# Calibration of the Ocean spectrometer

```
%This section shows the calibration  of the ocean spectrometer using
 the
%calibration source.
Expected1 = [365.015
404.656
407.783
435.833
546.074
576.96
579.066
696.543
706.722
710.748
727.294
738.393
750.387
763.511
772.376
794.818
800.616
811.531
826.452
852.144
866.794
912.297
922.45];

Recorded1 = [367.11
406.46
409.60
438.41
549.29
578.51
580.62
697.97
708.17
716.22
728.82
739.84
751.76
764.92
773.91
796.22
802.32
812.81
827.80
853.51
868.20
913.49
923.72];
```

```
%Remember fluctuation of 0.2nm

Difference1 = Recorded1 - Expected1;
%This equation gives the delta between the expected values and the
%recorded values so that we can calculate the standard deviation.

Average = mean(Difference1)
Standard_derivation = std(Difference1)

Standard_error = Standard_derivation/sqrt(length(Difference1))
% This is the associated error on the average
```

```
Average =

    1.7920


Standard_derivation =

    0.9246


Standard_error =

    0.1928
```

*Published with MATLAB® R2020b*