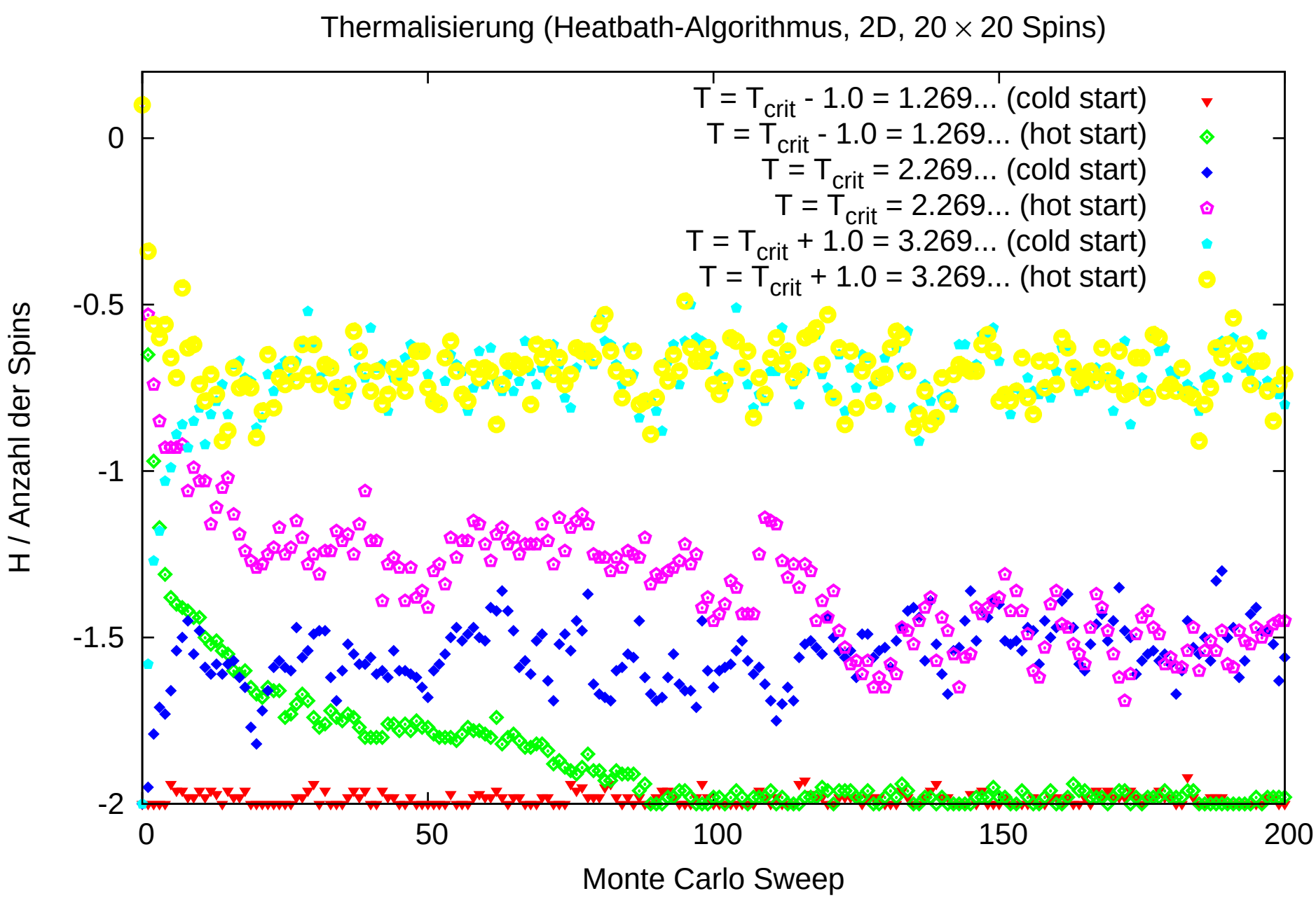
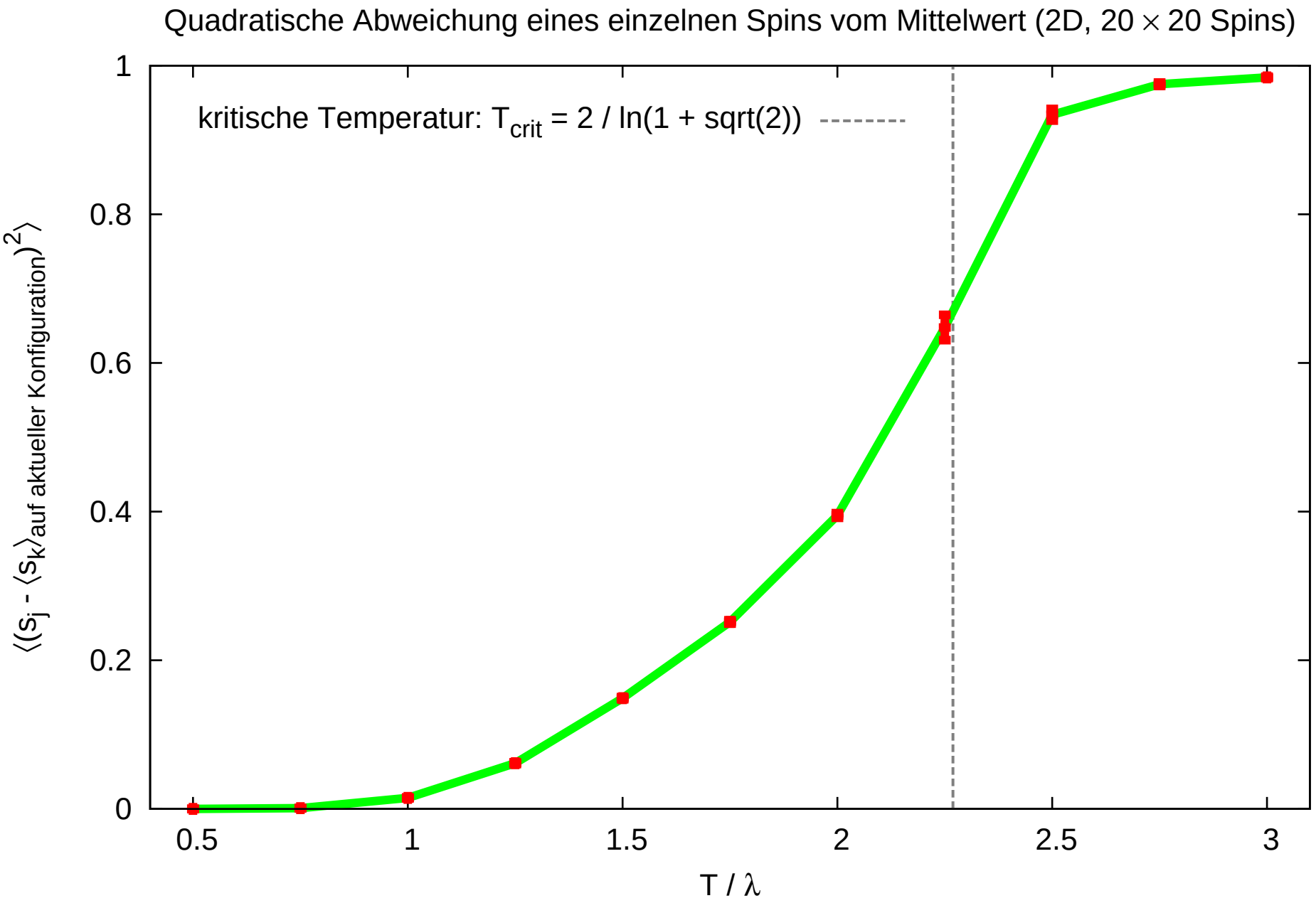
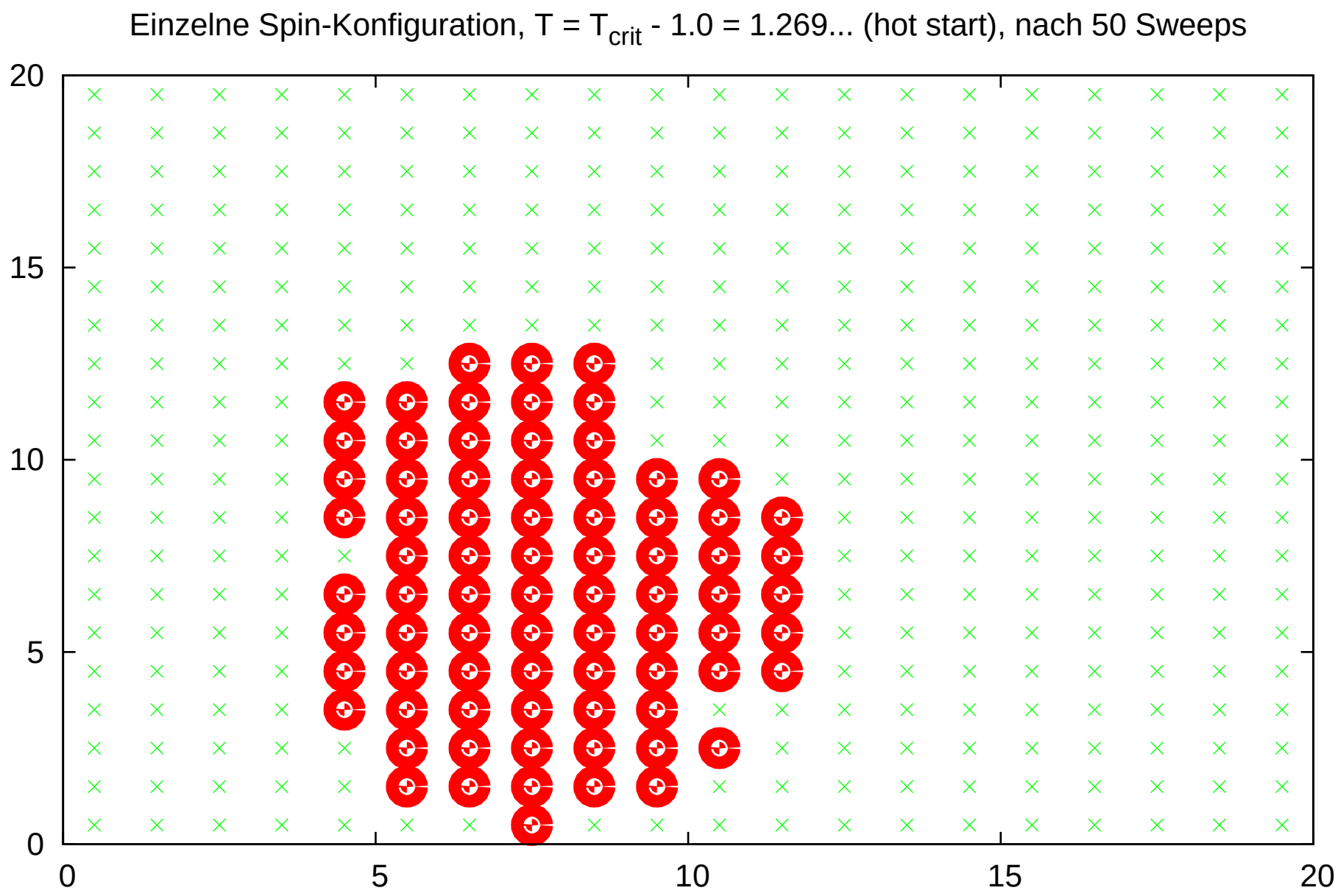
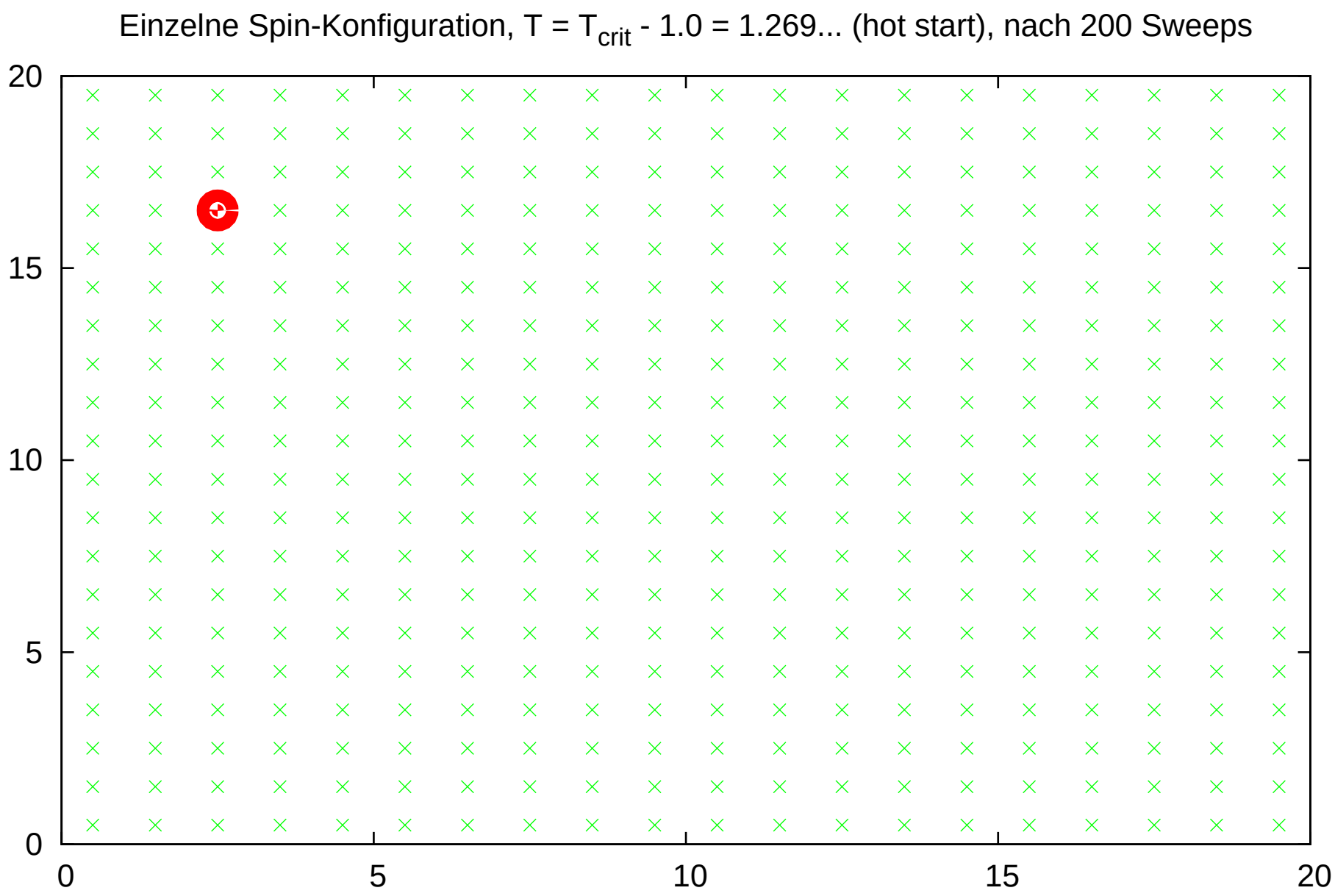
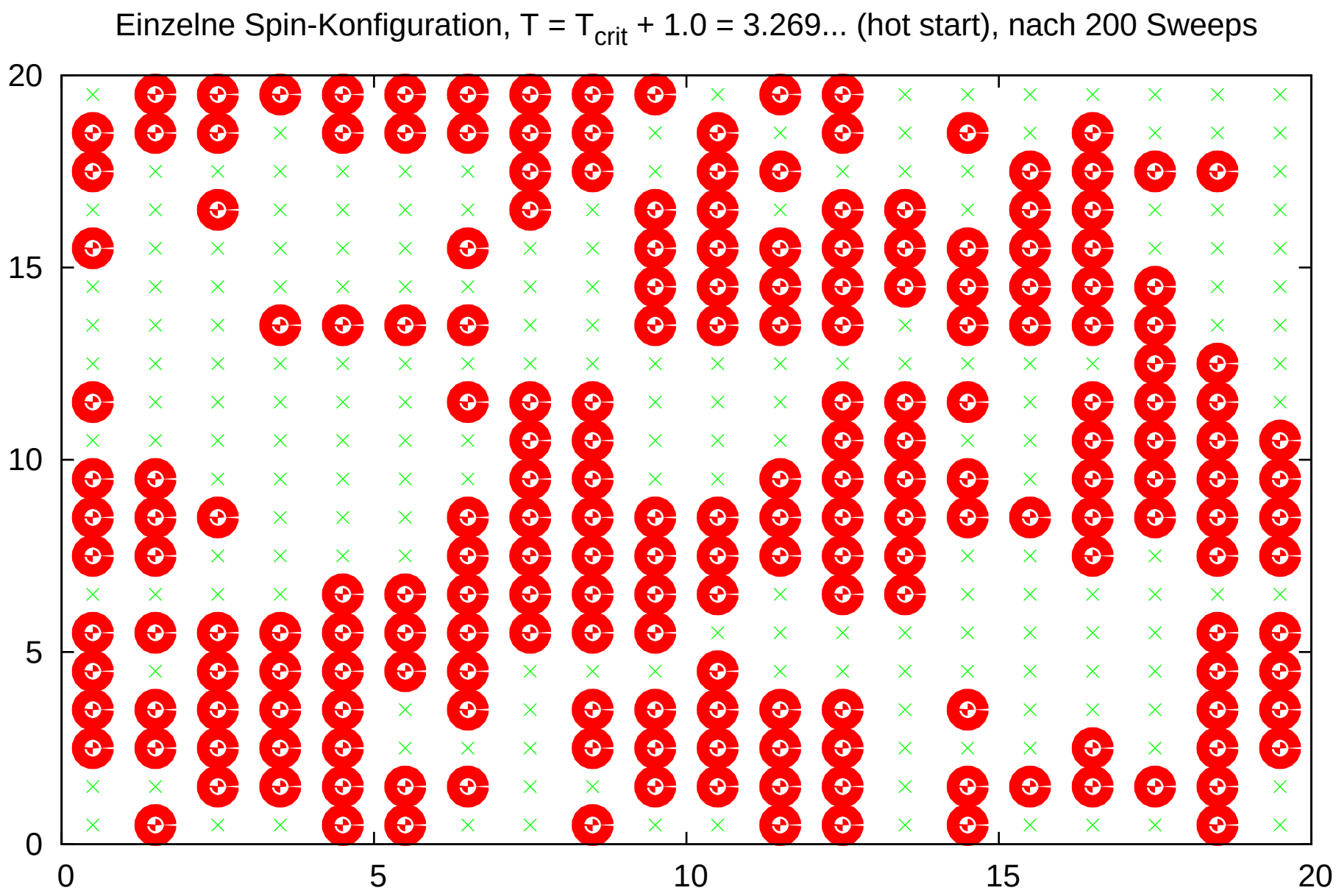

Thermalisierung (Heatbath-Algorithmus, 2D, 20 × 20 Spins)
T = T_crit - 1.0 = 1.269... (cold start)
T = T_crit - 1.0 = 1.269... (hot start)
T = T_crit = 2.269... (cold start)
T = T_crit = 2.269... (hot start)
T = T_crit + 1.0 = 3.269... (cold start)
T = T_crit + 1.0 = 3.269... (hot start)
H / Anzahl der Spins
0
-0.5
-1
-1.5
-2
0
50
100
150
200
Monte Carlo Sweep


Quadratische Abweichung eines einzelnen Spins vom Mittelwert (2D, 20 × 20 Spins)
kritische Temperatur: T_crit = 2 / ln(1 + sqrt(2))
⟨(S_j - ⟨S_k⟩auf aktueller Konfiguration)^2⟩
T / λ
0
0.2
0.4
0.6
0.8
1
0.5
1
1.5
2
2.5
3


Einzelne Spin-Konfiguration, T = T_crit - 1.0 = 1.269... (hot start), nach 50 Sweeps
20
15
10
5
0
0
5
10
15
20


Einzelne Spin-Konfiguration, T = T_crit - 1.0 = 1.269... (hot start), nach 200 Sweeps
20
15
10
5
0
0
5
10
15
20


Einzelne Spin-Konfiguration, T = T_crit + 1.0 = 3.269... (hot start), nach 200 Sweeps
0
5
10
15
20
0
5
10
15
20