Simulated and exact Density-Of-States (DOS) for the 2d Ising model. The exact DOS $g_n$ is obtained using the low temperature expansion $Z = e^{2KN} \sum_n g_n e^{-4Kn}$, where $K = J/kT$. 

![Graph showing simulated and exact density of states](image)
The energy distribution for the Baxter-Wu model is doubly peaked for lattices $L$ smaller than $L_0 \approx 426$.
The Binder parameter $B = 1 - \frac{\langle E^4 \rangle}{3 \langle E^2 \rangle^2}$ has a minimum $B_{\text{min}}$ which scales as $B_{\text{min}} = 2/3 - \lambda L^{-\theta_B/\nu}$, with $\theta_B = \alpha = 2/3$. 

![Graph showing $C_{\text{max}}$ and $(2/3 - B_{\text{min}})^{-1}$ vs. $L$]
\( B_{\text{min}} \) apparently displays a large correction-to-scaling term 
\( \theta_1 \simeq 0.25 \)