

Ex05-Report

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The parameters are as follows:

Number of Particles = 1000

Number of steps = 5000

Time interval = 0.0001

Particle radius = 1

Utilization $\phi = 0.1$

Kr = 100

16 threads for Ex04

1 thread for Ex05

Some runtime results are as below:

boxdim	cutoff	ex04(sec)	ex05(sec)
4	7	293.88	19.01
4	6	293.88	18.66
4	5	293.88	18.38
8	7	293.88	5.64
8	6	293.88	5.5
8	5	293.88	5.0902

The results show that boxdim has a significant influence on runtime and cutoff also affects runtime. Generally speaking, the speed increases a lot with the interactions function.