PHYS309 project dictionary

*[Note this is a working progress ☺ . Anything in pink is specifically relevant to the project (like data sets) while things in blue are terms used often and needs to be noted but aren’t specific to project (like a python library)]*

‘Measured data’ – Found in the [4lep folder](https://atlas-opendata.web.cern.ch/atlas-opendata/samples/2020/4lep/) as “Data/”, this refers to the data that is actually taken from collision experiments. In this folder, there is 4 ROOT files, Data A B C and D. In logs, I when I say ‘The Data’ branches in logs, it refers to all of these ROOT files.

‘Monte Carlo data’ - Found in the [4lep folder](https://atlas-opendata.web.cern.ch/atlas-opendata/samples/2020/4lep/) as “MC/”, refers to the simulated data of these experiments. Contains ROOT files of specific collisions and decays and these files contain the same branches (variables) as the ‘Measured data’.

‘lep\_pt’ – The variable which is the leptons’ transverse momentum.

‘lep\_E’ - The variable which is the leptons’ energy.

‘lep\_phi’ – The variable which shows the azimuthal angle of the leptons (symbol- φ)

‘lep\_eta’ - The variable which shows the pseudo-rapidity (the angle of a particle relative to the beam axis) of the leptons (symbol - η)

‘Branch’ – A subsection in a ROOT file. In my project’s case, a branch would be a variable of the collision, and the branch will contain datapoints on that variable.