

1 Benchmark

1.1 time

表1 elapsed time (second) for each program in Ising2d with $N=51 \times 50$, $nkbt=50$, $relx_{mcs} = 500000$, $sample_{mcs} = 500000$.

compile options	-DEBUG -g ... (Debug)	-O3 -DNDEBUG(Release)
f77 style	2097.460	1239.295
f77 with function	2280.915	1224.675
f90 with type	8243.244	1579.746

2 Results

2.1 Ising2d_{equilibriumbuiltinrandf77.out}

2.1.1 result

2.2 Ising2d_{equilibriumbuiltinrandf77withfunc.out}

2.2.1 result

2.3 Ising2d_{equilibriumbuiltinrand.out}

2.3.1 result

3 Compare

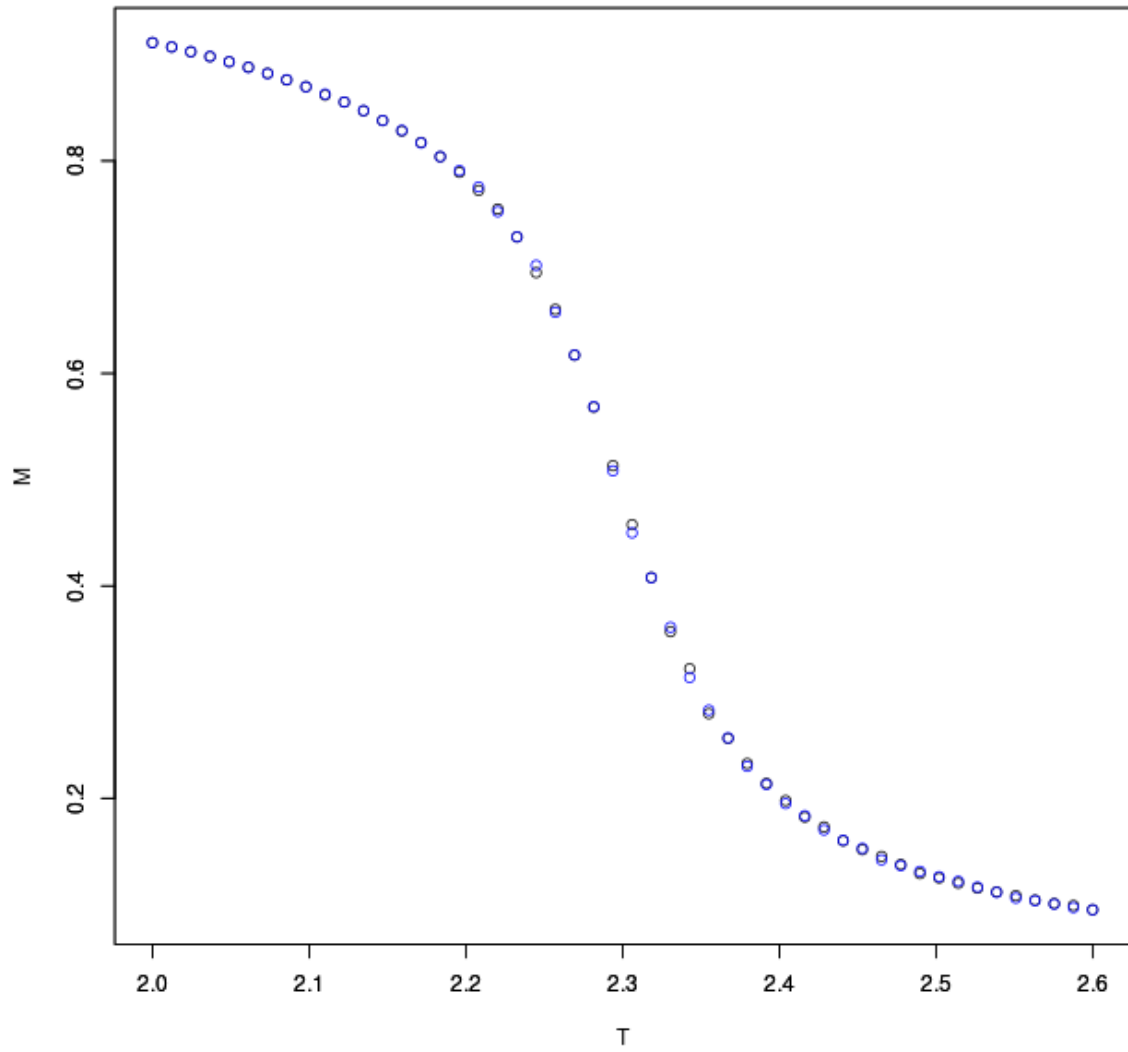


Fig 1 Result of the f77 style for equilibrium Monte Carlo simulation

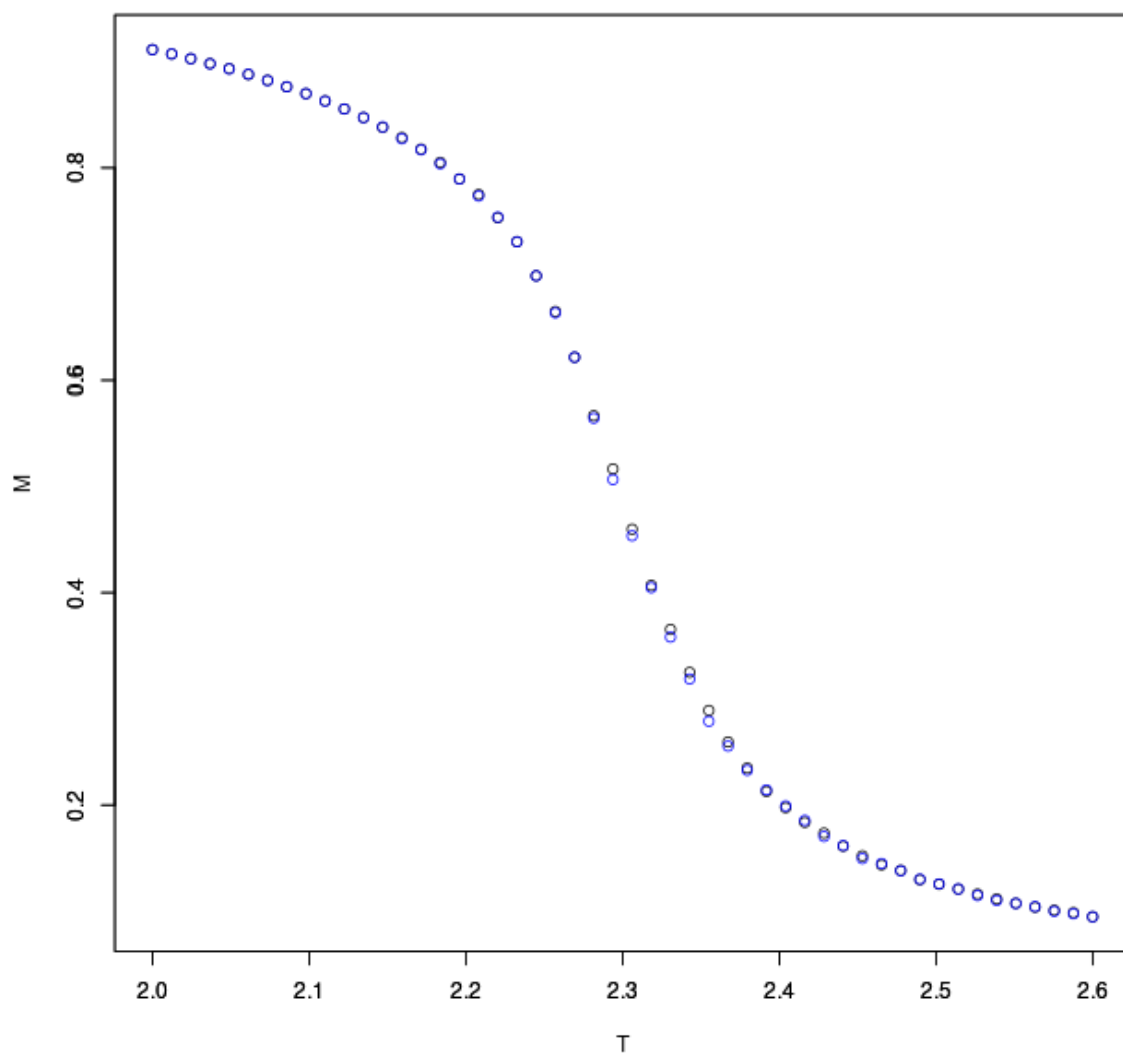


图 2 Result of the f77 style with function for equilibrium Monte Carlo simulation

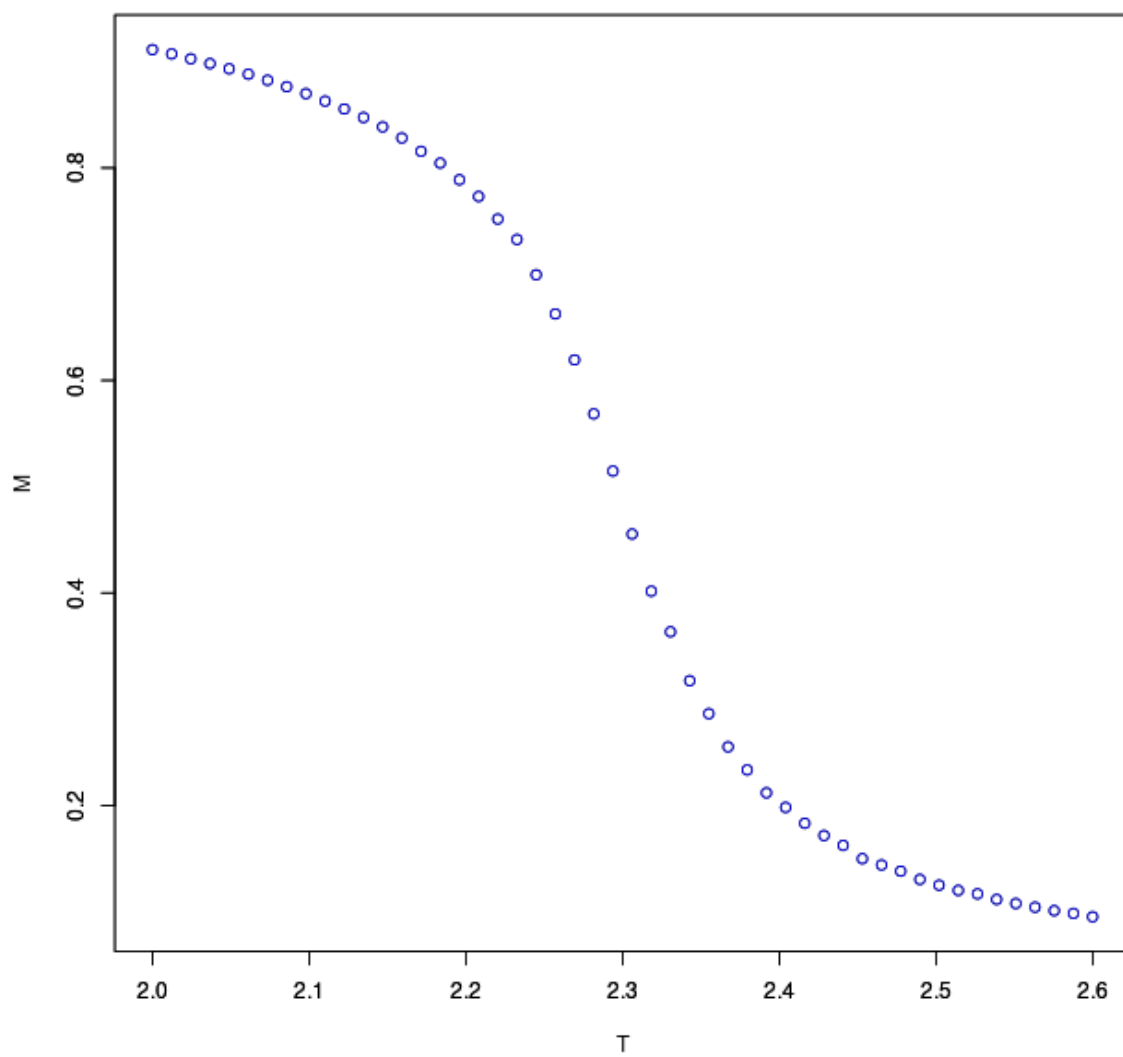


图 3 Result of the f90 style with class for equilibrium Monte Carlo simulation

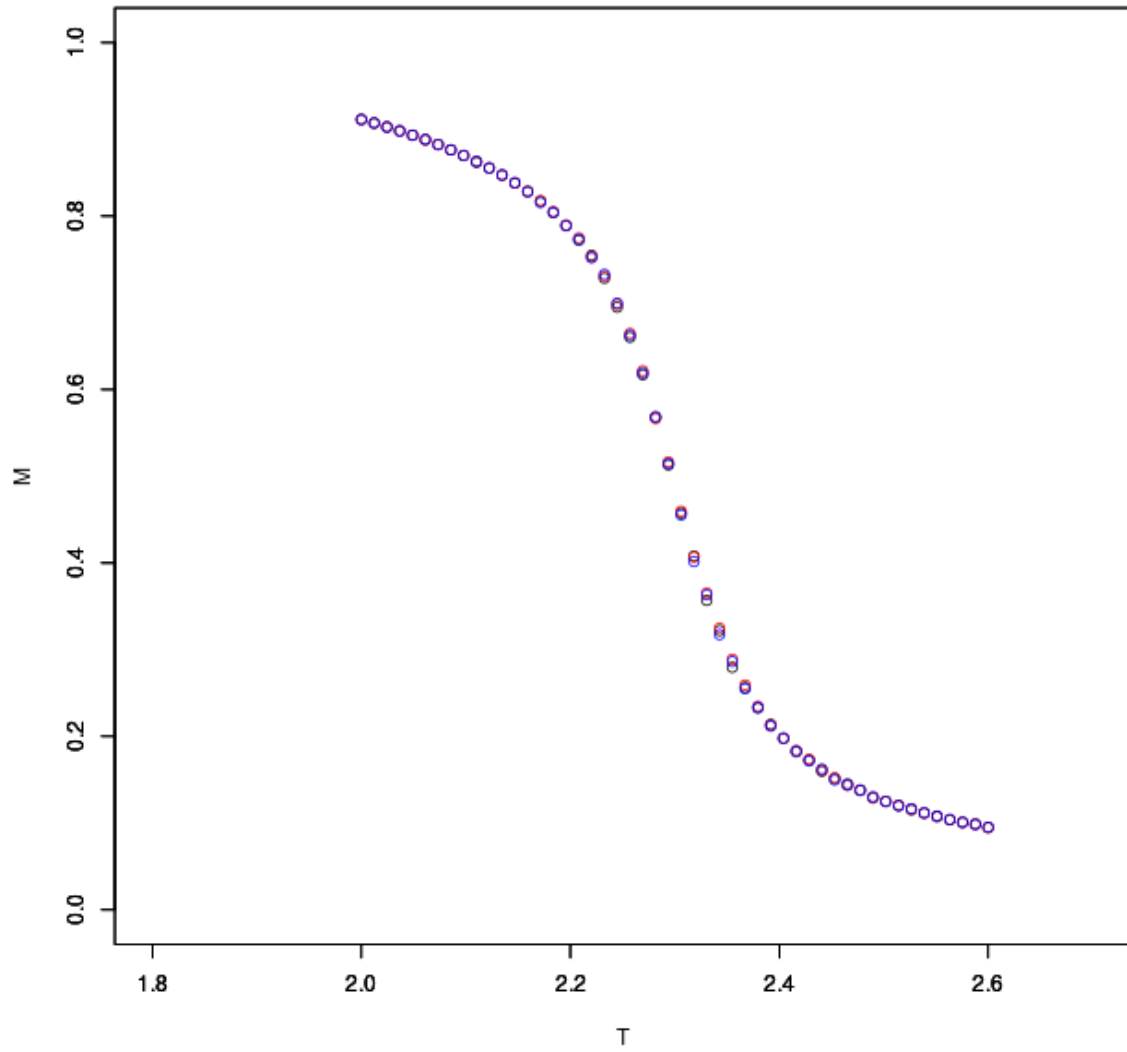


Fig. 4 Comparison of the magnetizations for equilibrium Monte Carlo simulation

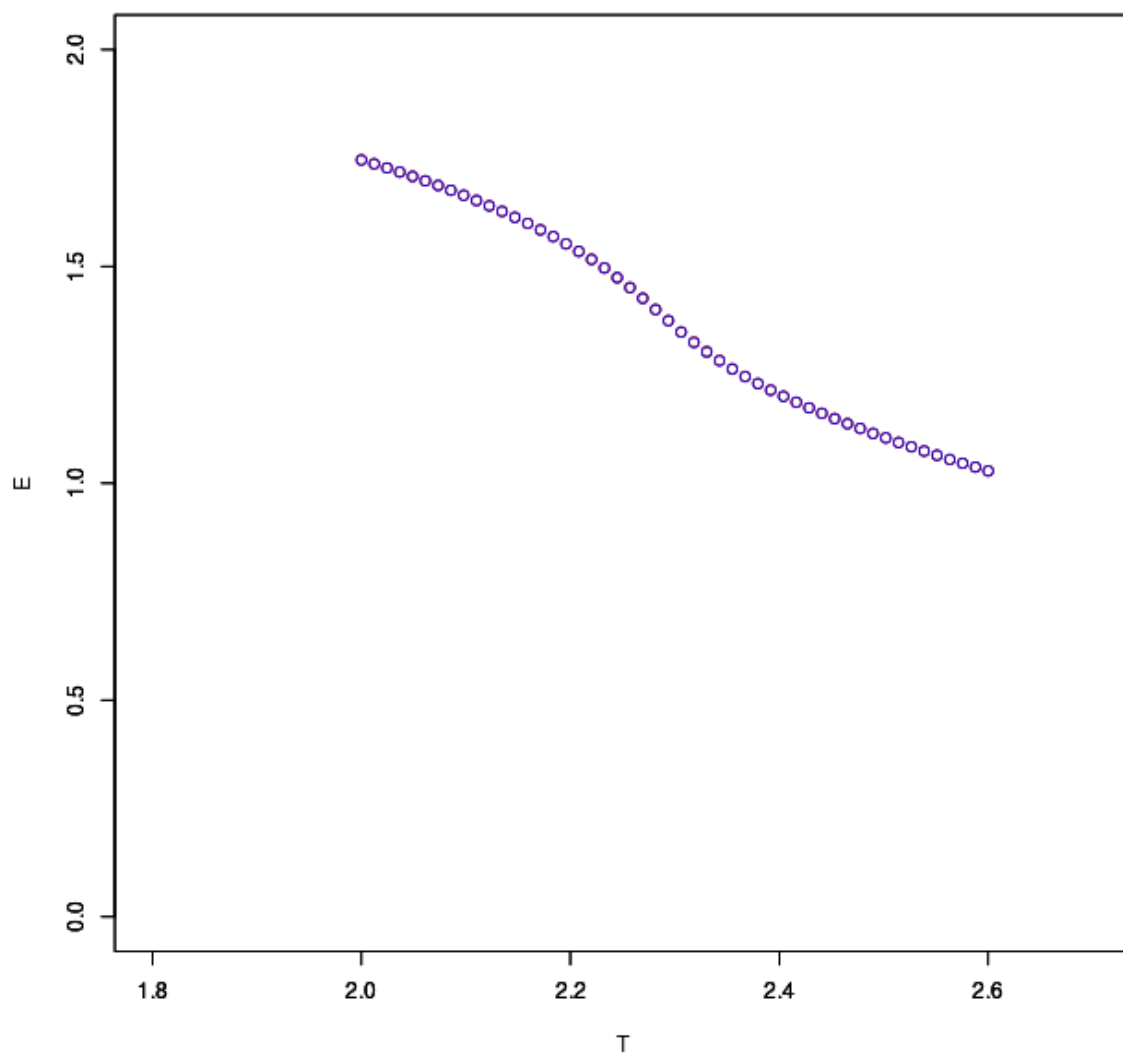


图 5 Comparison of the energies for equilibrium Monte Carlo simulation