**Data reduction in performing Anomalous Small Angle X-ray scattering (ASAXS)**

The steps required to properly reduce ASAXS data up to the point at which scattering components can be calculated directly are

1. Collect 2D images, monitor and photodiode counts of all the samples including air and standard samples like Glassy Carbon (if absolute scale is necessary)
2. 2D image to 1D azimuthally averaged data ->
3. Perform transmission correction and subtract air scattering ()

Transmission correction is done by dividing intensity obtained from sample, , by Transmission coefficient, , where () and ( ) are photo-diode and monitor counts of the sample and the air. The the transmission corrected data would be written as:

1. Perform background corrections

Subtract the Transmission corrected background data () from the transmission corrected data () obtained from your sample of interest

1. Calculate the calibration factor (CF)

At a particular energy CF can be can be obtained by using a standard sample like Glassy carbon by dividing the calibration data obtained from the Standard source and background corrected data

1. Multiply the background corrected data from the sample with the Calibration factor to put the data in absolute scale