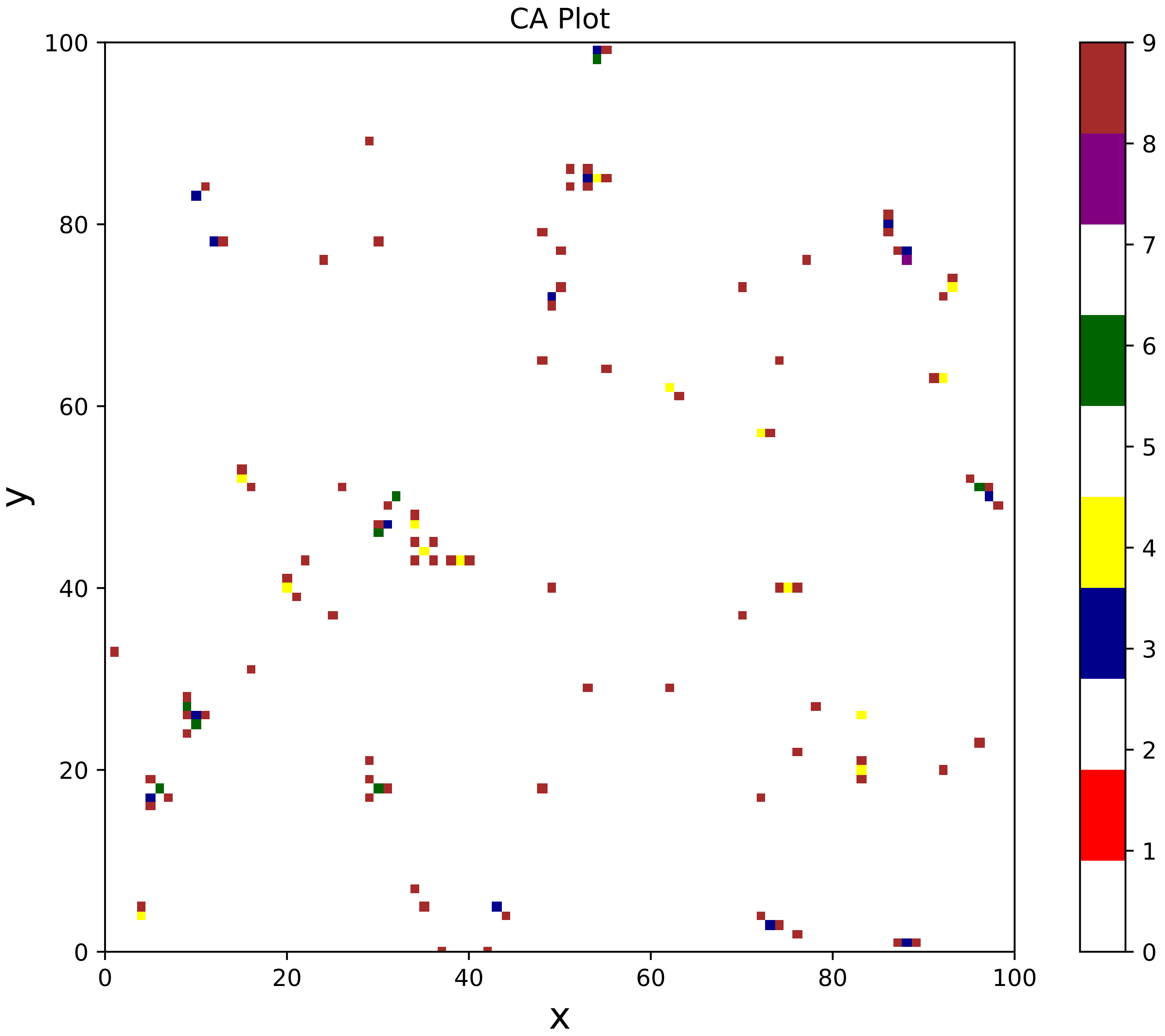

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

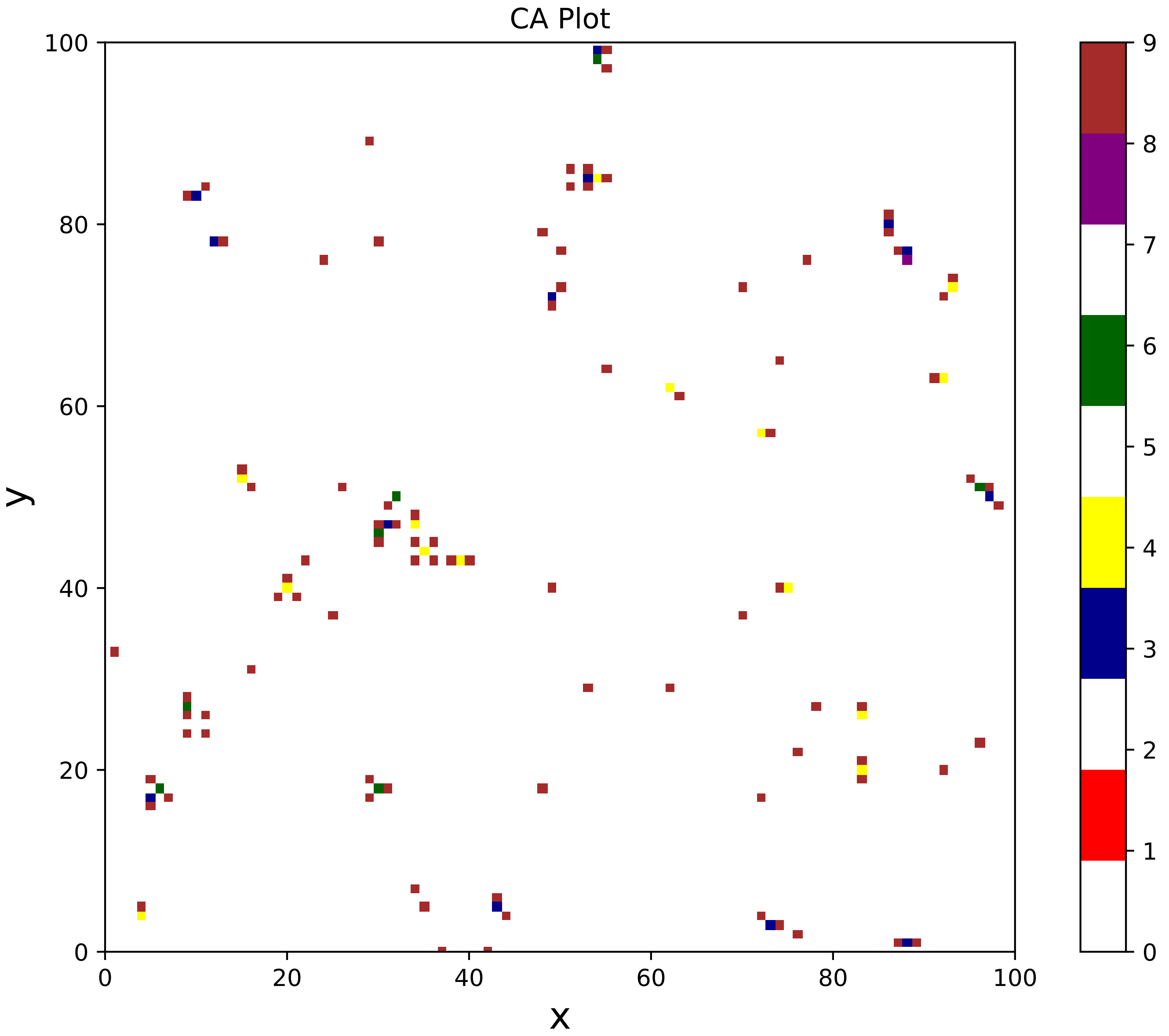

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

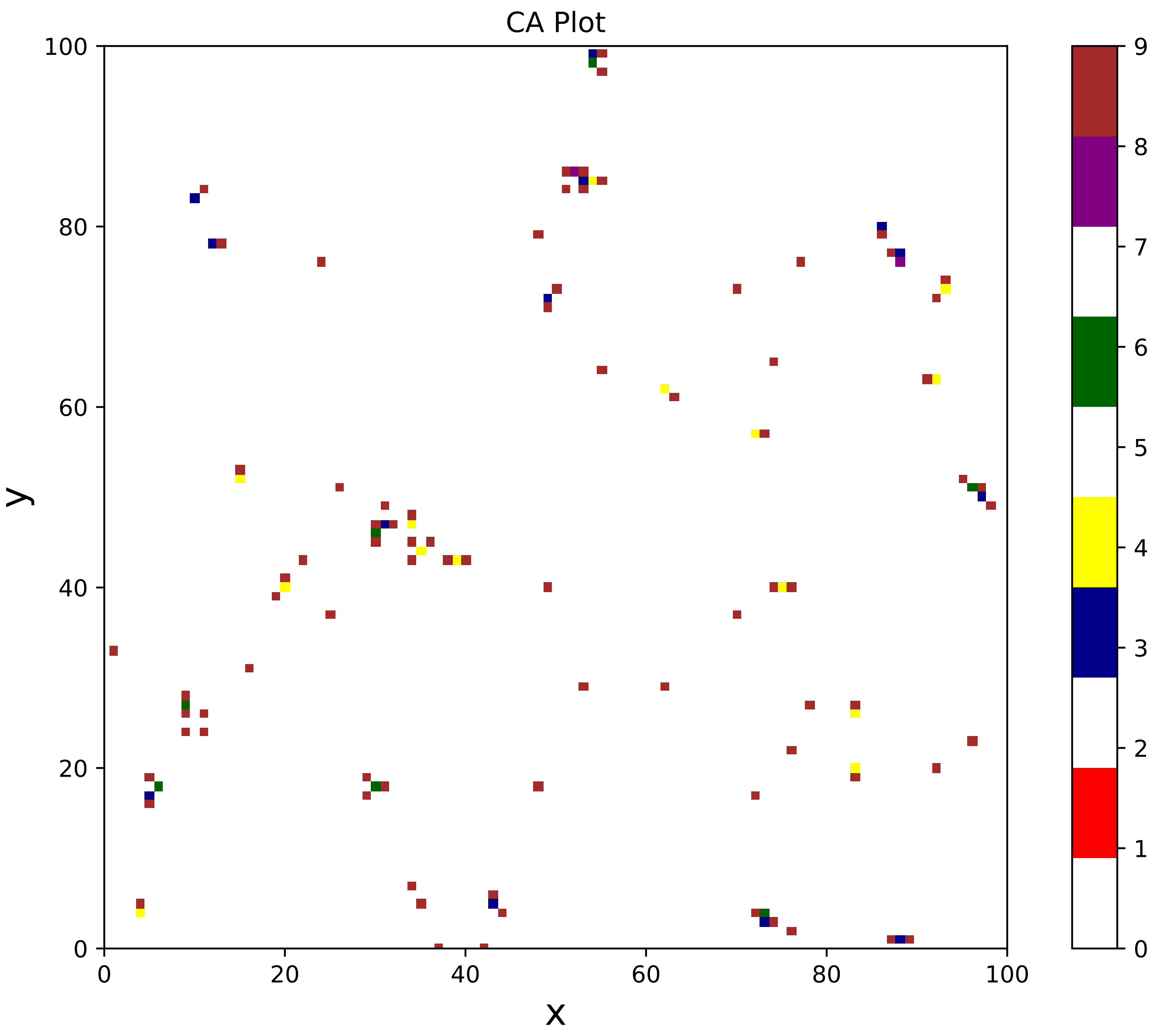

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

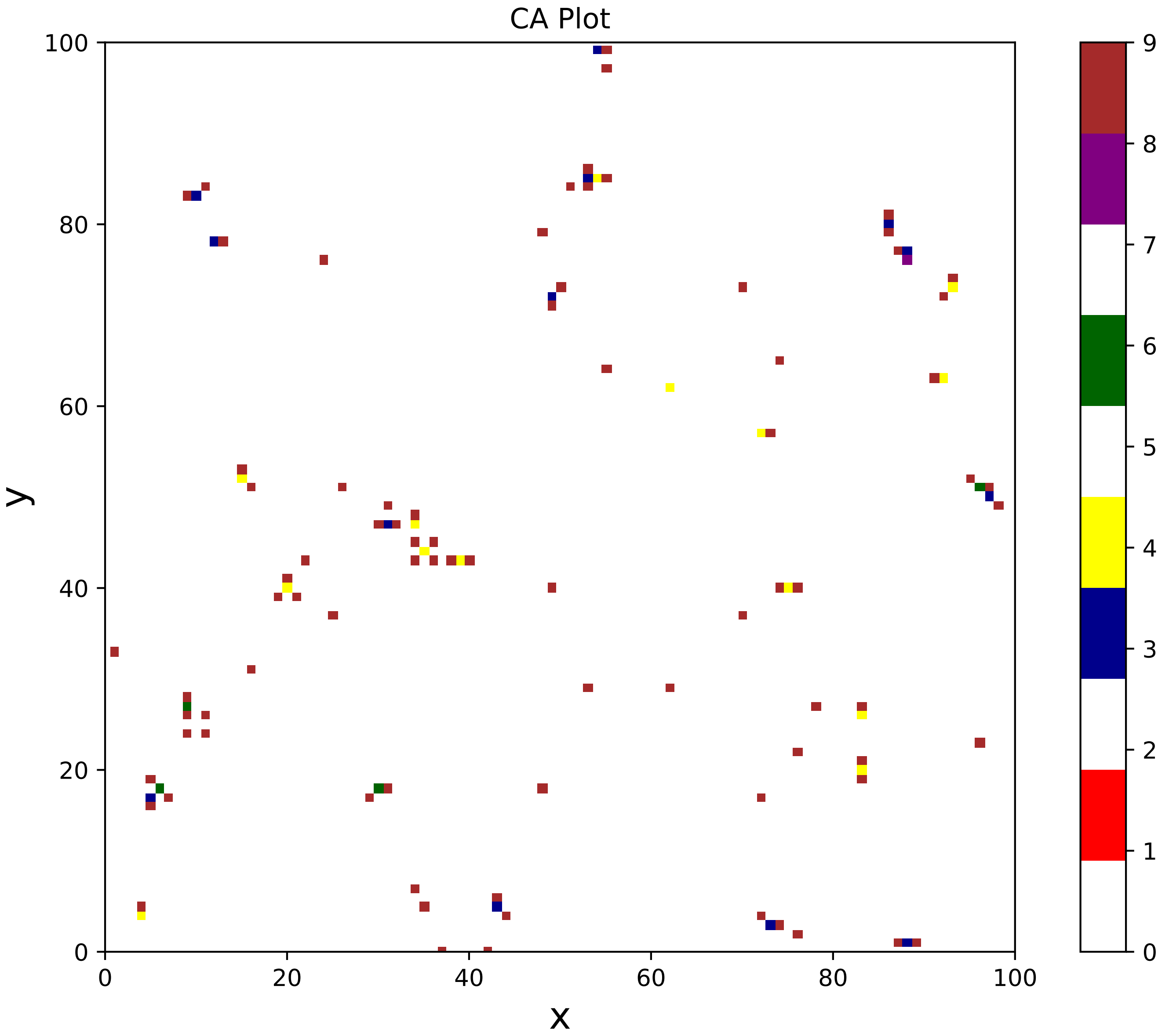

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

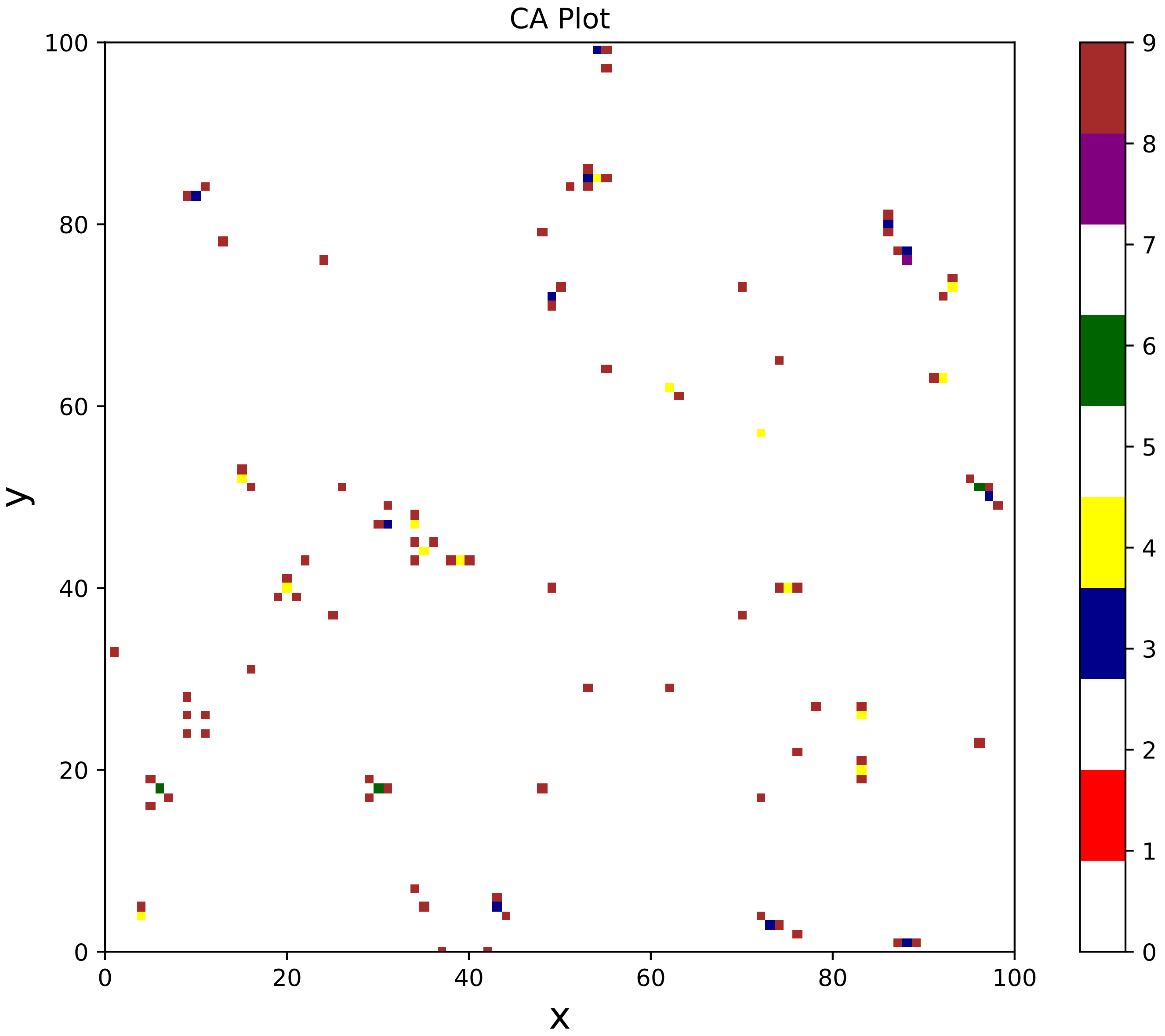

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

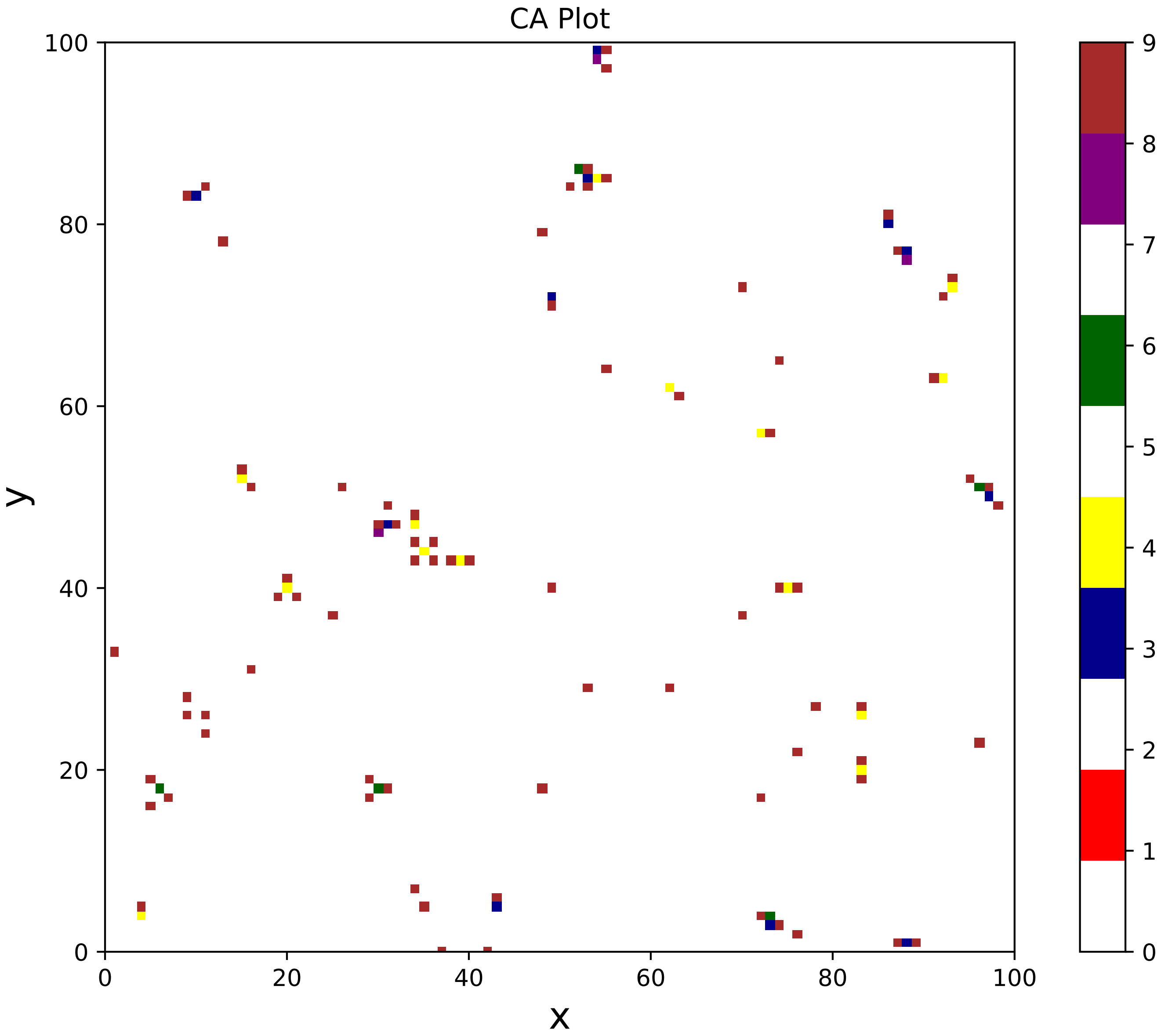

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

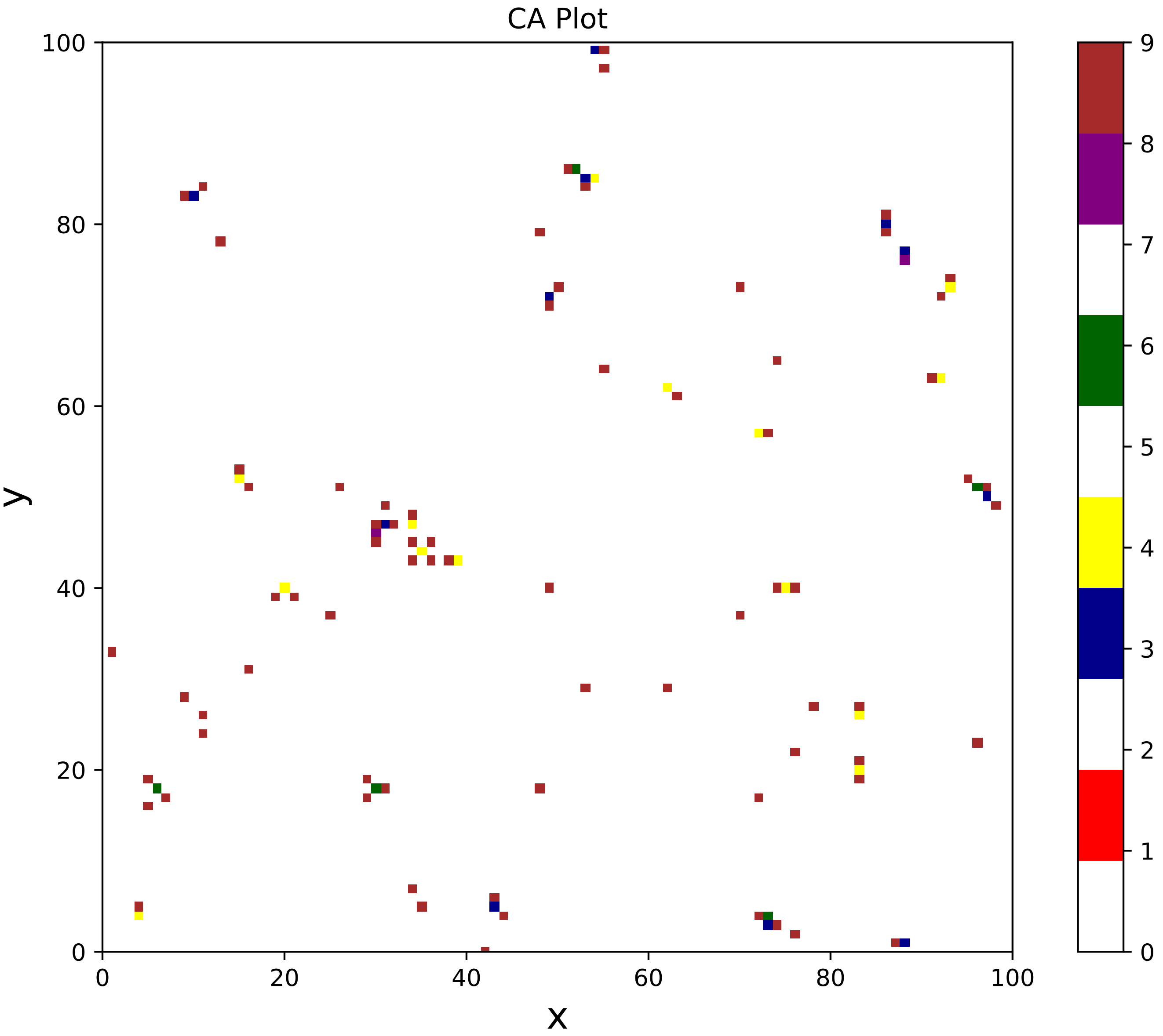

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

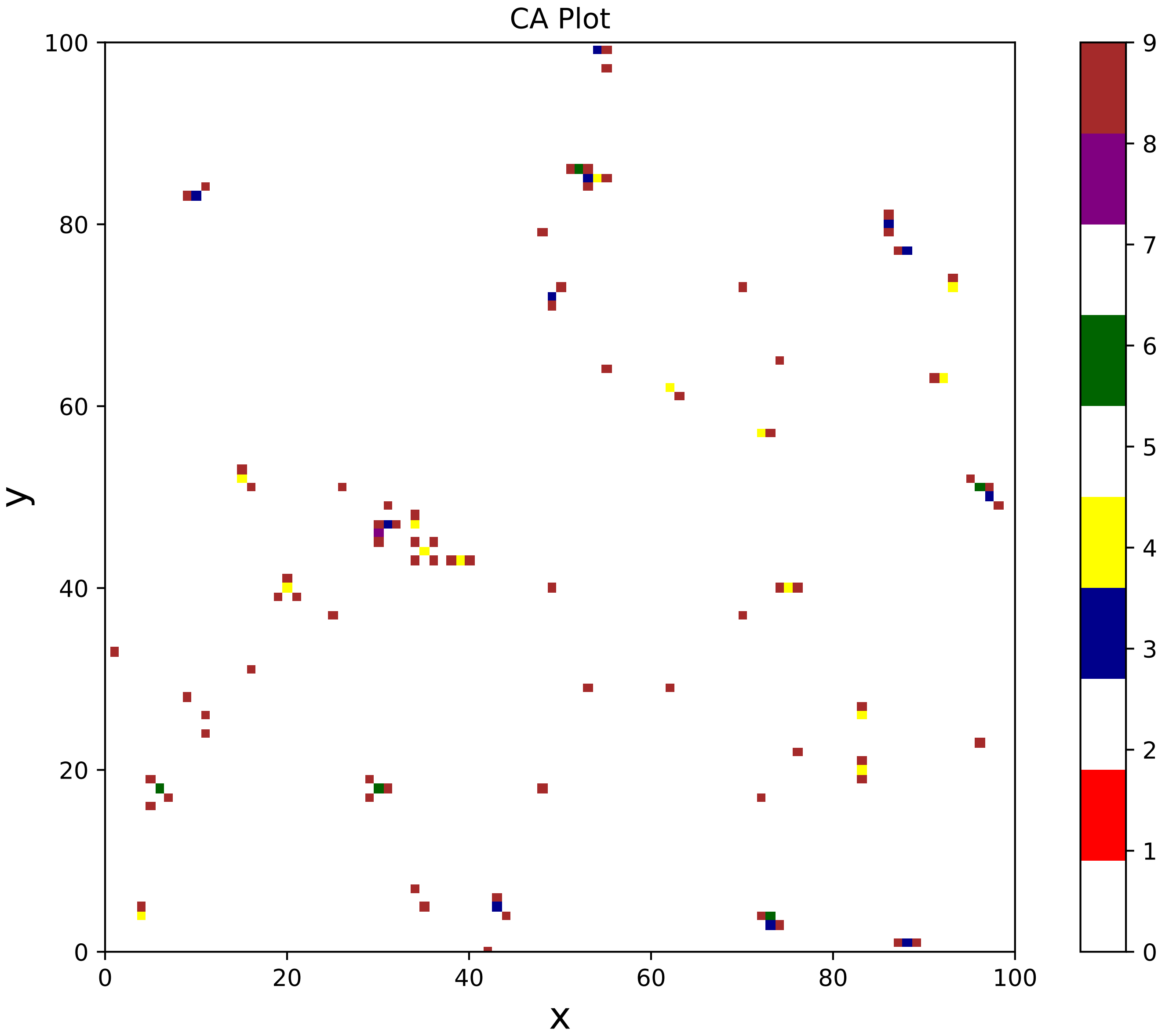

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

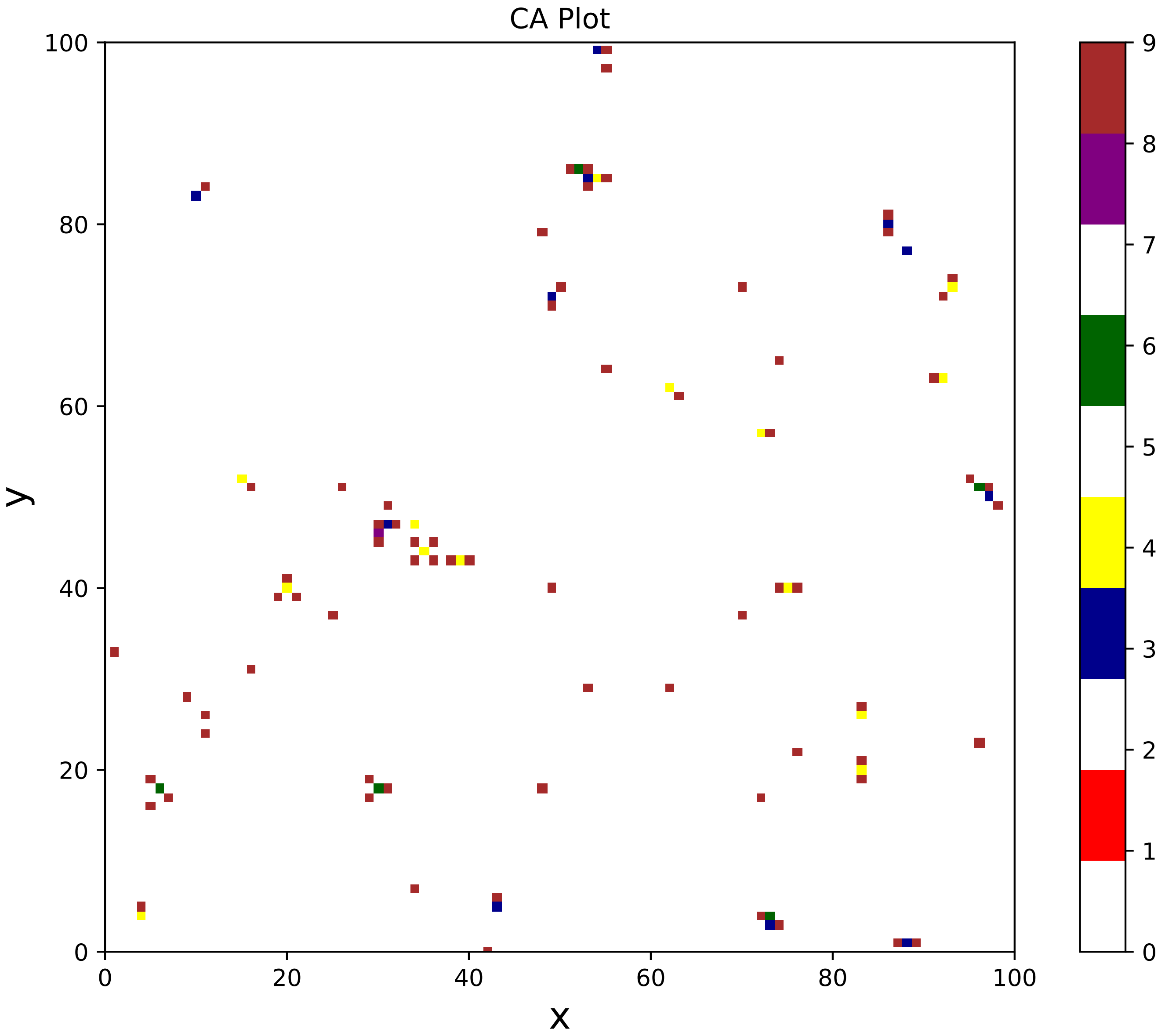

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

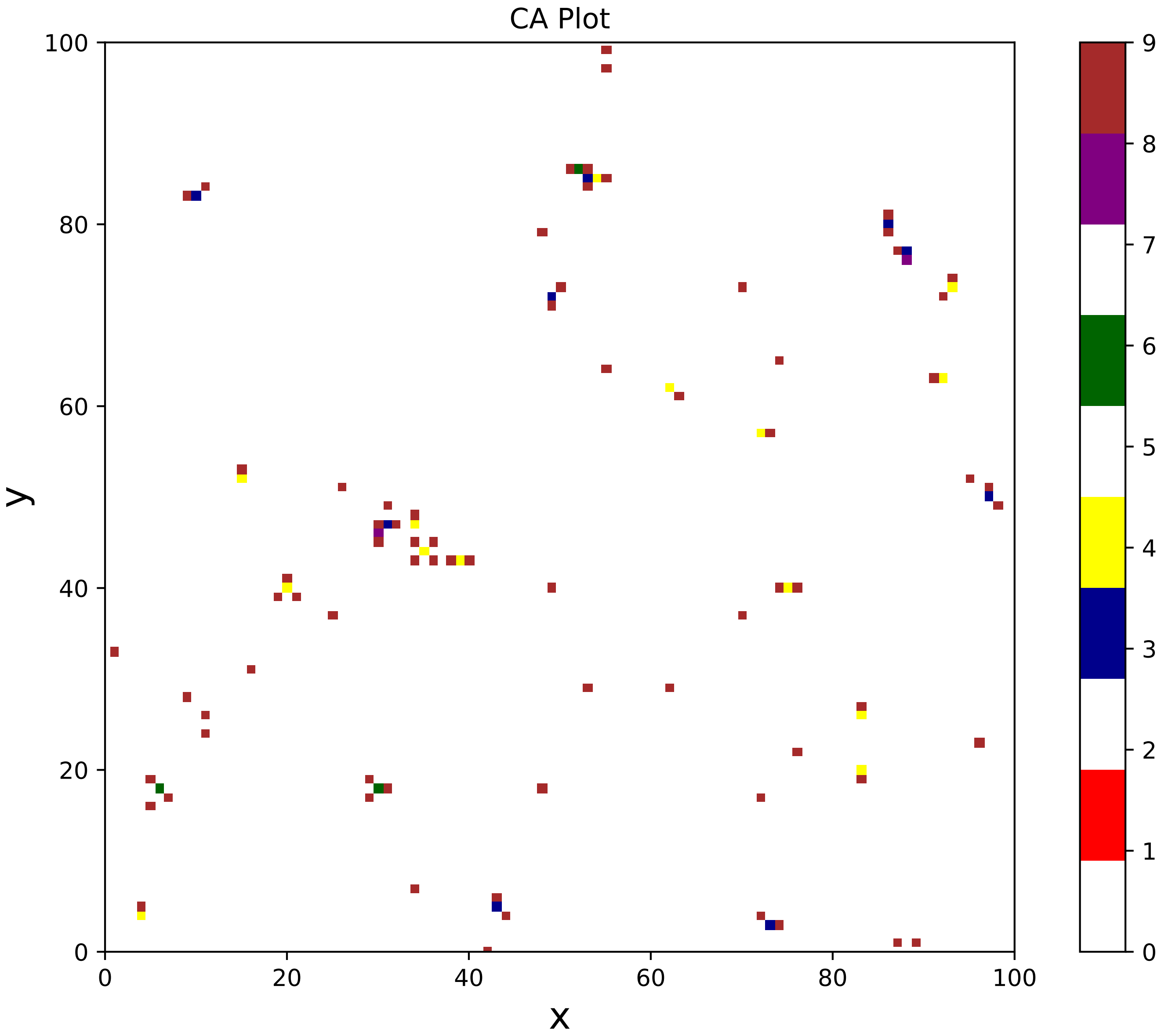

CA Plot
x
y
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

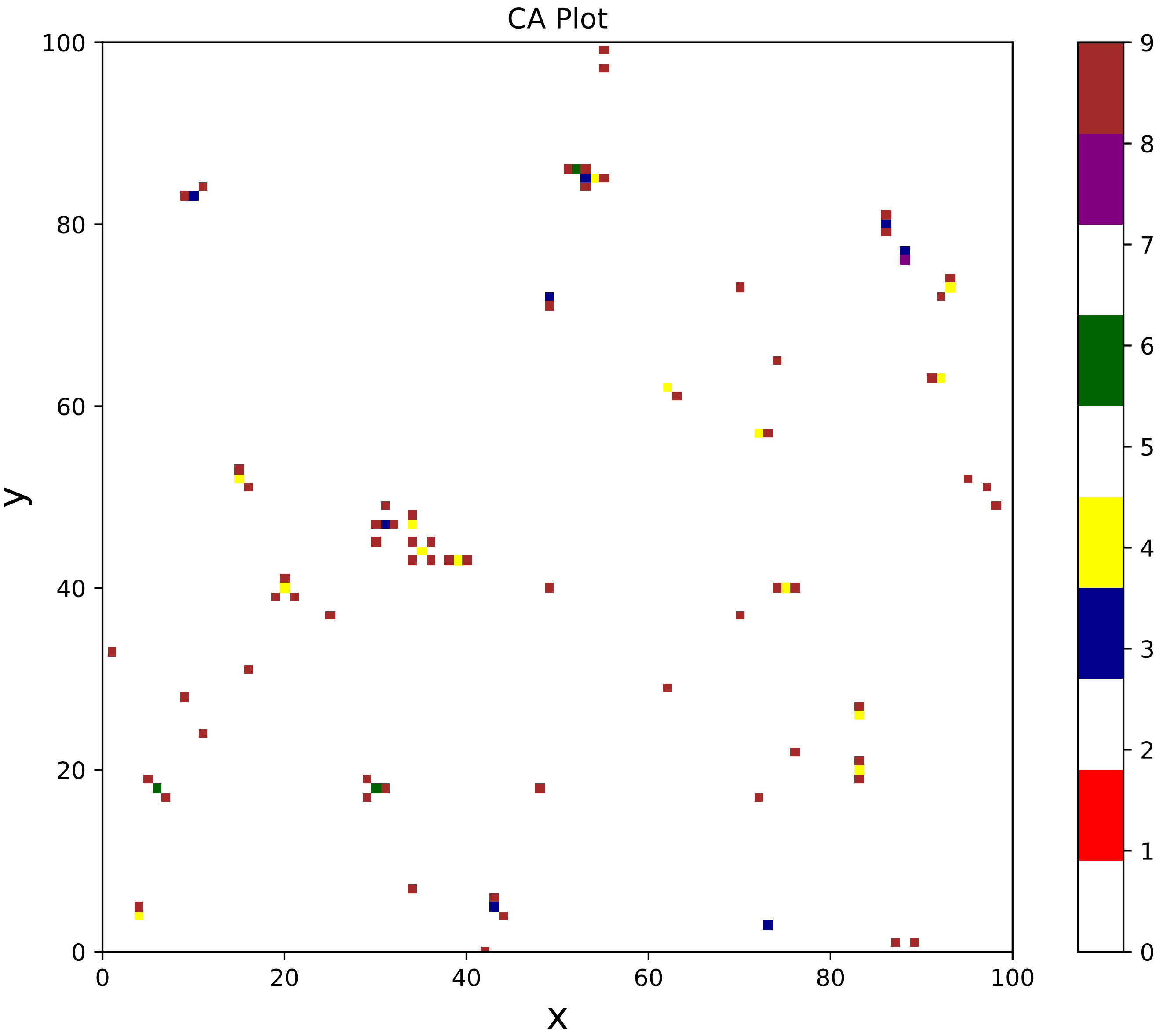

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

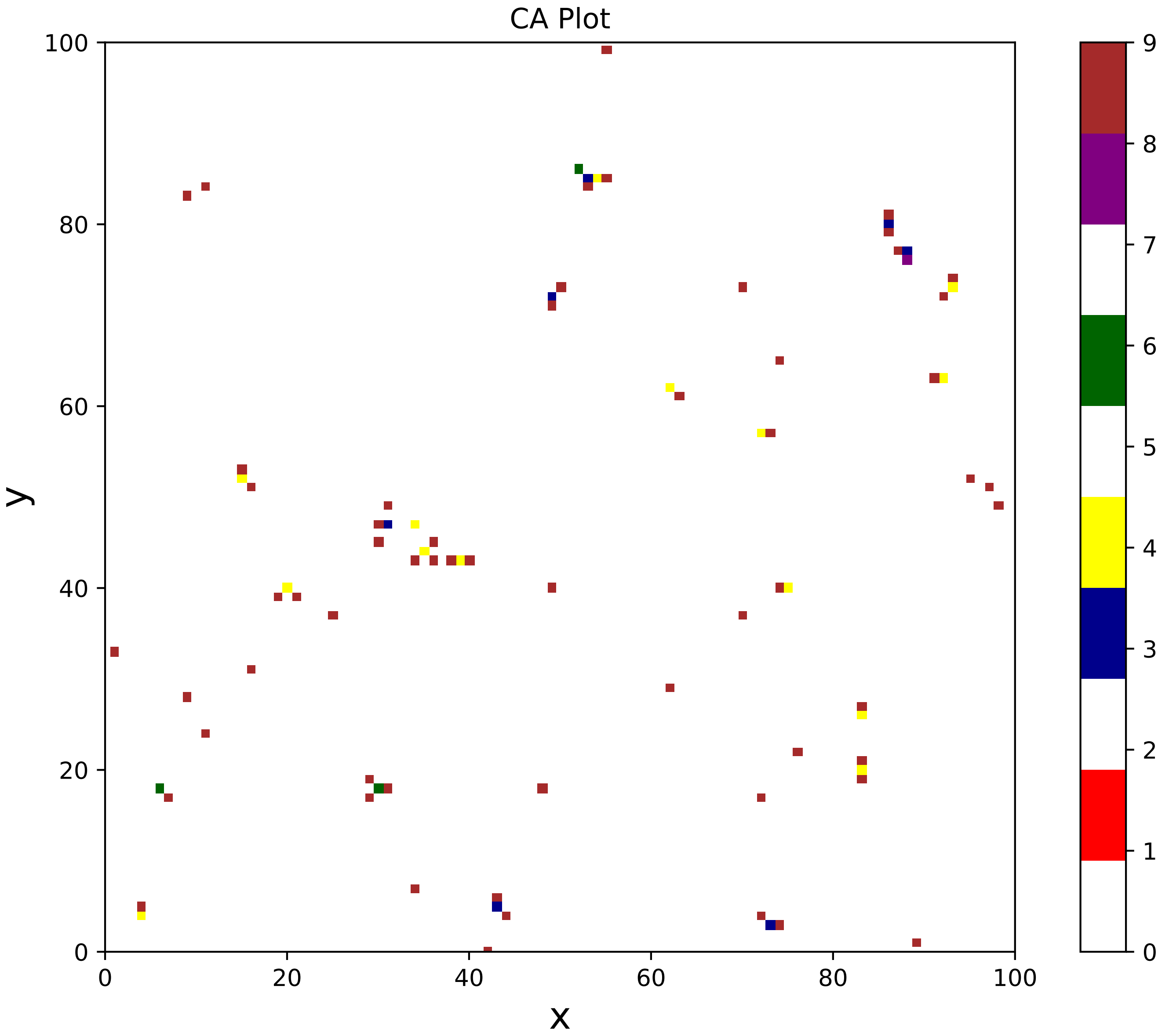

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

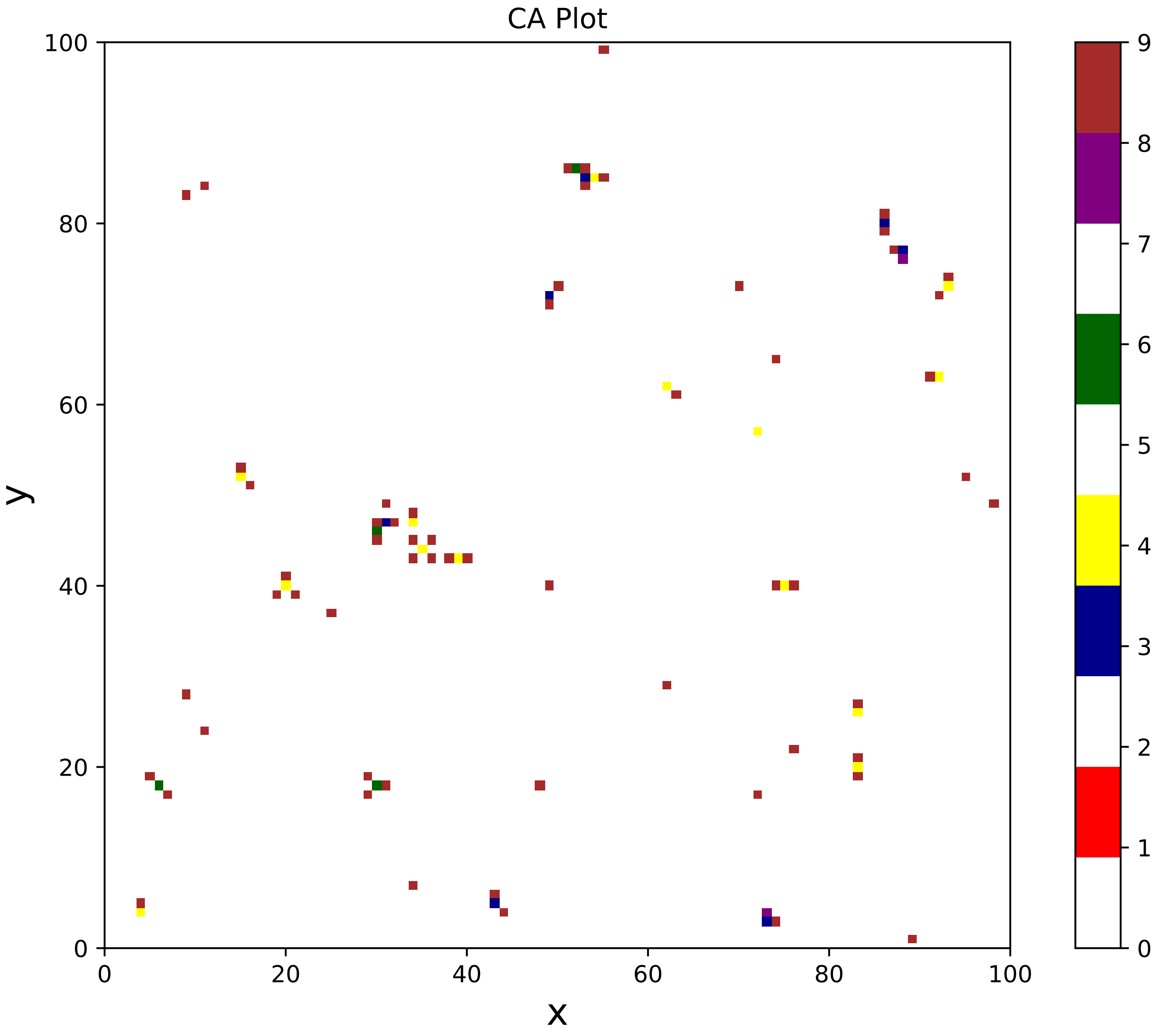

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

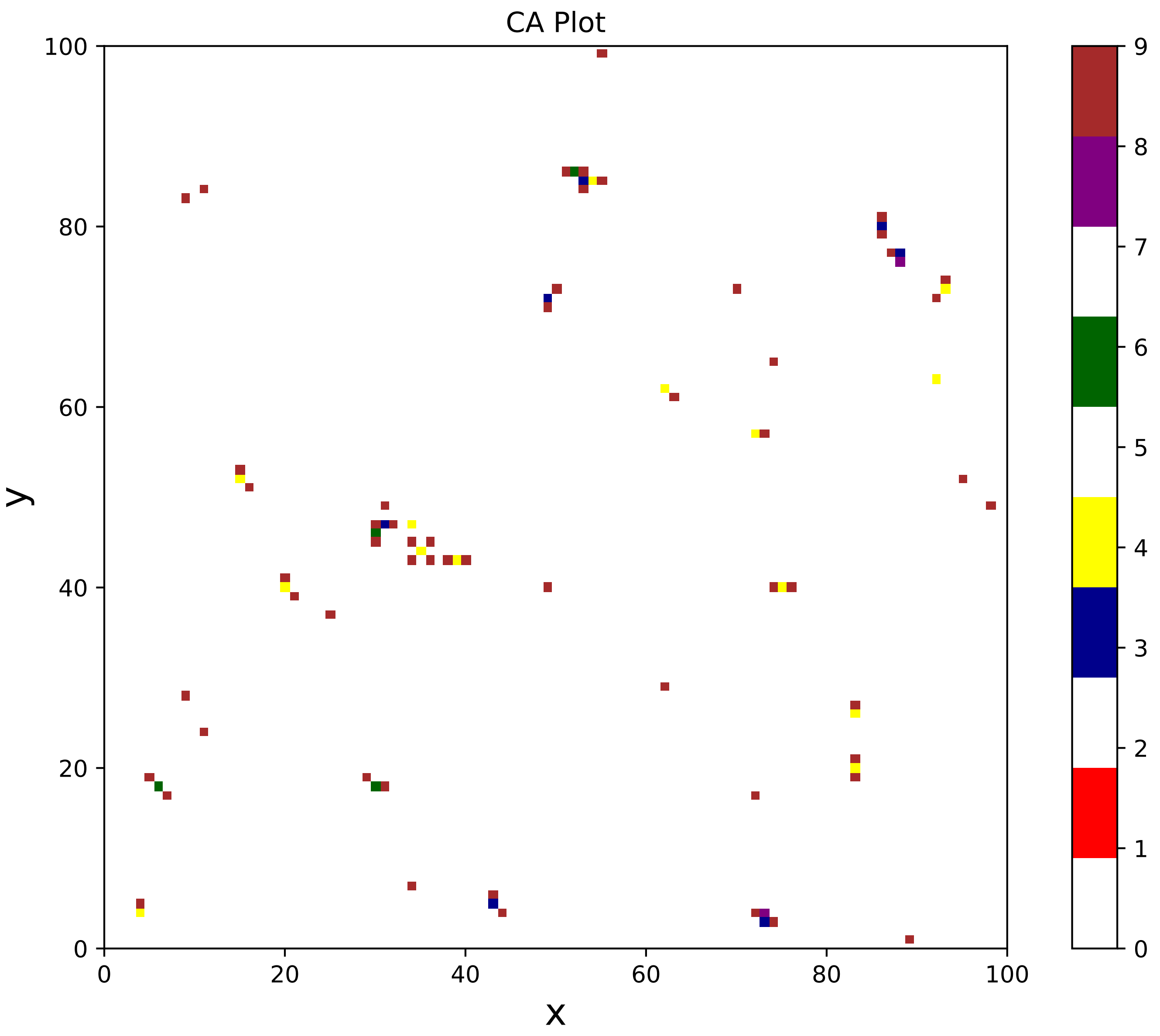

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

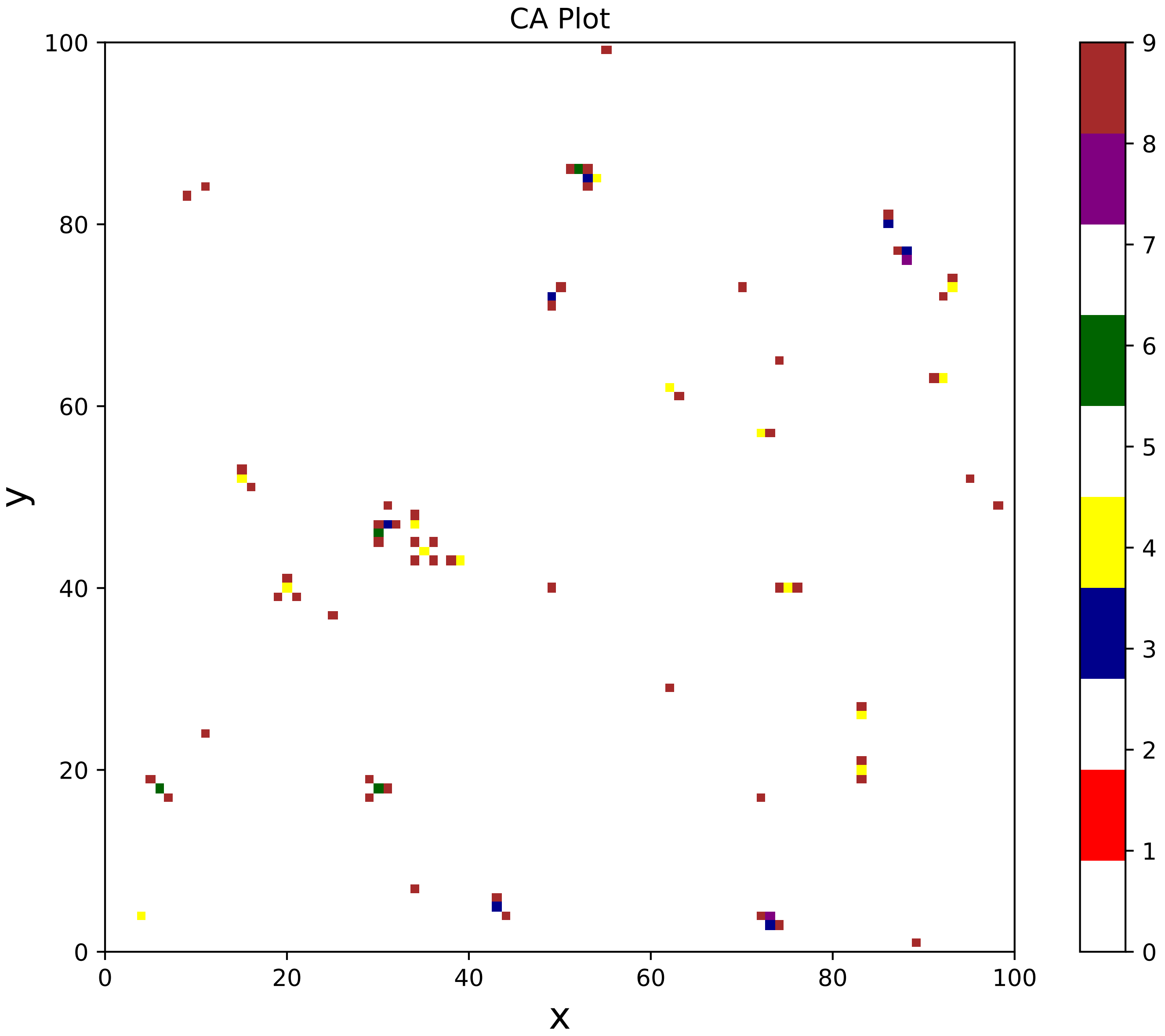

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

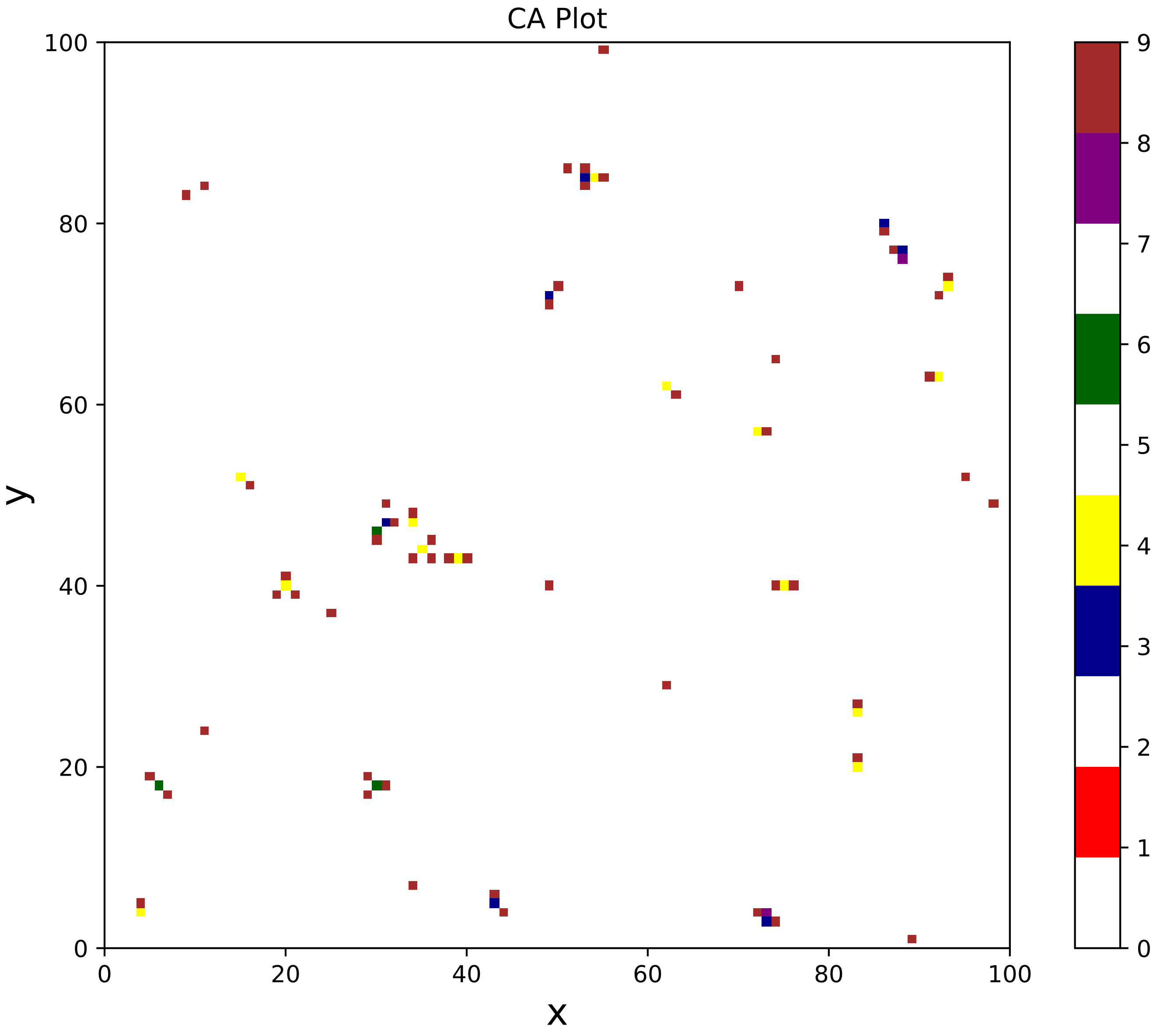

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

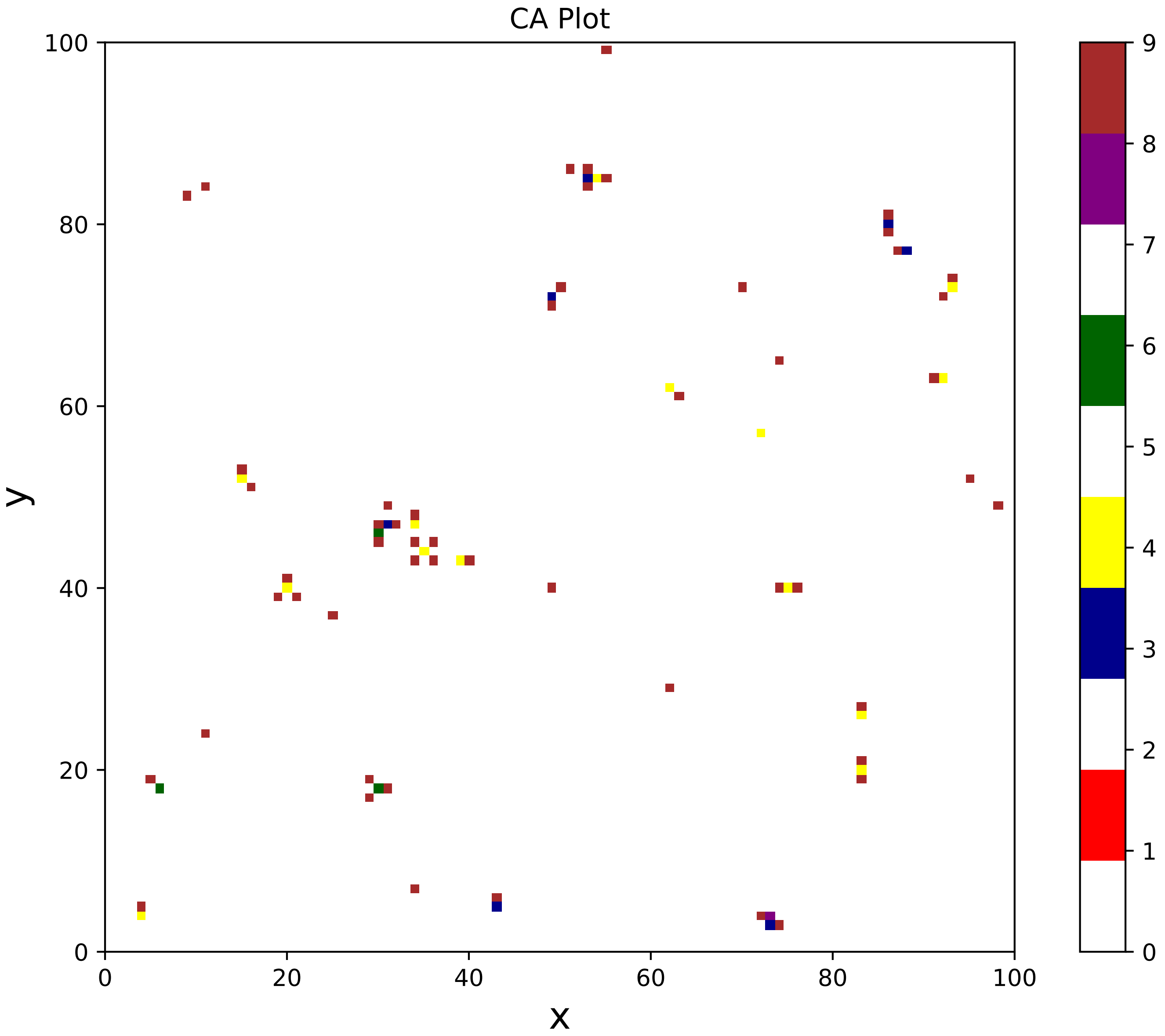

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

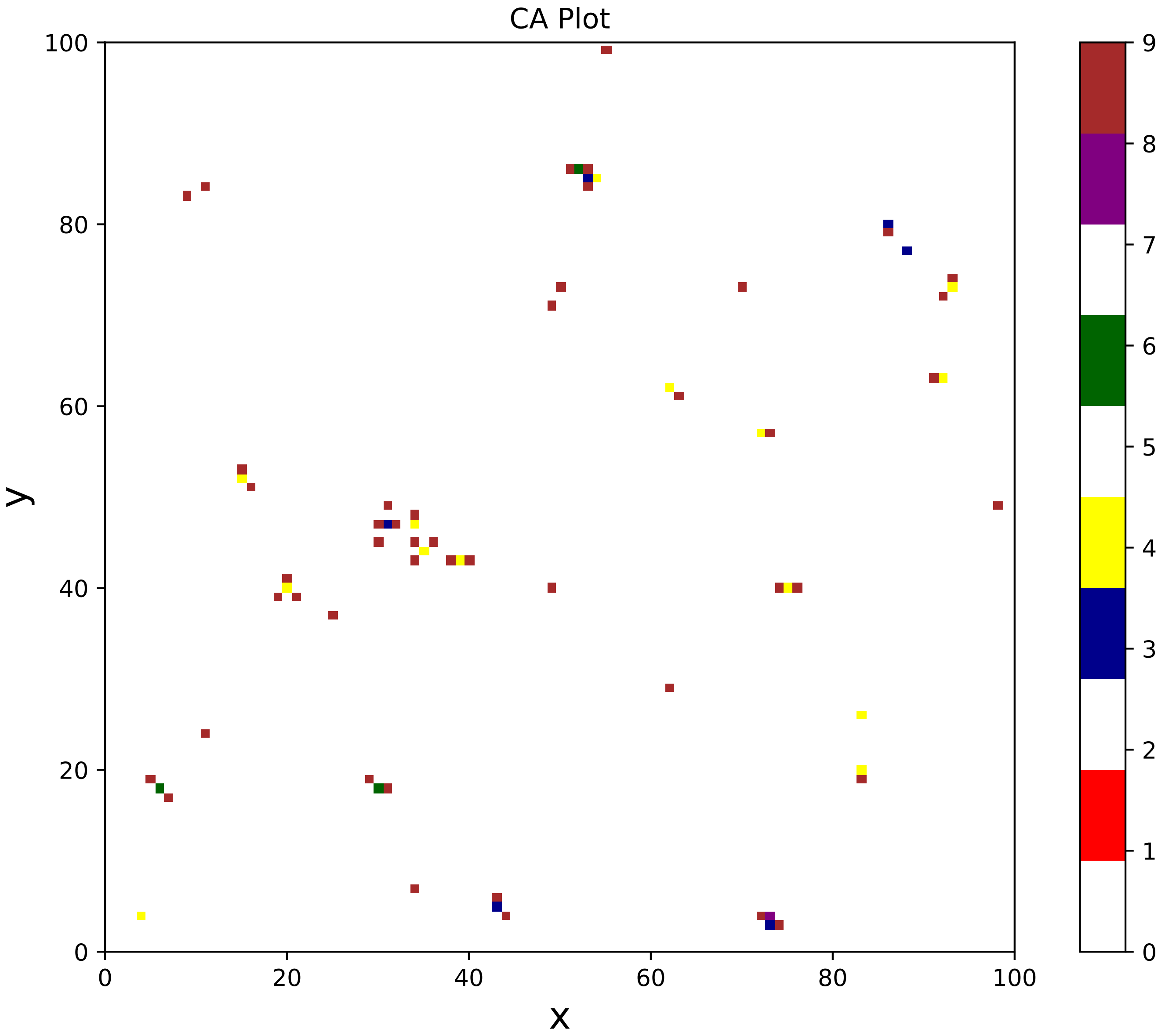

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

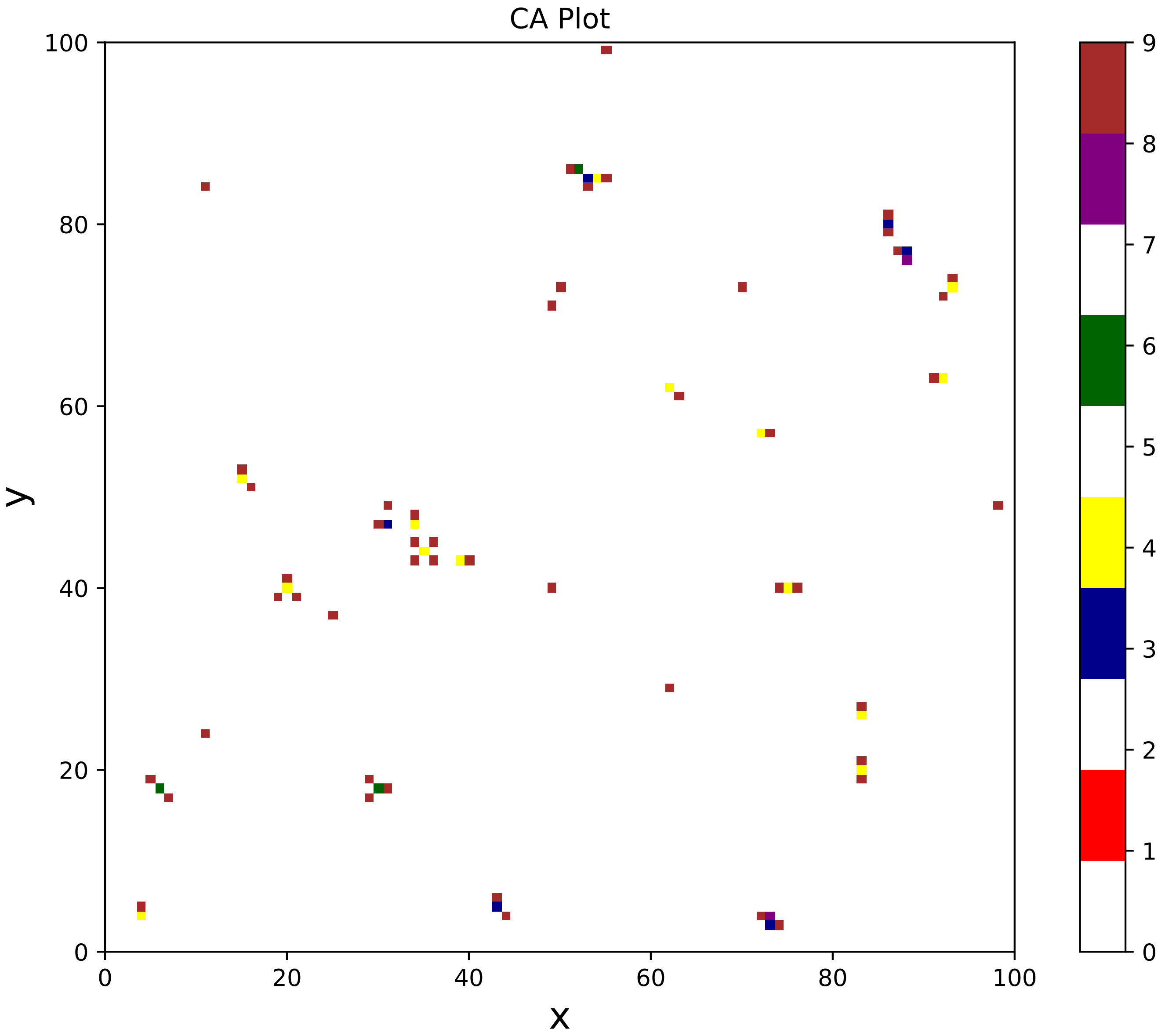

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

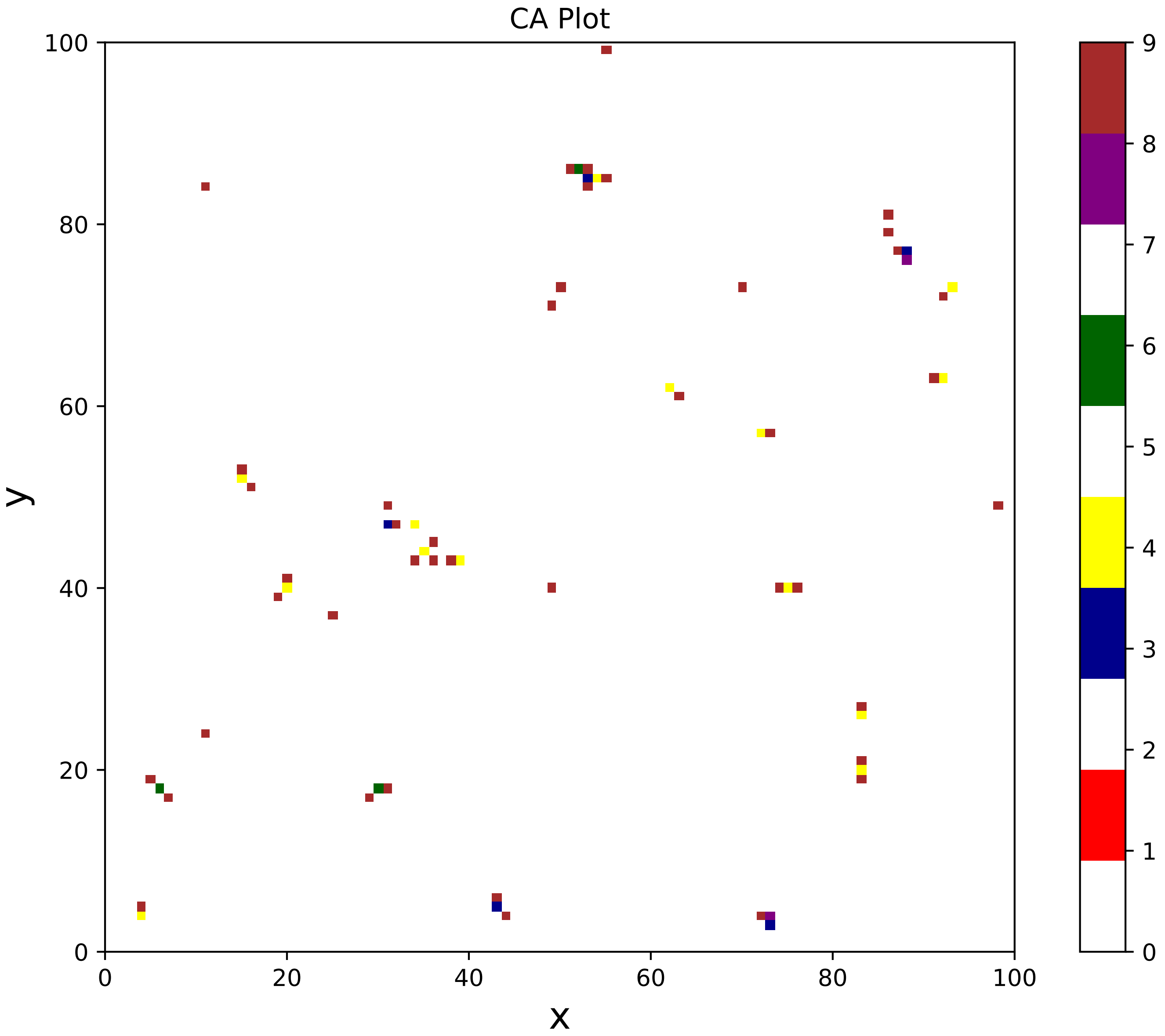

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

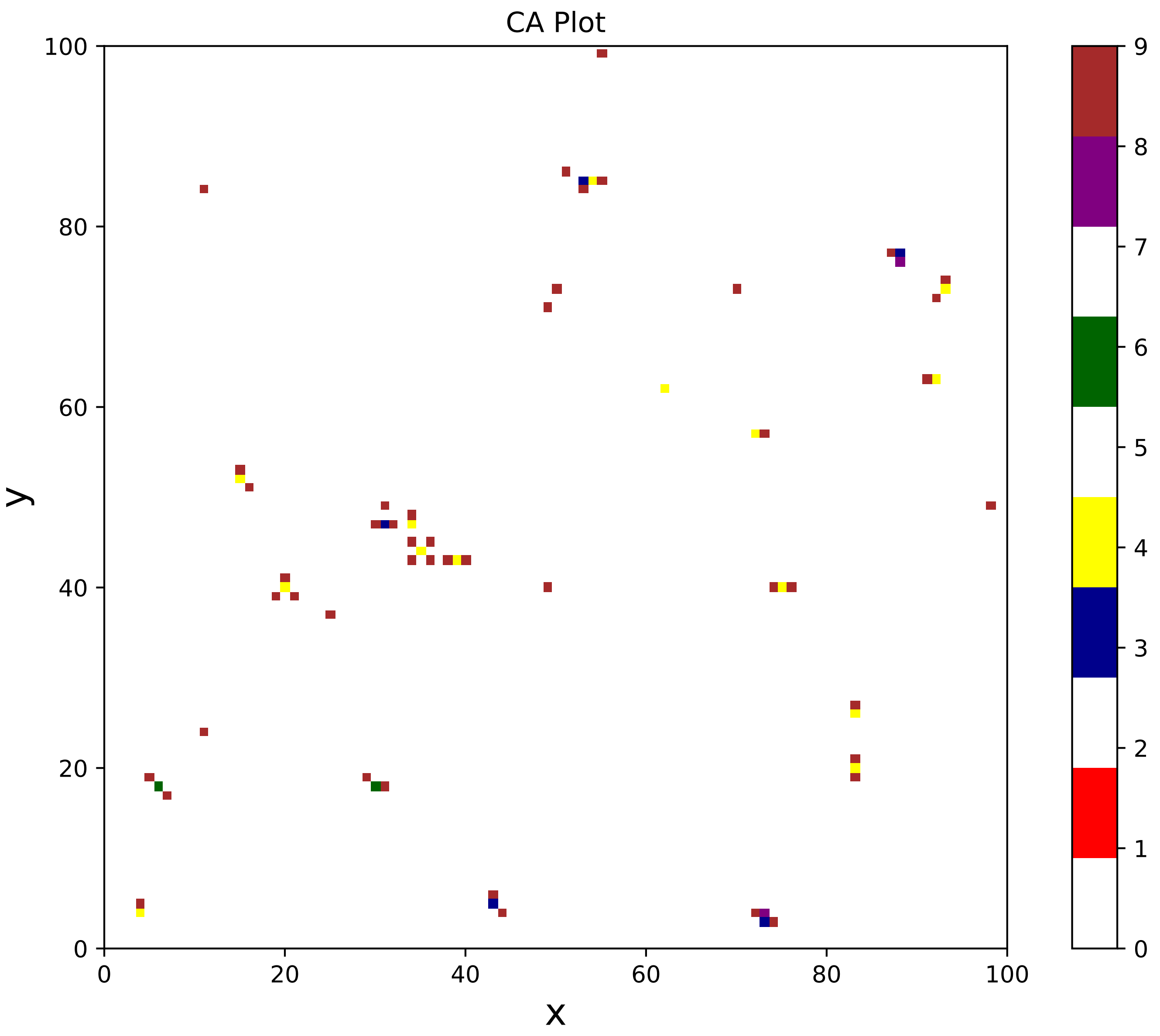

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

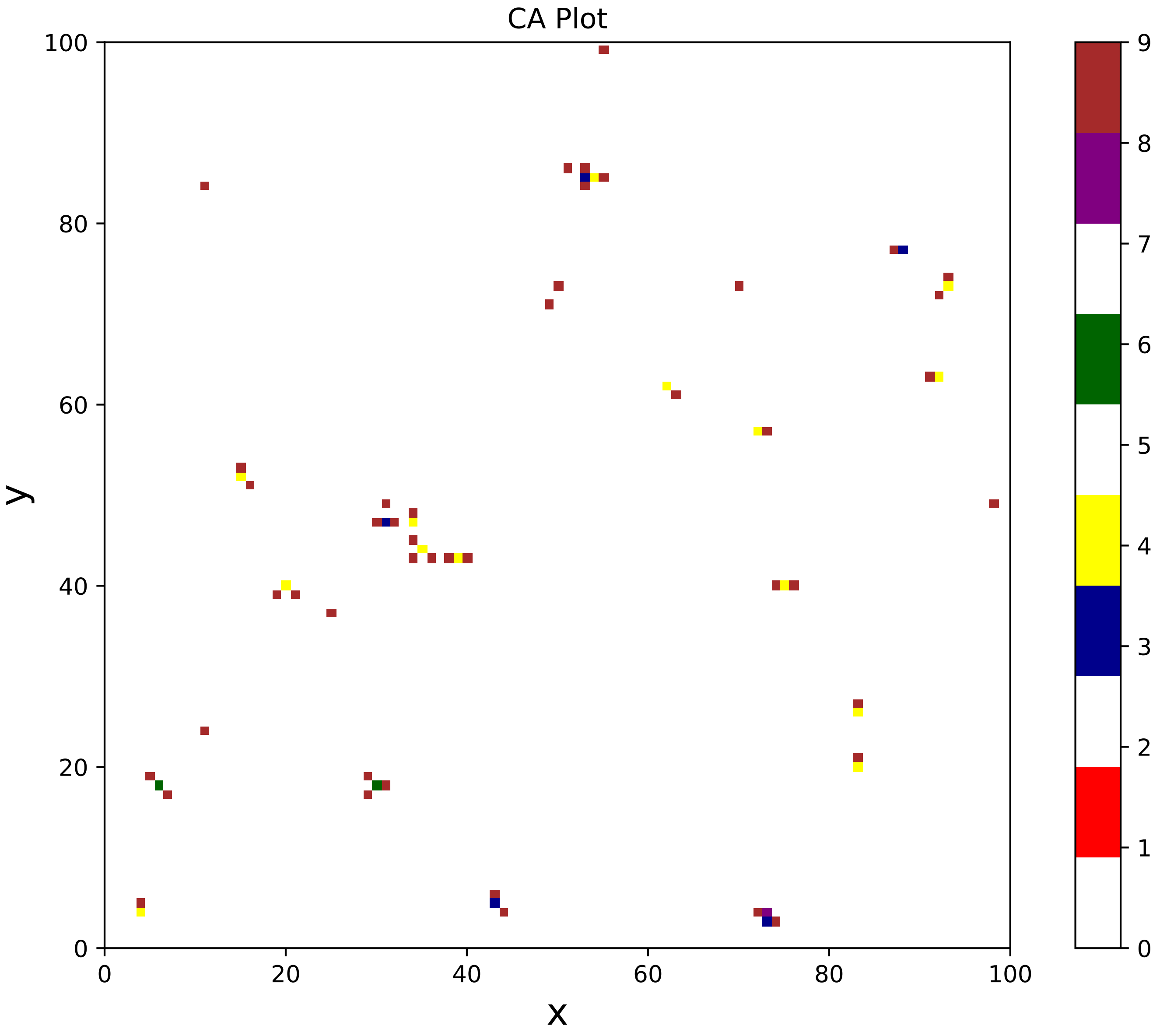

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

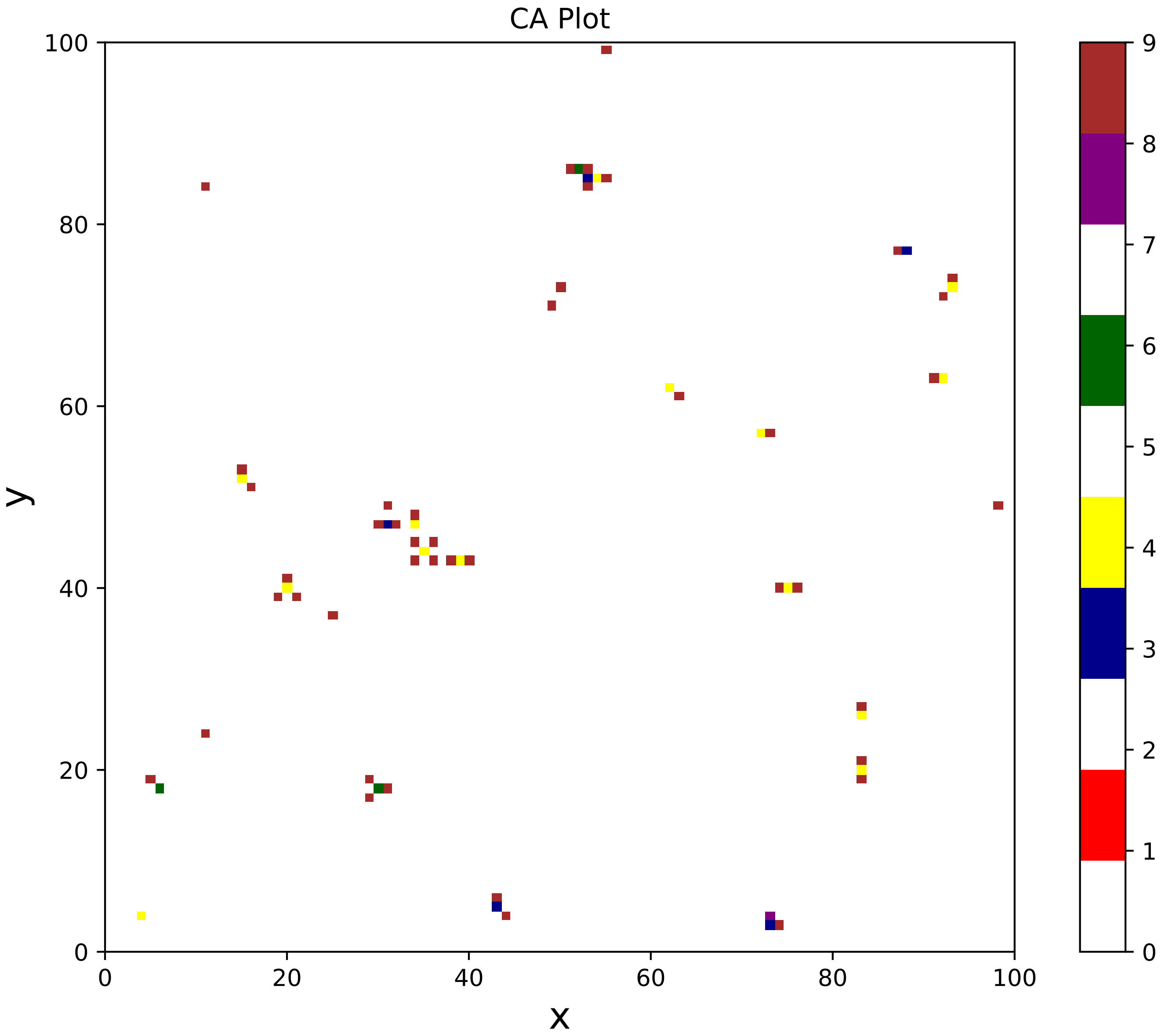

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

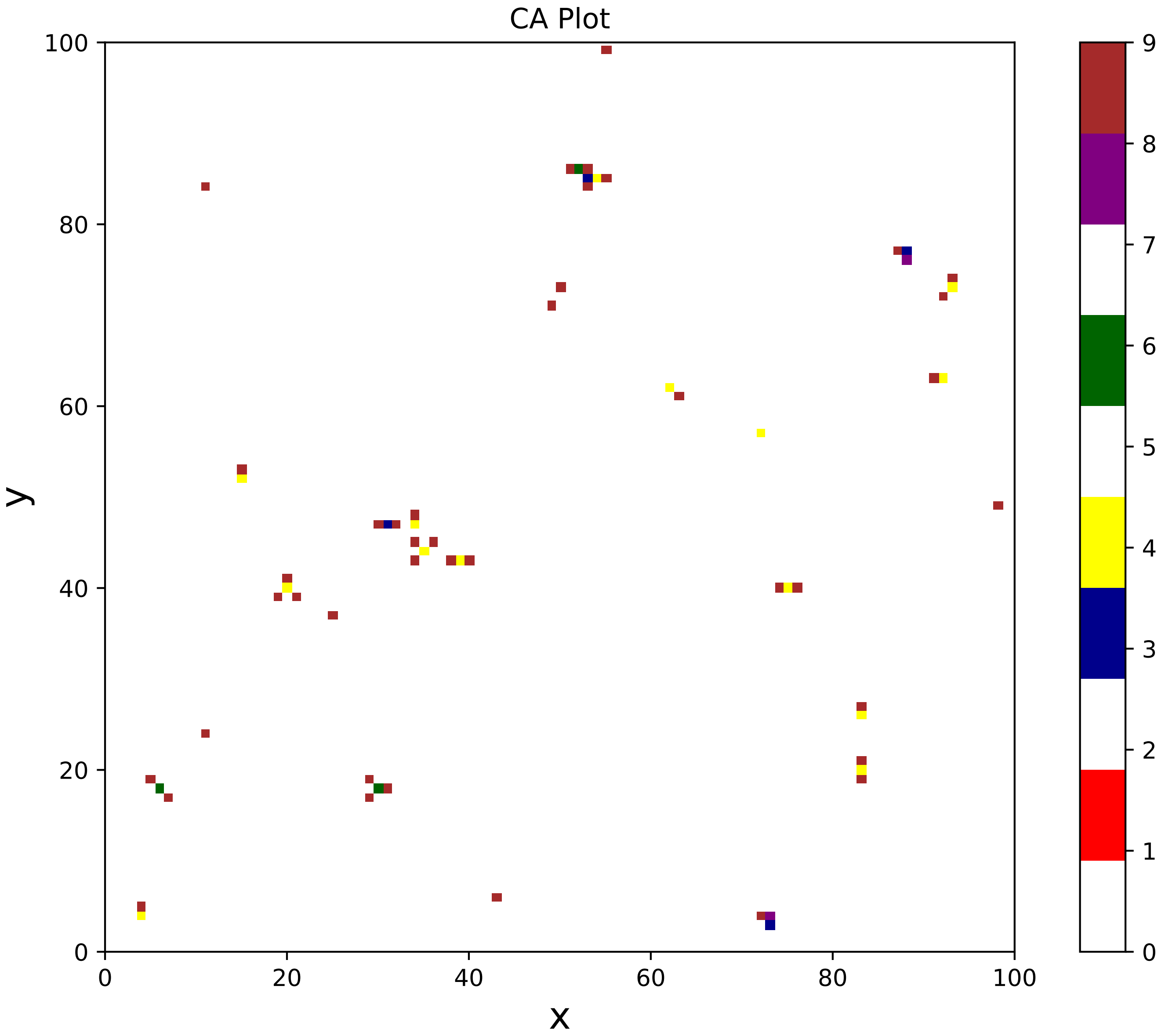

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

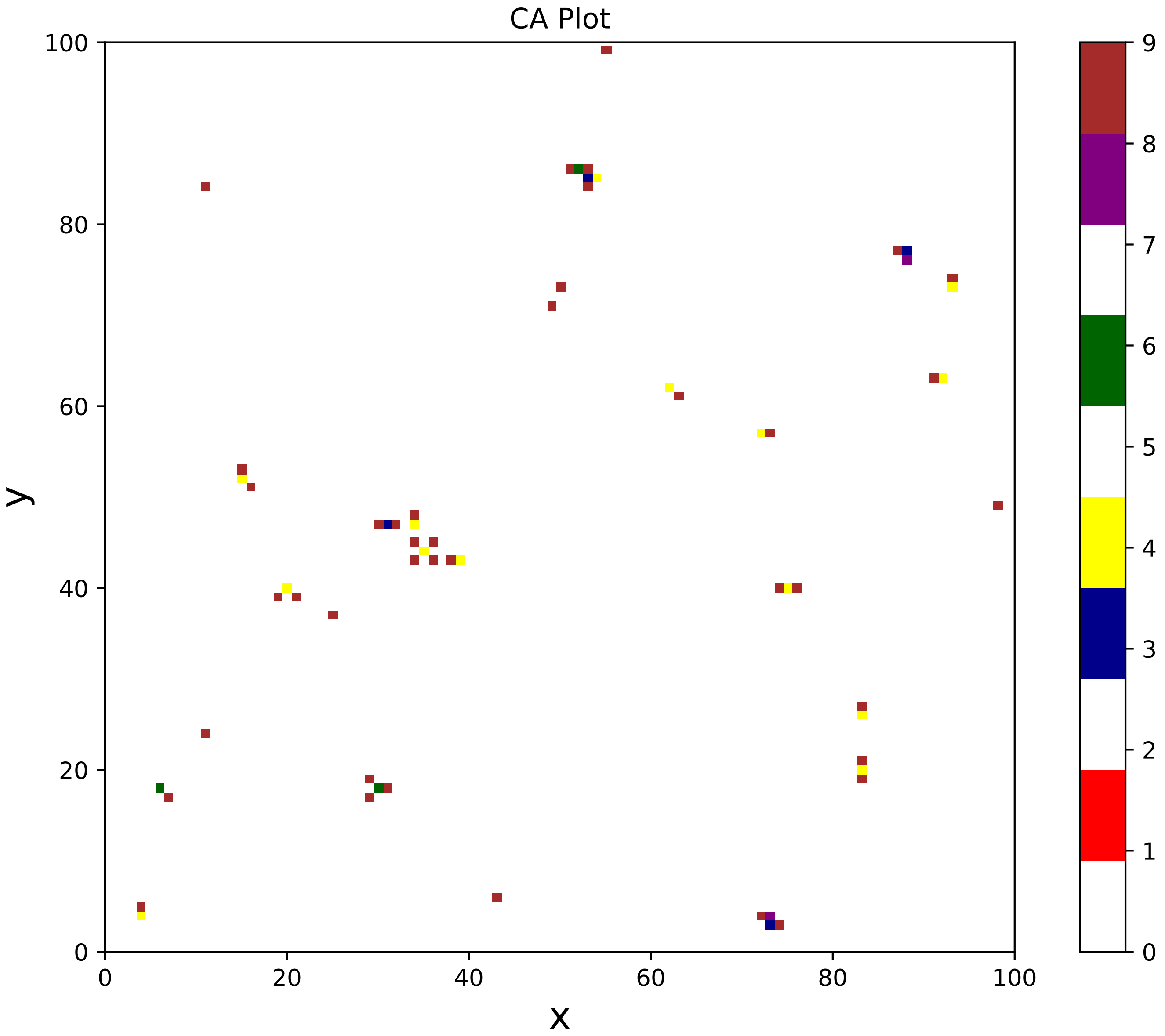

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

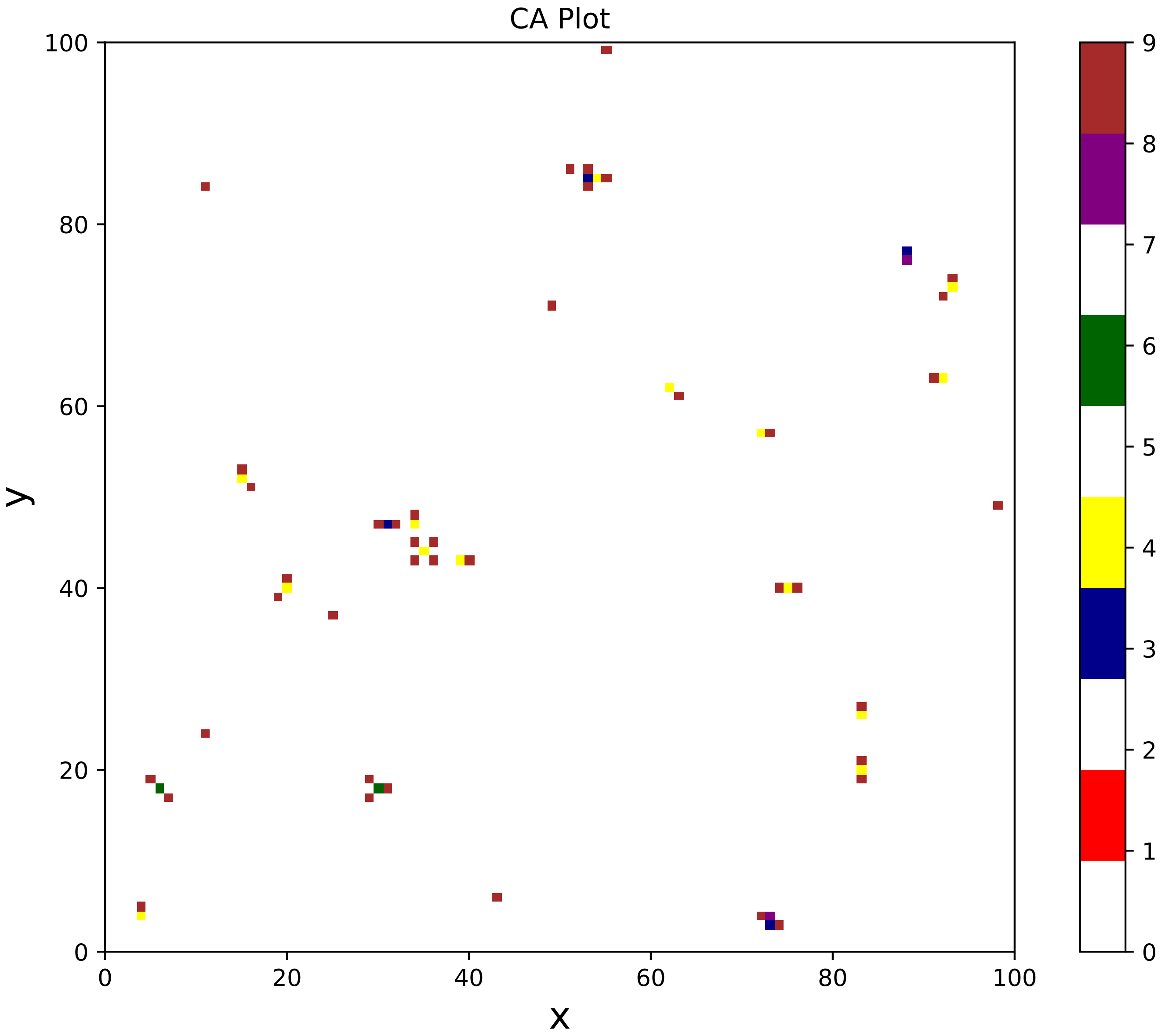

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

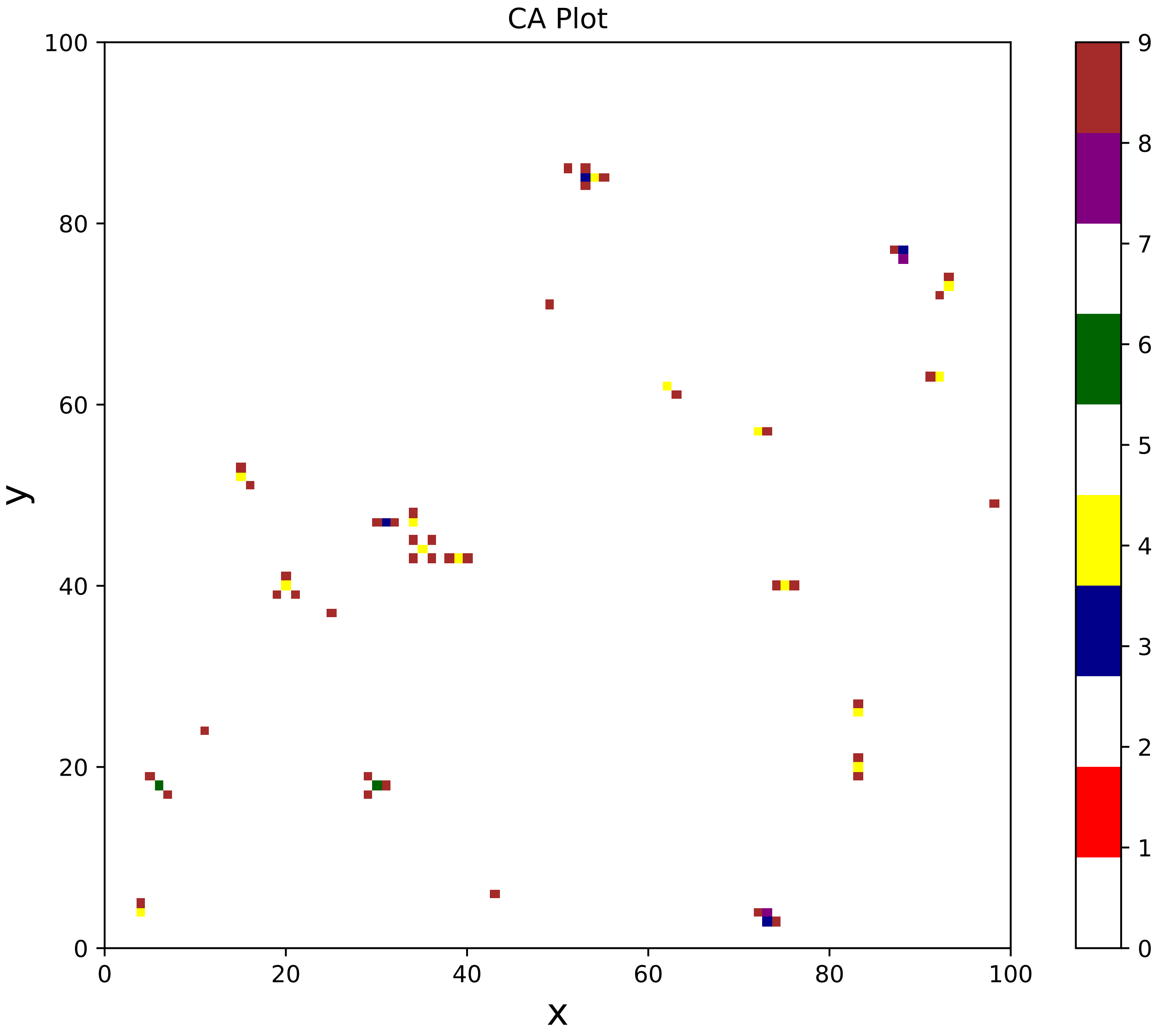

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

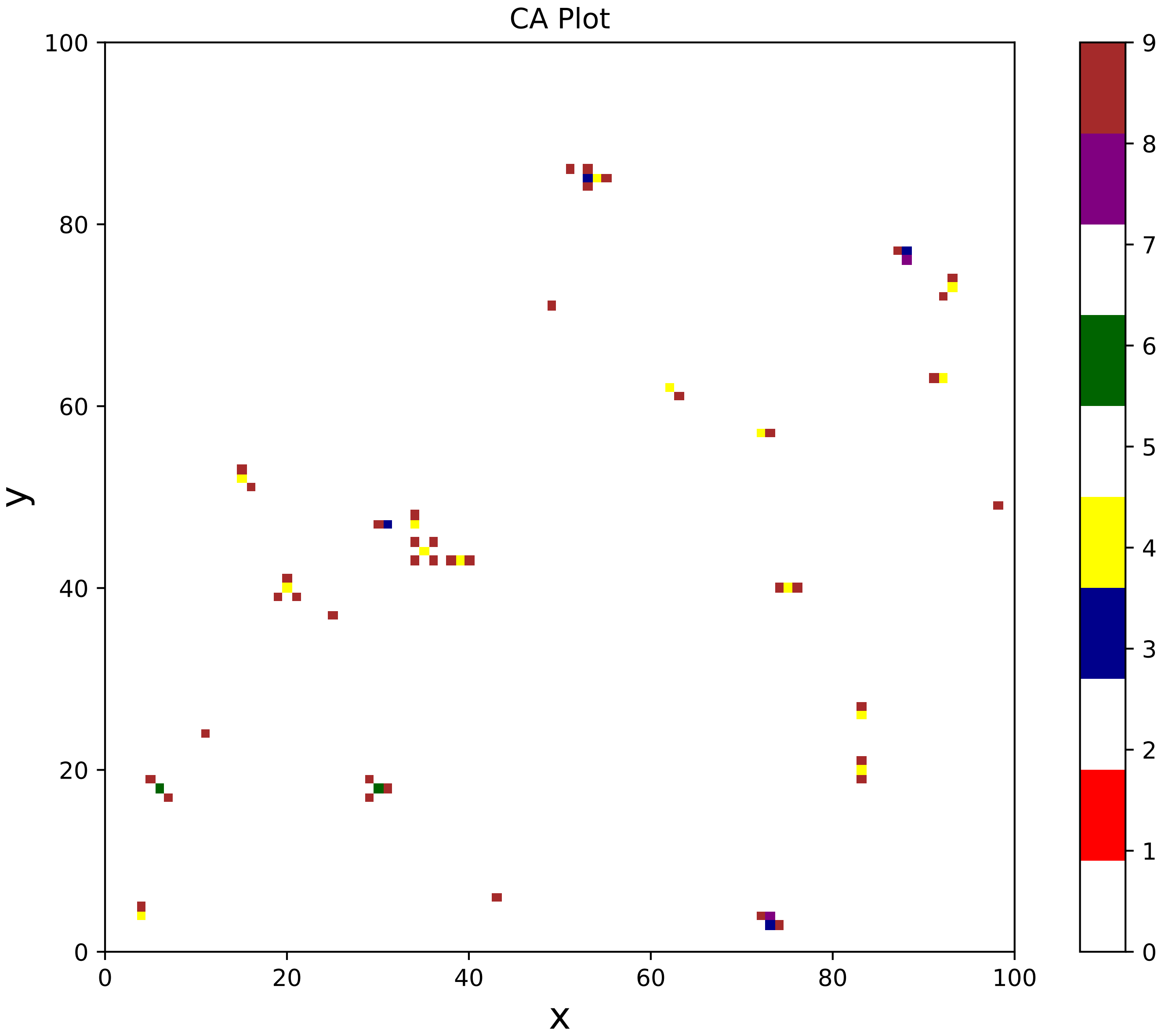

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

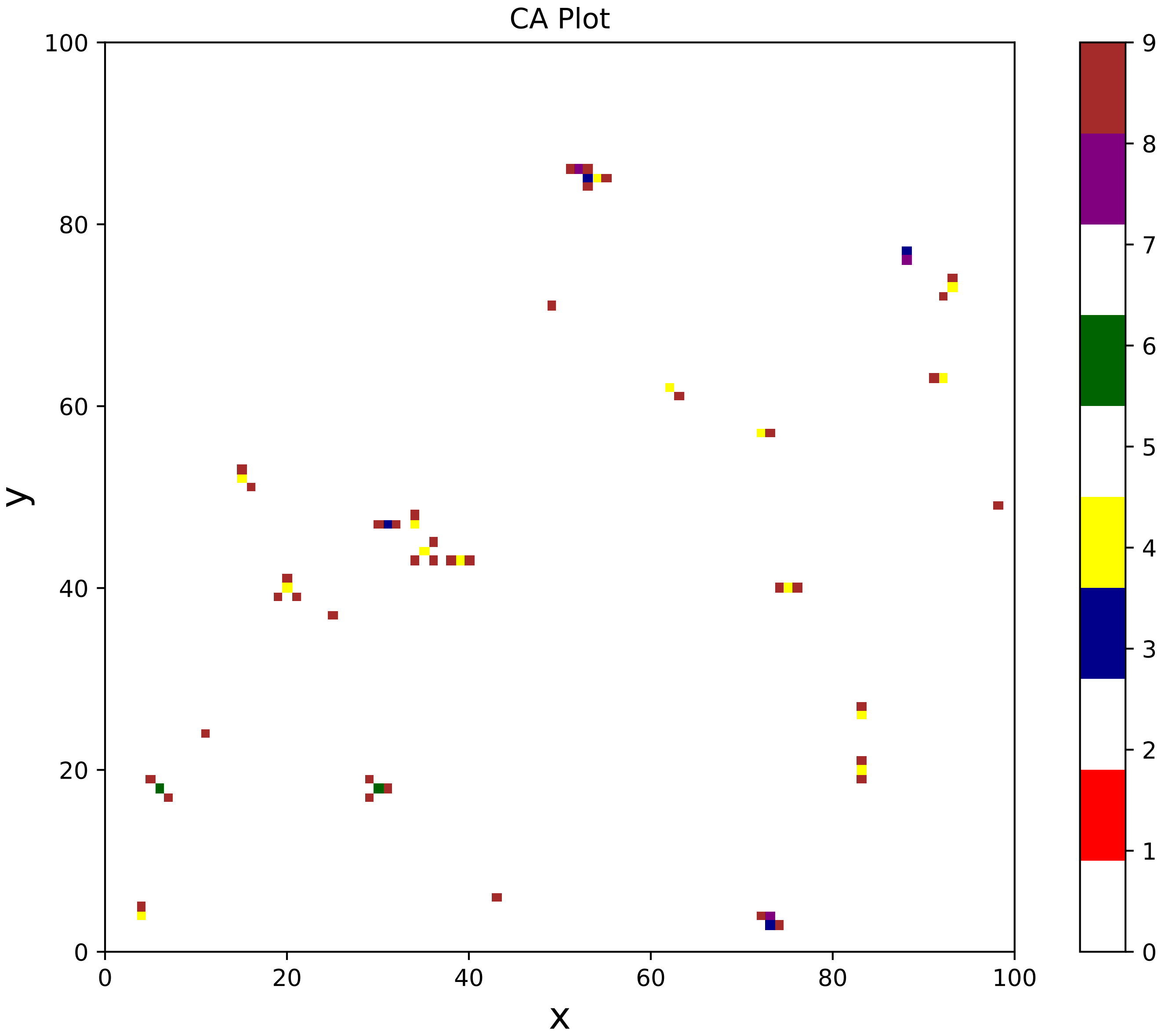

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

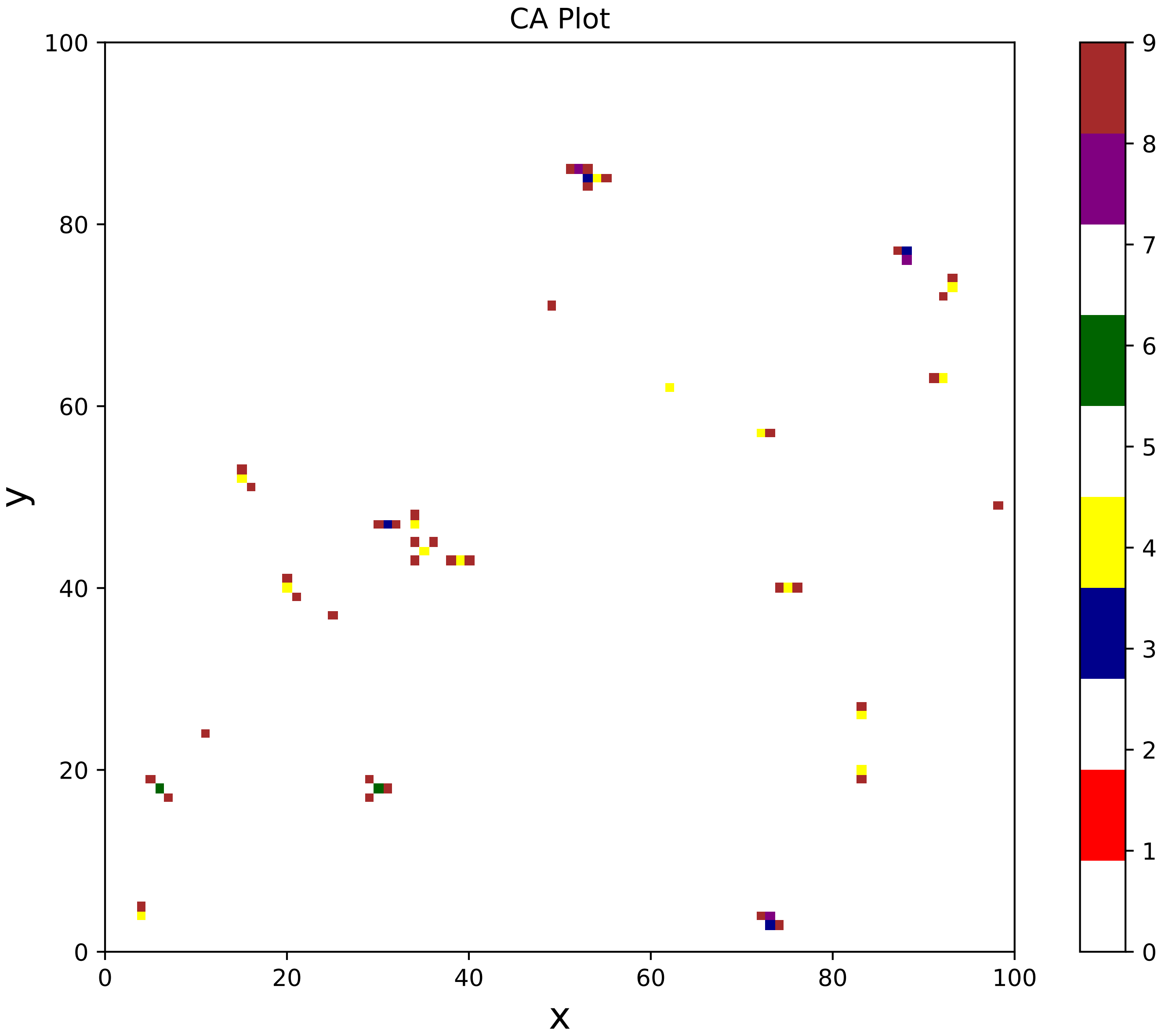

CA Plot
100
80
60
40
20
0
y
0
20
40
60
80
100
x
9
8
7
6
5
4
3
2
1
0

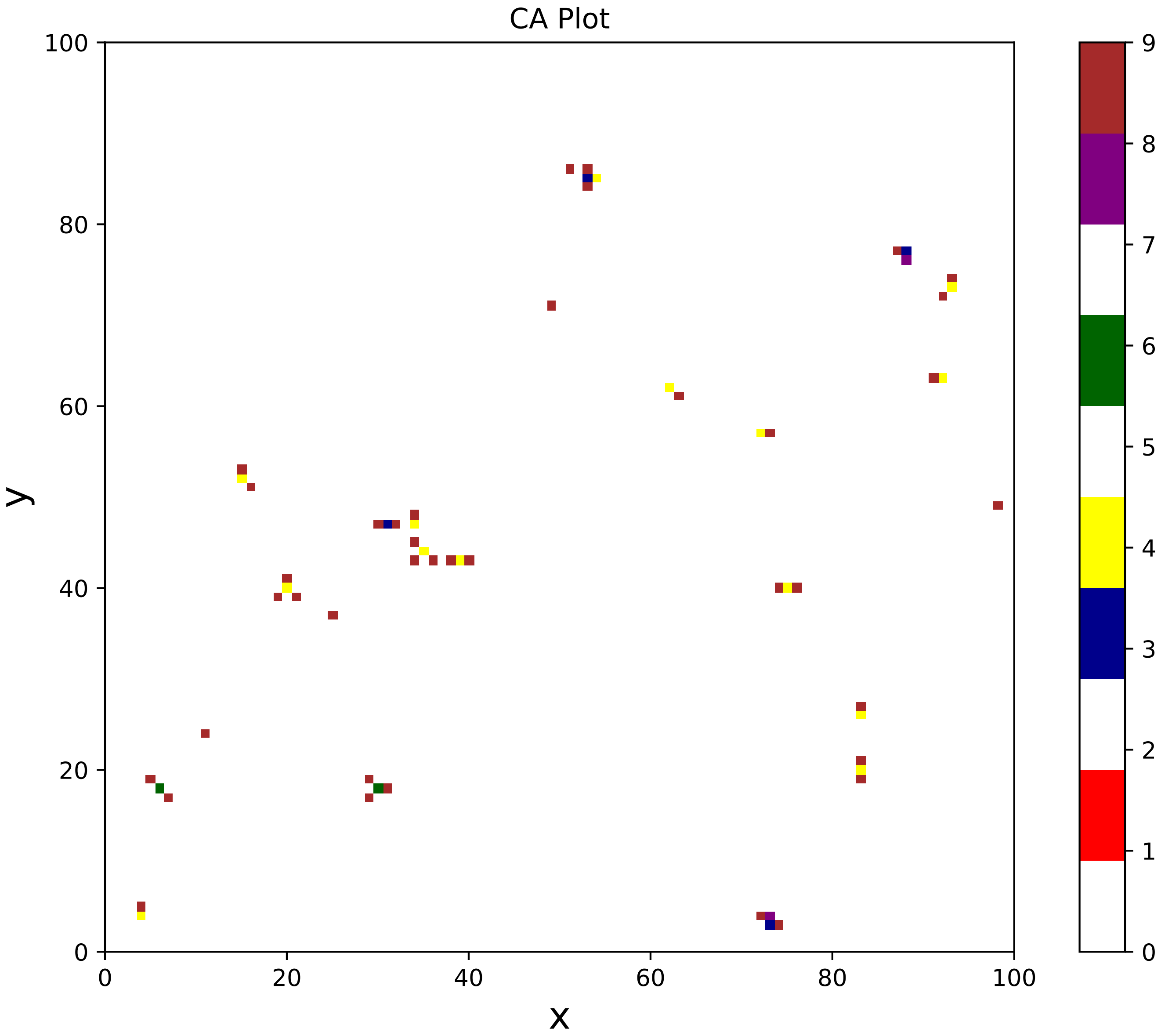

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9

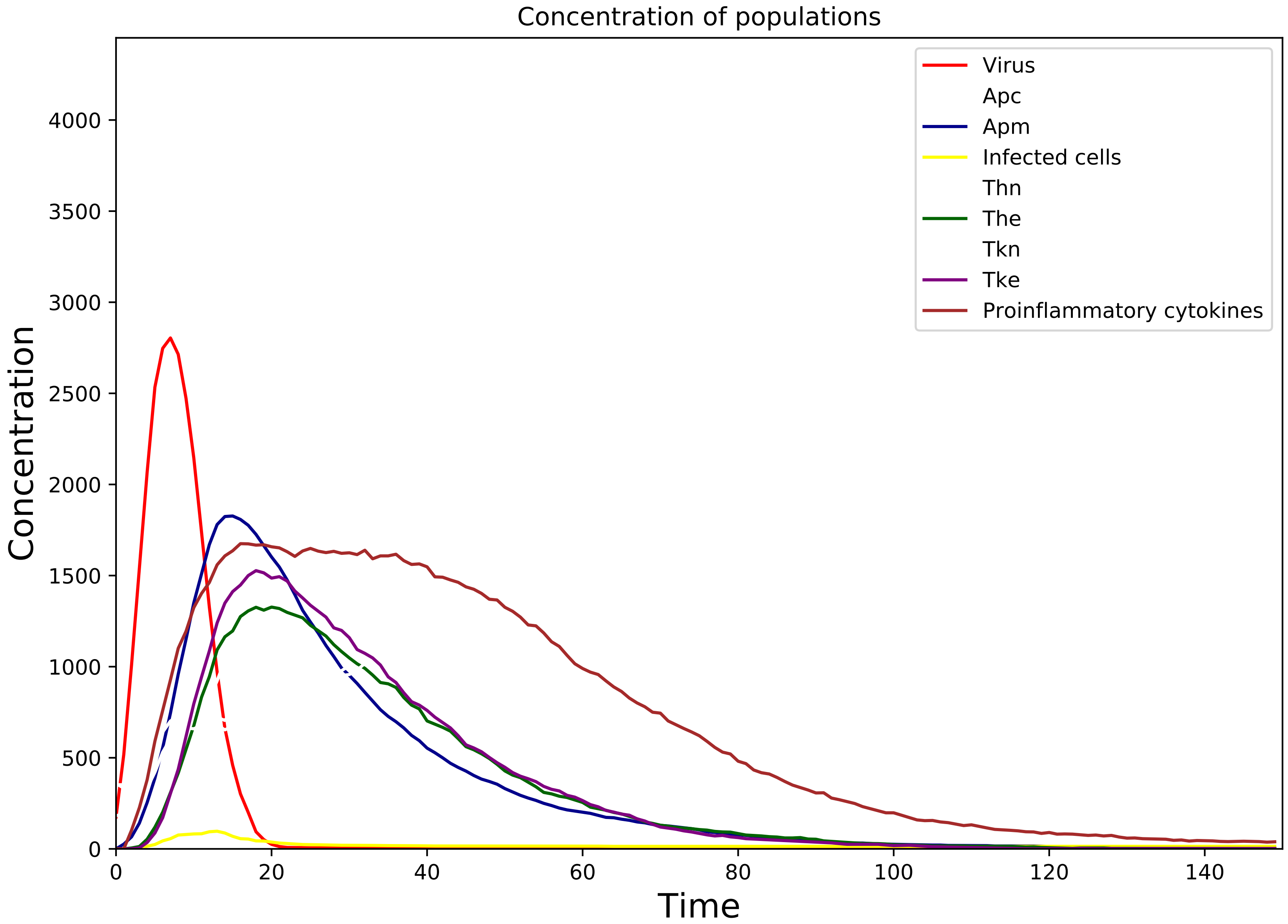

CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9


CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9


CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9


CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9


CA Plot
y
x
0
20
40
60
80
100
0
20
40
60
80
100
0
1
2
3
4
5
6
7
8
9


Concentration of populations
Concentration
Time
0
500
1000
1500
2000
2500
3000
3500
4000
0
20
40
60
80
100
120
140
Virus
Apc
Apm
Infected cells
Thn
The
Tkn
Tke
Proinflammatory cytokines