

式1

$$\begin{aligned} E_{\text{rot}} &= -\frac{\partial}{\partial\beta} N \ln(1 + 3 \exp[-2\frac{\Theta_r}{T}]) \\ &\simeq \frac{\partial}{\partial\beta} N \times 3 \exp[-2\frac{\Theta_r}{T}] \end{aligned}$$