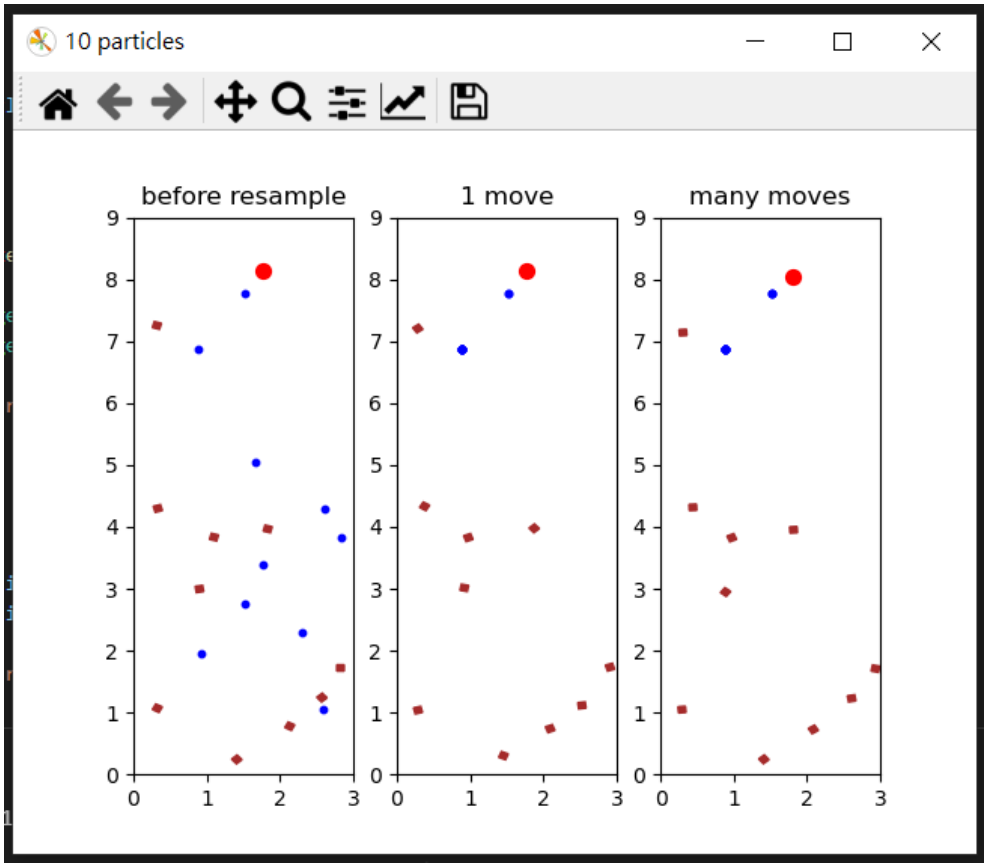
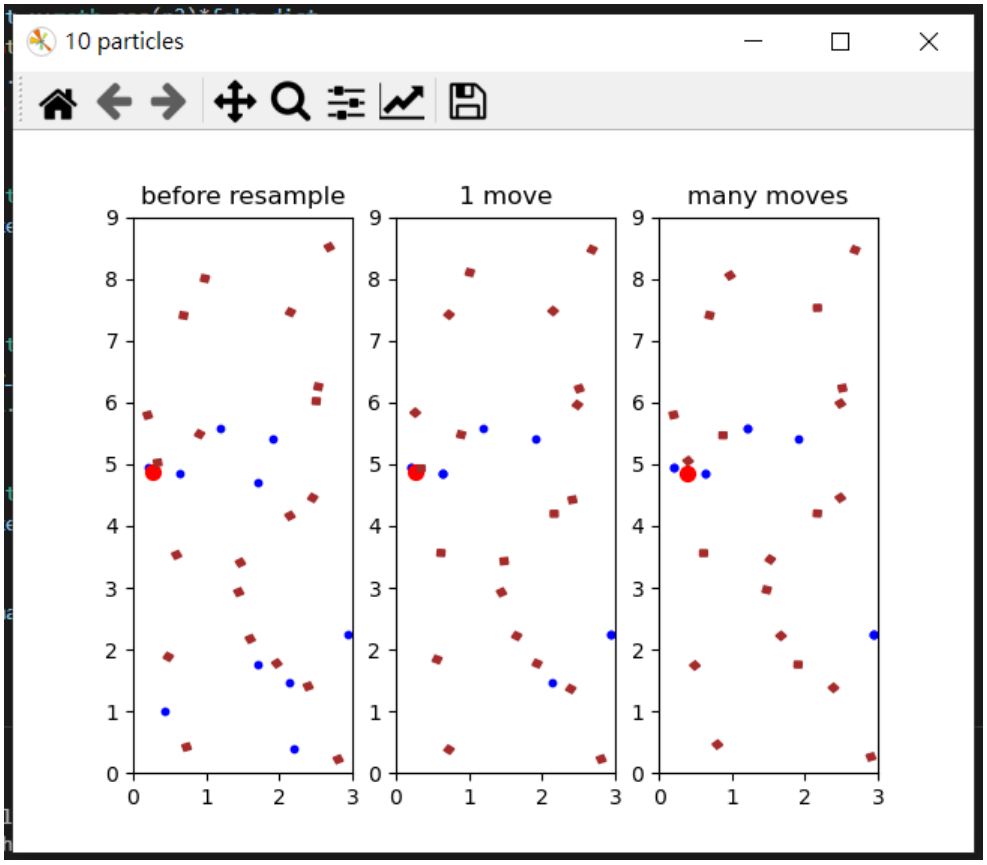
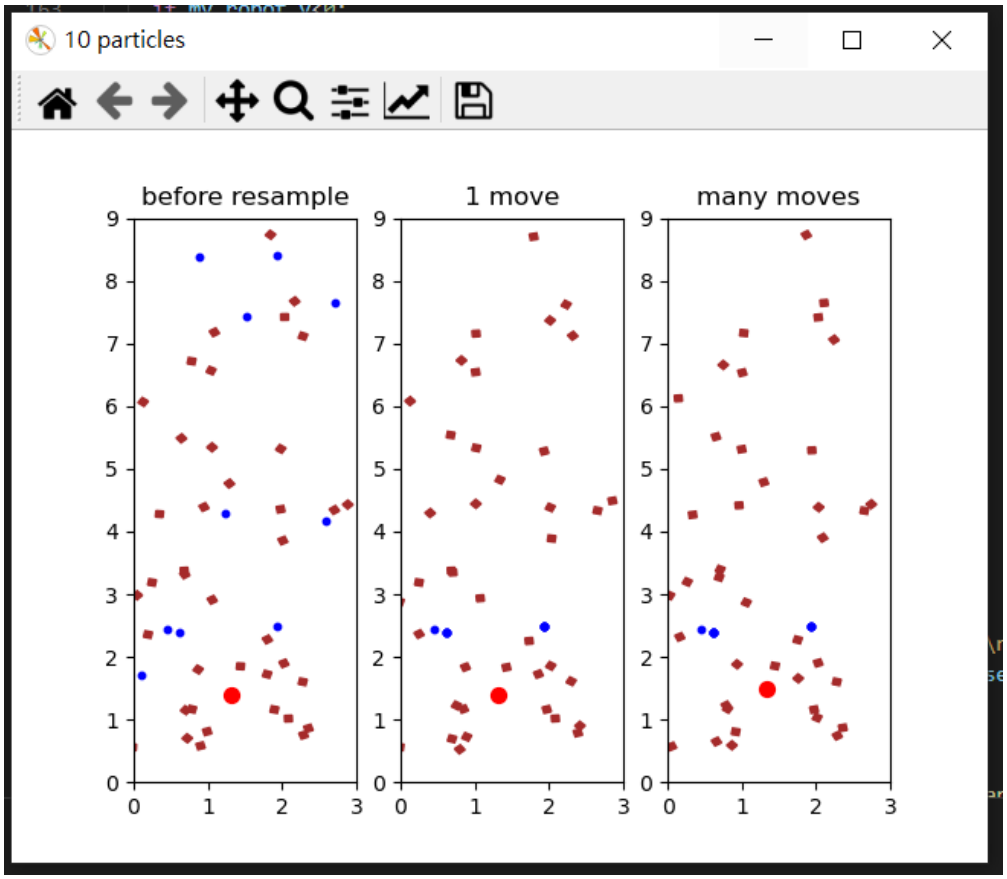
This is my experiment‘s result

In 10 particles:

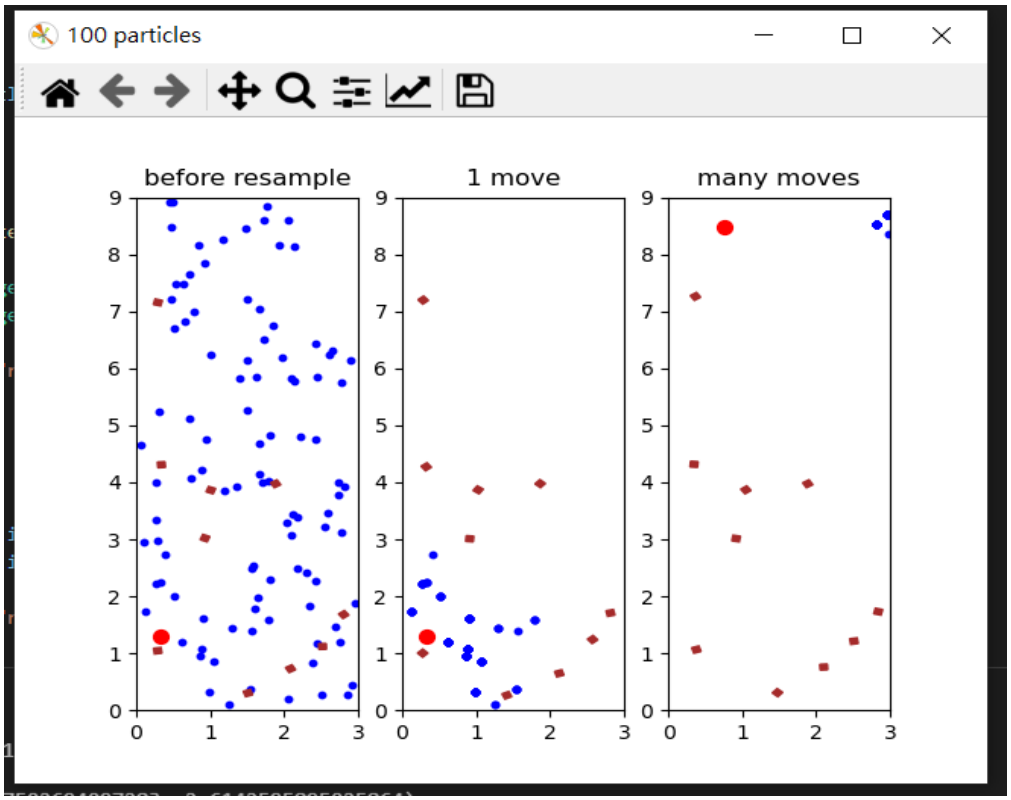


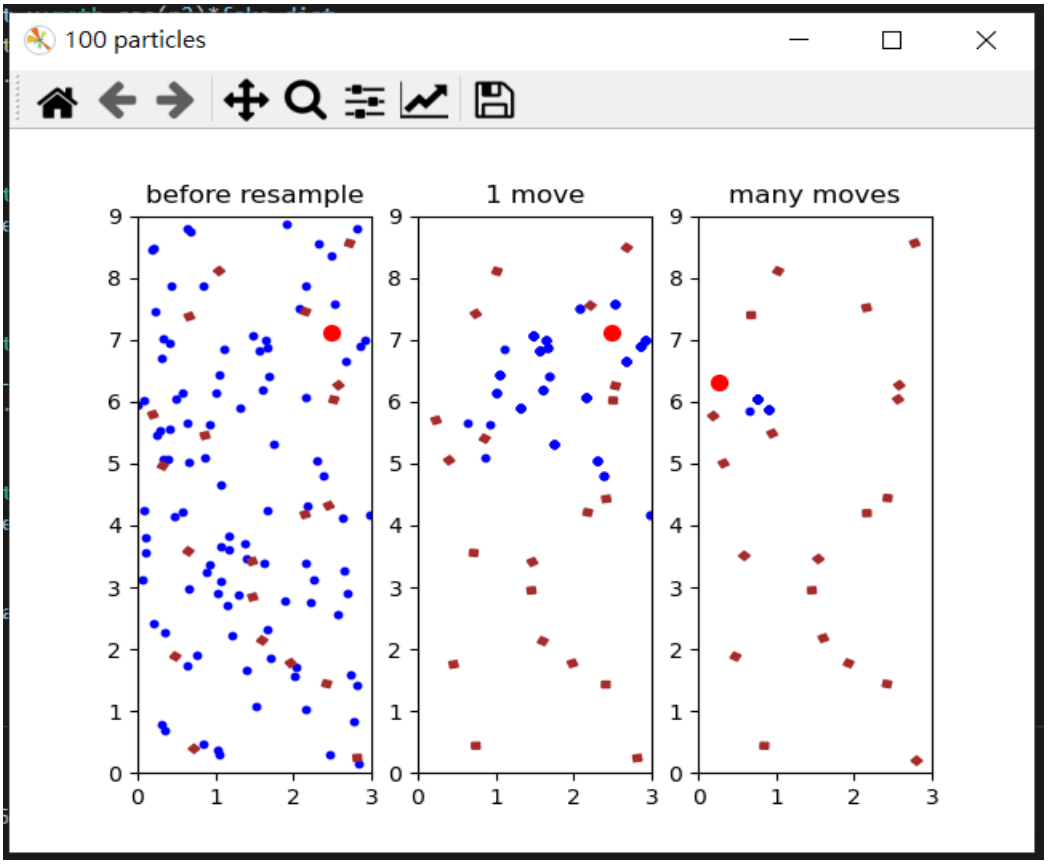


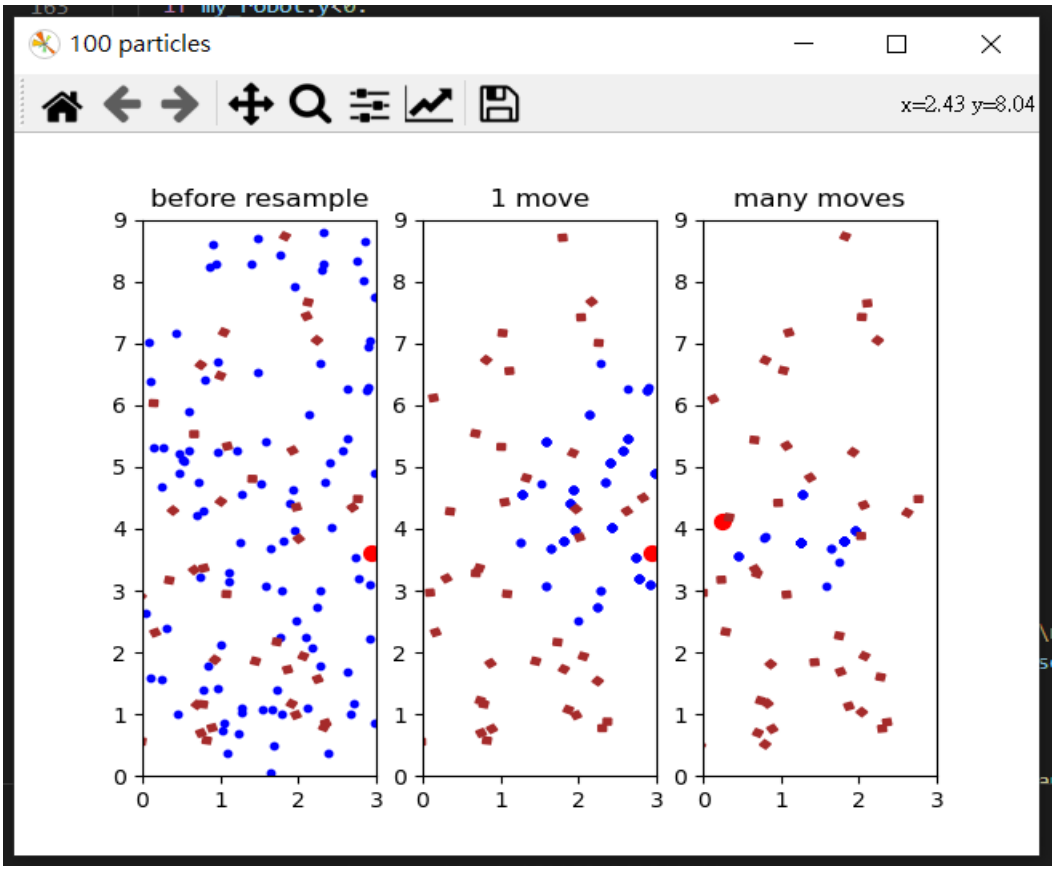


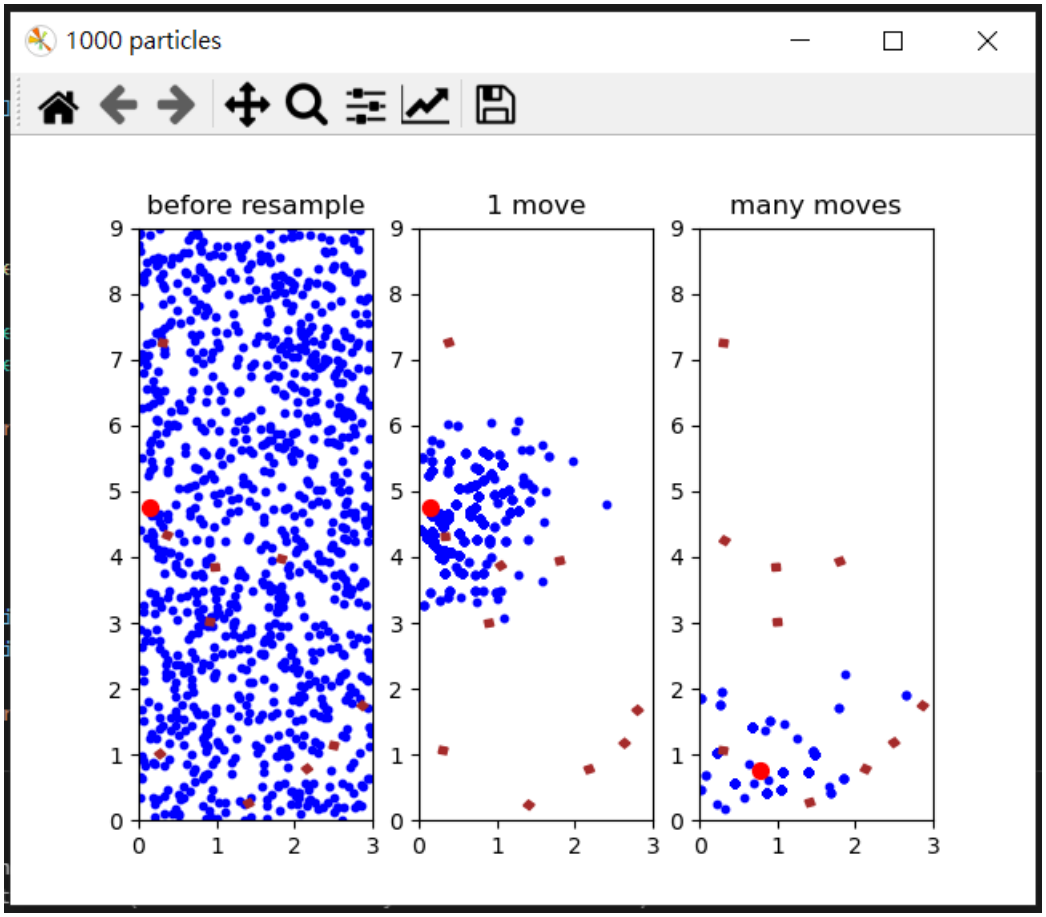
The particles is hard to resample,so the result isn't exact.

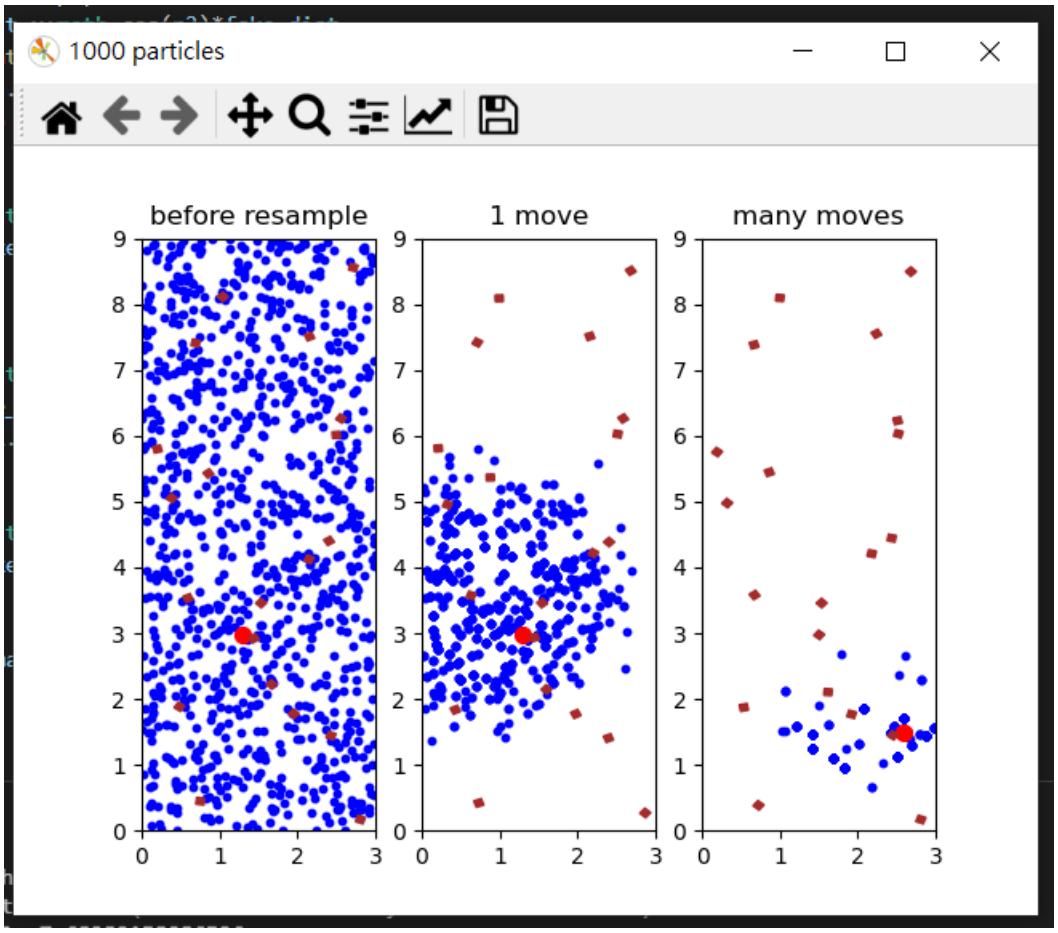
Now is show in 100 particles and 1000 particles:

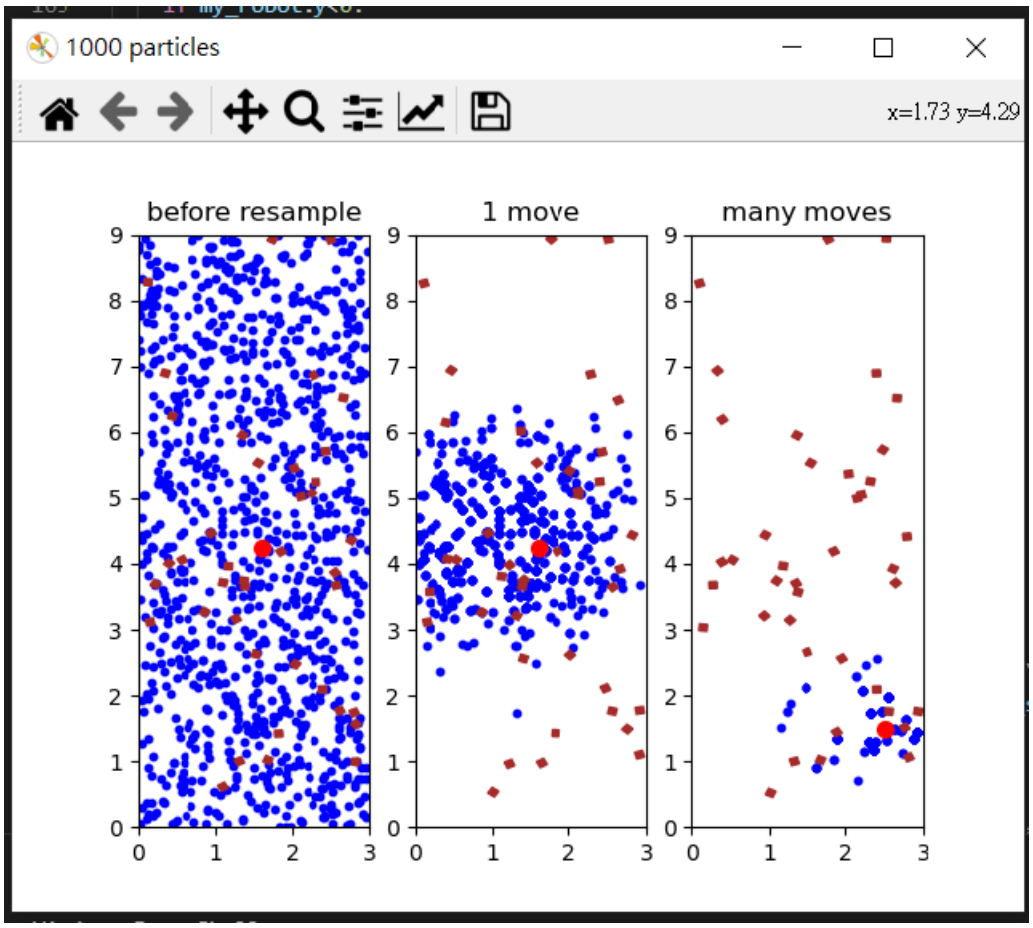



100 particles
before resample
1 move
many moves

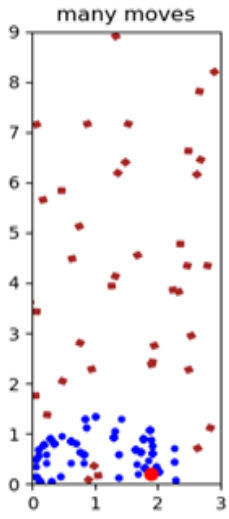

100 particles
x=2.43 y=8.04
before resample
1 move
many moves


1000 particles
before resample
1 move
many moves

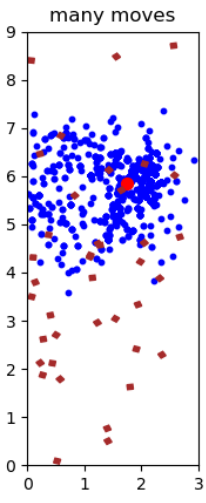

1000 particles
before resample
1 move
many moves



In 1000 particles,the result is exact than 10 particles and 100 particles.
And the walls can guide the robot, so if there are many walls, the result
Will be exact.
When I sense the result,always can't sense any wall, so ,I edit the program,
If the robot can't sense anything, it will keep move, until it sense a wall.
And I followed ,if recreate more particles at in each iteration of the algorithm.
The result will be exact.



recreat 10% particles



recreat 50%particles