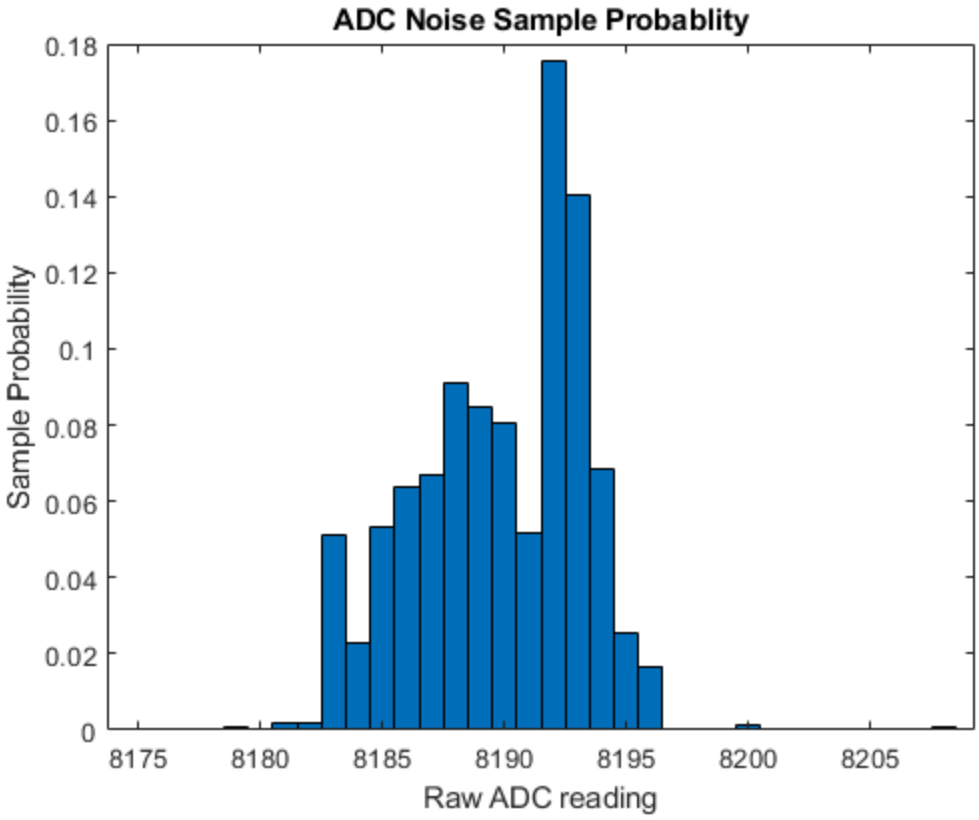
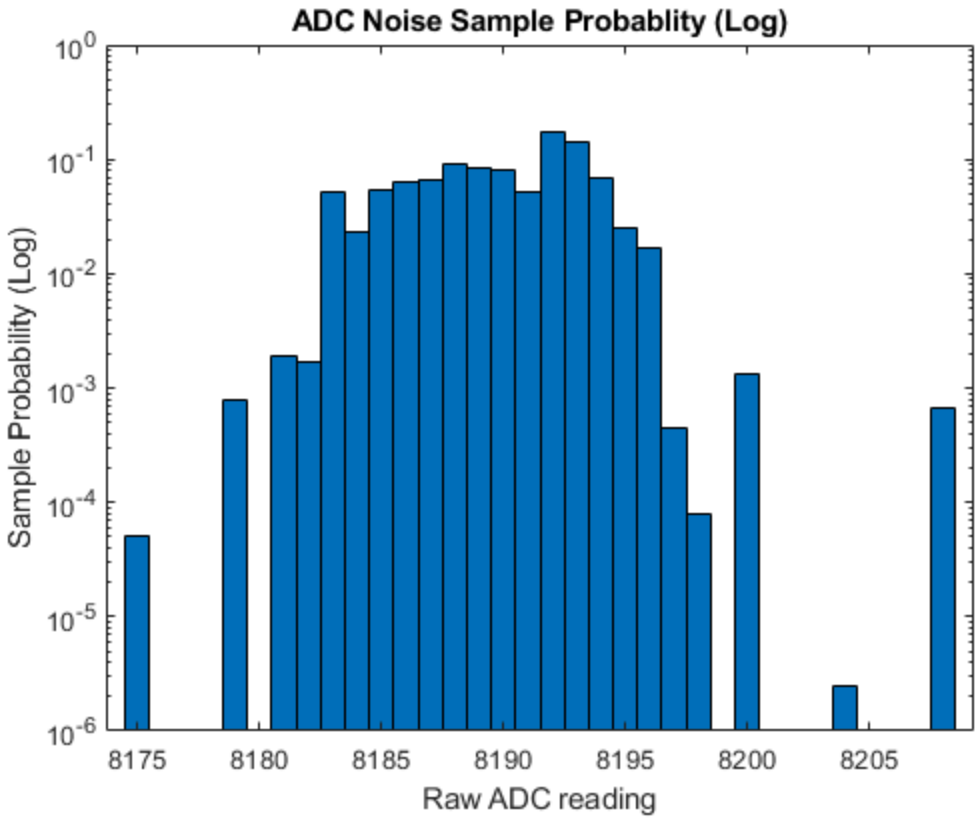
```
load ADC_Noise_Data.mat;
noise_mean = mean(data);
noise_max = max(data);
noise_min = min(data);
noise_span = noise_max - noise_min;
noise_std = std(double(data));

disp('Mean Reading: ');
disp(noise_mean);

disp('Max Reading: ');
disp(noise_max);

disp('Min Reading: ');
disp(noise_min);

disp('Span of Readings: ');
disp(noise_span);

disp('Std. Deviation of Readings: ');
disp(noise_std);
% Plot distribution of sample probablilty
[count, val] = groupcounts(data);
count = count/sum(count);

f1 = figure('Name','ADC Noise Sample Probablity');
bar(val, count, 1);
title('ADC Noise Sample Probablity');
xlabel('Raw ADC reading');
ylabel('Sample Probability');

f2 = figure('Name','ADC Noise Sample Probablity (Log)');
bar(val, count, 1);
title('ADC Noise Sample Probablity (Log)');
xlabel('Raw ADC reading');
ylabel('Sample Probability (Log)');
set(gca, 'YScale', 'log');
```

```
Mean Reading:
   8.1898e+03

Max Reading:
   8208

Min Reading:
   8175

Span of Readings:
   33

Std. Deviation of Readings:
    3.4353
```


ADC Noise Sample Probablity
Sample Probability
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
8175
8180
8185
8190
8195
8200
8205
Raw ADC reading

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