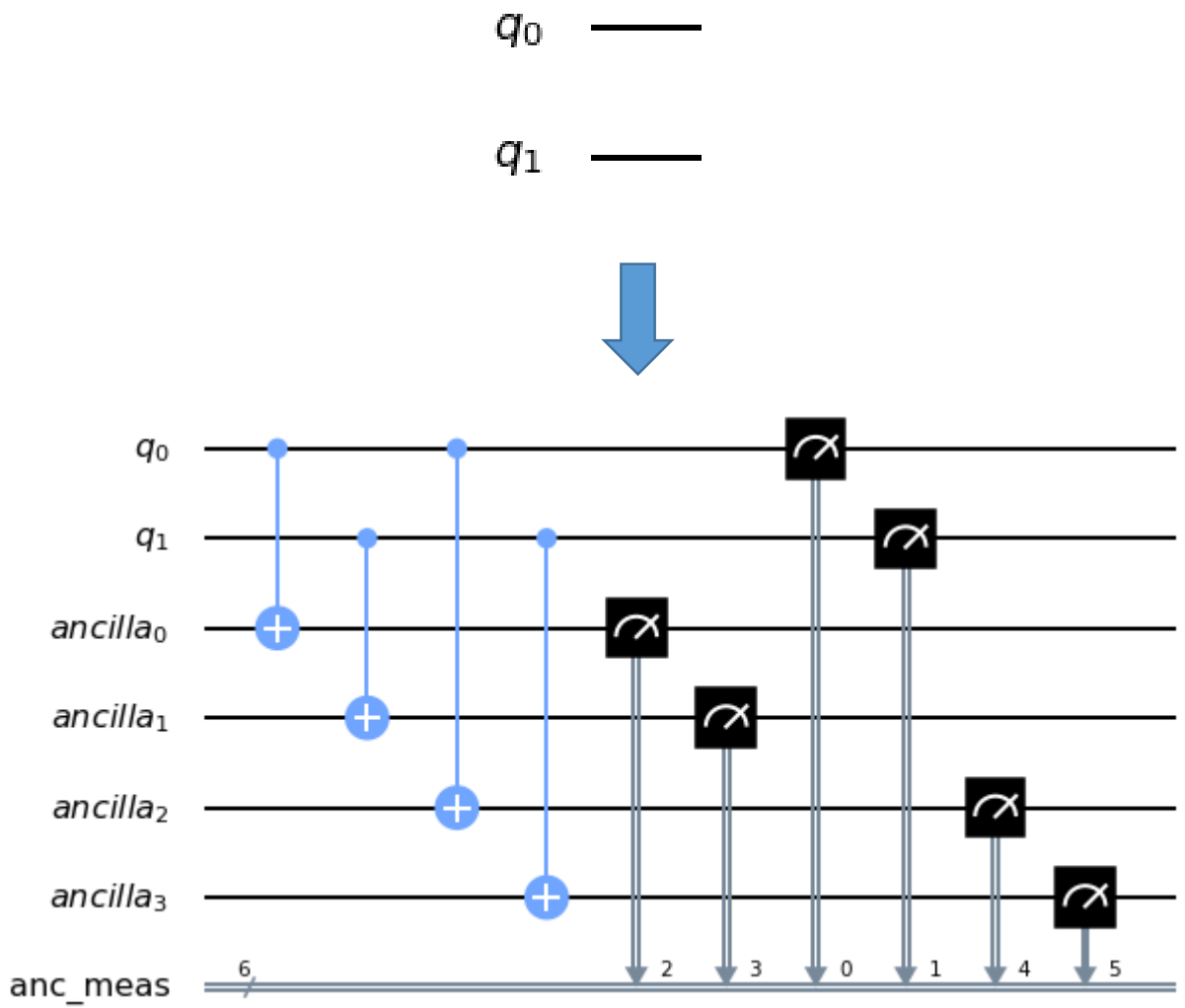
Readout Error Mitigation (2)

Comparing Two Fold vs Three Fold Majority Logic

November 3, 2020 (Election Day!)

Example of Three Fold Majority Logic

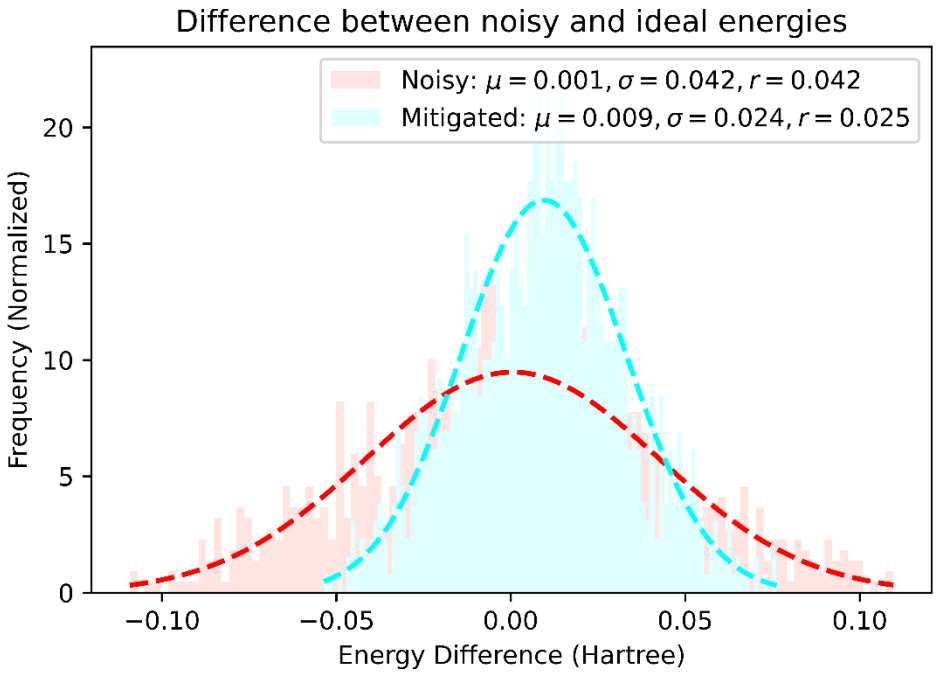
- After the transformation shown on the side, only symmetric outputs (like ‘010101’ but not ‘000111’) are accepted



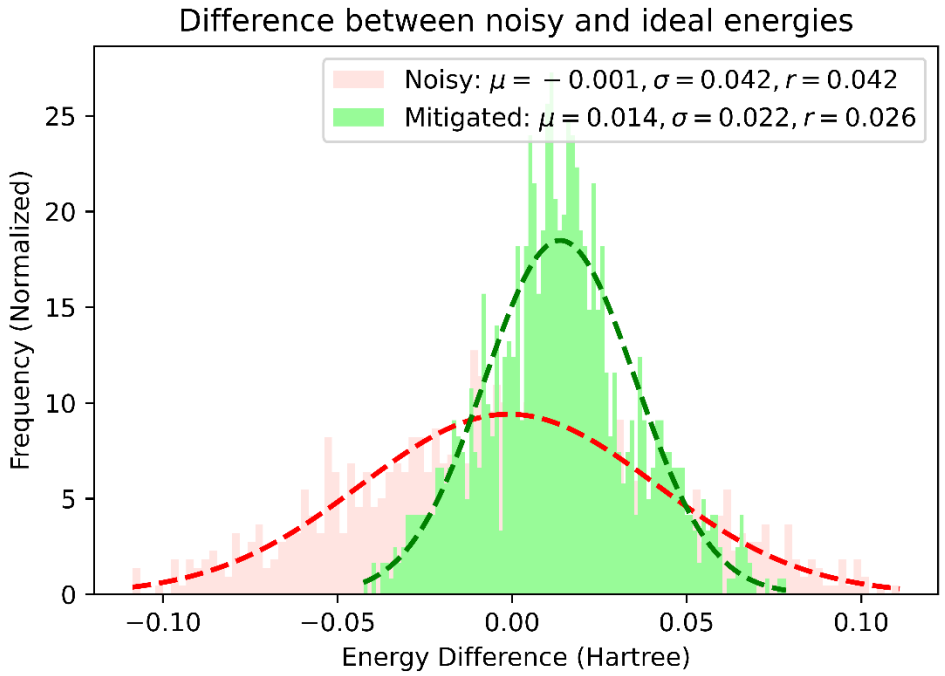
Regular Range $(-\pi, \pi)$

Full Noise Model

Two Fold Majority Logic



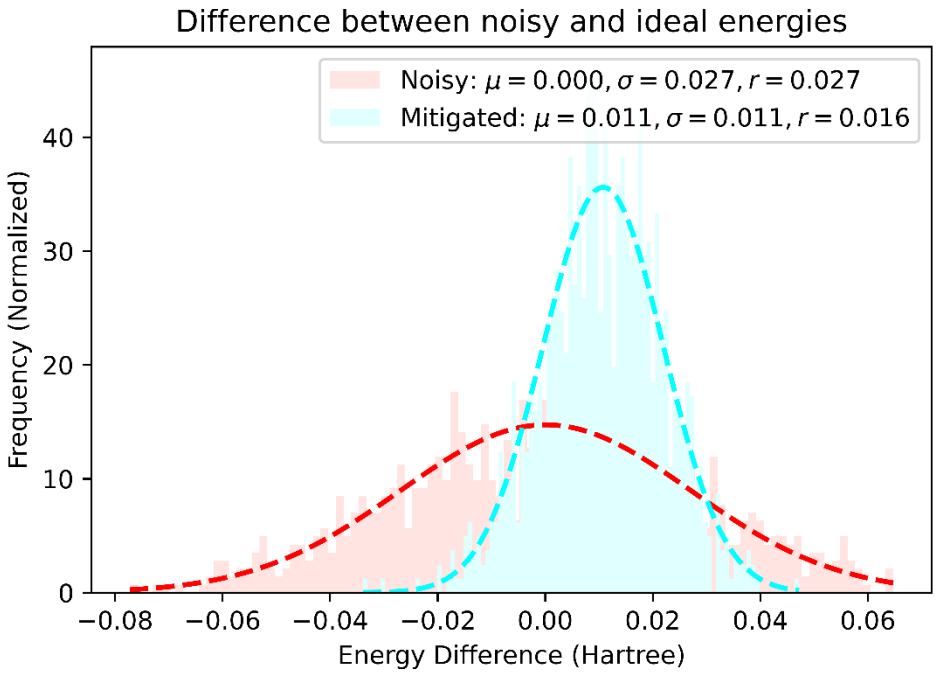
Three Fold Majority Logic



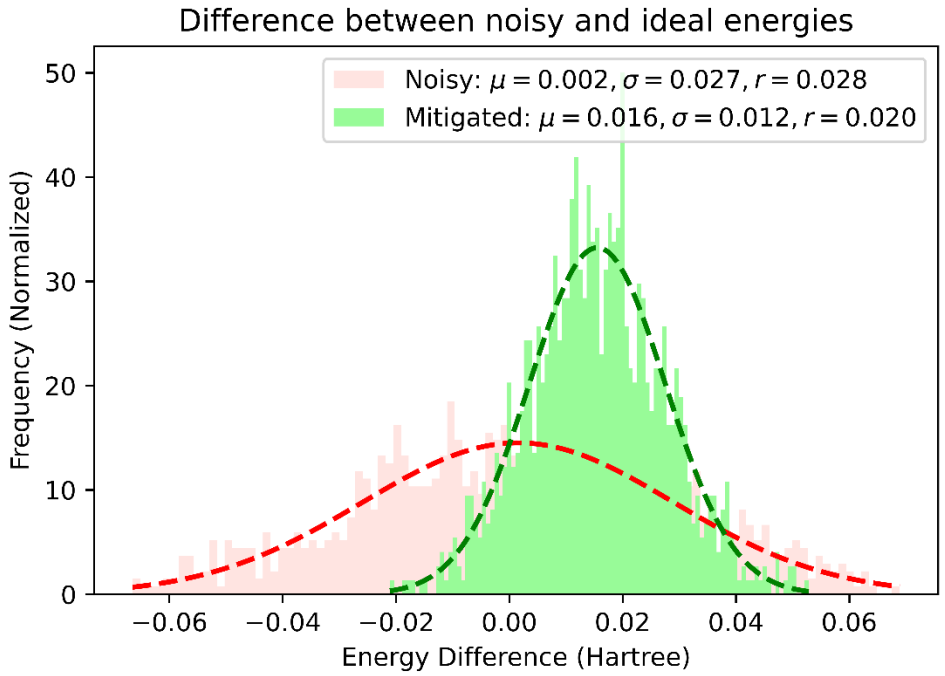
Regular Range $(-\pi, \pi)$

Only Readout Errors

Two Fold Majority Logic



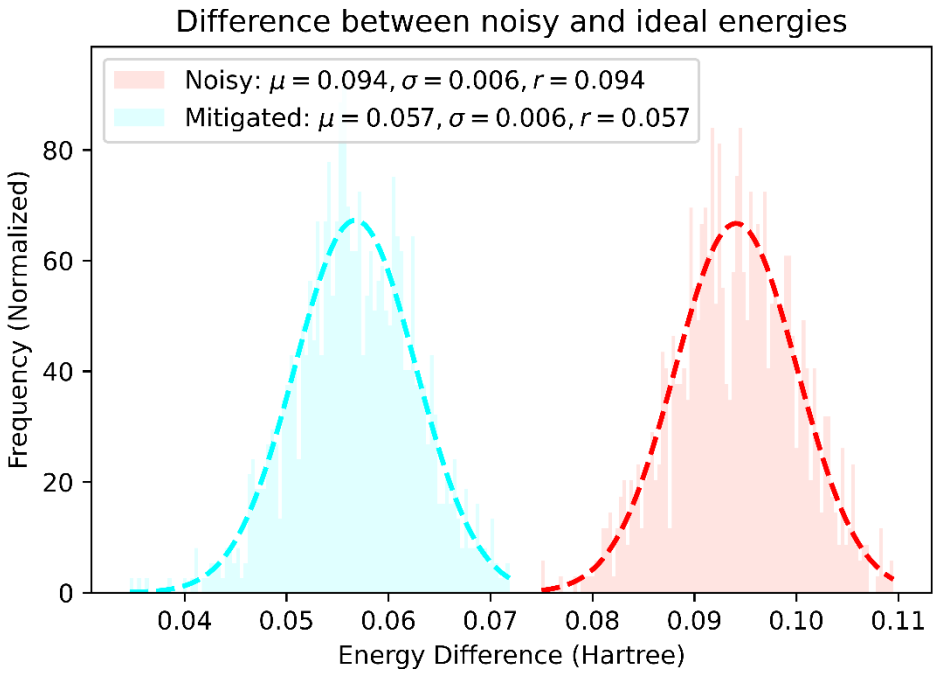
Three Fold Majority Logic



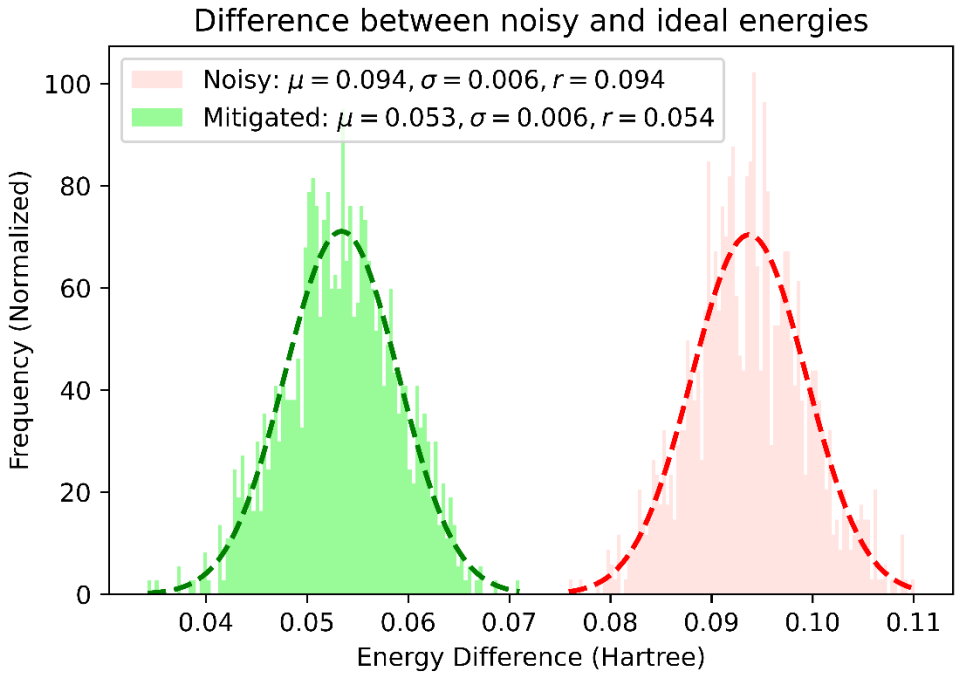
Restricted Range [(0.001, 0.002),(-0.002, -0.001), (-0.2, -0.1)]

Full Noise Model

Two Fold Majority Logic



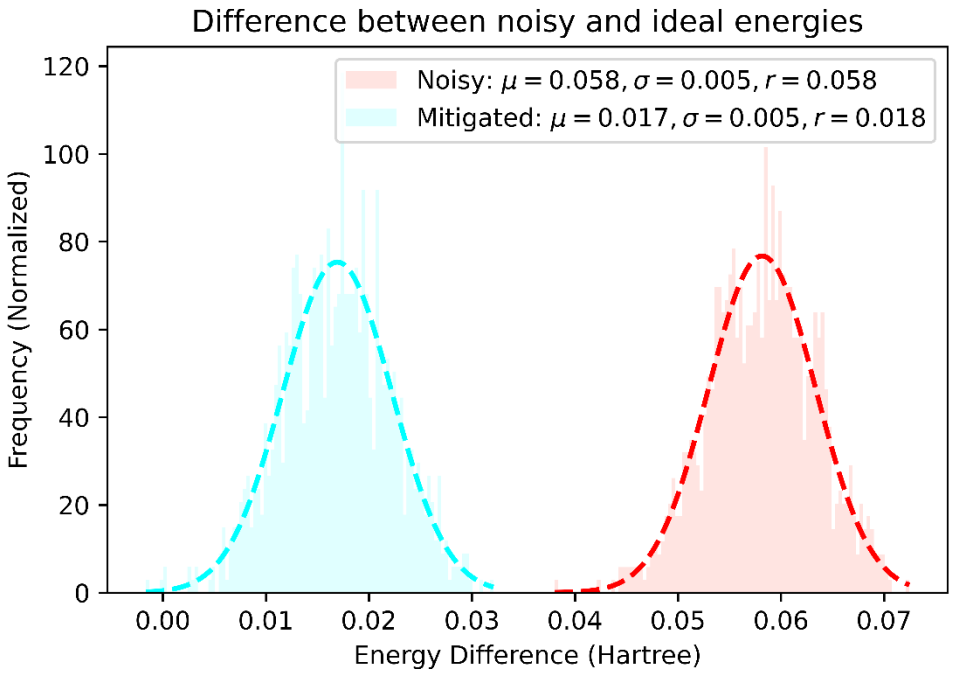
Three Fold Majority Logic



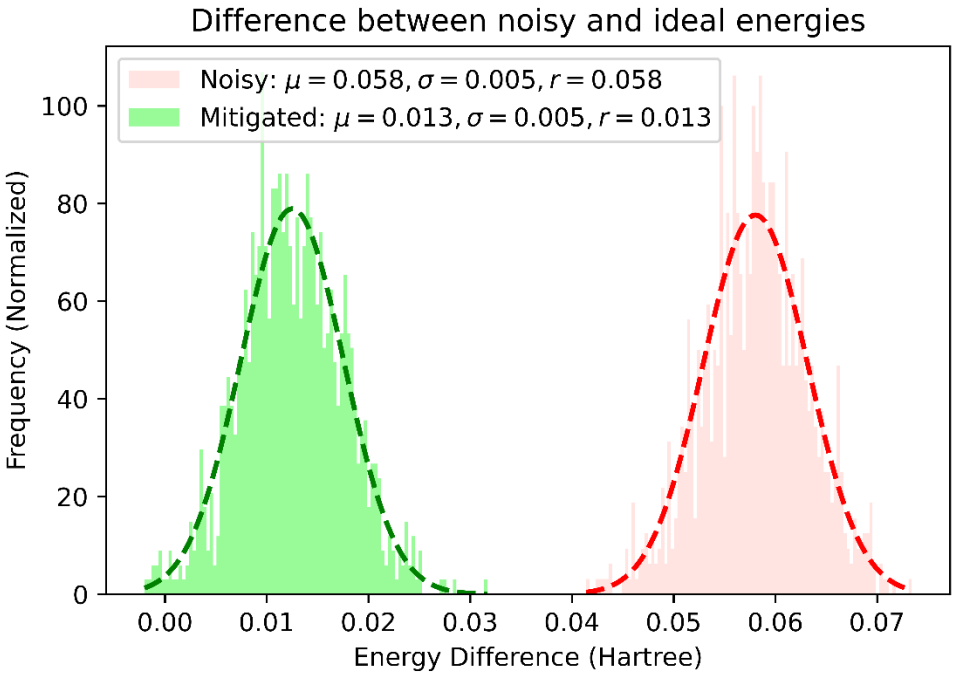
Restricted Range [(0.001, 0.002),(-0.002, -0.001), (-0.2, -0.1)]

Only Readout Errors

Two Fold Majority Logic

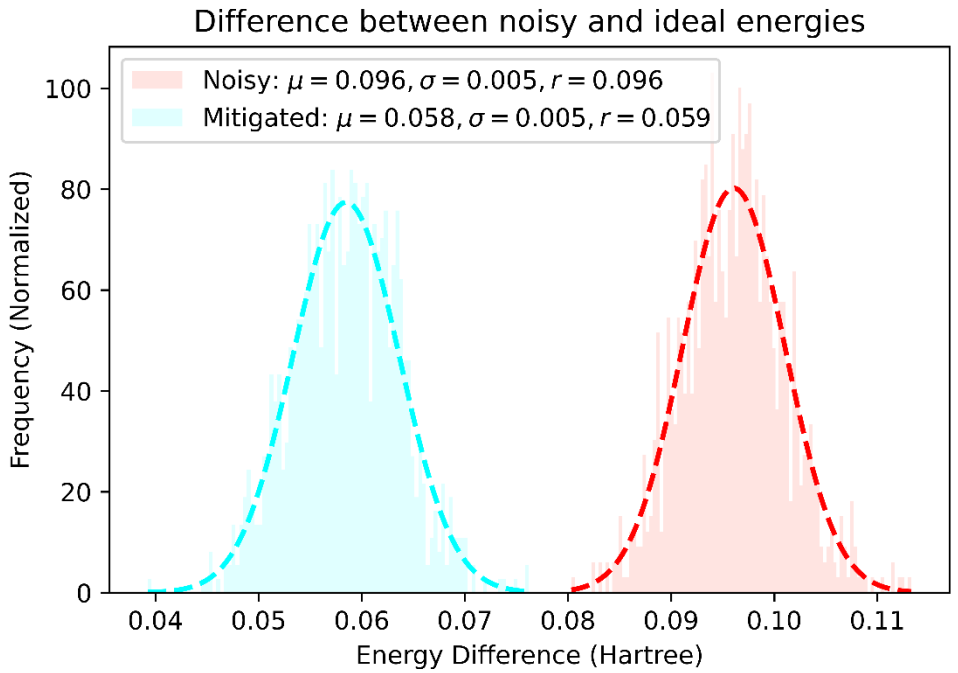
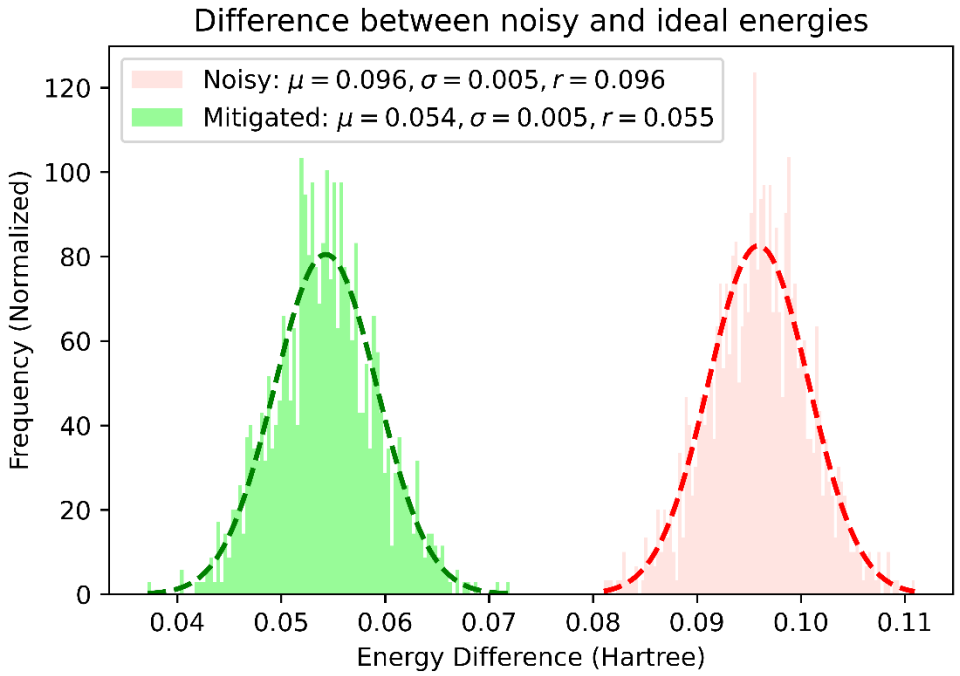


Three Fold Majority Logic



Optimized Parameters [0.00172129,-0.00182397, -0.11217598] Full Noise Model

Two Fold Majority Logic



Three Fold Majority Logic