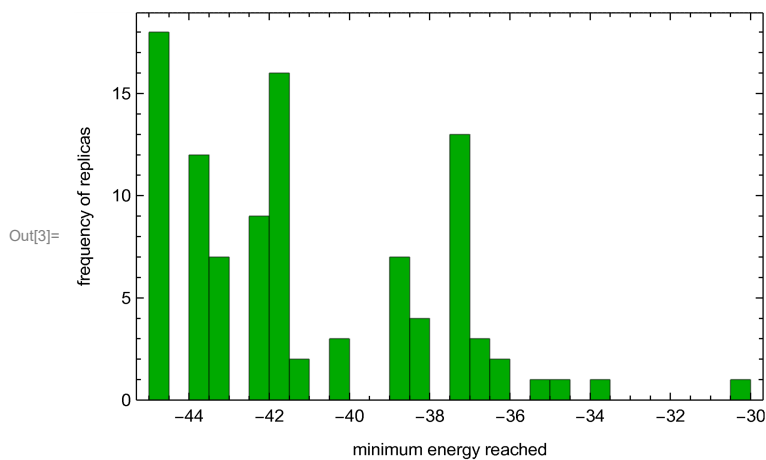


Brendan Philbin

Thermal Annealing Analysis

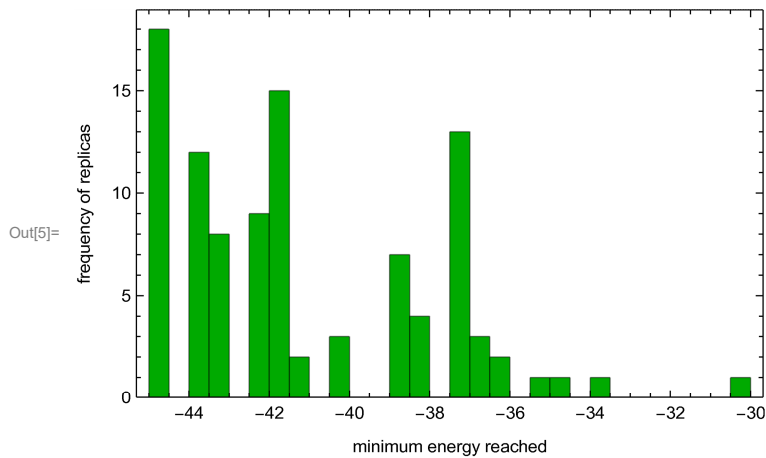
Trial 1 (no annealing): $N=32$, $M=100$, $R=100$, $J=2$, $S=3$, $C=4$,
 $\beta=5$

```
In[1]:= SetDirectory[NotebookDirectory[]];  
trial1 = Flatten[Import["histogram1.csv", "CSV"]];  
Histogram[trial1, 100, ChartStyle -> Darker[Green], Frame -> True,  
FrameLabel -> {"minimum energy reached", "frequency of replicas"}]
```



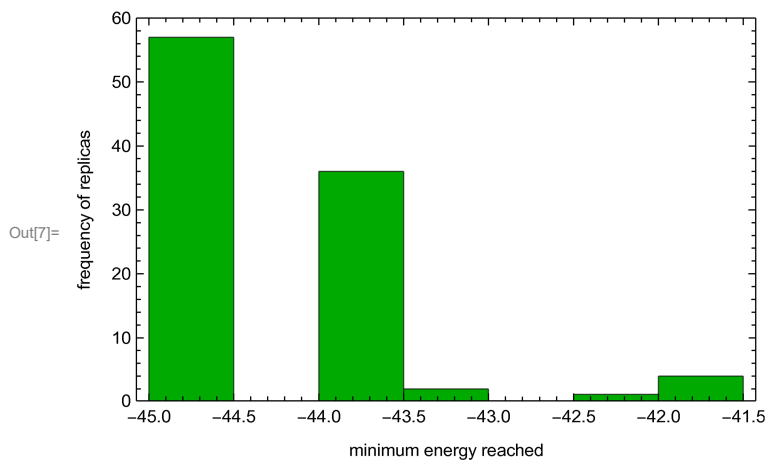
Trial 2 (no annealing): $N=32$, $M=200$, $R=100$, $J=2$, $S=4$, $C=5$, $\beta=5$

```
In[4]:= trial2 = Flatten[Import["histogram2.csv", "CSV"]];
Histogram[trial2, 100, ChartStyle -> Darker[Green], Frame -> True,
FrameLabel -> {"minimum energy reached", "frequency of replicas"}]
```



Trial 3 (no annealing): $N=32$, $M=400$, $R=100$, $J=2$, $S=5$, $C=6$, $\beta=5$

```
In[6]:= trial3 = Flatten[Import["histogram3.csv", "CSV"]];
Histogram[trial3, 100, ChartStyle -> Darker[Green], Frame -> True,
FrameLabel -> {"minimum energy reached", "frequency of replicas"}]
```



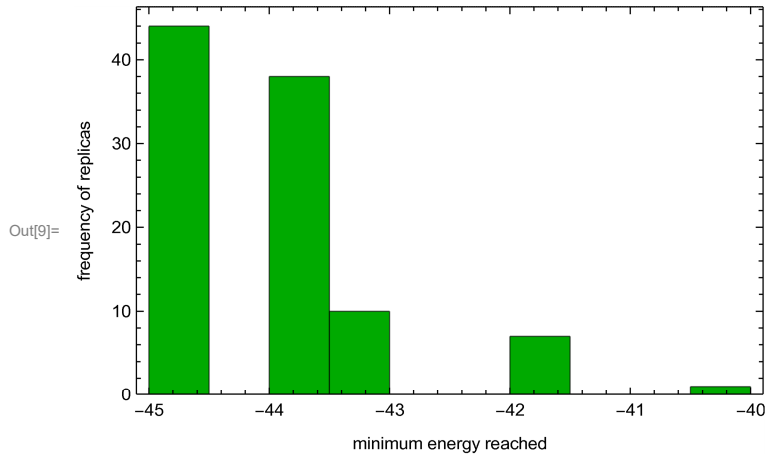
Trial 4 (w/ annealing): $N=32$, $M=100$, $R=100$, $J=2$, $S=3$, $C=4$,

$\beta=5$

```

In[8]:= trial4 = Flatten[Import["histogram4.csv", "CSV"]];
Histogram[trial4, 100, ChartStyle → Darker[Green], Frame → True,
  FrameLabel → {"minimum energy reached", "frequency of replicas"}]

```

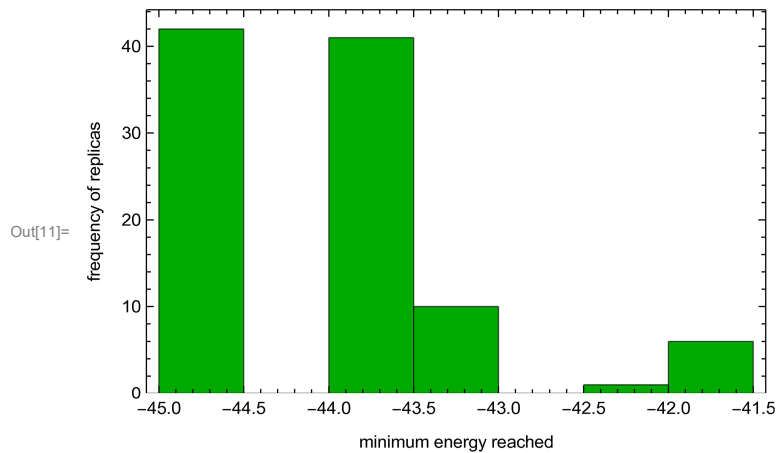


Trial 5 (w/ annealing): N=32, M=200, R=100, J=2, S=4, C=5,
 $\beta=5$

```

In[10]:= trial5 = Flatten[Import["histogram5.csv", "CSV"]];
Histogram[trial5, 100, ChartStyle → Darker[Green], Frame → True,
  FrameLabel → {"minimum energy reached", "frequency of replicas"}]

```



Trial 6 (w/ annealing): $N=32$, $M=400$, $R=100$, $J=2$, $S=5$, $C=6$, $\beta=5$

```
In[12]:= trial6 = Flatten[Import["histogram6.csv", "CSV"]];  
Histogram[trial6, 100, ChartStyle -> Darker[Green], Frame -> True,  
FrameLabel -> {"minimum energy reached", "frequency of replicas"}]
```

