Measuring the Differential cross section from experiments

$$\sigma = \frac{N}{L}$$

- Where N is the number of events observed in a time frame, and L is the luminosity of the detector.
- Luminosity is determined using a clean process, such as the Bhabha scattering. We then reverse engineer the Luminosity by using a cross section obtained from MC generators.
- This is not the full story, to obtain an inclusive cross section, more variables need to be accounted for. For example;

  Background events that may appear to be the event we wish to observe

  Also, the efficiency of detection, as some scatterings may not be captured.

I also learnt that $1cm^2 = 10^{24}$ barn