**Code Documentation**

Analysis of NA62 data is done within an analyser class which has access to the detectors and candidates. A custom analyser class called “Spectro” was created for the analysis of Monte-Carlo data of. The “Spectro” analyser class has the following member functions:

* **Constructor** – The constructor initialises the analyser via an abstract base class called “Analyzer” and also requests the ROOT trees required for the analysis.
* **InitOutput**
* **InitHist** – Histograms needed for the analysis are dynamically created and registered with a call to BookHisto(), this stores the histogram in an external map provided by the Analyzer base class.
* **DefineMCSimple**
* **StartOfRunUser**
* **StartOfBurstUser**
* **SaveAllPlotsPDF** – The Spectro class provides this extra member function which is not provided by default analysers. This function is called within DrawPlot() and writes every histogram registered with BookHisto() as a pdf file.
* Process – This is where the main analysis is done. The process function is called once per event over the number of events input to the analyser when run.
* **PostProcess**
* **EndOfBurstUser**
* **EndOfRunUser** – This function runs after the process function has been called for the last.
* **DrawPlot** – This function saves all the histrogram plots within a ROOT file called outFile.root as well as calling the SaveAllPlotsPDF() function. The user must use the –g option when running the analyser for this function to run.