

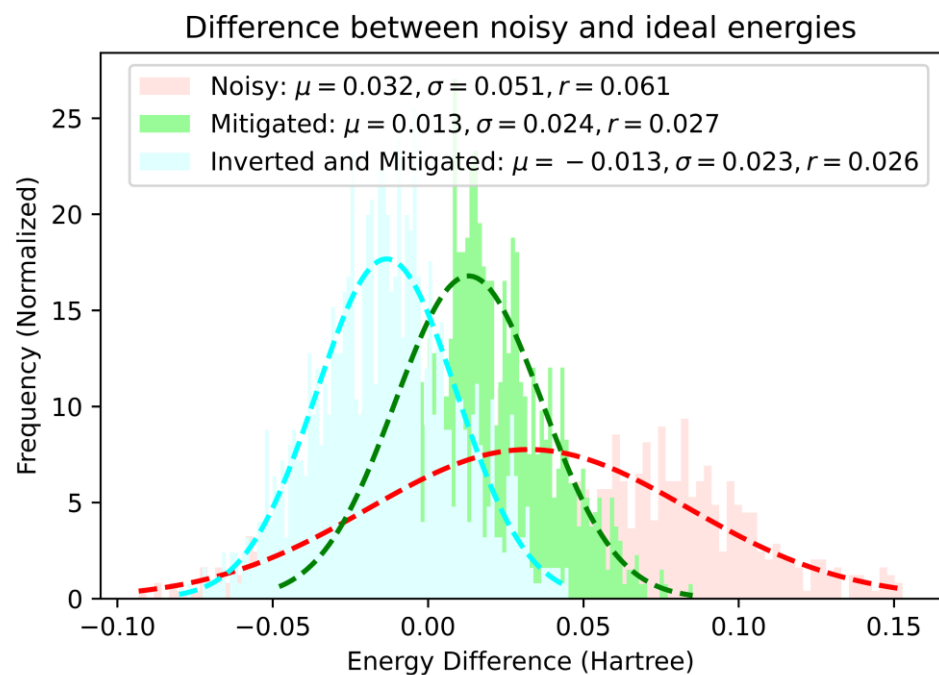
# Readout Error Mitigation (3)

Inverting the Circuit, Flipping the Counts and Measuring Expectation Value

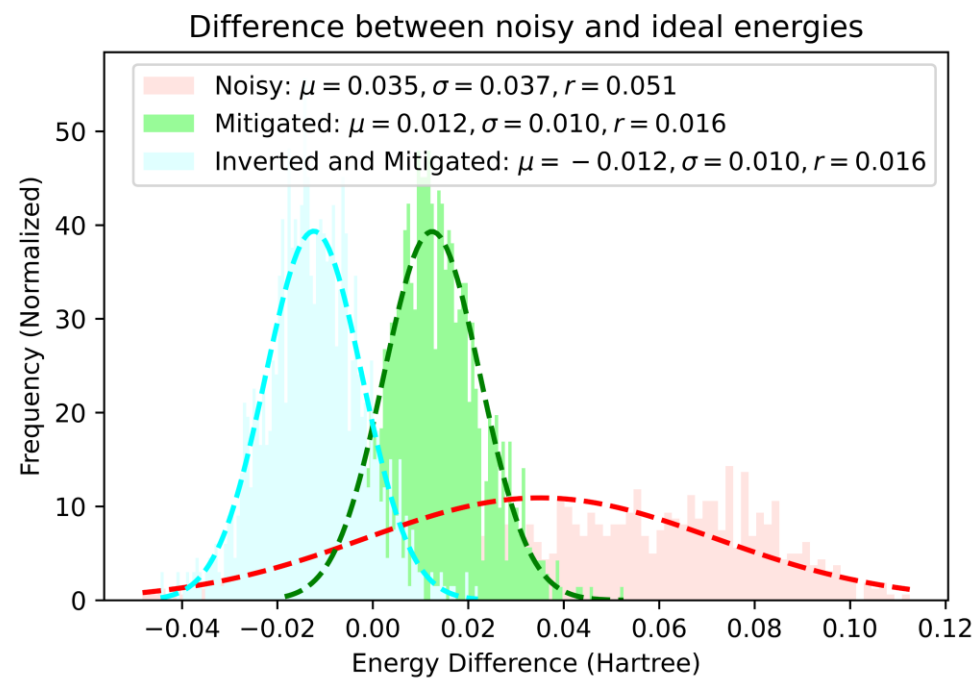
November 8, 2020 (Election Weekend)

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

## Full Noise Model

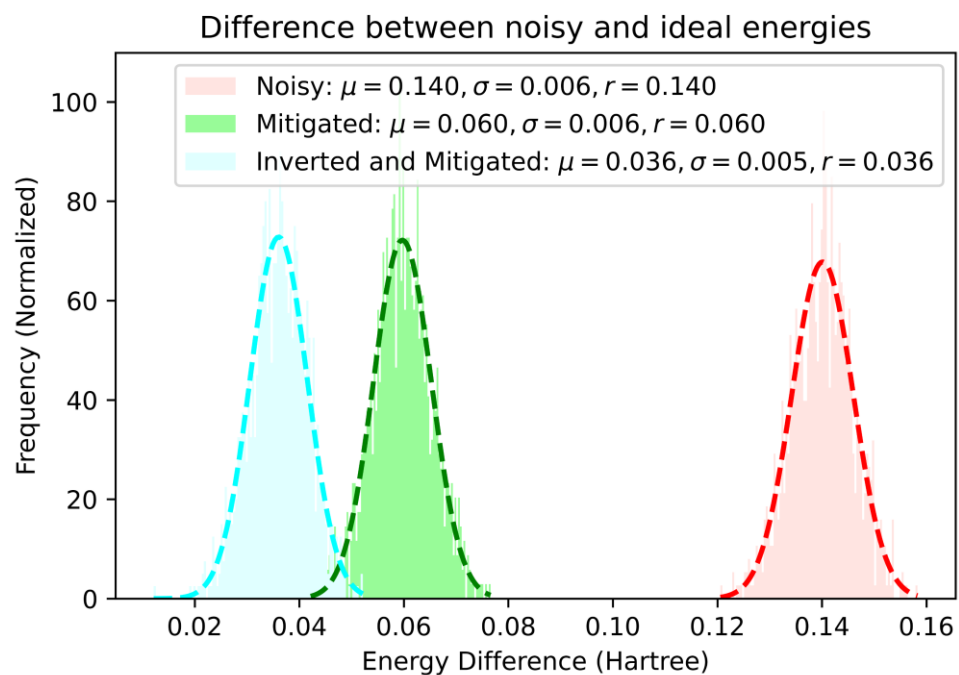


## Only Readout Errors

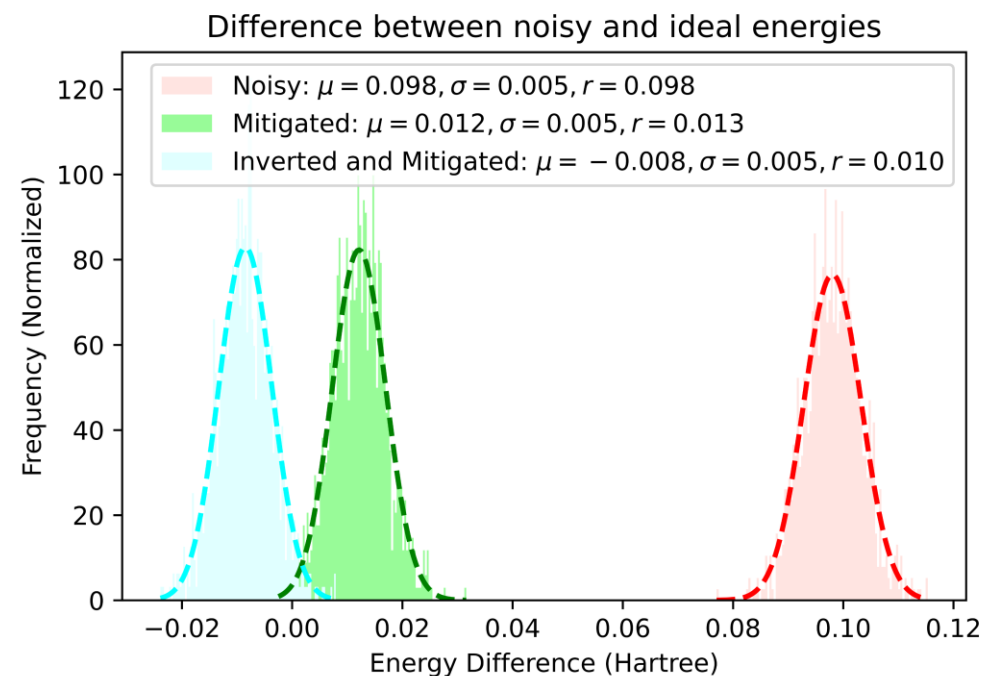


# Restricted Range $[(0.001, 0.002), (-0.002, -0.001), (-0.2, -0.1)]$

## Full Noise Model



## Only Readout Errors



# Simulation Info

- Ran on FakeBogota Noise Model with each measurement consisting of 10,000 shots
- A 1000 different set of parameters sampled from specified range.
- RMS values may be incorrect. Here is the code:

```
def stats(data):  
    """  
    Finds mean, std dev, and rms of data  
    """  
    data = np.array(data)  
    rms = np.sqrt(np.mean(data**2))  
    (mu, sigma) = norm.fit(data)  
    return mu, sigma, rms
```

- Code for these experiments can be found [here](#)