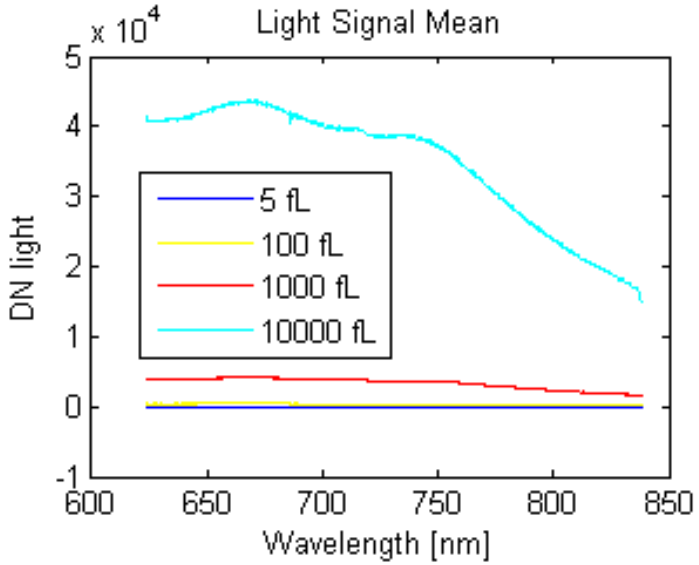
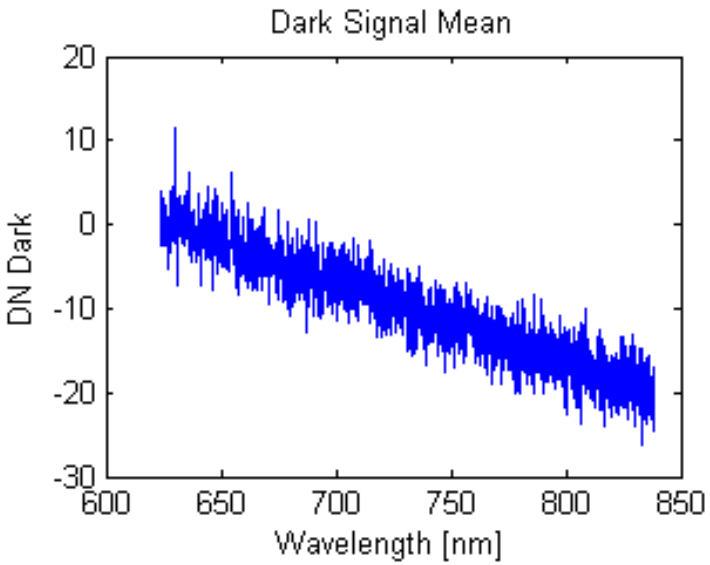
READ THE SPECTROMETER DATA DETERMINE THE MEAN VALUES, STANDARD DEVIATION, DC CORRECTION

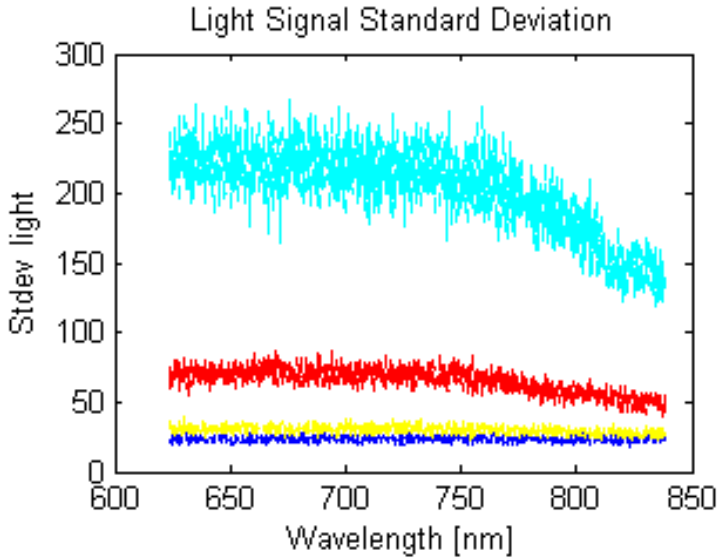
Objectives

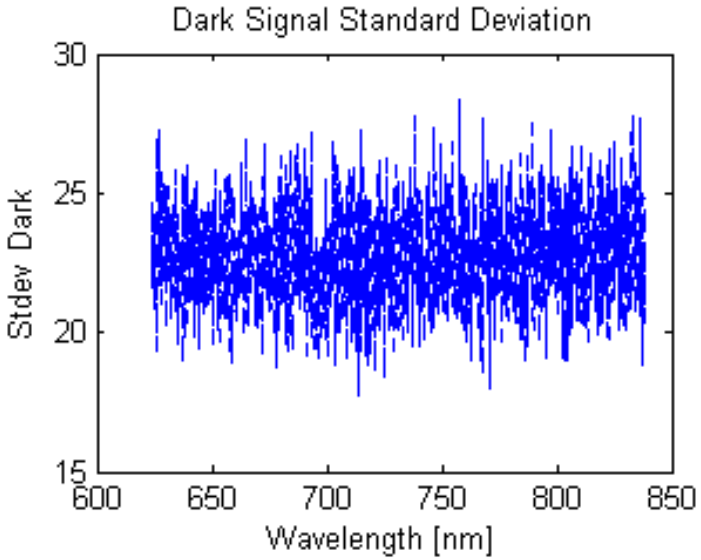
1) Read spectrometer data (excel data) → 100 scans when radiated at 4 different luminance levels
2) Calculate the mean value for the 100 scans for each luminance level
3) Calculate the standard deviation corresponding to the 100 scans for each luminance level
4) Read spectrometer dark noise data → 100 scans
5) Calculate the mean value for the 100 scans of dark signal
6) Calculate the standard deviation corresponding to the 100 scans of dark signal

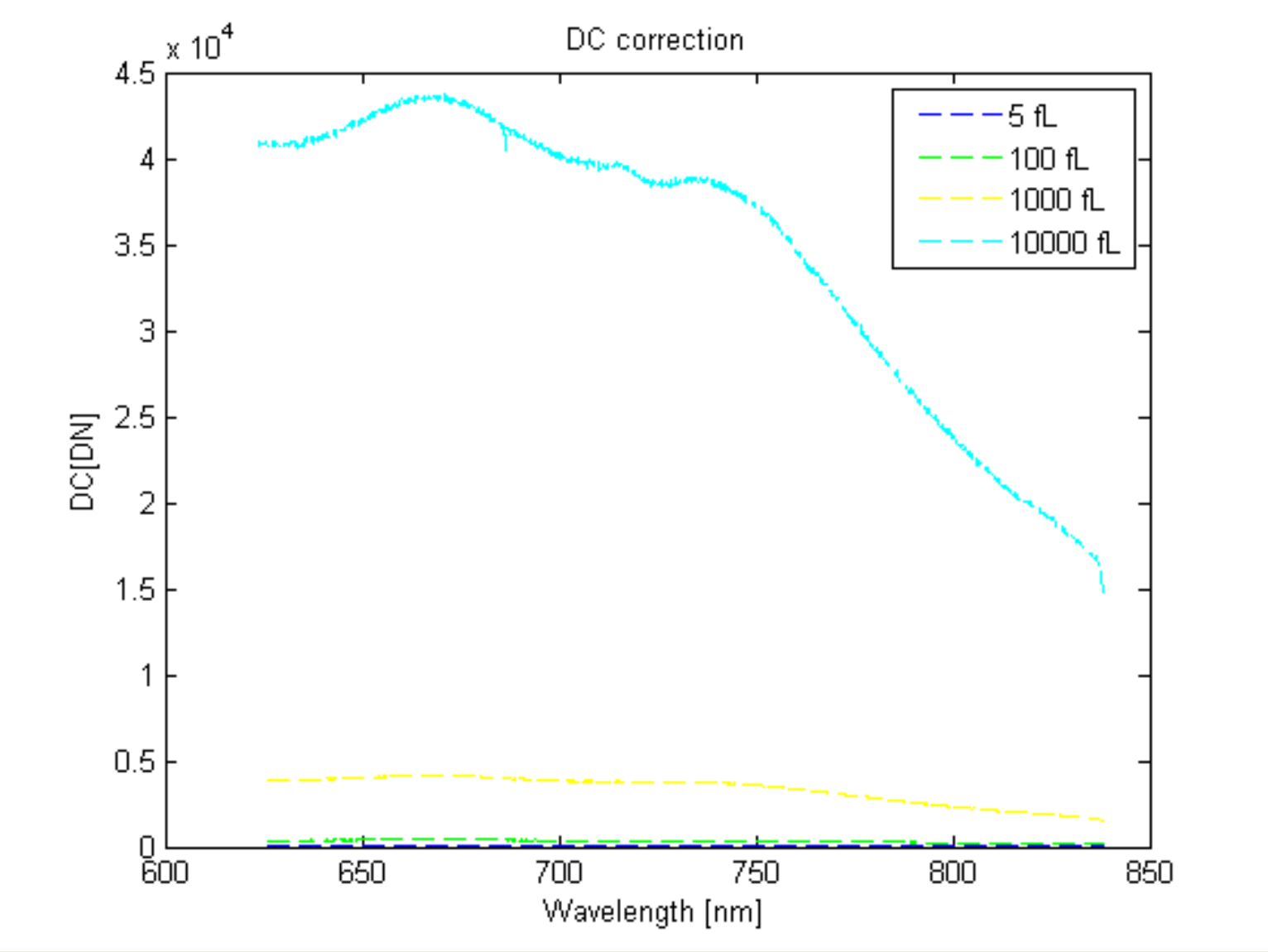
Plot data


Light Signal Mean
x 10^4
DN light
Wavelength [nm]
5 fL
100 fL
1000 fL
10000 fL


Dark Signal Mean
DN Dark
Wavelength [nm]


Light Signal Standard Deviation
Stdev light
Wavelength [nm]


Dark Signal Standard Deviation
Stdev Dark
Wavelength [nm]


DC correction
x 10^4
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
DC[DN]
600
650
700
750
800
850
Wavelength [nm]
5 fL
100 fL
1000 fL
10000 fL