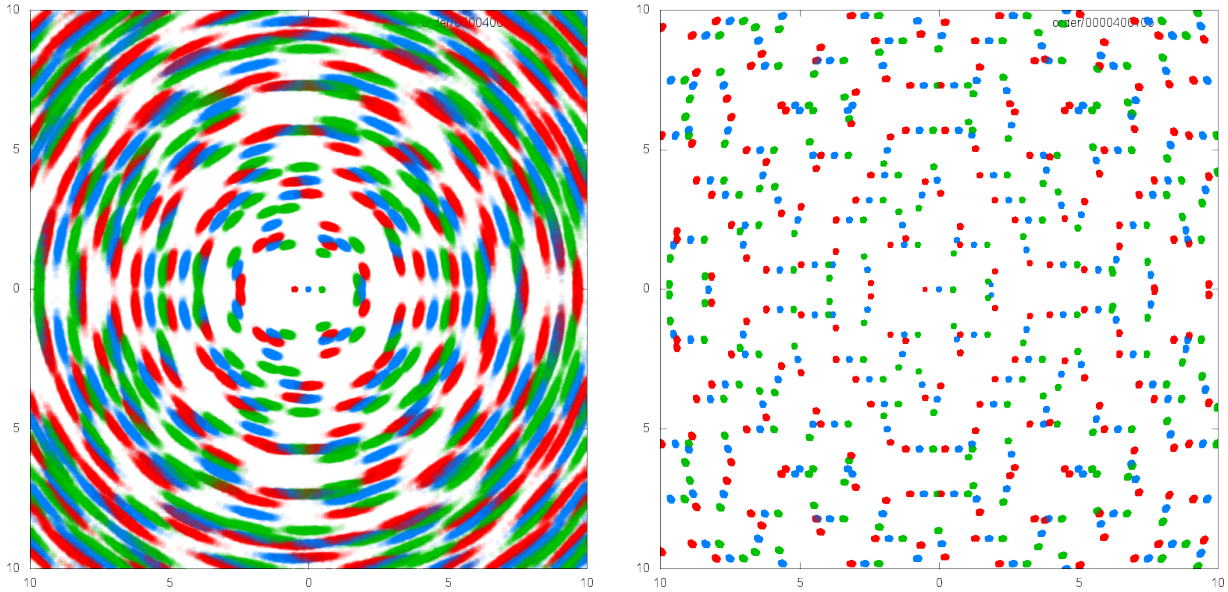
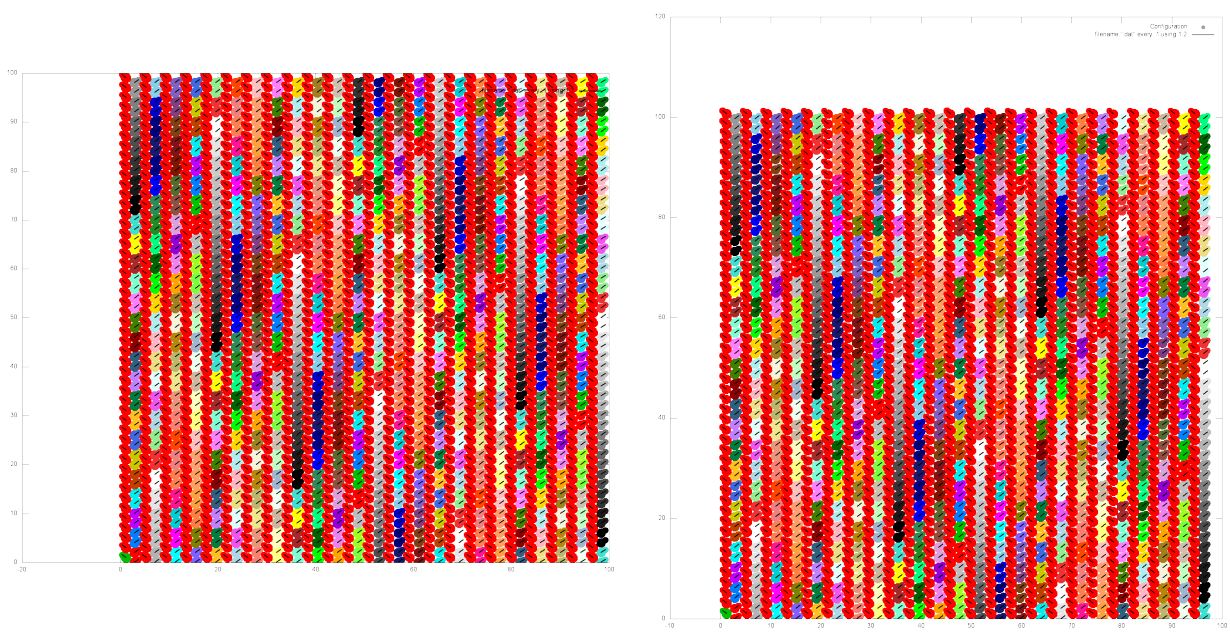
1 Snowman: Temp$= 0.2$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

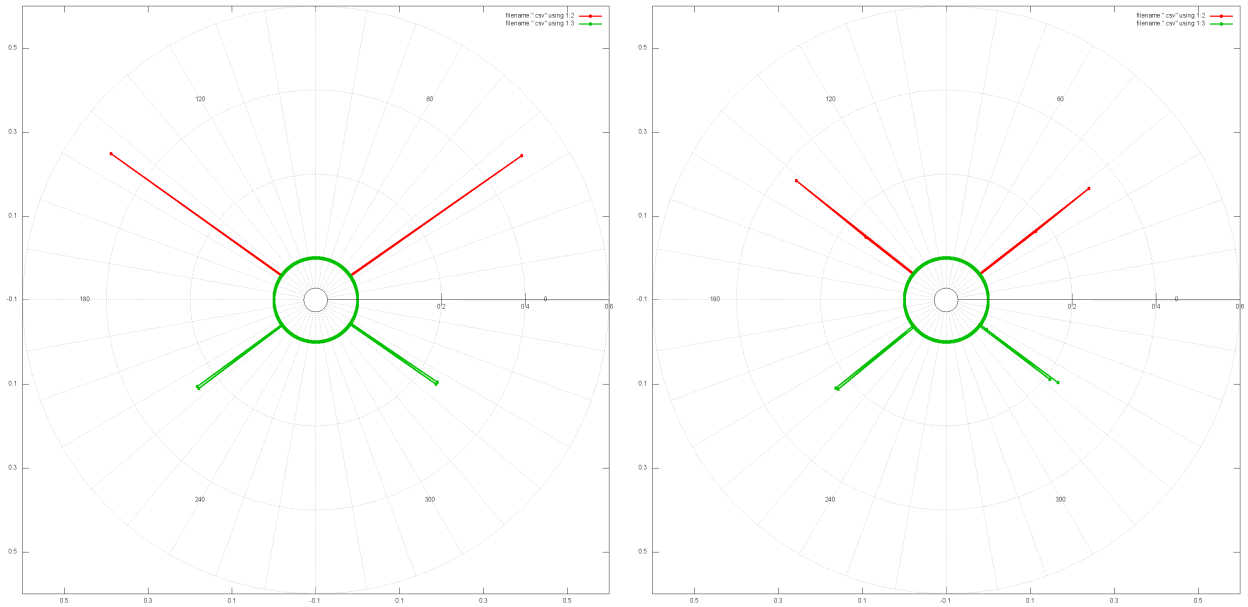
Figure 1: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 2: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 3: Angle Distribution

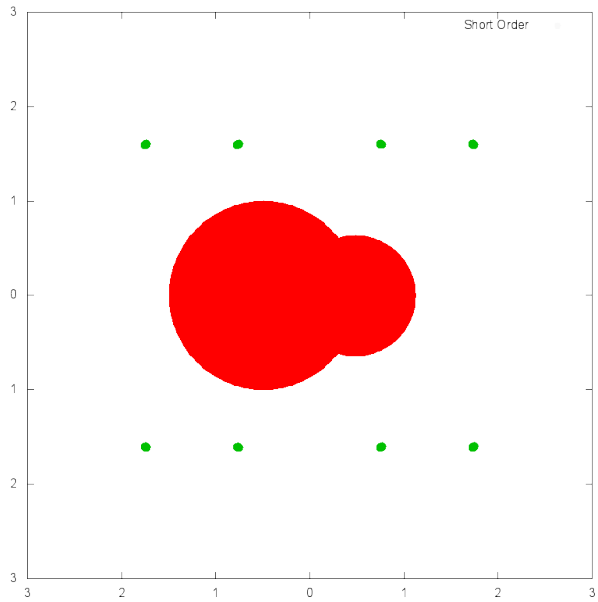


Figure 4: Short Range Ordering

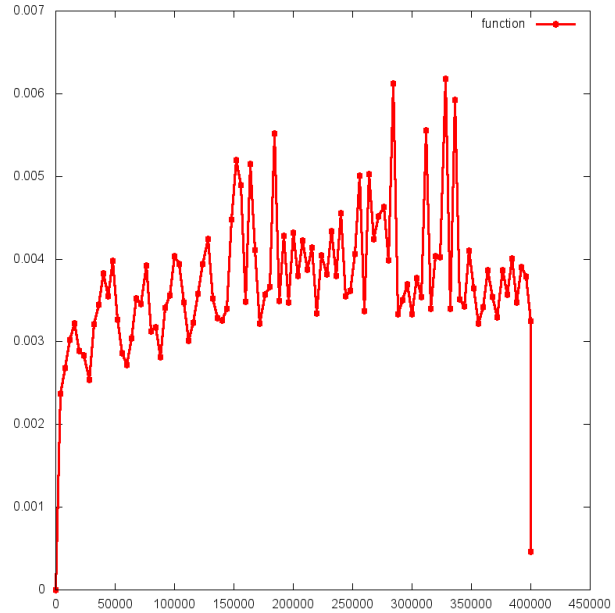


Figure 5: Mean Squared Displacement

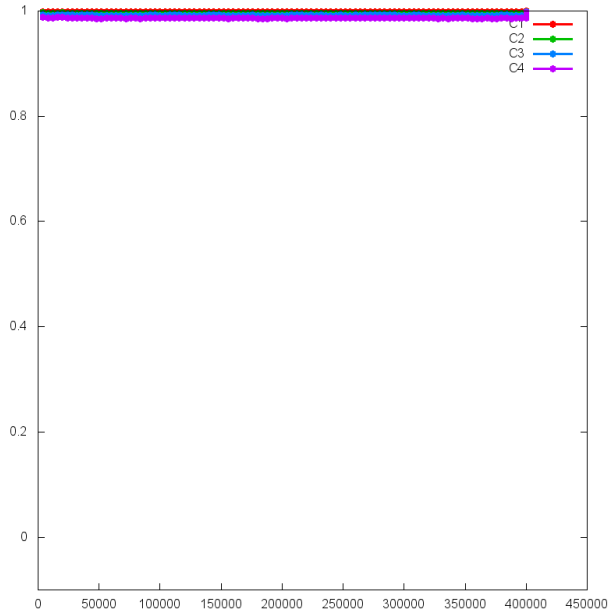


Figure 6: Rotational Relaxation

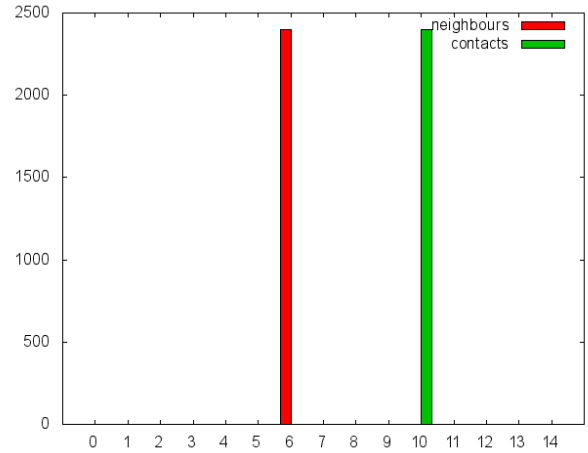


Figure 7: Contact Number

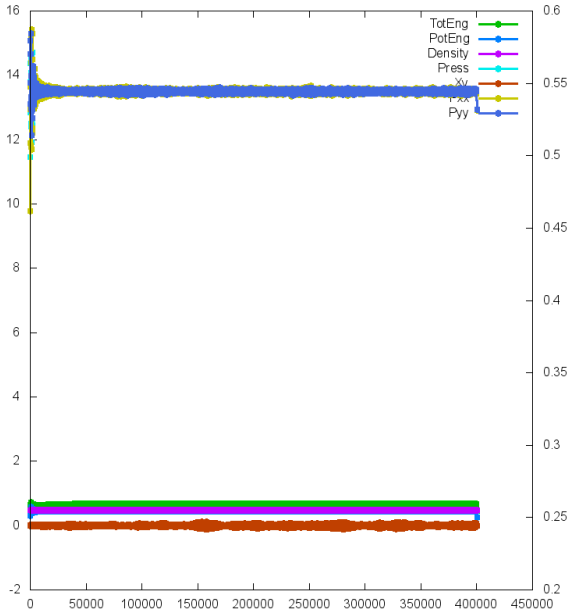
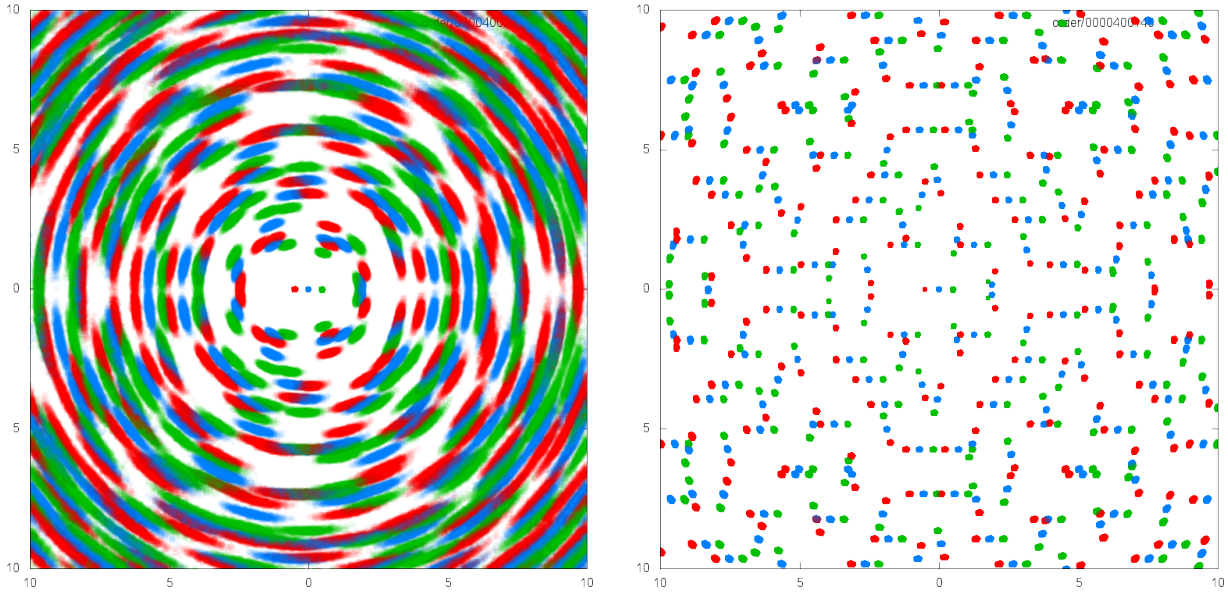


Figure 8: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0
Diffusion Constant	0.0001
Average bond fraction	0.9378
Local Order	0.3722
Global Order	0.5291
Circle Order	0.0000
contacts	1.0000
neighbours	0.6000
pairing	0.1667
Density	0.4841
Total Energy	0.4645
Packing Fraction	0.9882

Table 1: Data

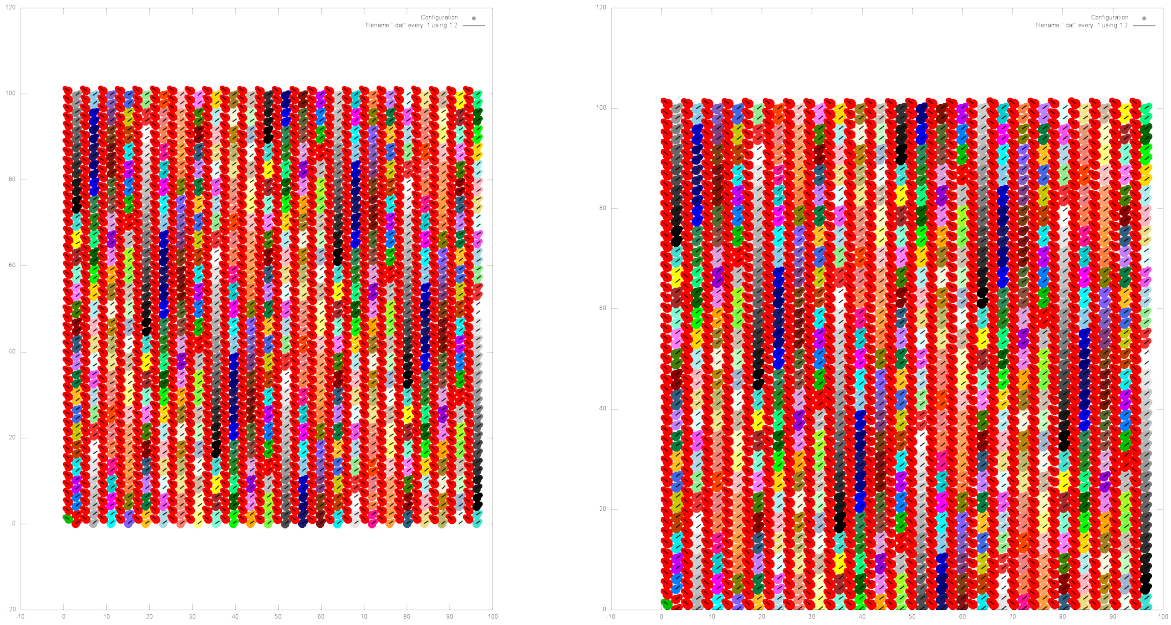
2 Snowman: Temp$= 0.3$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

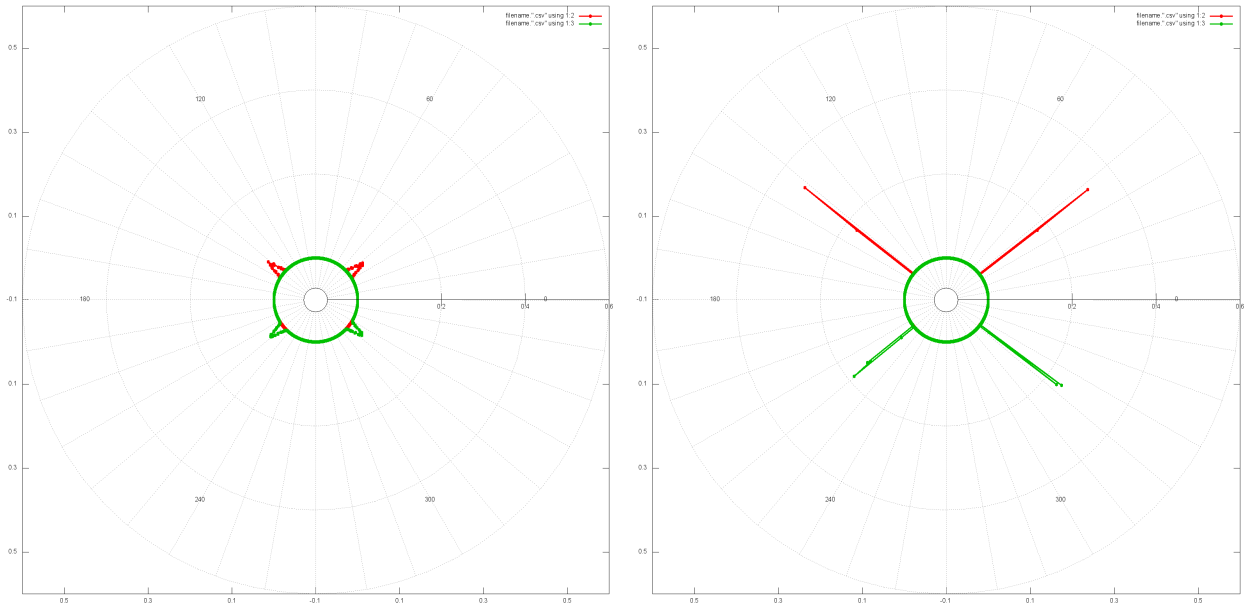
Figure 9: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 10: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 11: Angle Distribution

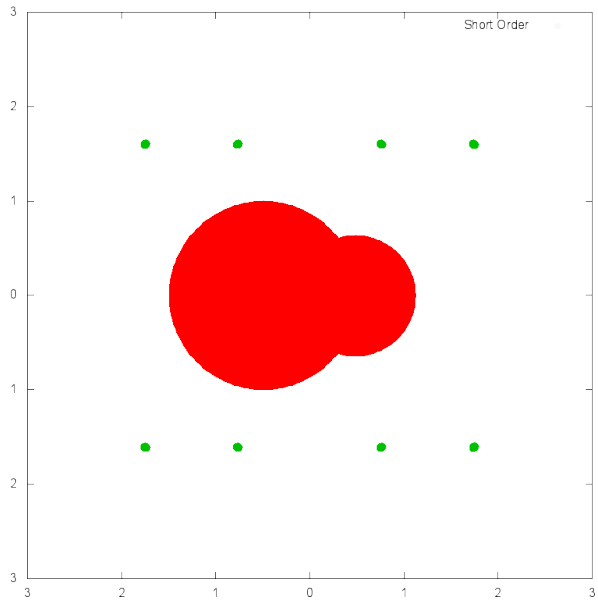


Figure 12: Short Range Ordering

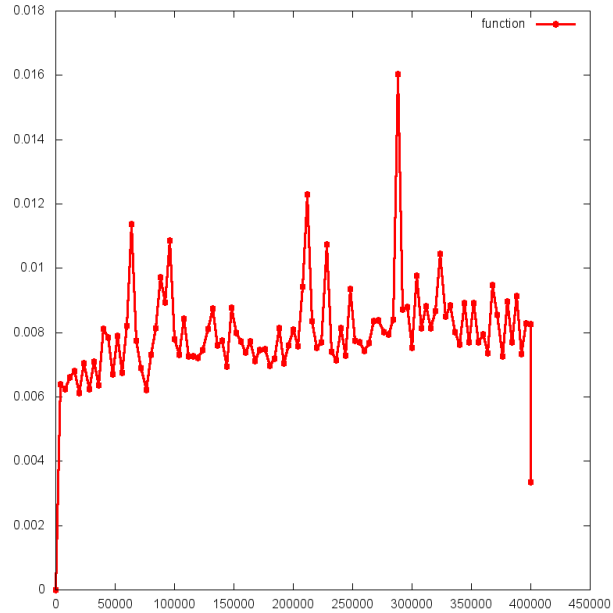


Figure 13: Mean Squared Displacement

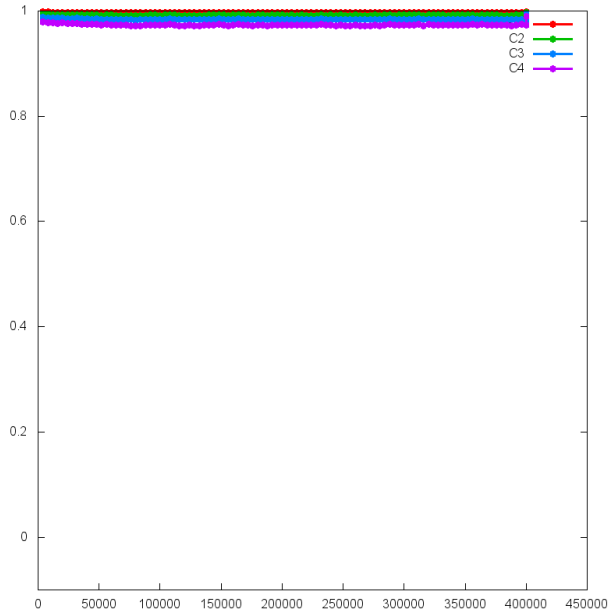


Figure 14: Rotational Relaxation

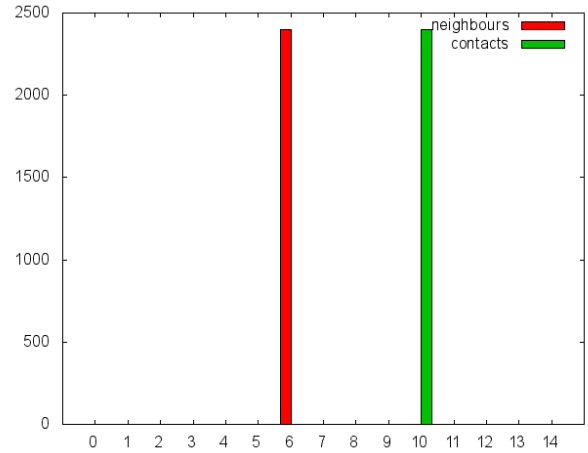


Figure 15: Contact Number

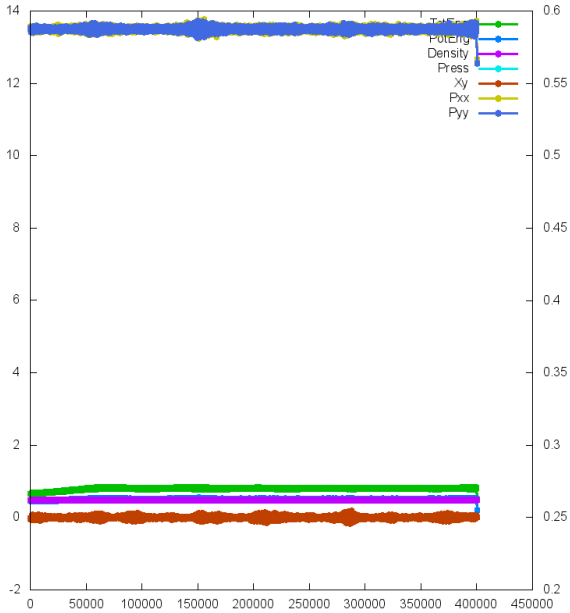
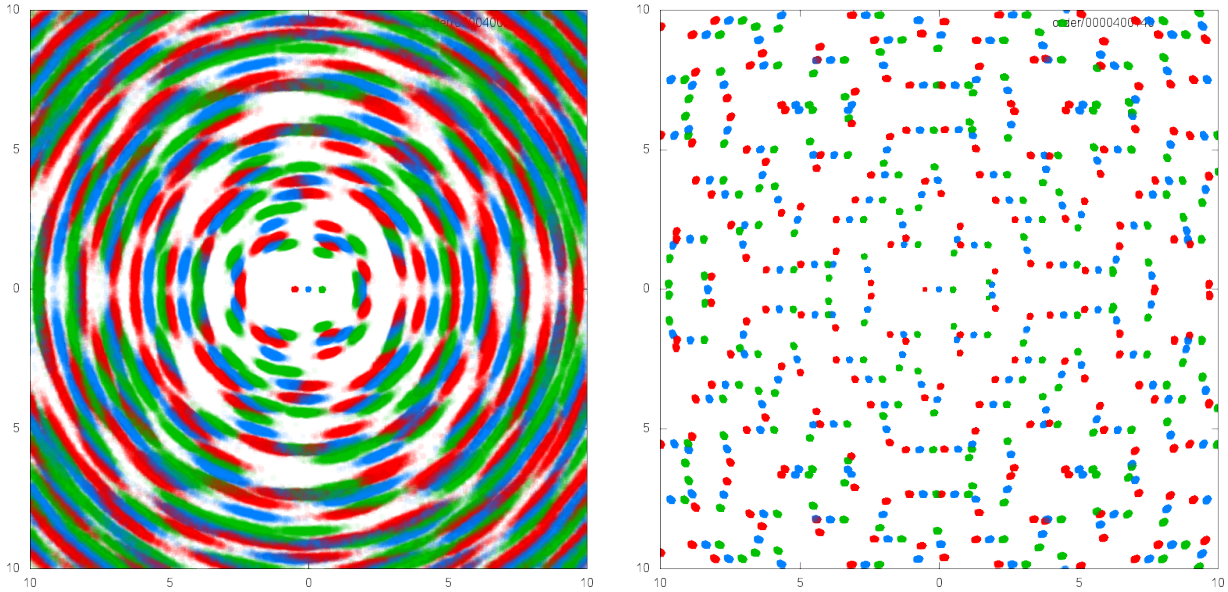


Figure 16: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0
Diffusion Constant	0.0004
Average bond fraction	0.9390
Local Order	0.3717
Global Order	0.5287
Circle Order	0.0000
contacts	1.0000
neighbours	0.6000
pairing	0.1667
Density	0.4829
Total Energy	0.4976
Packing Fraction	0.9856

Table 2: Data

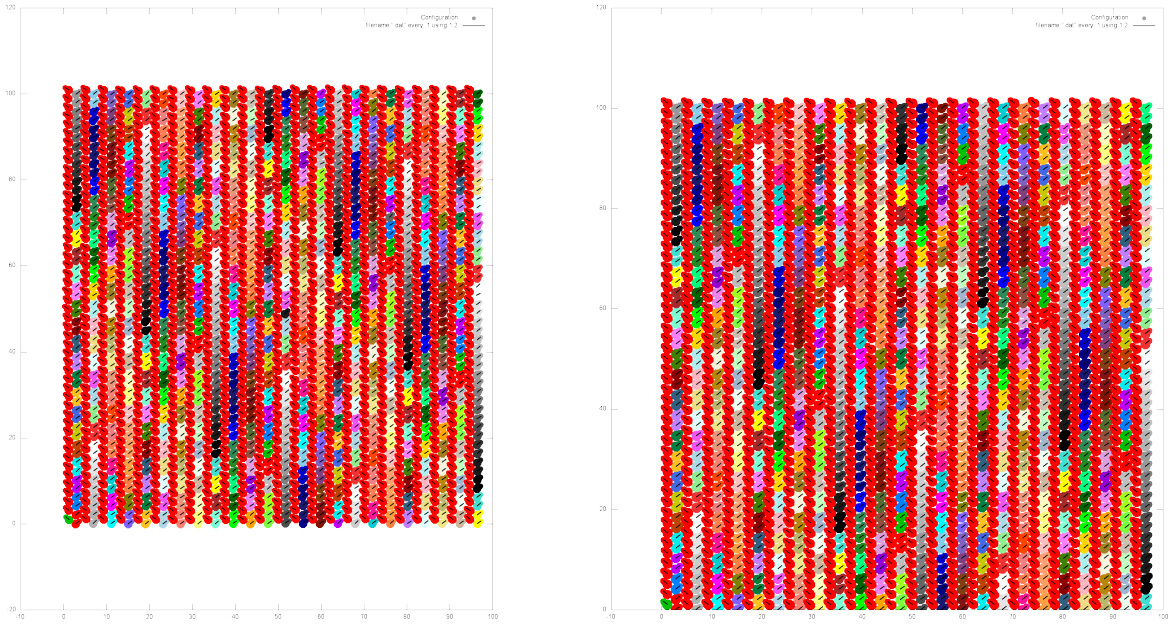
3 Snowman: Temp$= 0.4$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

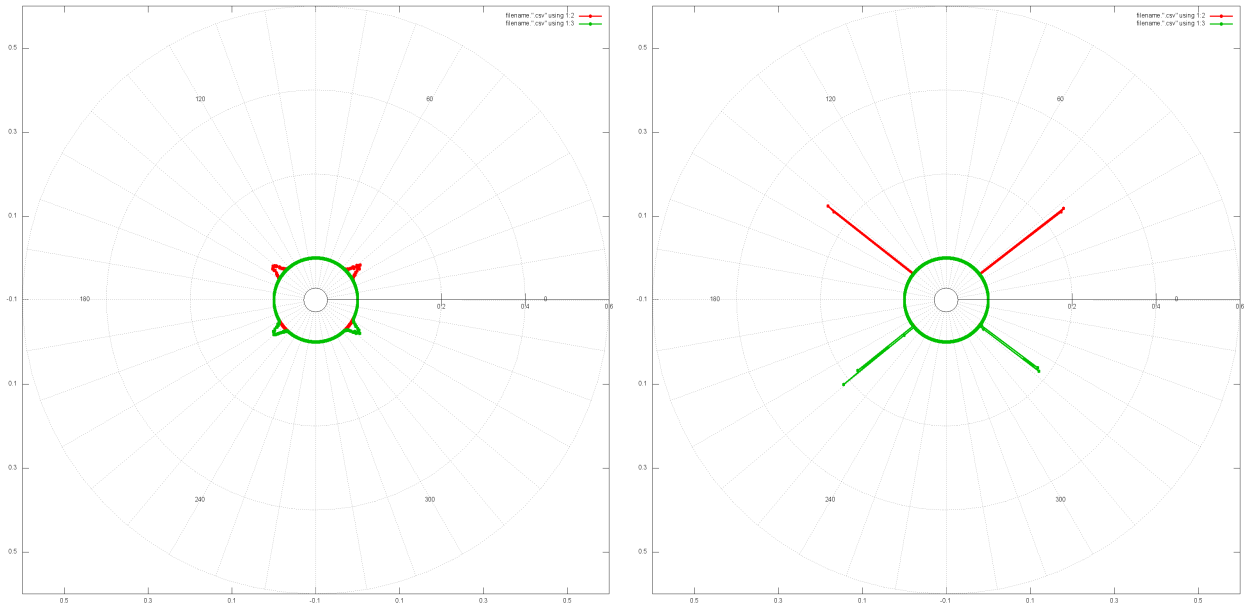
Figure 17: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 18: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 19: Angle Distribution

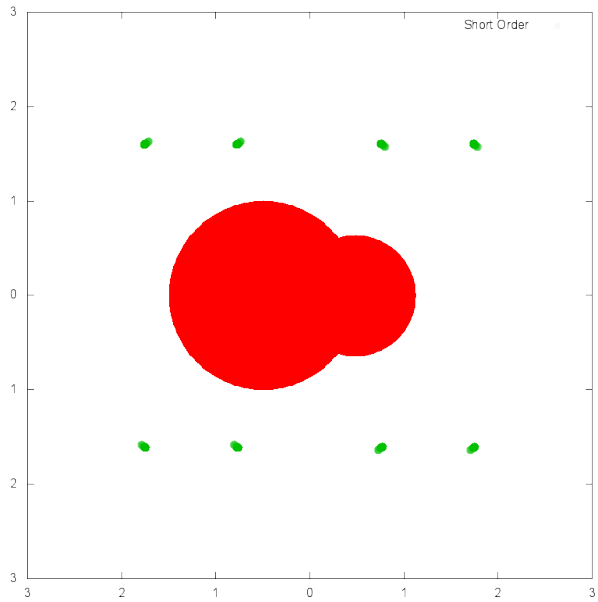


Figure 20: Short Range Ordering

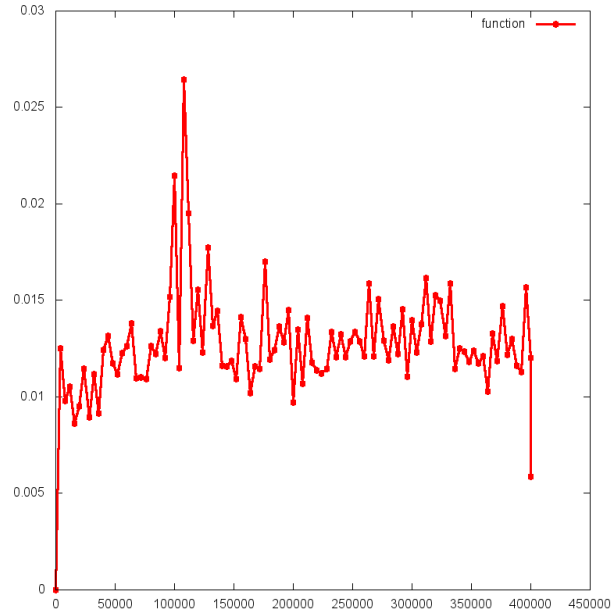


Figure 21: Mean Squared Displacement

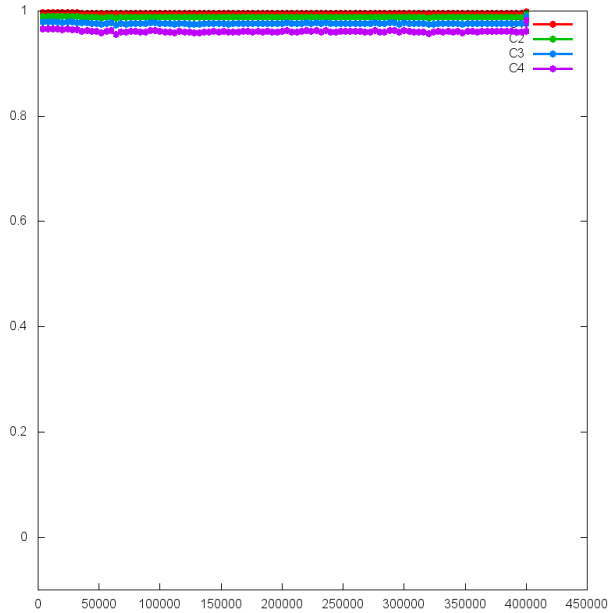


Figure 22: Rotational Relaxation

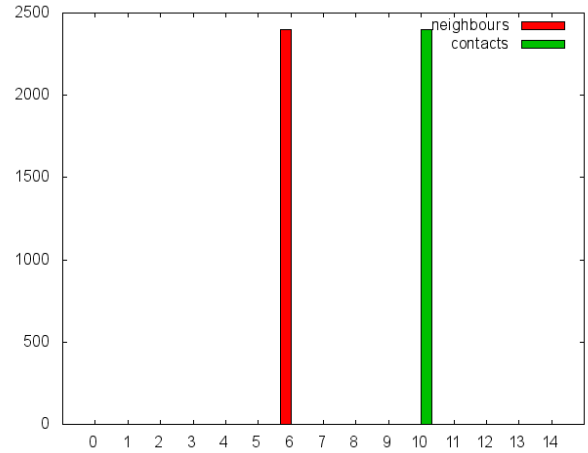


Figure 23: Contact Number

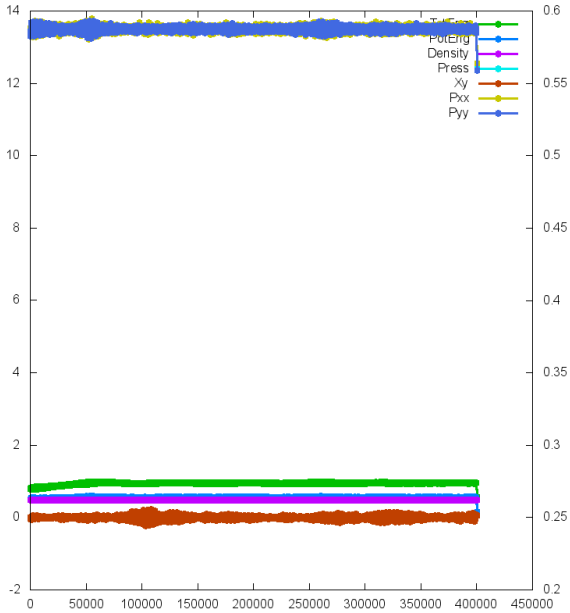
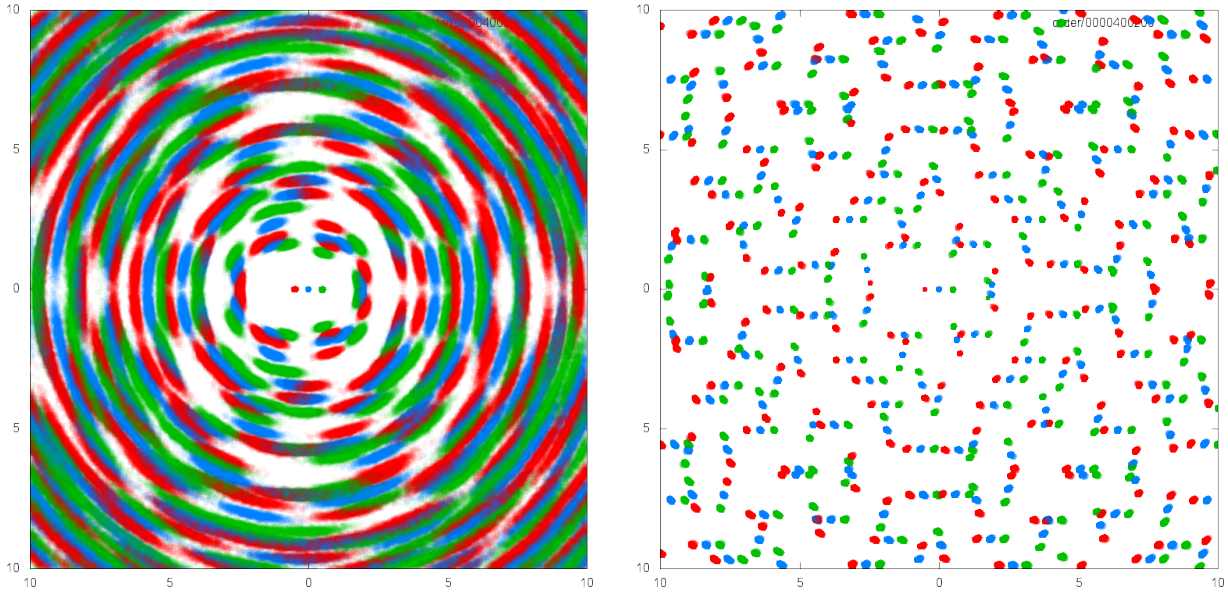


Figure 24: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0
Diffusion Constant	0.0007
Average bond fraction	0.9398
Local Order	0.3720
Global Order	0.5290
Circle Order	0.0000
contacts	1.0000
neighbours	0.6000
pairing	0.1667
Density	0.4821
Total Energy	0.5641
Packing Fraction	0.9840

Table 3: Data

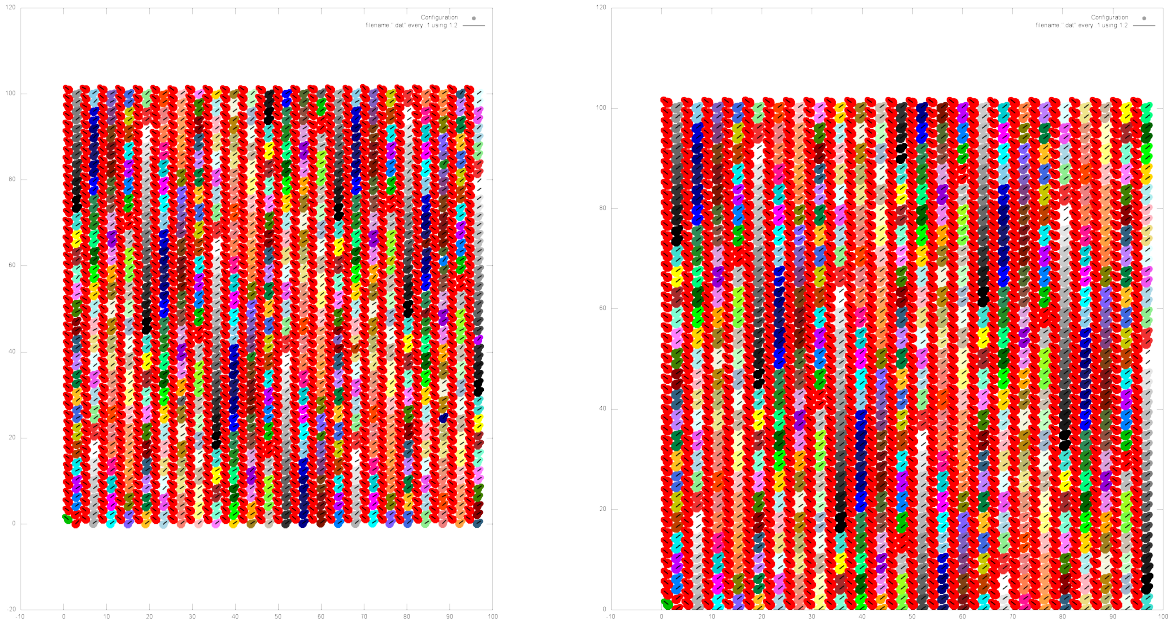
4 Snowman: Temp$= 0.5$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

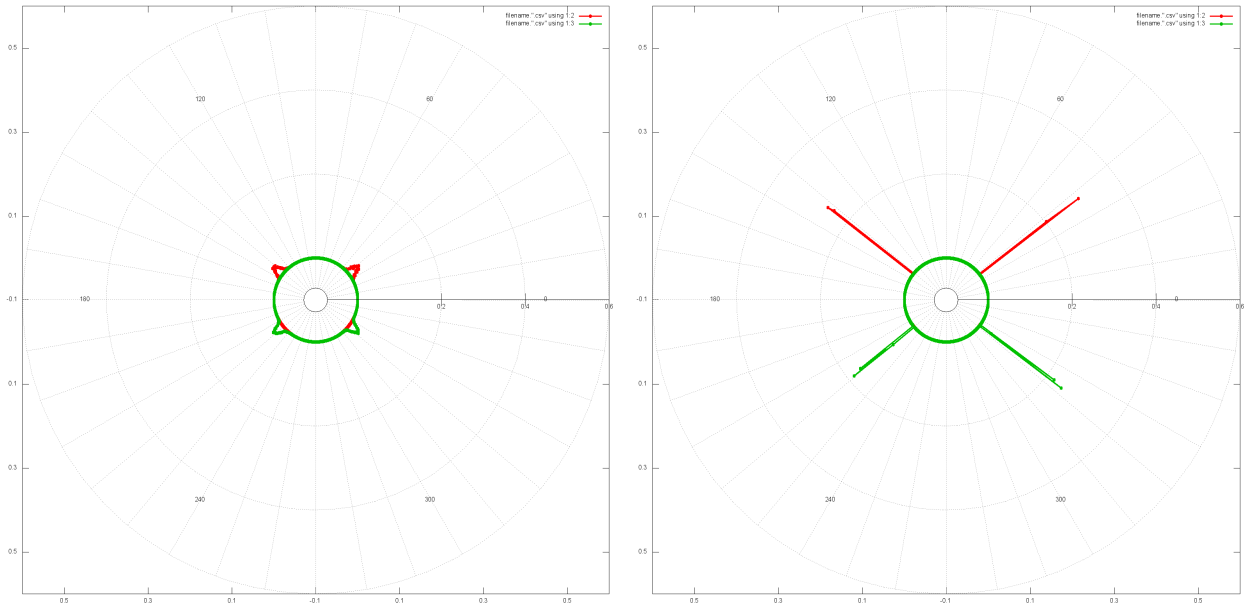
Figure 25: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 26: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 27: Angle Distribution

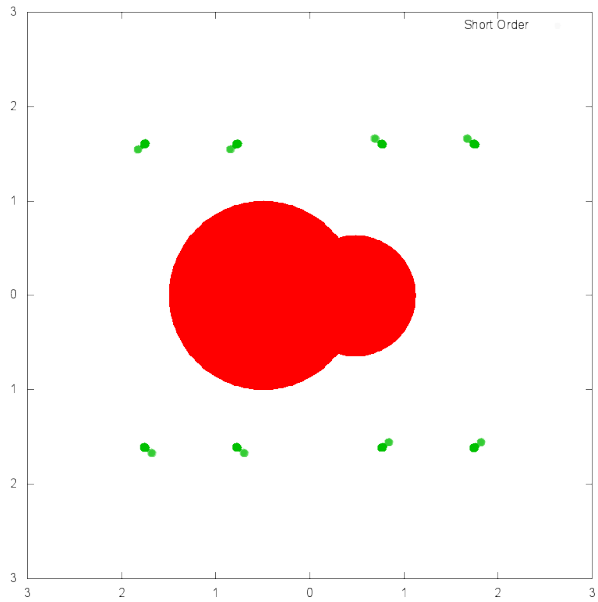


Figure 28: Short Range Ordering

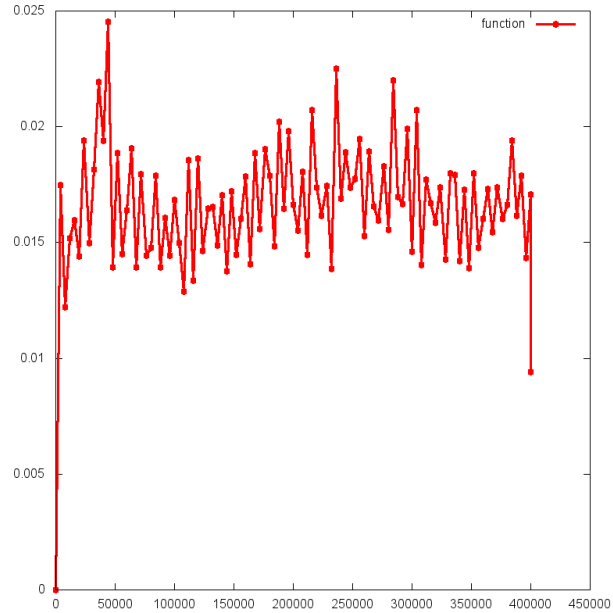


Figure 29: Mean Squared Displacement

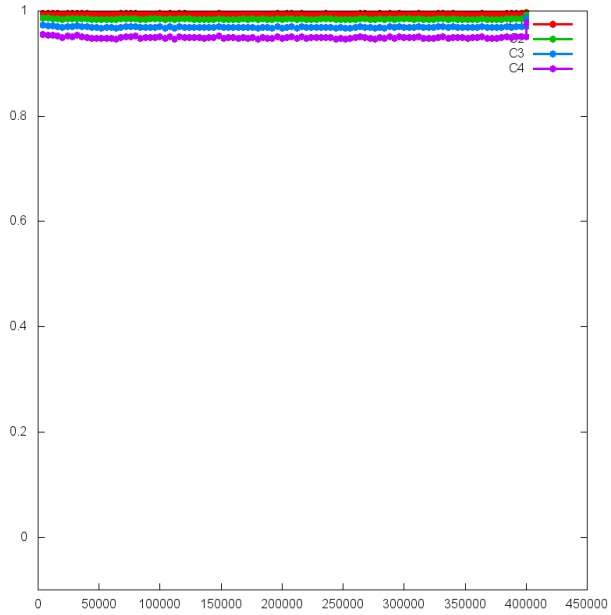


Figure 30: Rotational Relaxation

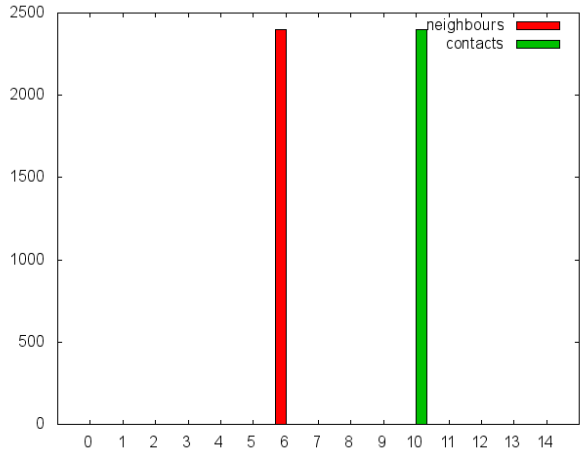


Figure 31: Contact Number

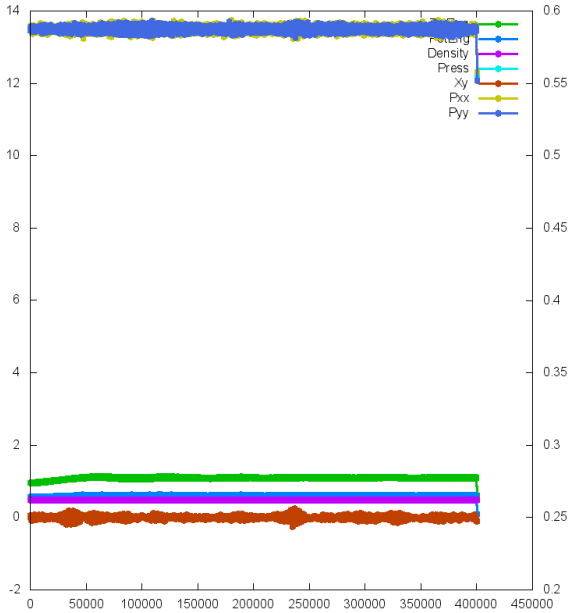
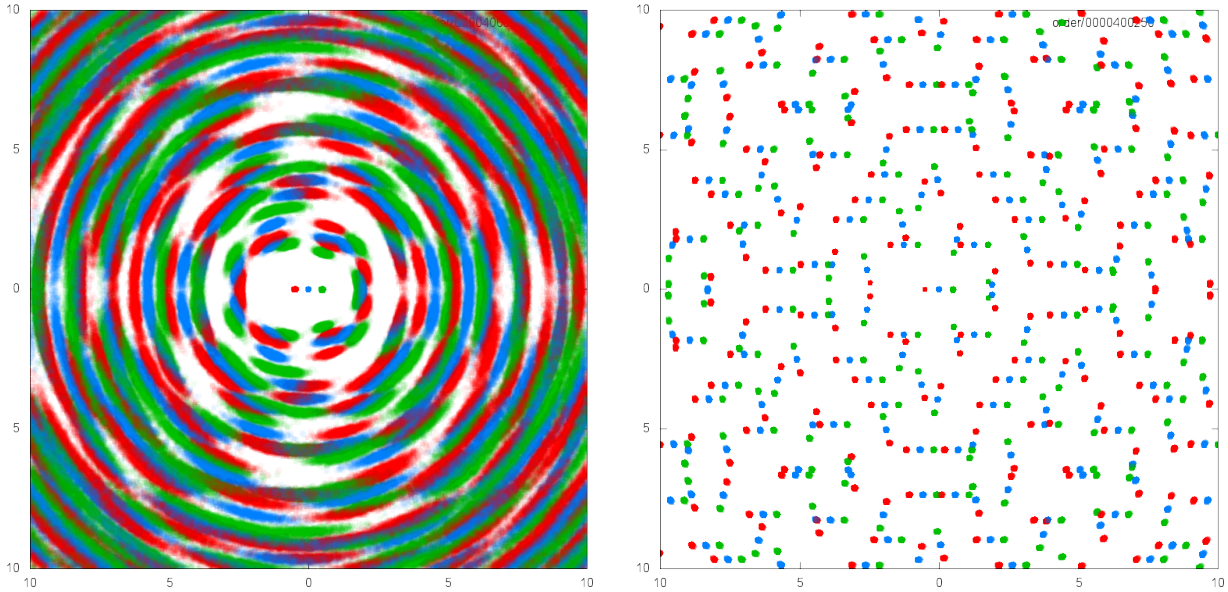


Figure 32: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0
Diffusion Constant	0.0012
Average bond fraction	0.9406
Local Order	0.3719
Global Order	0.5289
Circle Order	0.0000
contacts	1.0000
neighbours	0.6000
pairing	0.1667
Density	0.4810
Total Energy	0.6023
Packing Fraction	0.9818

Table 4: Data

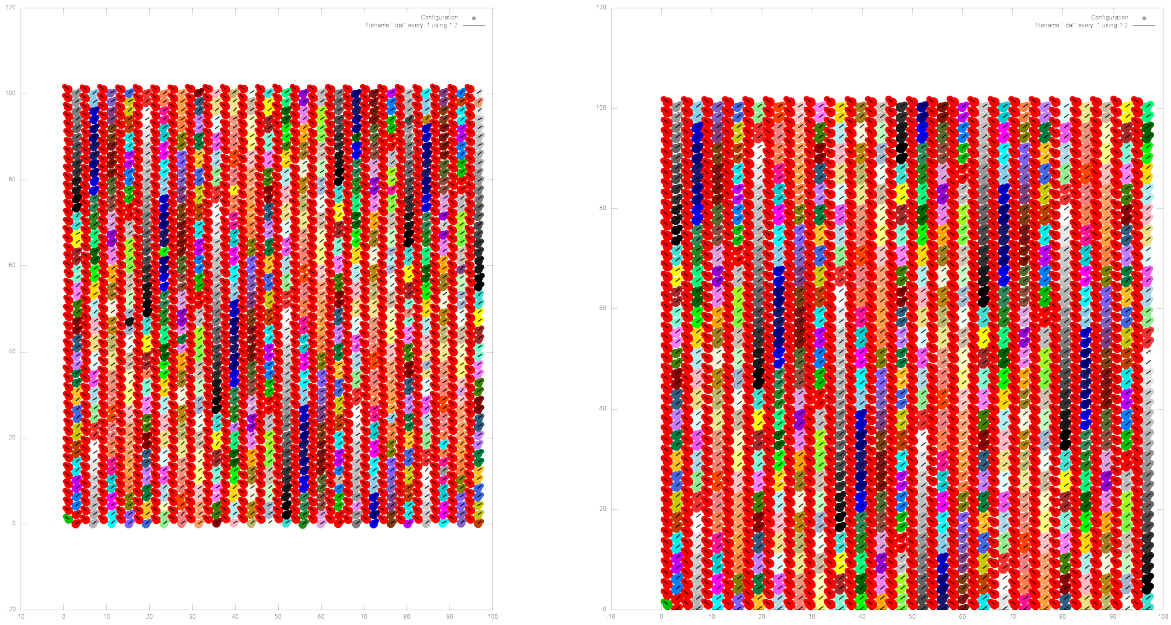
5 Snowman: Temp$= 0.6$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

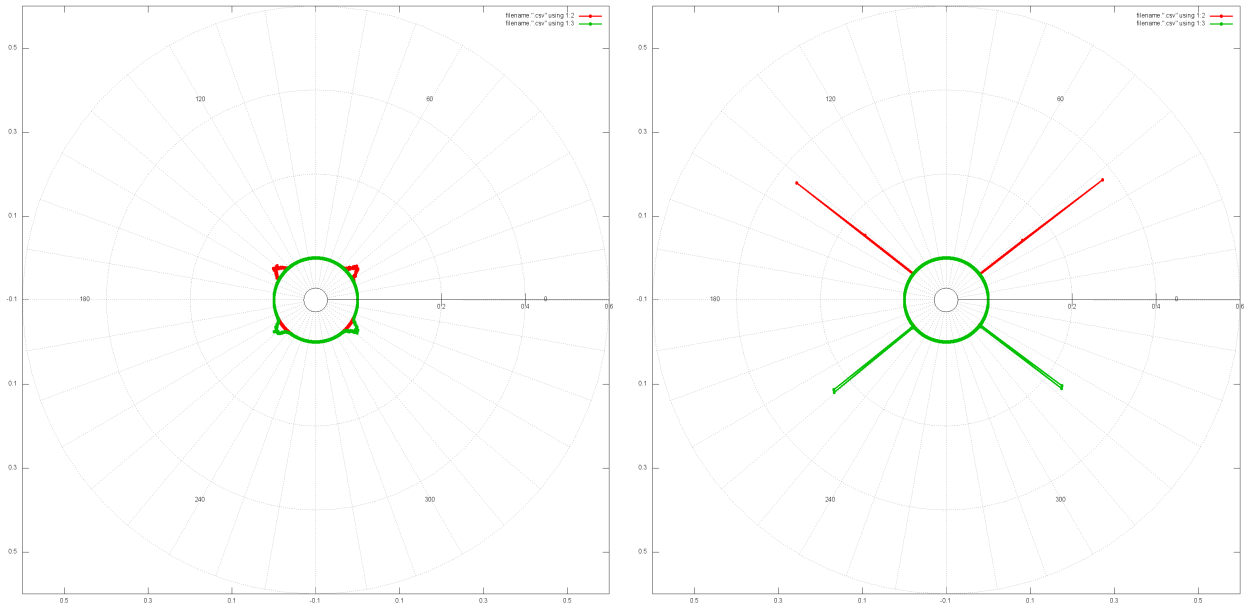
Figure 33: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 34: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 35: Angle Distribution

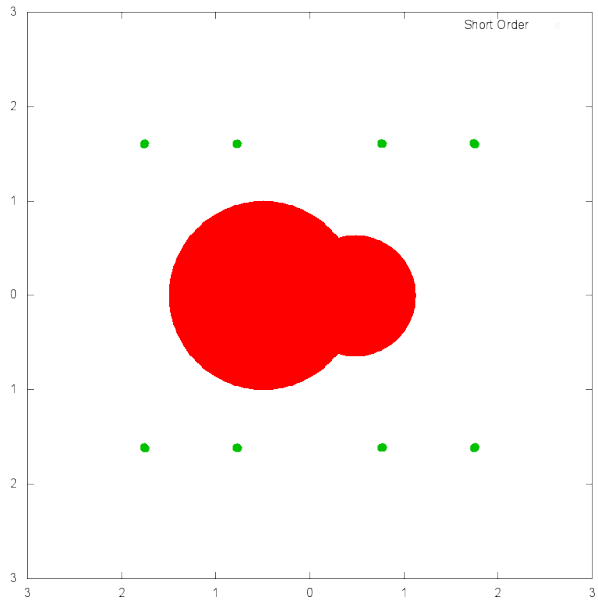


Figure 36: Short Range Ordering

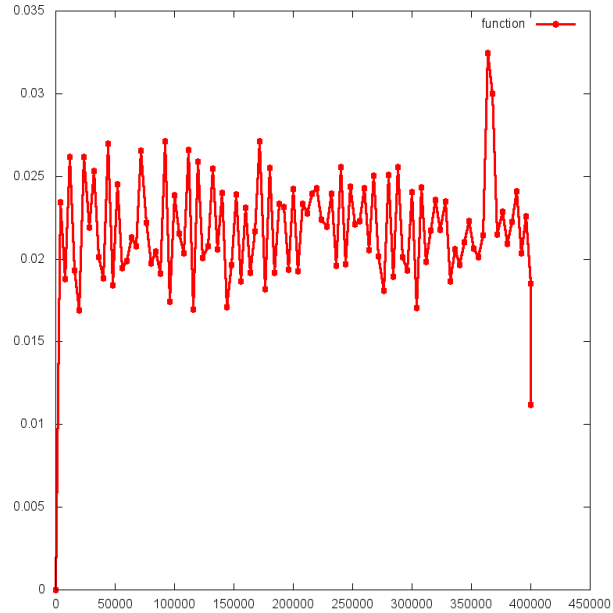


Figure 37: Mean Squared Displacement

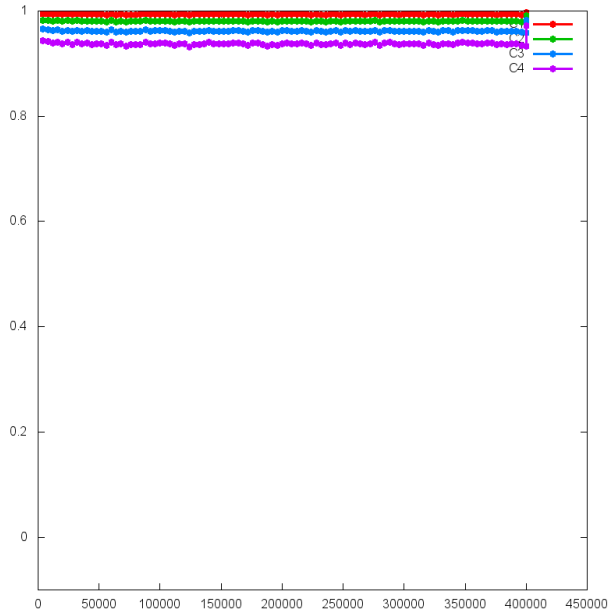


Figure 38: Rotational Relaxation

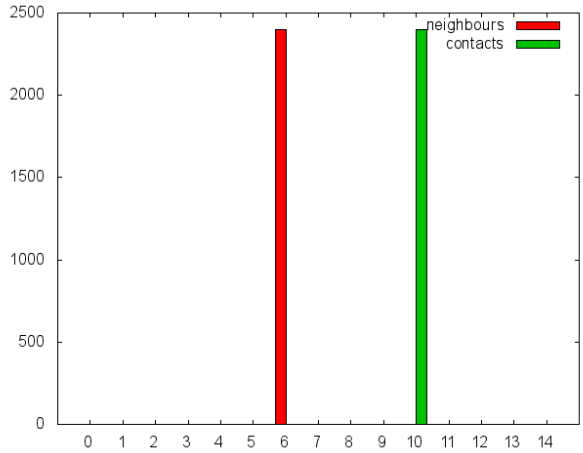


Figure 39: Contact Number

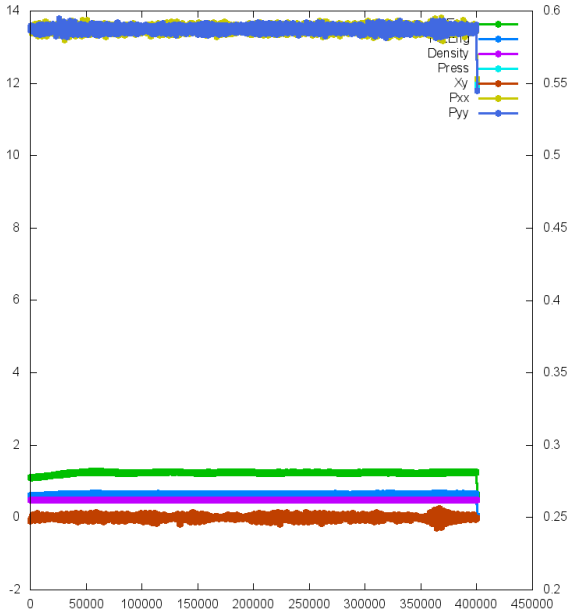
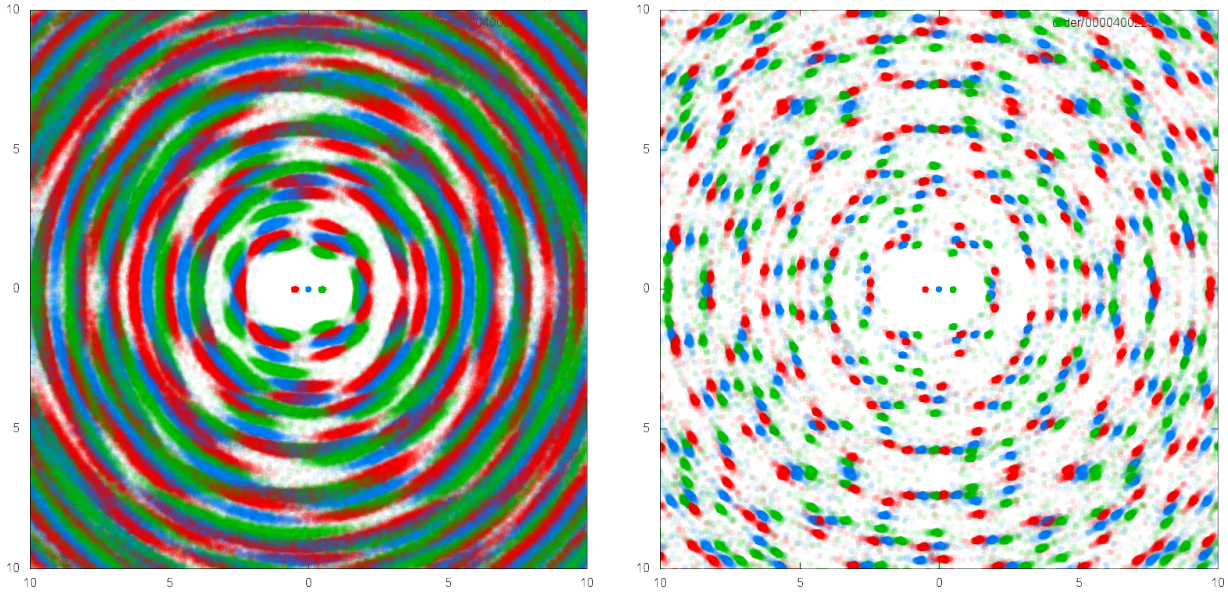


Figure 40: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0
Diffusion Constant	0.0014
Average bond fraction	0.9417
Local Order	0.3724
Global Order	0.5293
Circle Order	0.0000
contacts	1.0000
neighbours	0.6000
pairing	0.1667
Density	0.4799
Total Energy	0.6438
Packing Fraction	0.9795

Table 5: Data

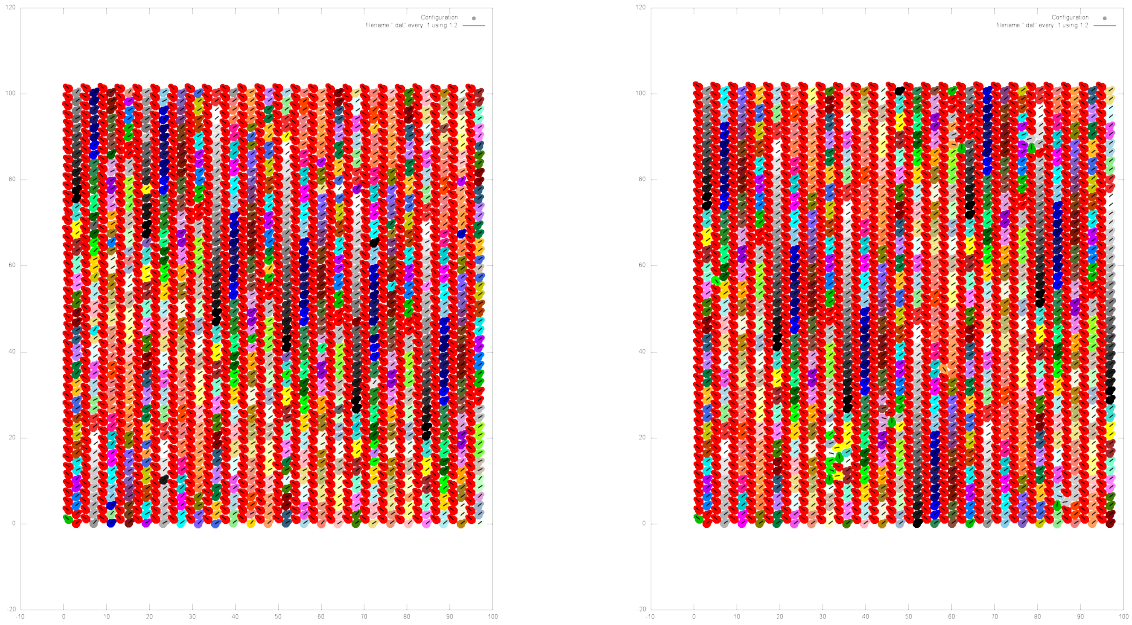
6 Snowman: Temp$= 0.8$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

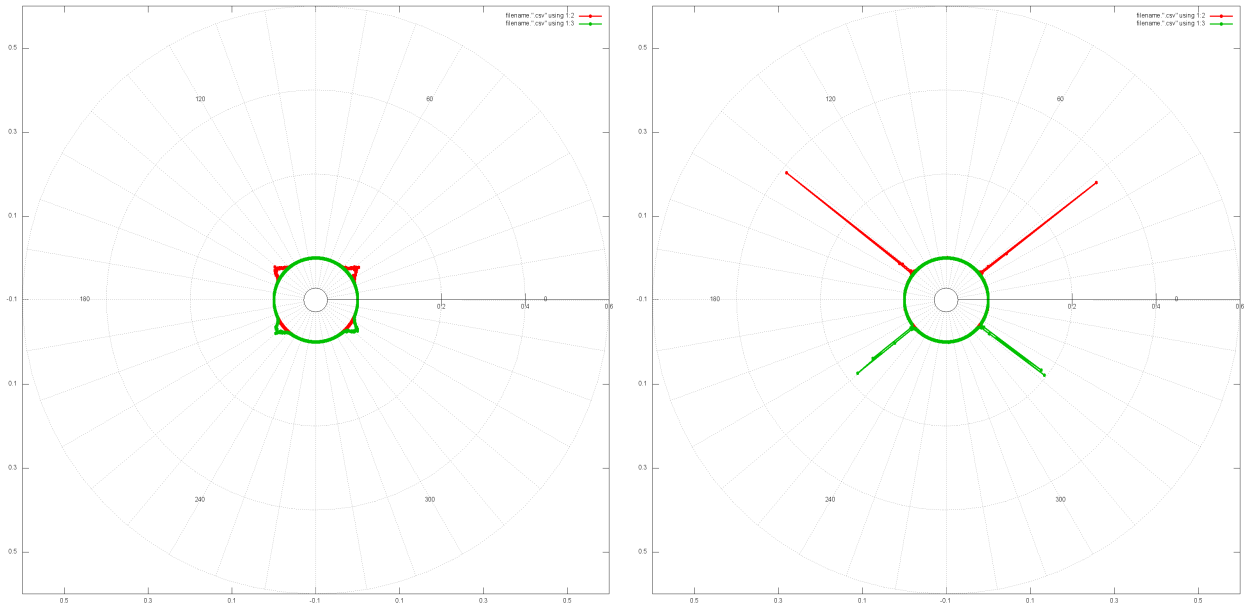
Figure 41: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 42: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 43: Angle Distribution

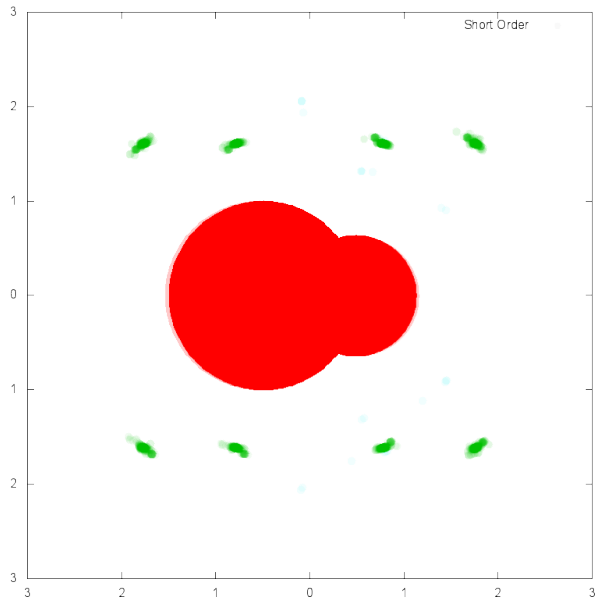


Figure 44: Short Range Ordering

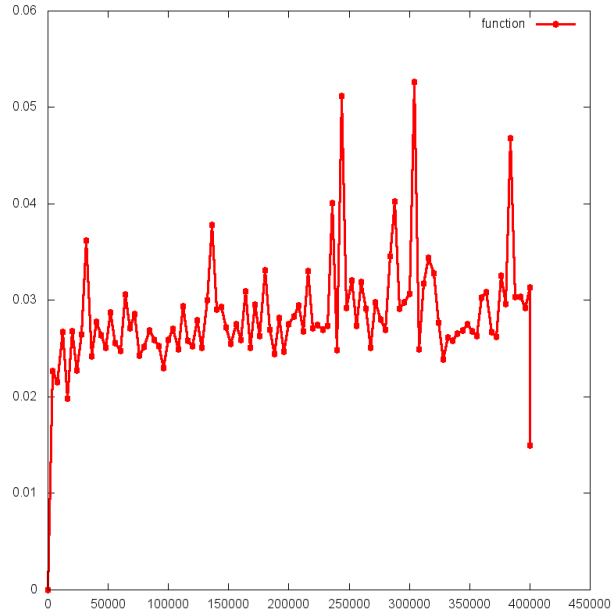


Figure 45: Mean Squared Displacement

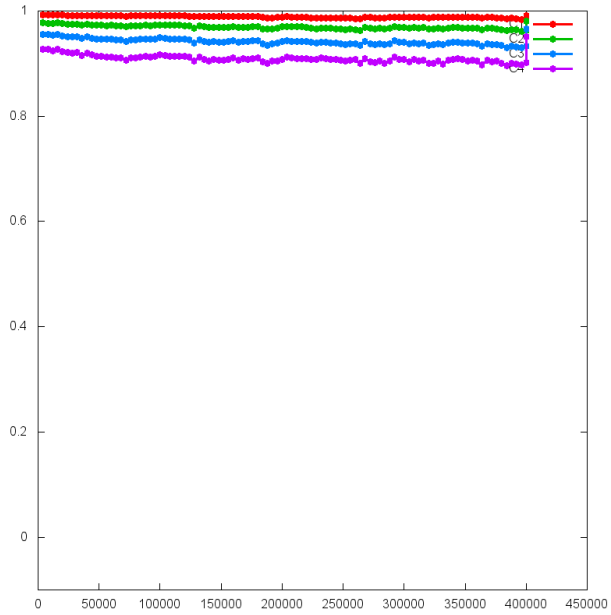


Figure 46: Rotational Relaxation

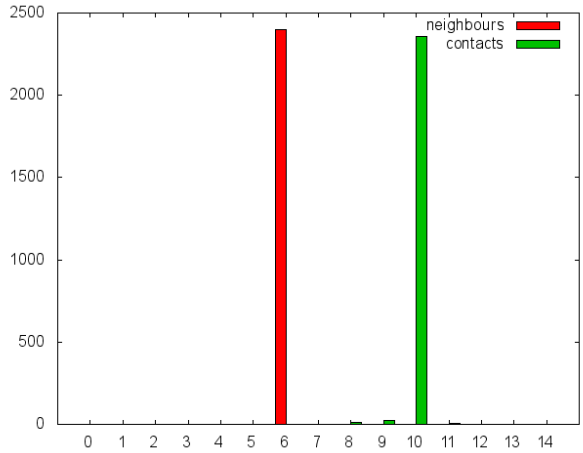


Figure 47: Contact Number

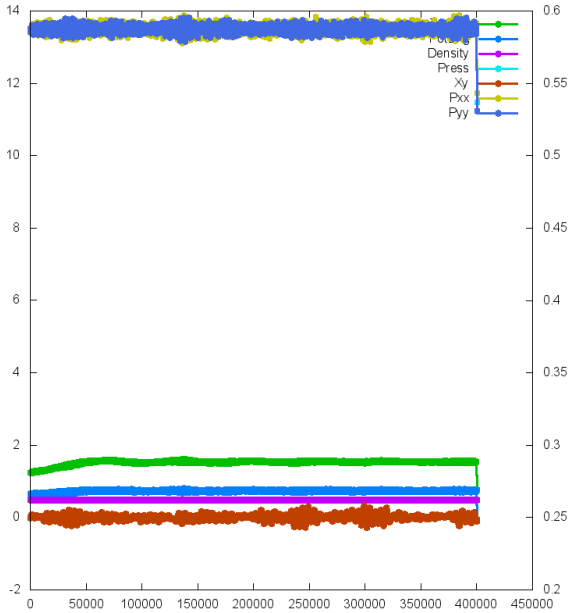
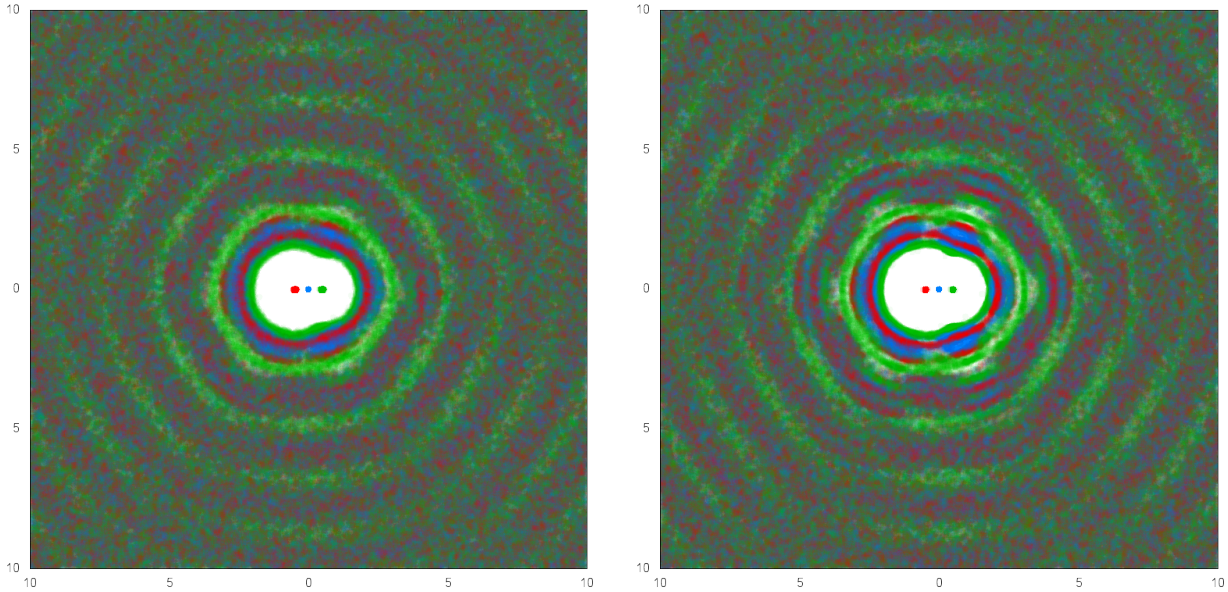


Figure 48: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0
Diffusion Constant	0.0019
Average bond fraction	0.9436
Local Order	0.3734
Global Order	0.5282
Circle Order	0.0031
contacts	0.9000
neighbours	0.6000
pairing	0.1664
Density	0.4778
Total Energy	0.7627
Packing Fraction	0.9753

Table 6: Data

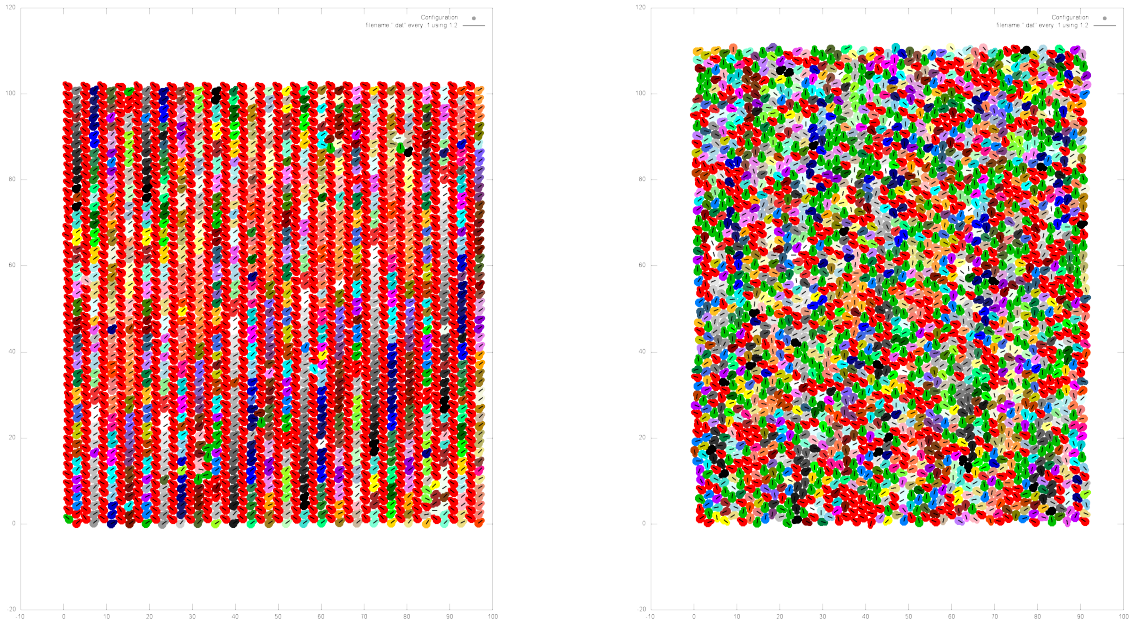
7 Snowman: Temp$= 1.0$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

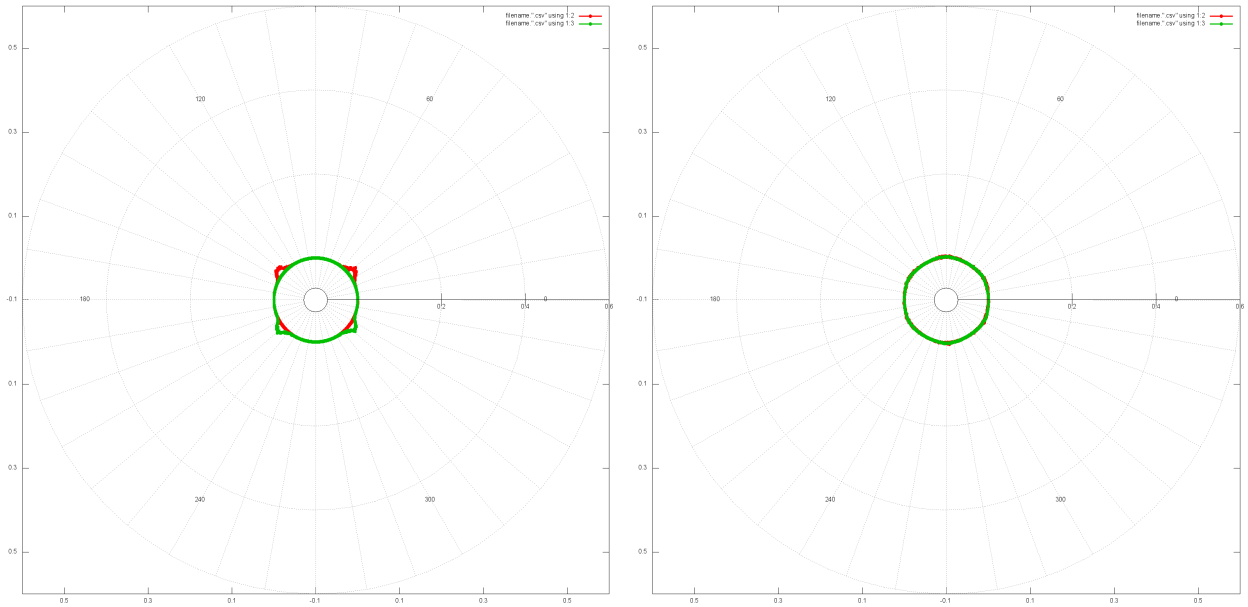
Figure 49: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 50: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 51: Angle Distribution

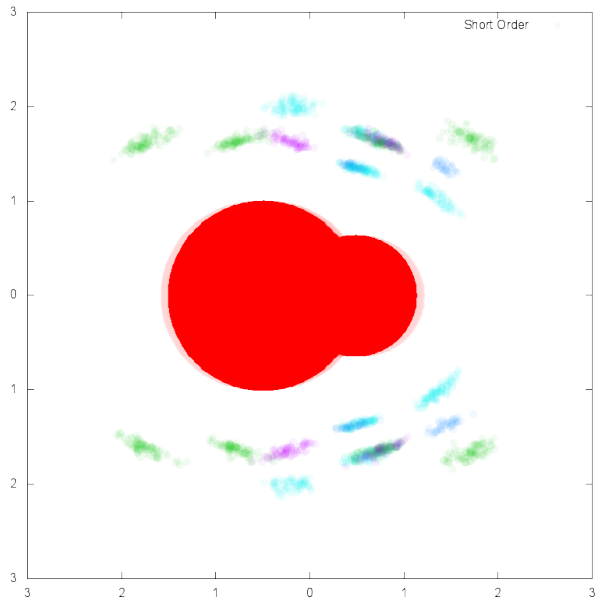


Figure 52: Short Range Ordering

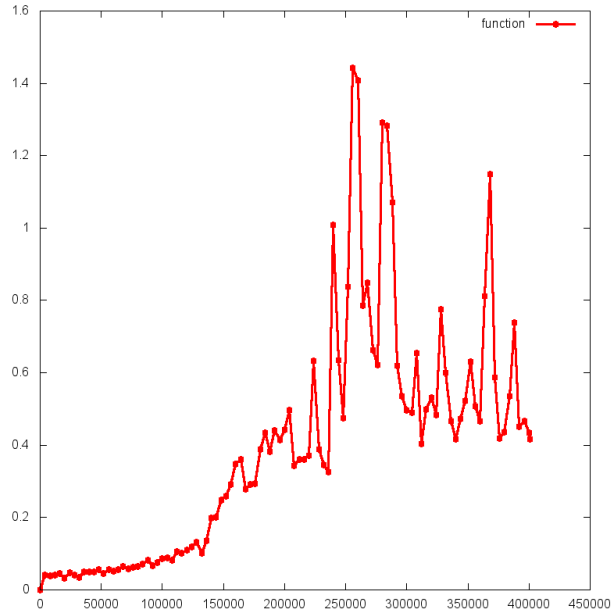


Figure 53: Mean Squared Displacement

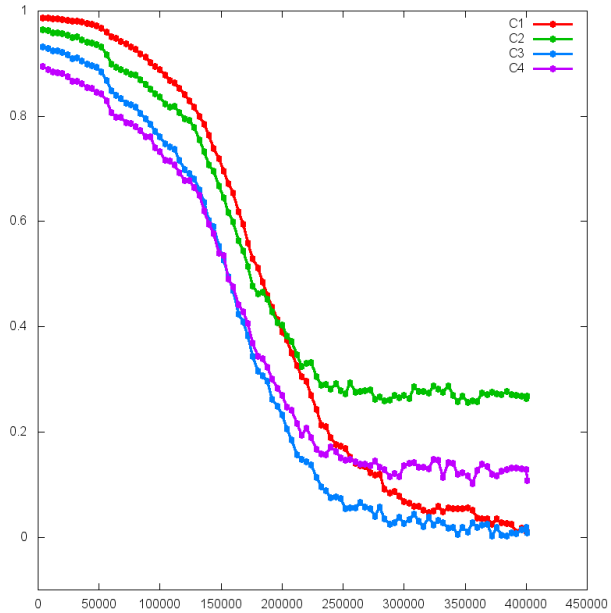


Figure 54: Rotational Relaxation

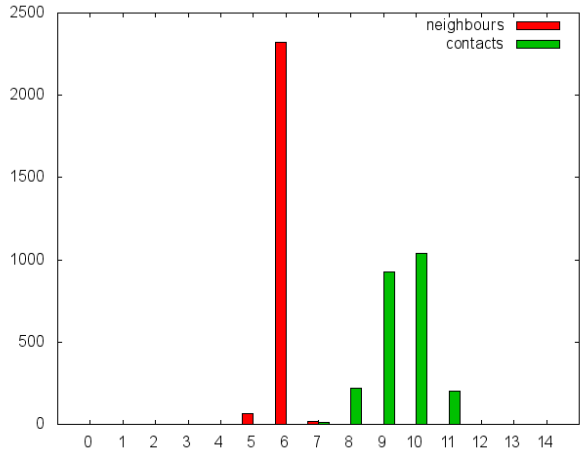


Figure 55: Contact Number

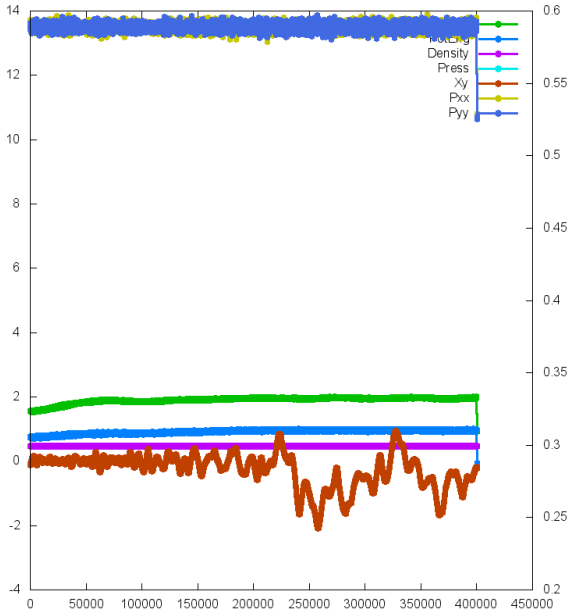
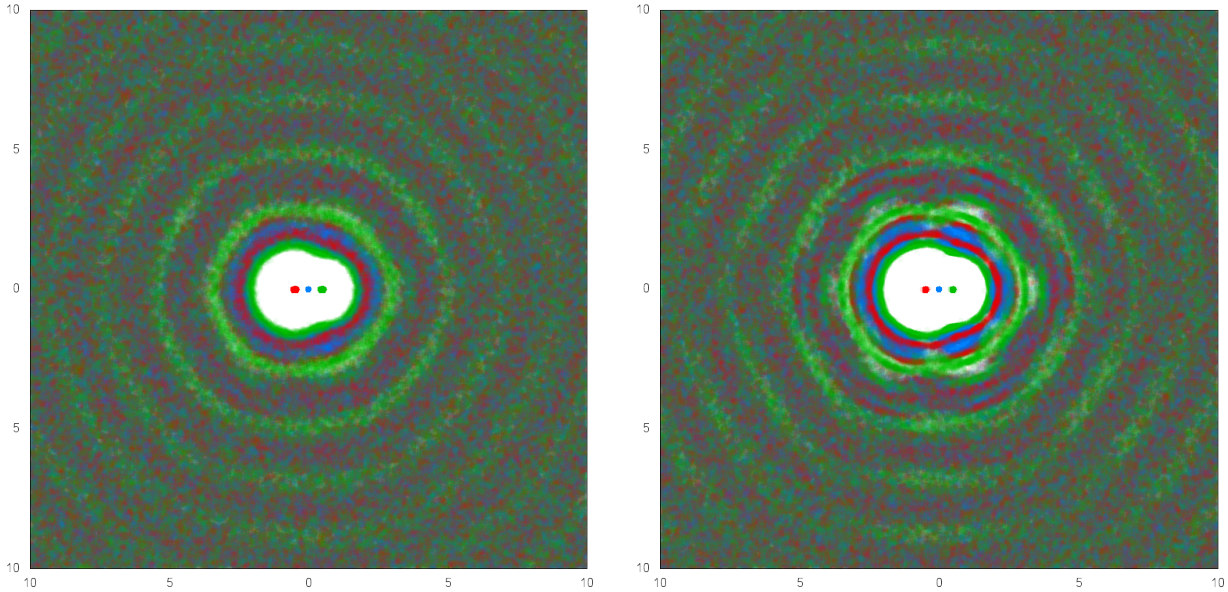


Figure 56: Properties

C1 Relaxation	0
C2 Relaxation	0
C3 Relaxation	0
C4 Relaxation	0.659 209
Diffusion Constant	0.0521
Average bond fraction	0.9411
Local Order	0.4938
Global Order	0.5001
Circle Order	0.1906
contacts	0.9000
neighbours	0.5000
pairing	0.1588
Density	0.4733
Total Energy	0.9418
Packing Fraction	0.9661

Table 7: Data

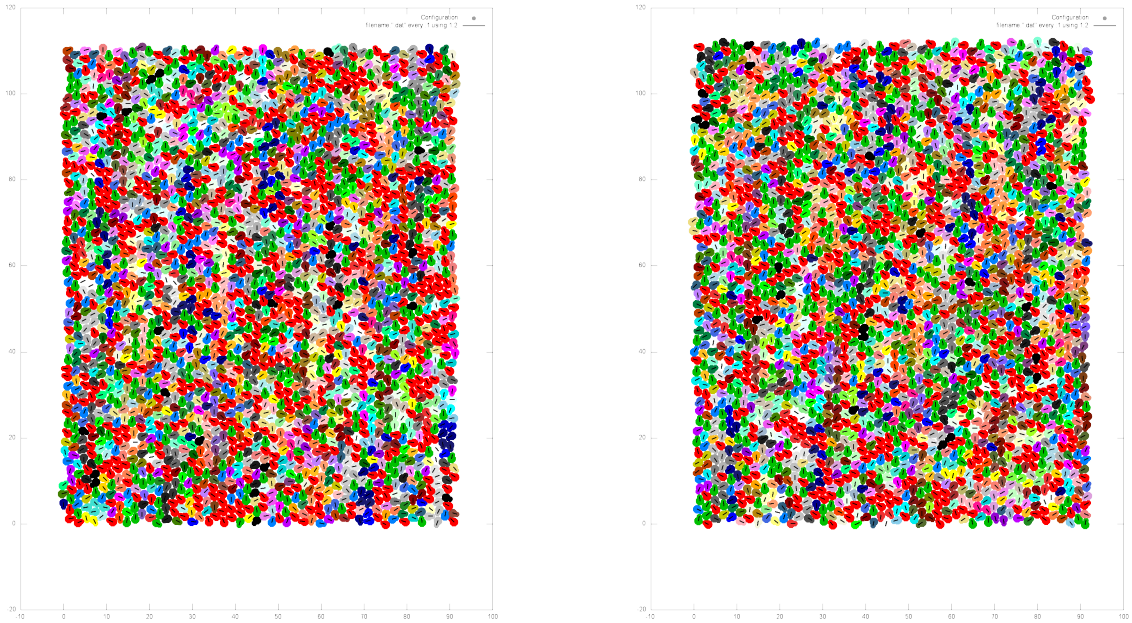
8 Snowman: Temp$= 1.5$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

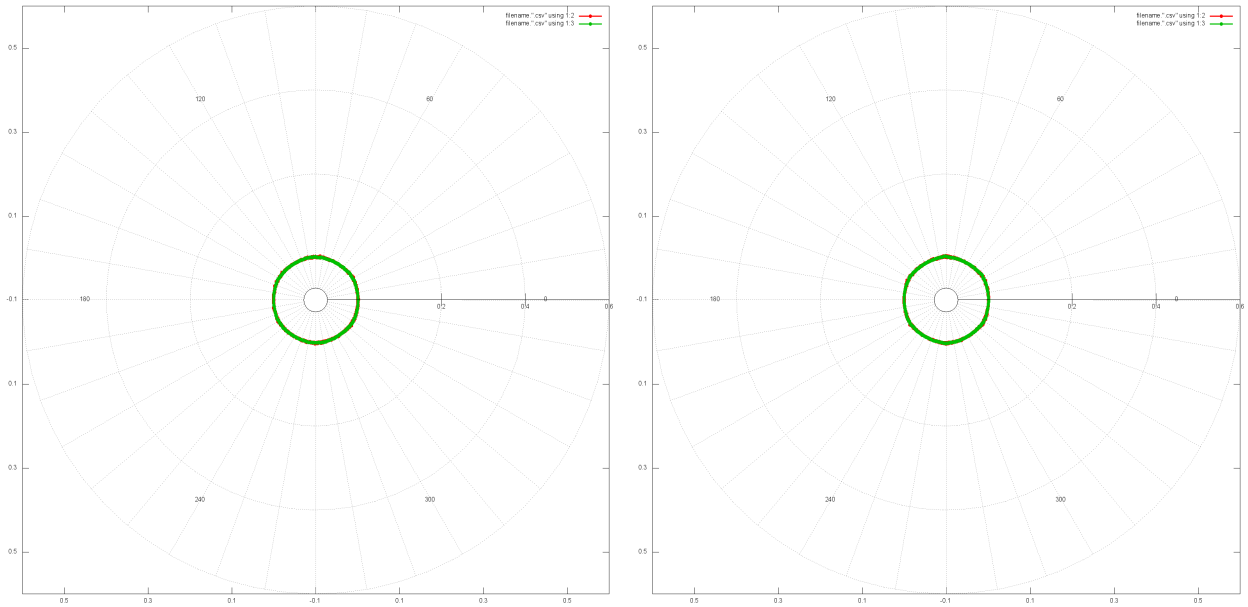
Figure 57: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 58: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 59: Angle Distribution

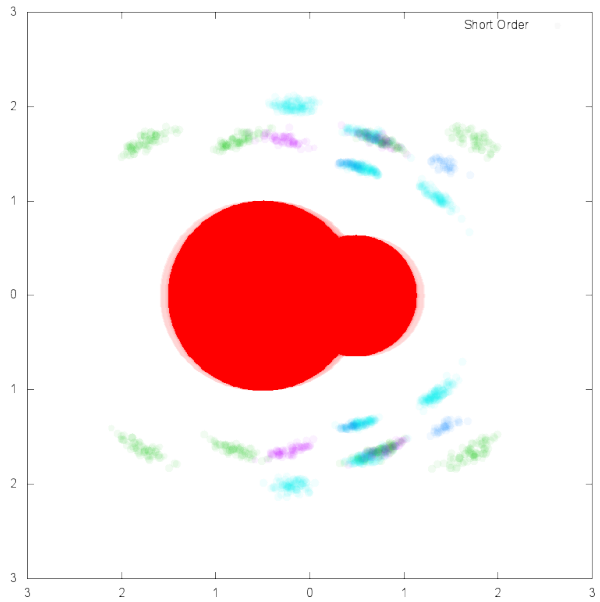


Figure 60: Short Range Ordering

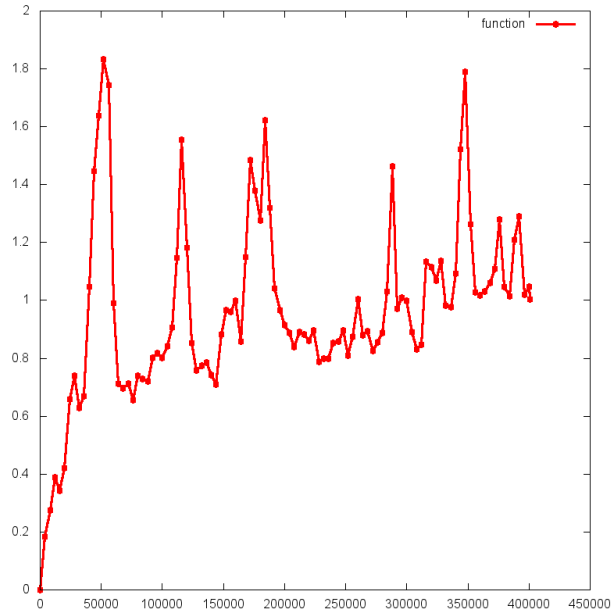


Figure 61: Mean Squared Displacement

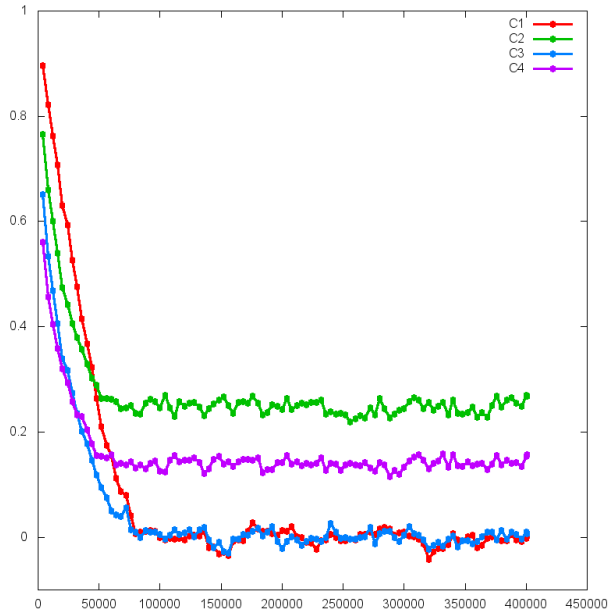


Figure 62: Rotational Relaxation

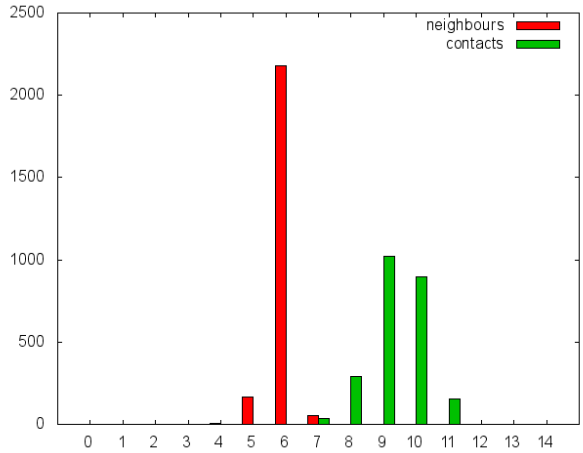


Figure 63: Contact Number

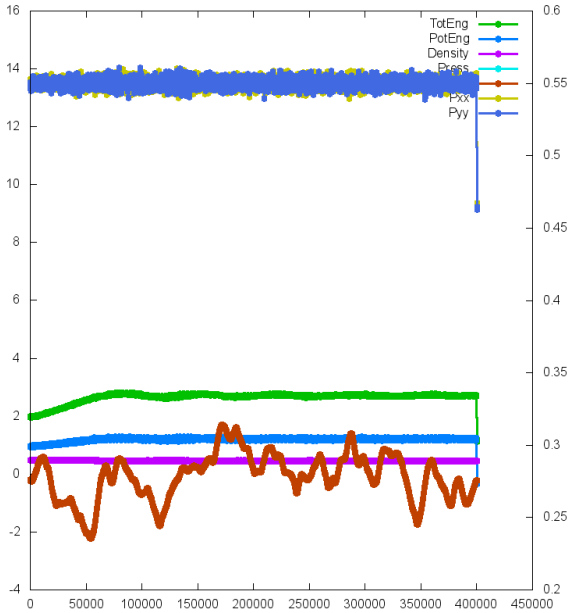
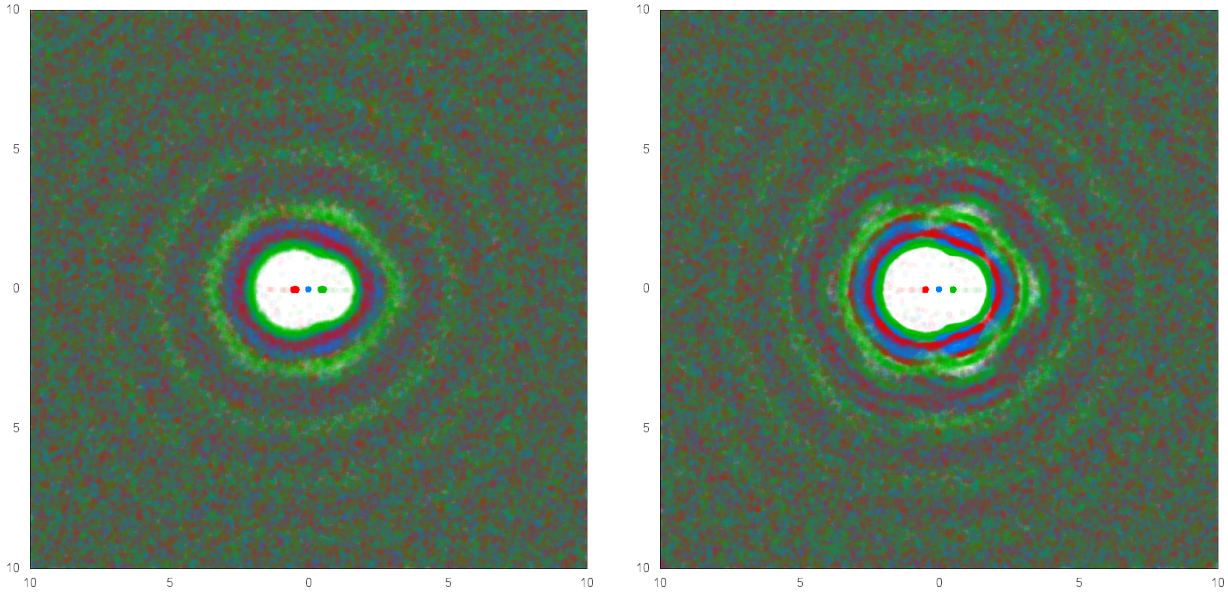


Figure 64: Properties

C1 Relaxation	0.249 687
C2 Relaxation	0.169 787
C3 Relaxation	0.209 737
C4 Relaxation	0.1598
Diffusion Constant	0.1252
Average bond fraction	0.9463
Local Order	0.5033
Global Order	0.5008
Circle Order	0.1881
contacts	0.9000
neighbours	0.5000
pairing	0.1572
Density	0.4657
Total Energy	1.1372
Packing Fraction	0.9507

Table 8: Data

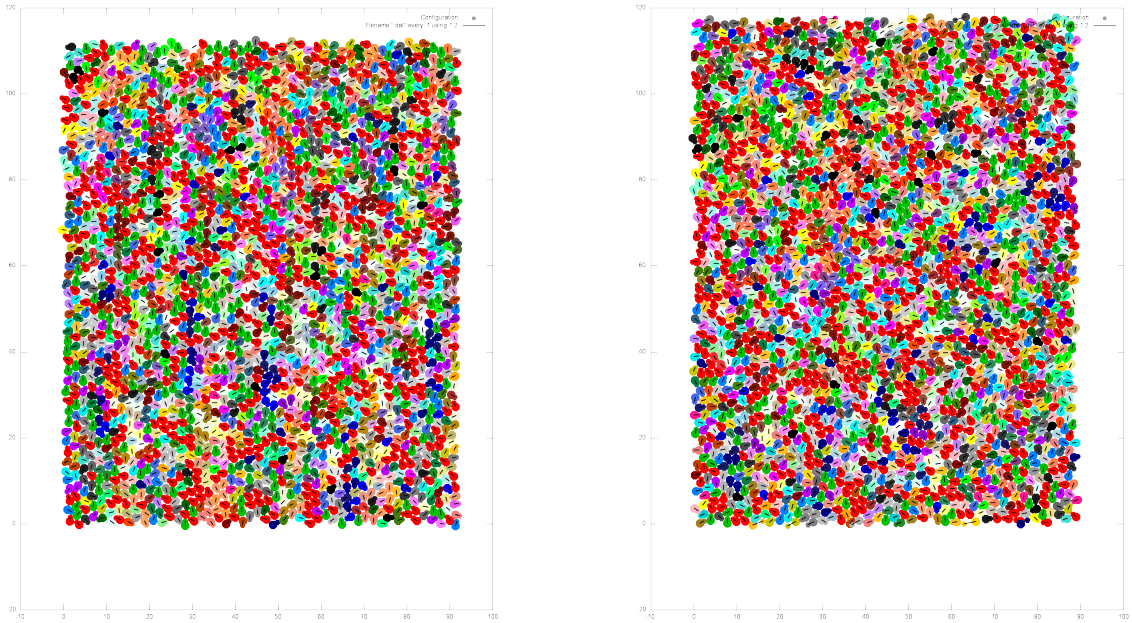
9 Snowman: Temp$= 2.0$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

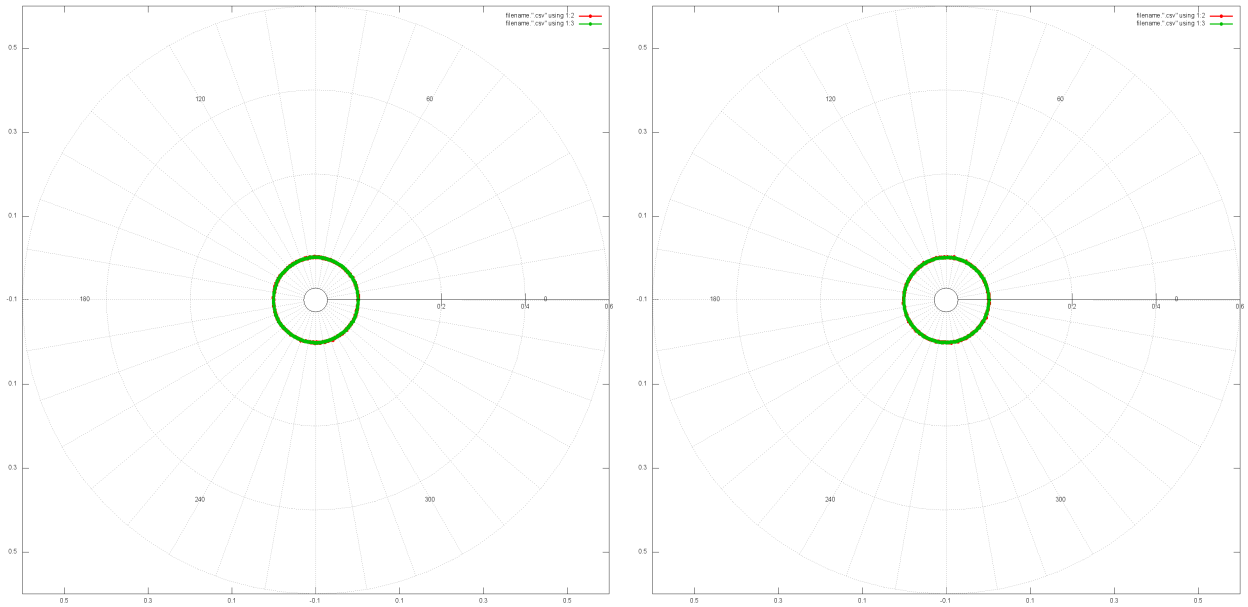
Figure 65: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 66: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 67: Angle Distribution

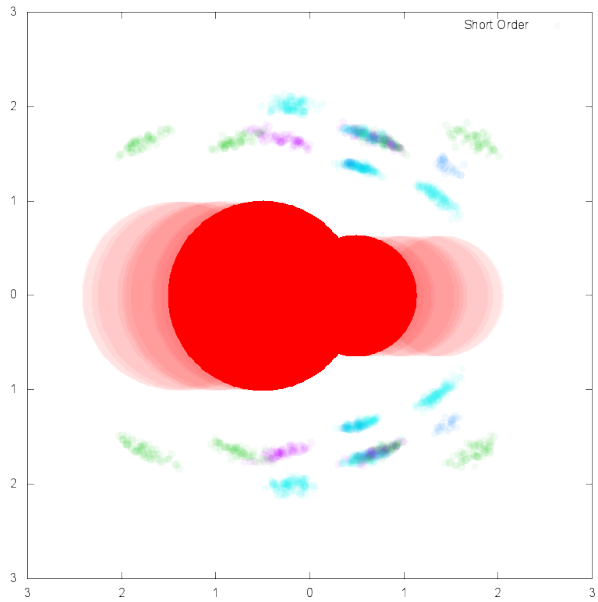


Figure 68: Short Range Ordering

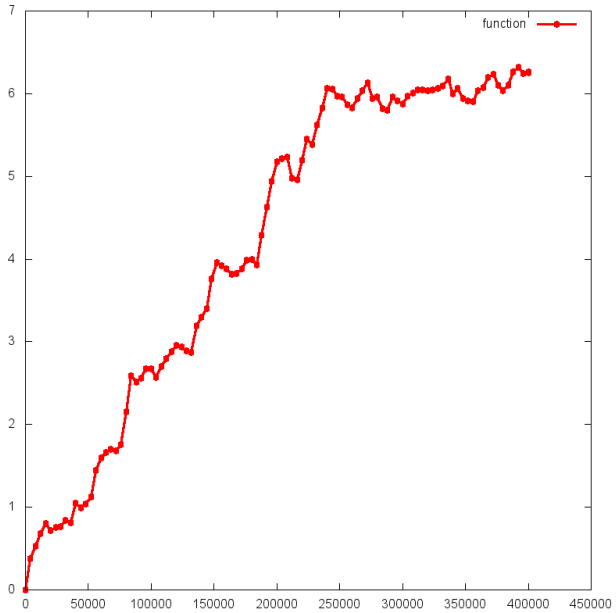


Figure 69: Mean Squared Displacement

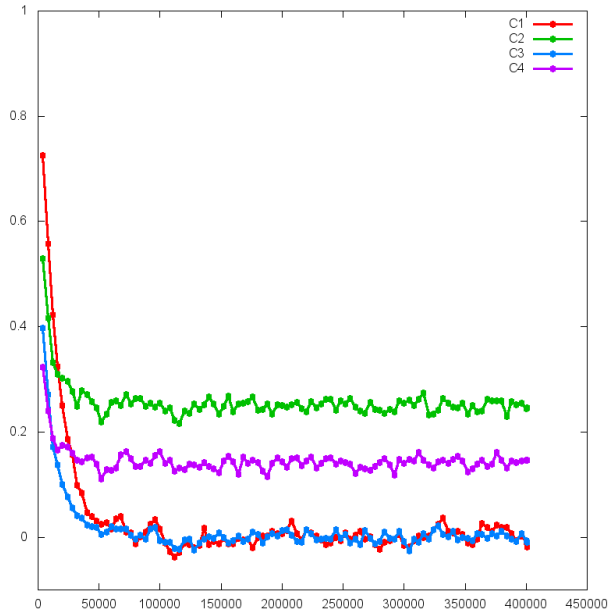


Figure 70: Rotational Relaxation

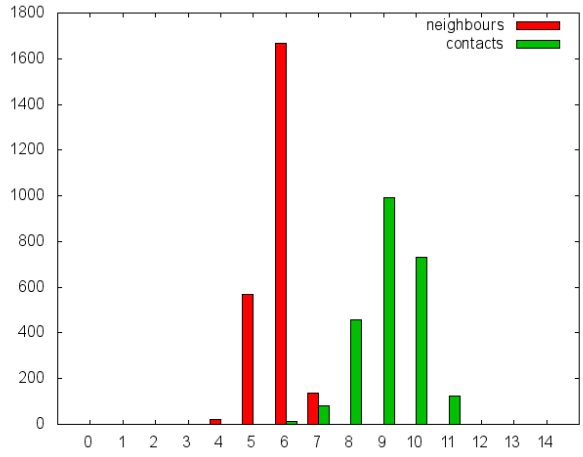


Figure 71: Contact Number

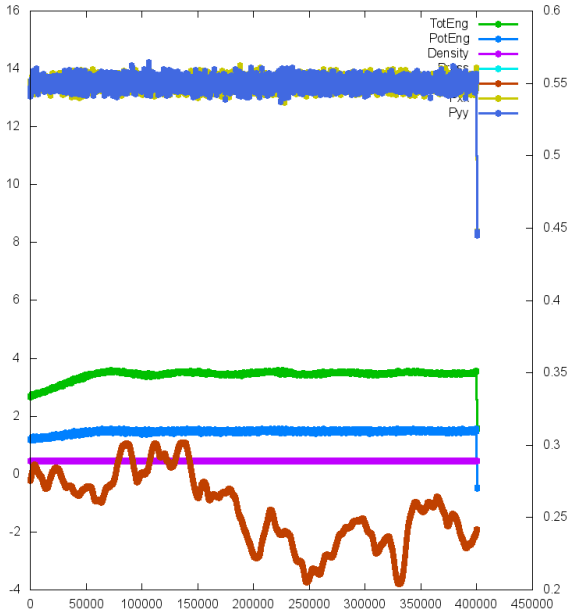
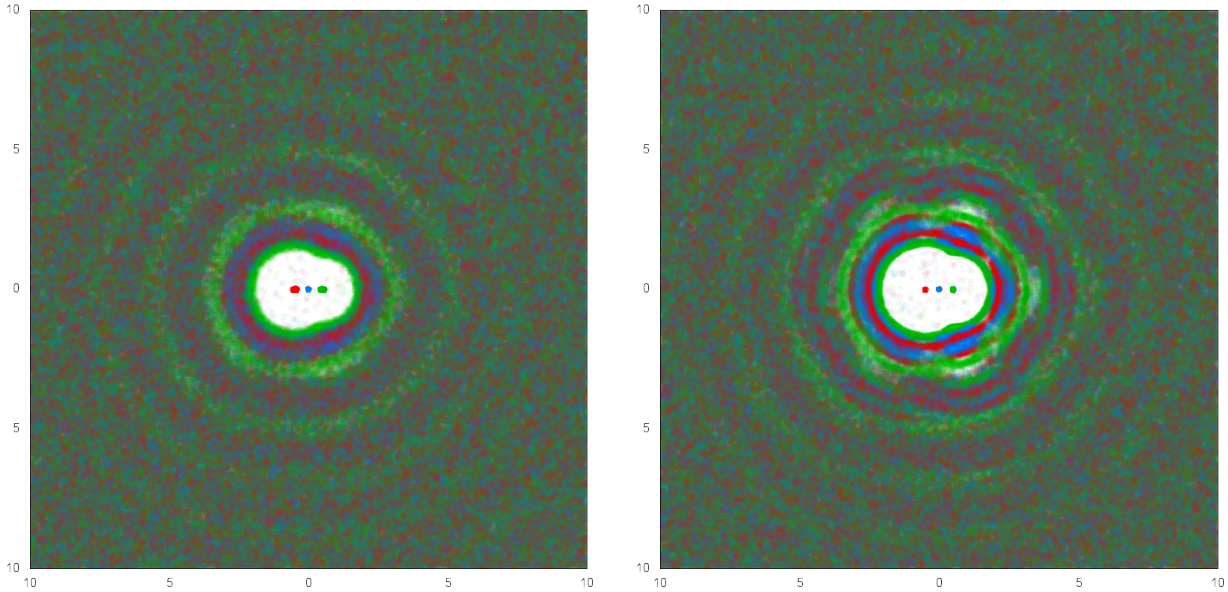


Figure 72: Properties

C1 Relaxation	0.199 748
C2 Relaxation	0.079 899 3
C3 Relaxation	0.199 748
C4 Relaxation	0.119 849
Diffusion Constant	0.7822
Average bond fraction	0.9479
Local Order	0.5187
Global Order	0.5000
Circle Order	0.1517
contacts	0.9000
neighbours	0.5000
pairing	0.1575
Density	0.4592
Total Energy	1.5637
Packing Fraction	0.9372

Table 9: Data

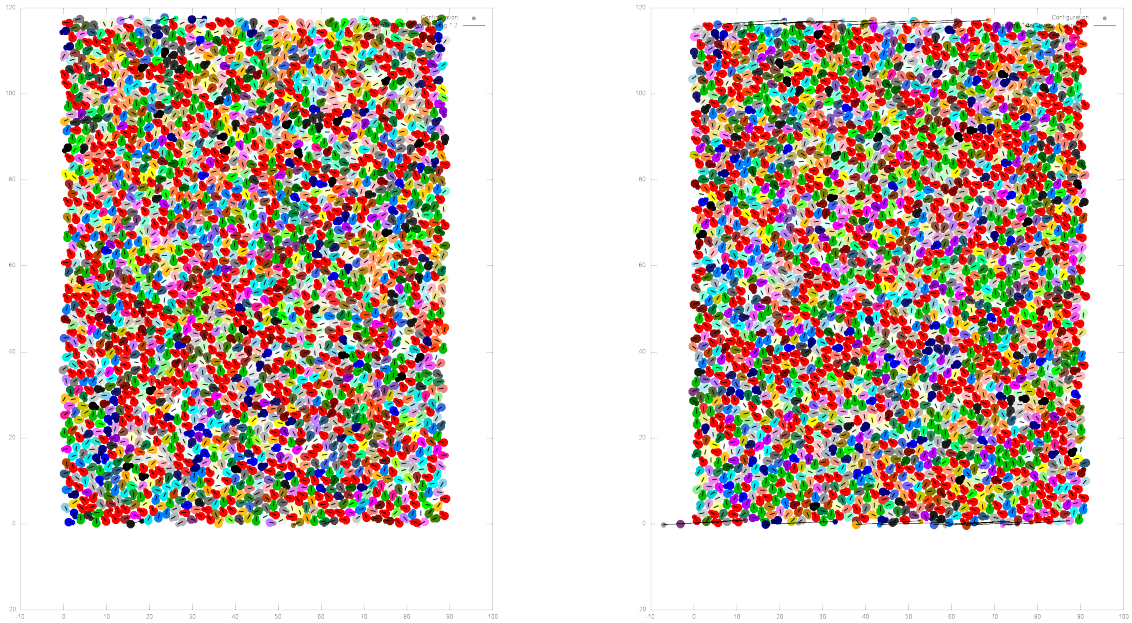
10 Snowman: Temp$= 2.5$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

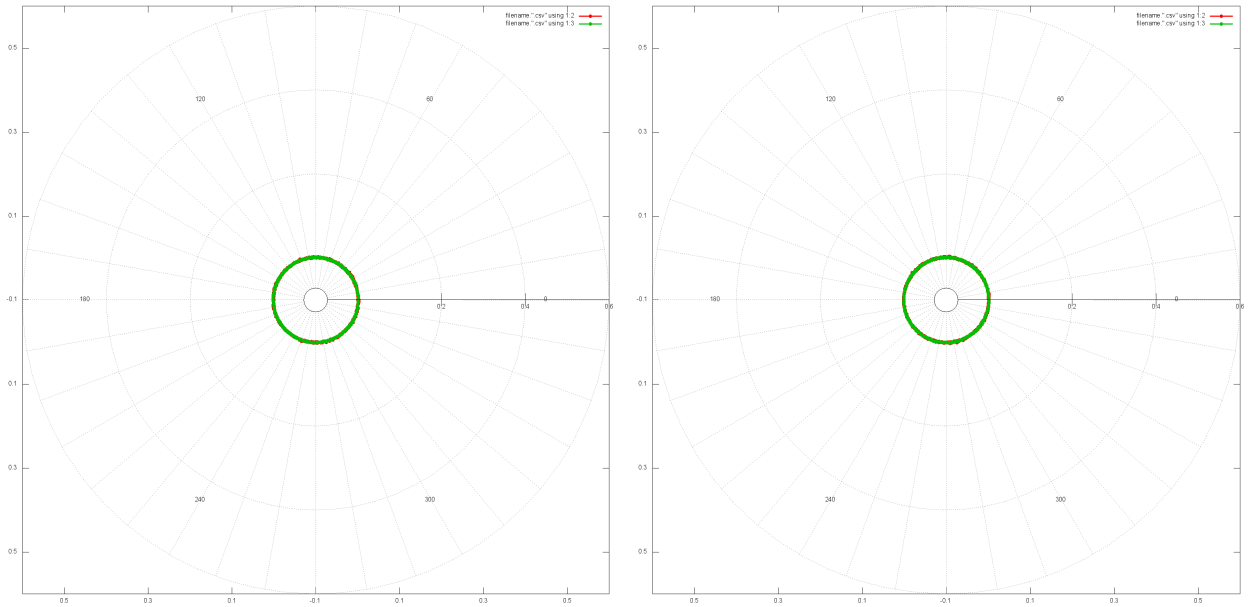
Figure 73: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 74: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 75: Angle Distribution

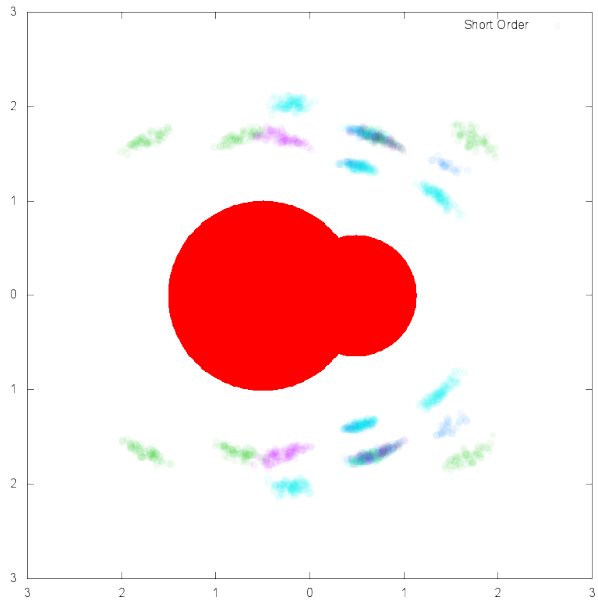


Figure 76: Short Range Ordering

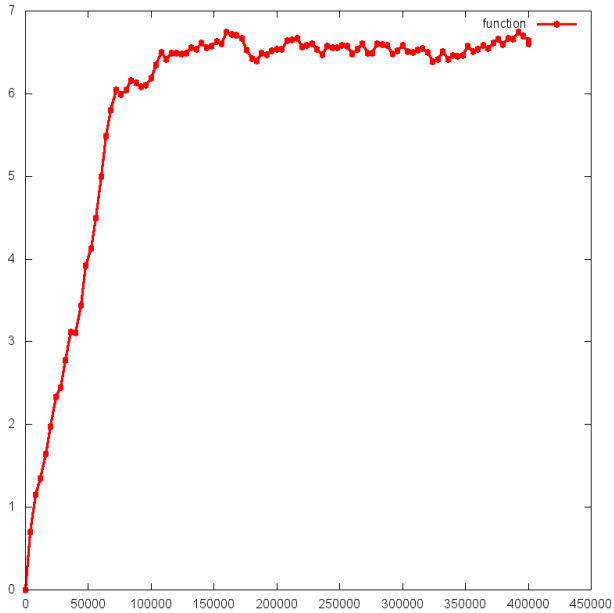


Figure 77: Mean Squared Displacement

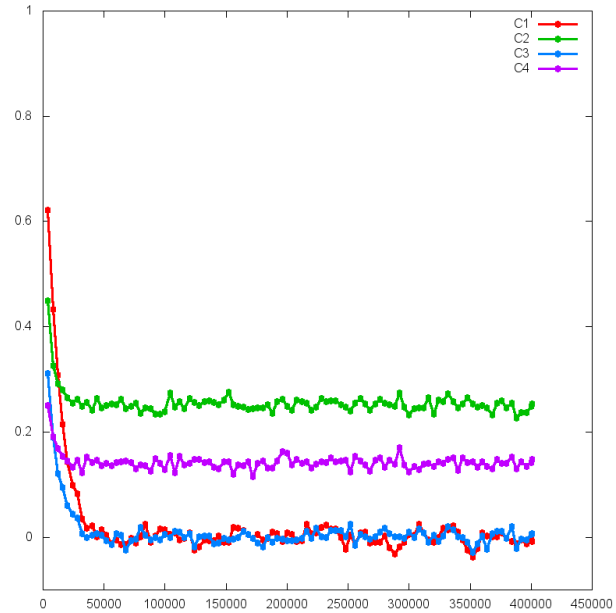


Figure 78: Rotational Relaxation

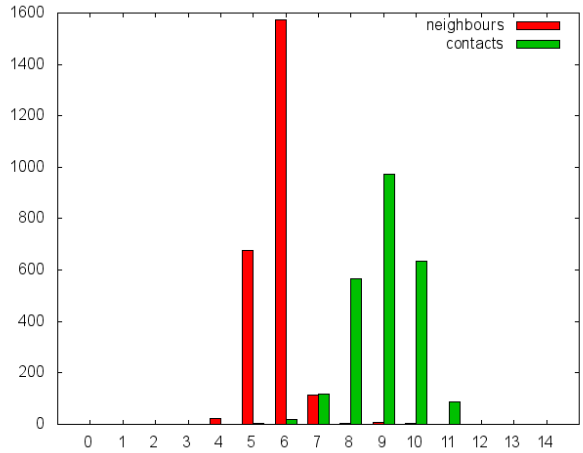


Figure 79: Contact Number

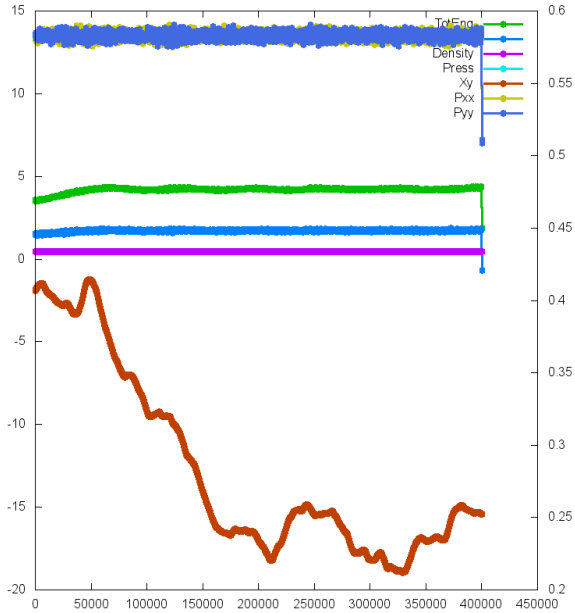
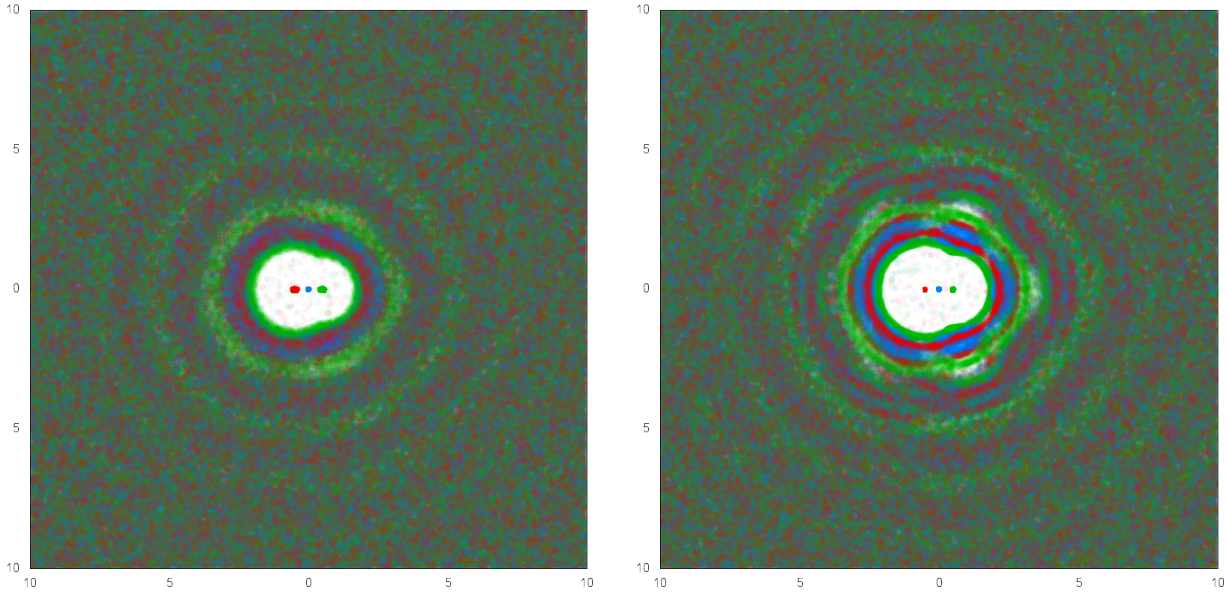


Figure 80: Properties

C1 Relaxation	0.139 824
C2 Relaxation	0.079 899 3
C3 Relaxation	0.089 886 7
C4 Relaxation	0.059 924 5
Diffusion Constant	0.8245
Average bond fraction	0.9529
Local Order	0.5104
Global Order	0.5002
Circle Order	0.1421
contacts	0.8000
neighbours	0.5000
pairing	0.1557
Density	0.4517
Total Energy	1.8485
Packing Fraction	0.9220

Table 10: Data

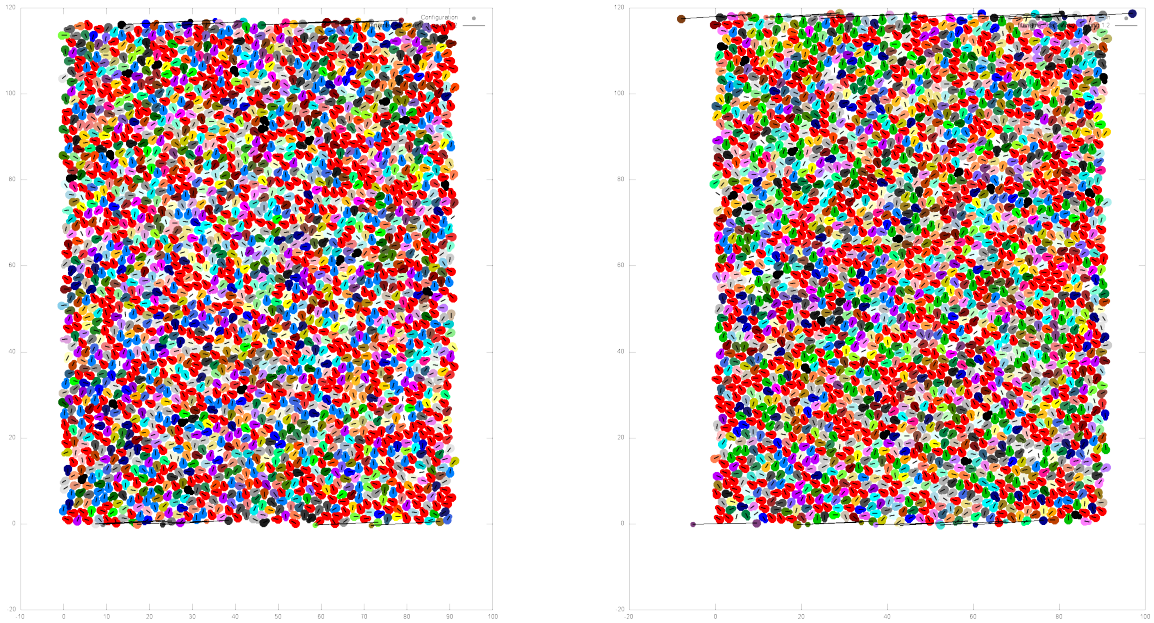
11 Snowman: Temp$= 3.0$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

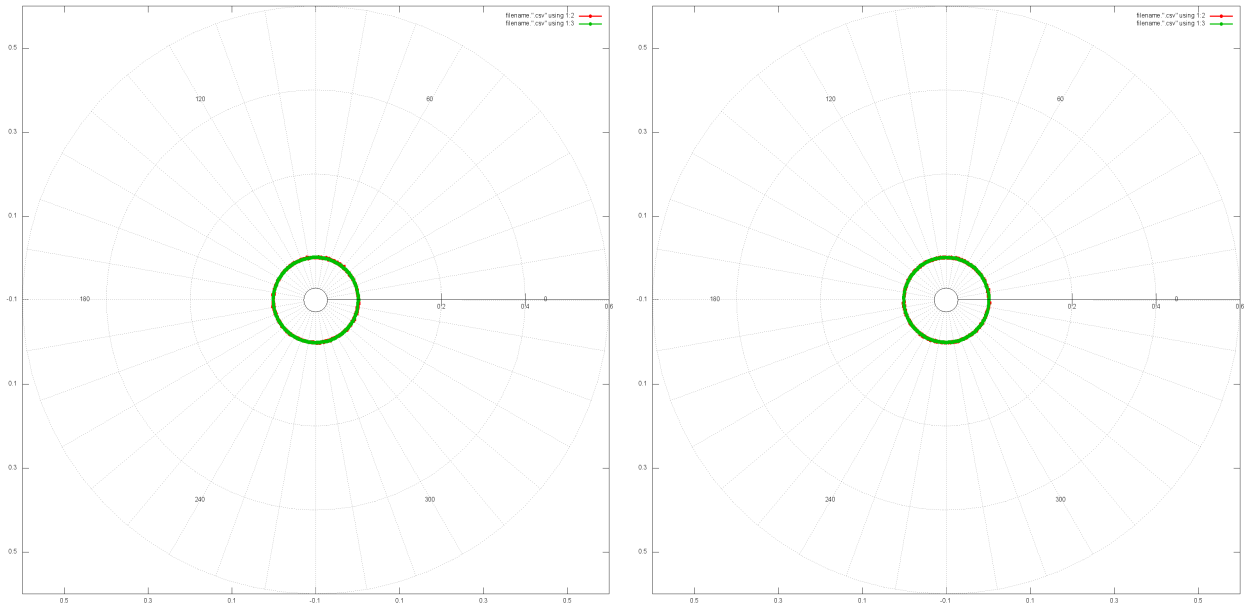
Figure 81: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 82: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 83: Angle Distribution

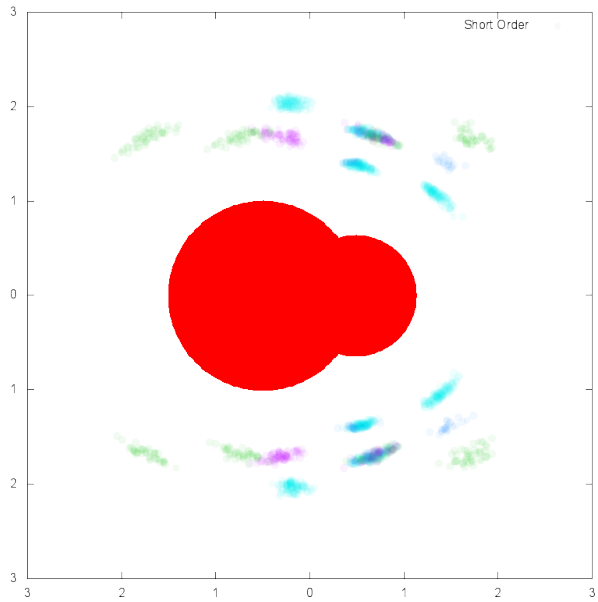


Figure 84: Short Range Ordering

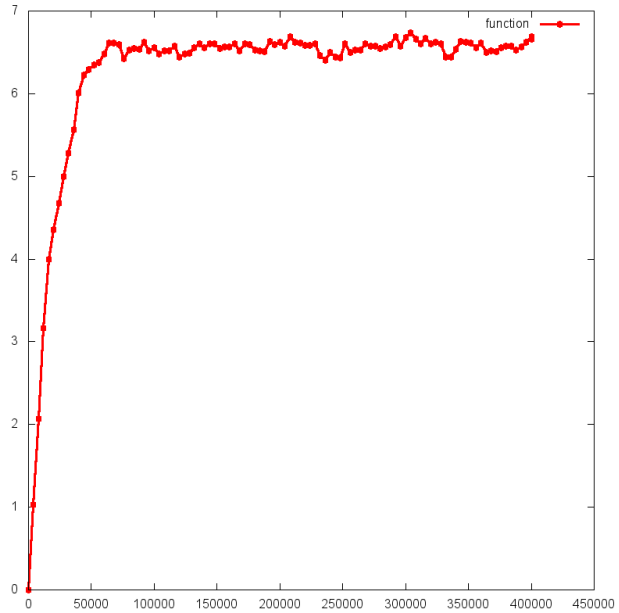


Figure 85: Mean Squared Displacement

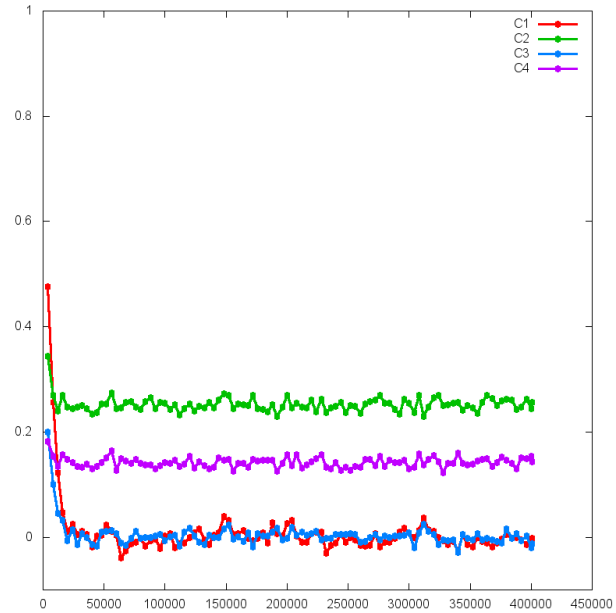


Figure 86: Rotational Relaxation

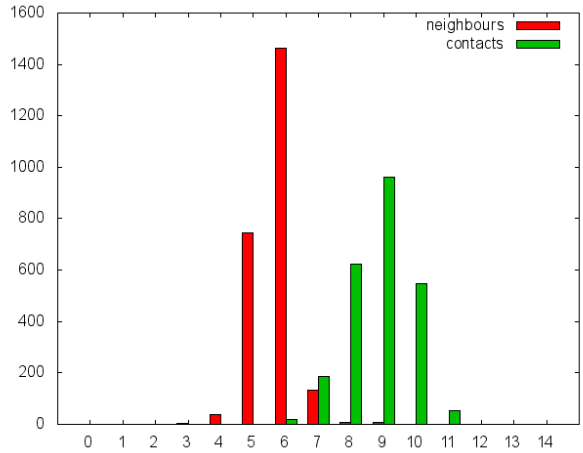


Figure 87: Contact Number

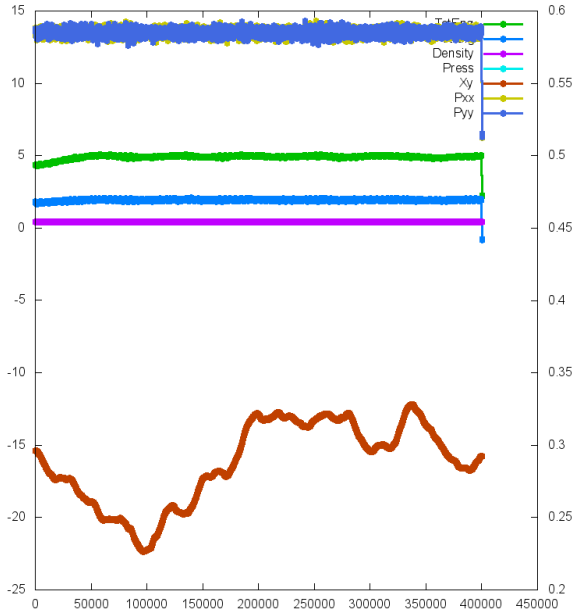
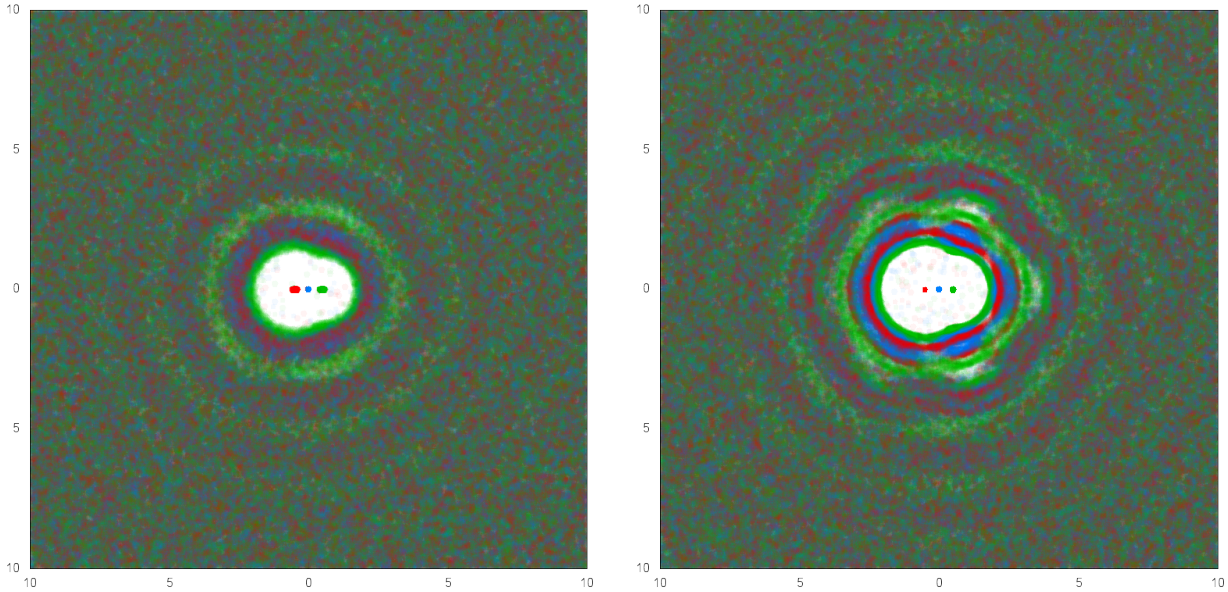


Figure 88: Properties

C1 Relaxation	0.099 873 9
C2 Relaxation	0.029 962 2
C3 Relaxation	0.049 937
C4 Relaxation	0.029 962 2
Diffusion Constant	0.8313
Average bond fraction	0.9562
Local Order	0.5163
Global Order	0.5008
Circle Order	0.1283
contacts	0.8000
neighbours	0.5000
pairing	0.1544
Density	0.4462
Total Energy	2.1872
Packing Fraction	0.9108

Table 11: Data

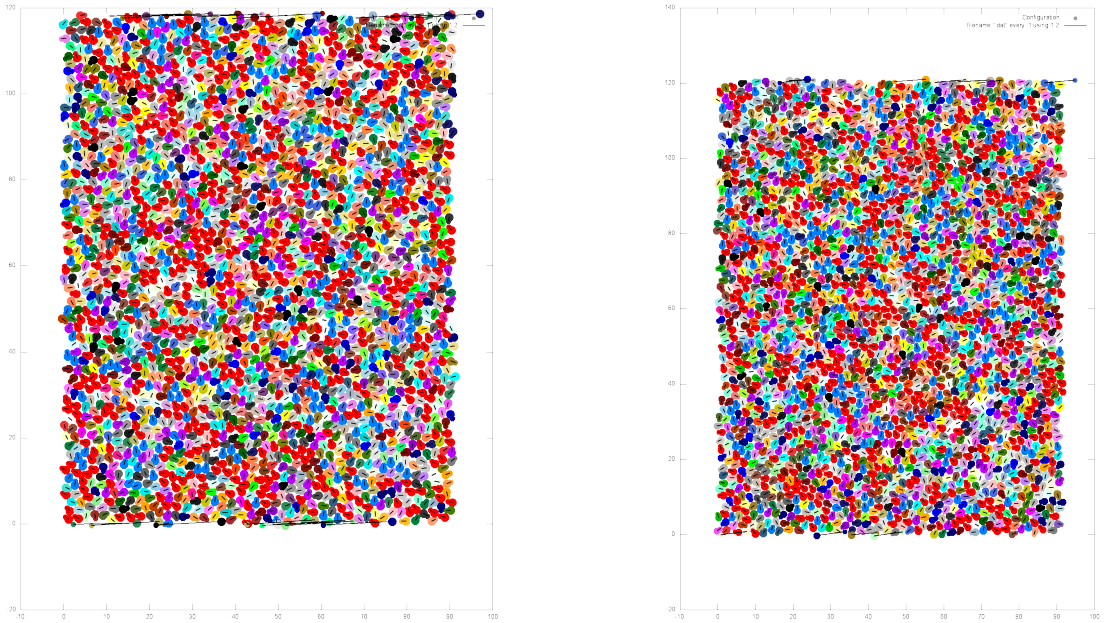
12 Snowman: Temp$= 4.0$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

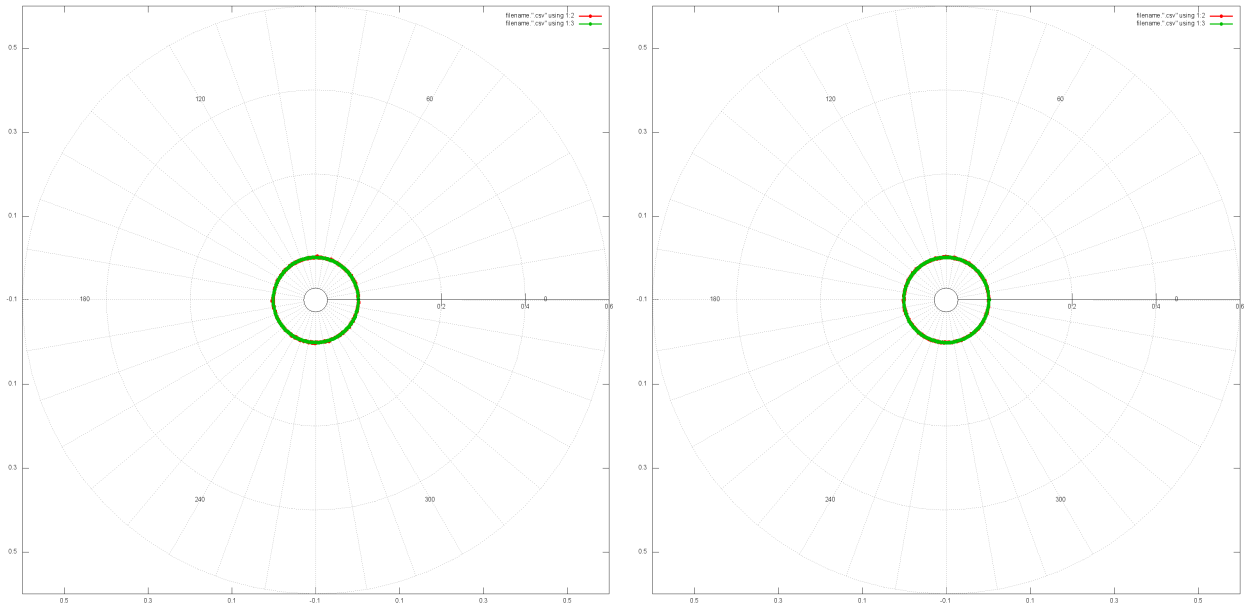
Figure 89: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 90: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 91: Angle Distribution

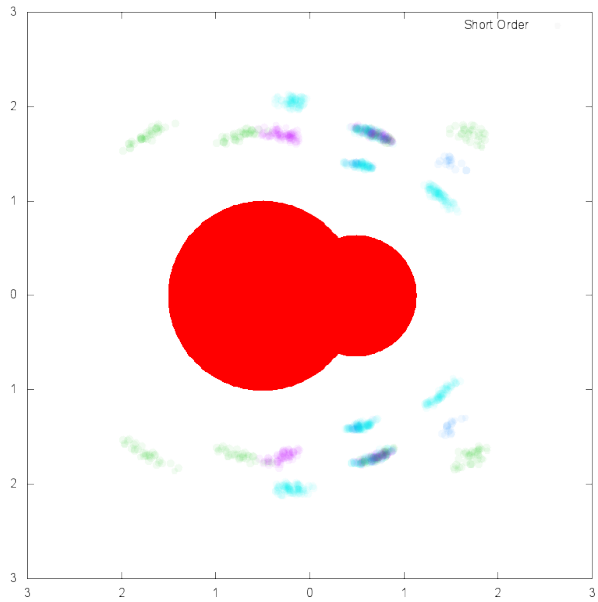


Figure 92: Short Range Ordering

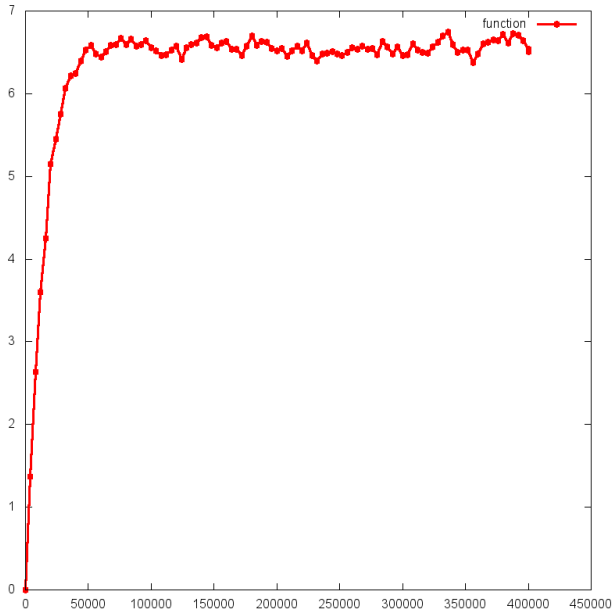


Figure 93: Mean Squared Displacement

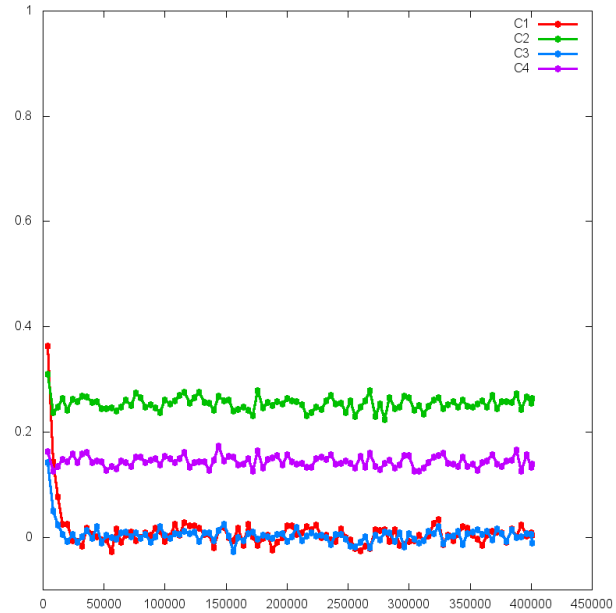


Figure 94: Rotational Relaxation

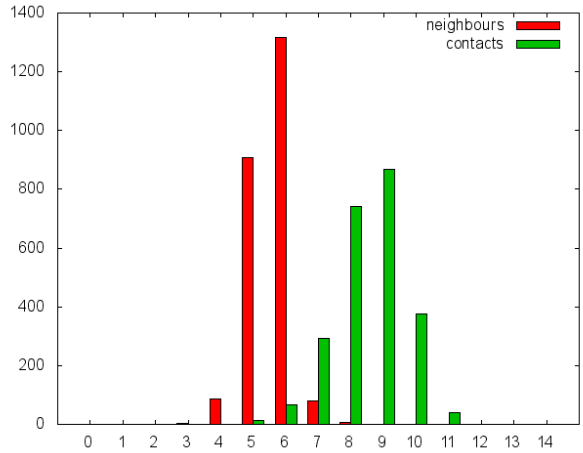


Figure 95: Contact Number

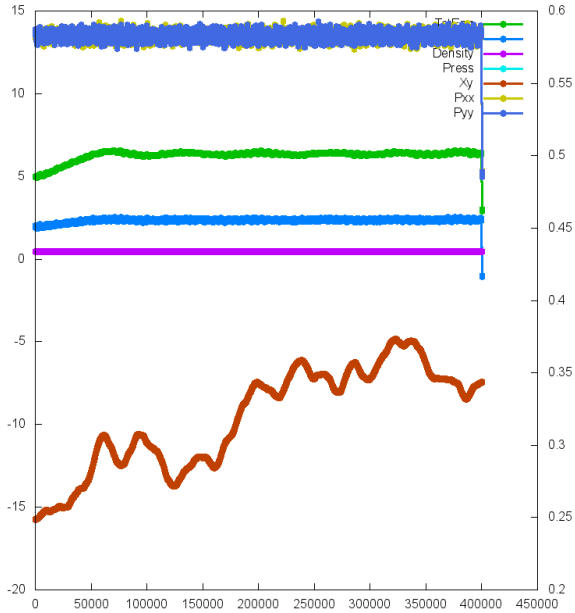
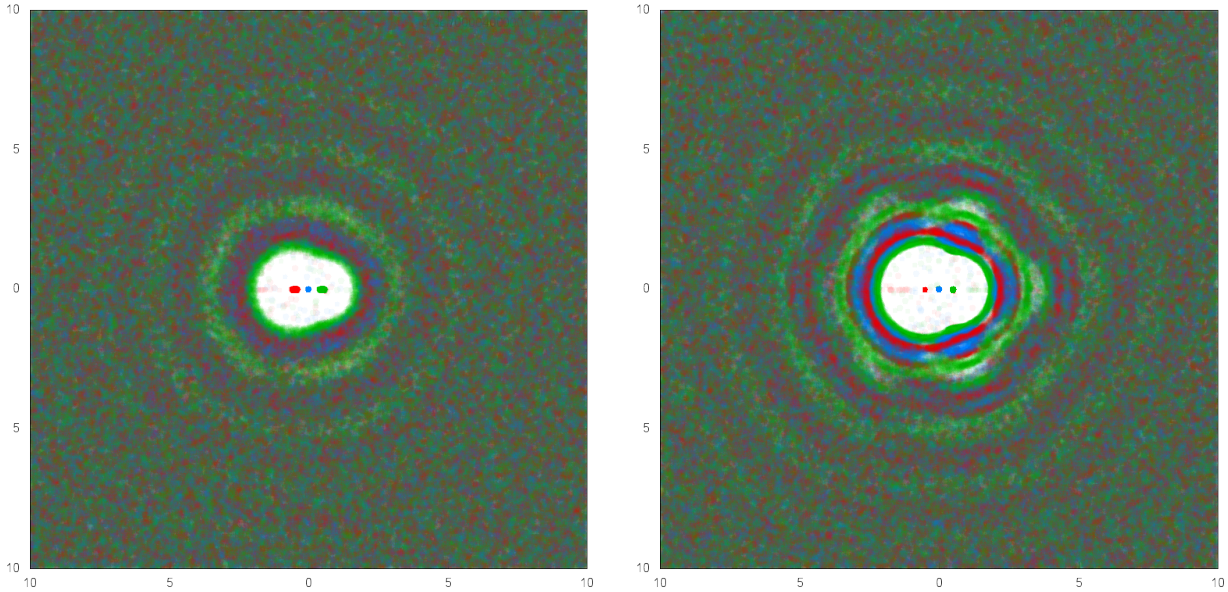


Figure 96: Properties

C1 Relaxation	0.059 930 3
C2 Relaxation	0.019 976 8
C3 Relaxation	0.049 941 9
C4 Relaxation	0.019 976 8
Diffusion Constant	0.8125
Average bond fraction	0.9625
Local Order	0.5219
Global Order	0.5004
Circle Order	0.1131
contacts	0.8000
neighbours	0.5000
pairing	0.1526
Density	0.4349
Total Energy	2.9310
Packing Fraction	0.8878

Table 12: Data

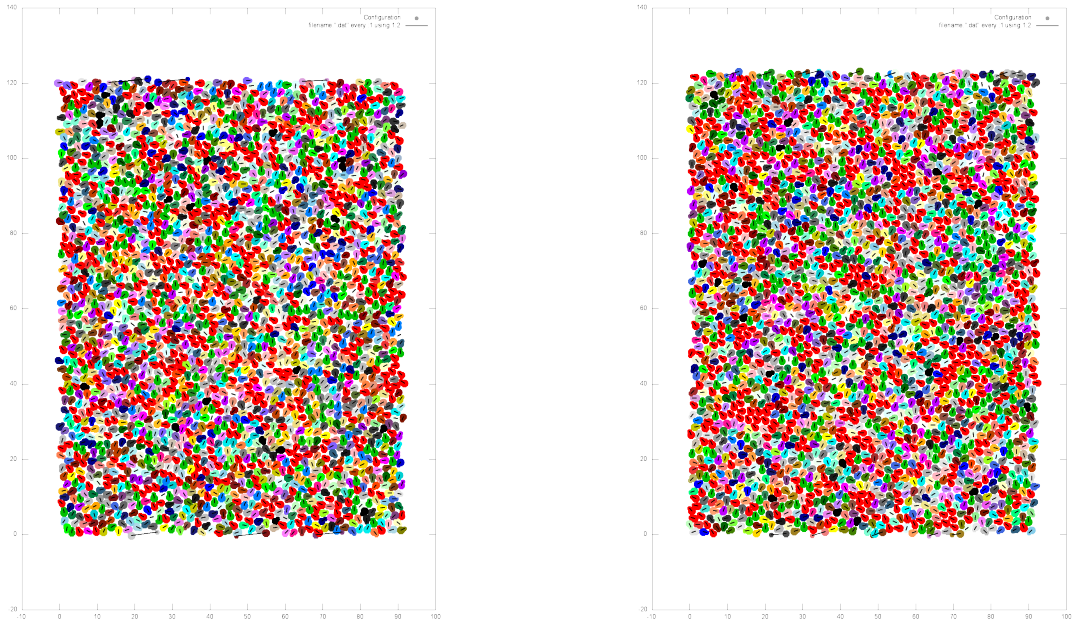
13 Snowman: Temp$= 5.0$, $r = 0.637556$, $d = 1.0$, pg



(a) Pre minimisation

(b) Post CG minimisation

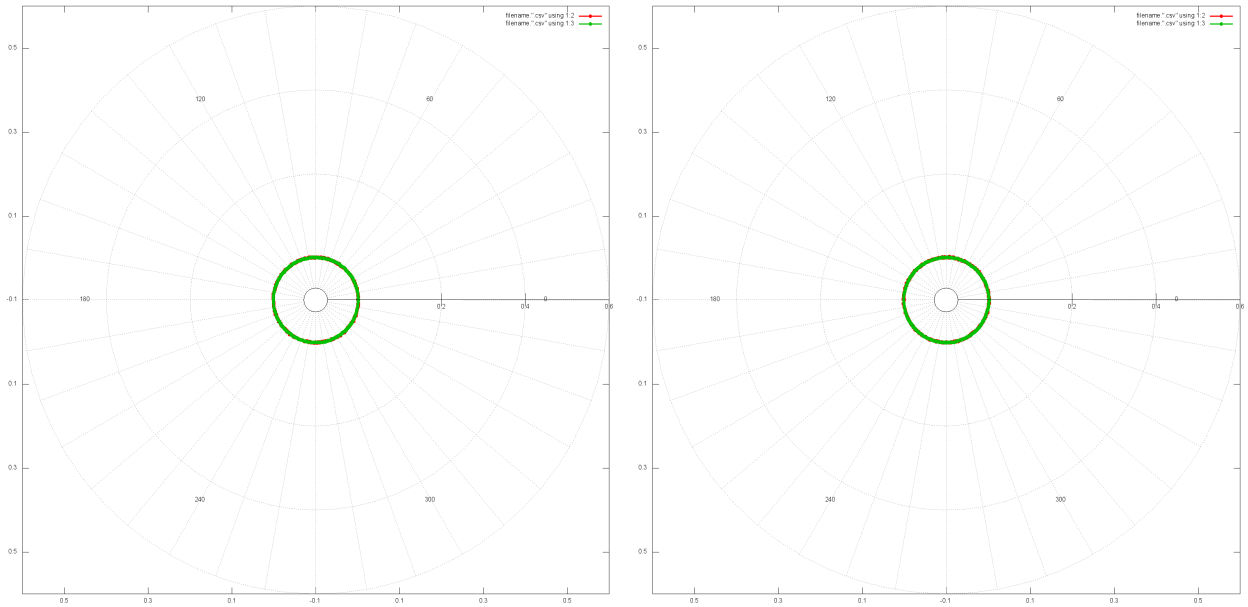
Figure 97: Order Parameter



(a) Initial Configuration

(b) Final Configuration

Figure 98: Configuration



(a) Initial Configuration (b) Final Configuration

Figure 99: Angle Distribution

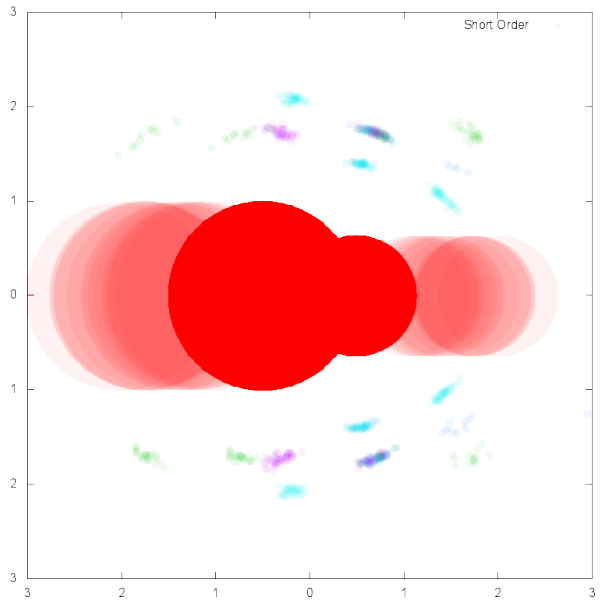


Figure 100: Short Range Ordering

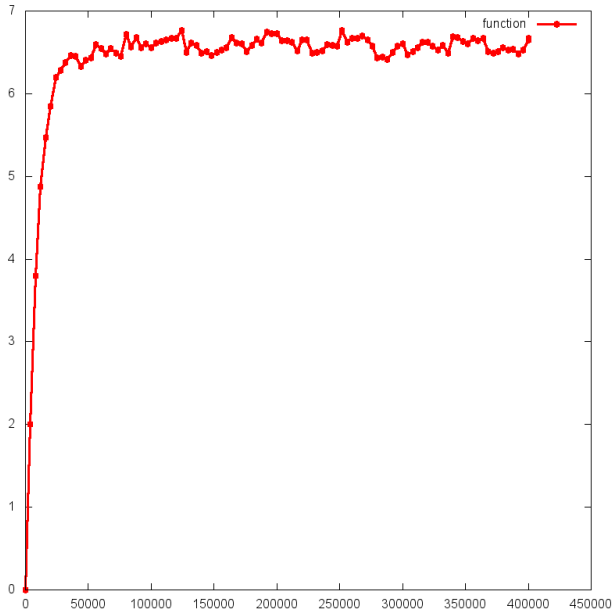


Figure 101: Mean Squared Displacement

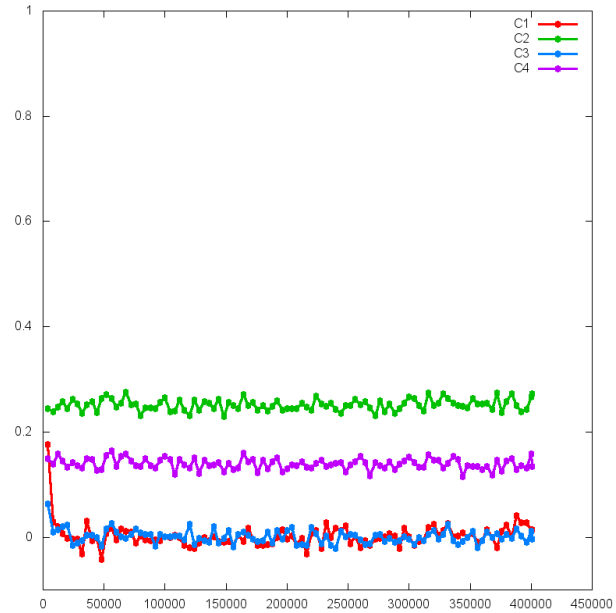


Figure 102: Rotational Relaxation

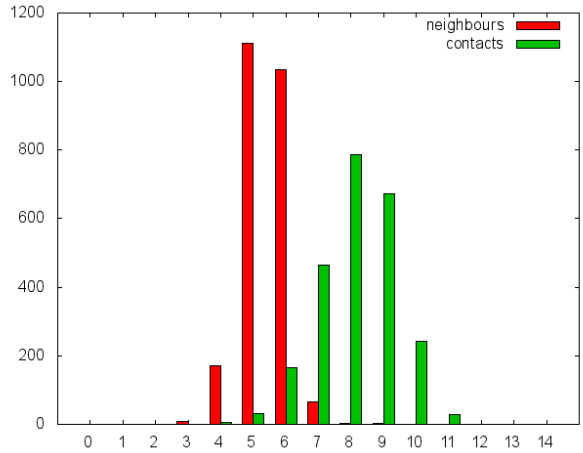


Figure 103: Contact Number

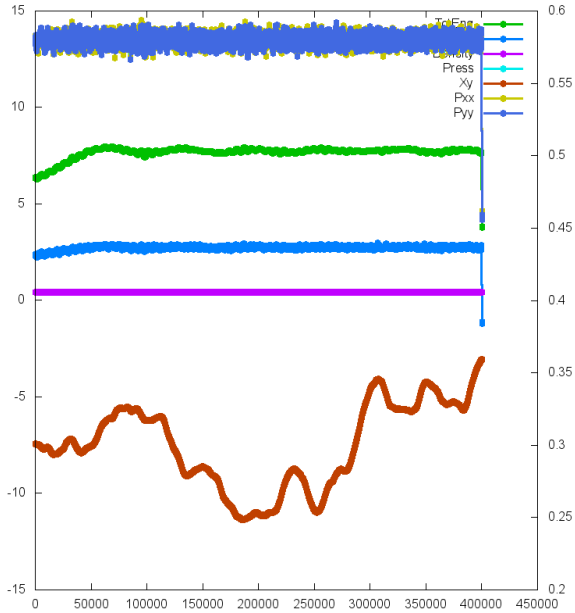


Figure 104: Properties

C1 Relaxation	0.049 938 6
C2 Relaxation	0.009 987 72
C3 Relaxation	0.059 926 3
C4 Relaxation	0.019 975 4
Diffusion Constant	0.8331
Average bond fraction	0.9654
Local Order	0.5131
Global Order	0.5001
Circle Order	0.0858
contacts	0.8000
neighbours	0.5000
pairing	0.1504
Density	0.4246
Total Energy	3.7864
Packing Fraction	0.8666

Table 13: Data