

Initial :  $h[E_n] = 0$  for all  $n$   
 Conditions :  $g[E_n] = 1$  for all  $n$

Initialize :  $s[i, j] = +1$  or  $-1$  chosen randomly

Choose new site

Calculate current energy  
 and energy if spin is flipped  
 ( $E_{\text{Now}}$  and  $E_{\text{New}}$ )

Calculate transition probability  
 $P[E_{\text{Now}} \rightarrow E_{\text{New}}]$

Is  $P[E_{\text{Now}} \rightarrow E_{\text{New}}] > \text{random}[0,1]$ ?

Yes

No

$h[E_{\text{New}}] + = 1$   
 $g[E_{\text{New}}] \times = f$   
 $s[\{i, j\}_{\text{New}}] \times = -1$   
 $E_{\text{New}} \rightarrow E_{\text{Now}}$   
 $\{i, j\}_{\text{New}} \rightarrow \{i, j\}_{\text{Now}}$

$h[E_{\text{Now}}] + = 1$   
 $g[E_{\text{Now}}] \times = f$

Is histogram flat?

Yes

No

$f \rightarrow f^{1/2}$   
 Is  $f > f_{\text{Min}}$ ?

No

Yes

Record  $g[E]$

$h[E_n] = 0$  for all  $n$

