$\beta = \frac{1}{16}$ $\Delta\beta = \frac{(8 - \frac{1}{16})}{STEP}$ $\Gamma = 8. \sim 0$

for step $= 1 \sim STEP$

$\beta \mathrel{+}= \Delta\beta$ $J^{\perp} = \frac{-1}{2} \log(\tanh((\Gamma/M) \times \beta))/\beta$

for $m = 1 \sim M$

for $n = 1 \sim N$

$\Delta H = 0$

for $i = 1 \sim N$

64 $\Delta H \mathrel{+}= J_{i,n} \sigma_{m,i}$

62 $\Delta H \mathrel{+}= h_n$

$\Delta H \mathrel{-}= J^{\perp}(\sigma_{m+1,n} + \sigma_{m-1,n}) \cdot M$

$\Delta H = 2 \cdot \Delta H \cdot \sigma_{m,n}$

if $e^{-\Delta H \beta} > \underset{[0,1]}{\text{random}()}$

$\sigma_{m,n} = -\sigma_{m,n}$

end if

$$H = -\sum_{i<j} J_{ij} \sigma_i \sigma_j - \sum_i h_i \sigma_i$$

$\downarrow$