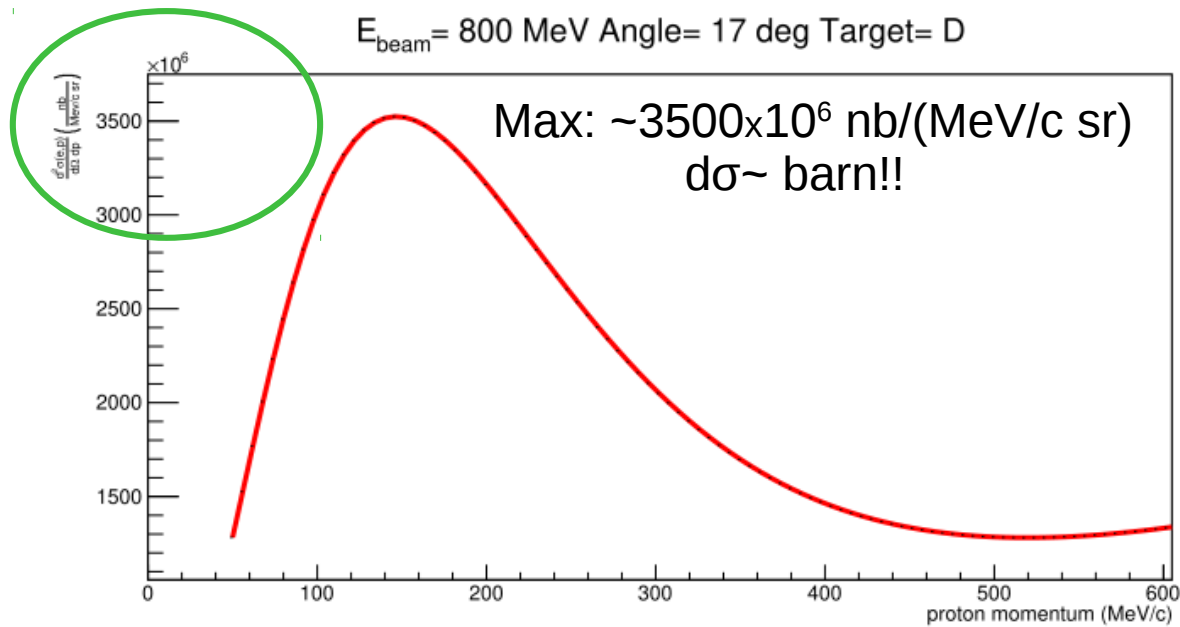


- Photo disintegration Cross-section
- Quasi-elastic cross section (EPC.f – Rondon version)
 - Modified as a function to be called by C++
 - First was a standalone program
 - C++ wrapper to read and plot EPC.f output
 - It showed some issues with the Deuterium spectrum



Comparison Carbon, from the paper to my output

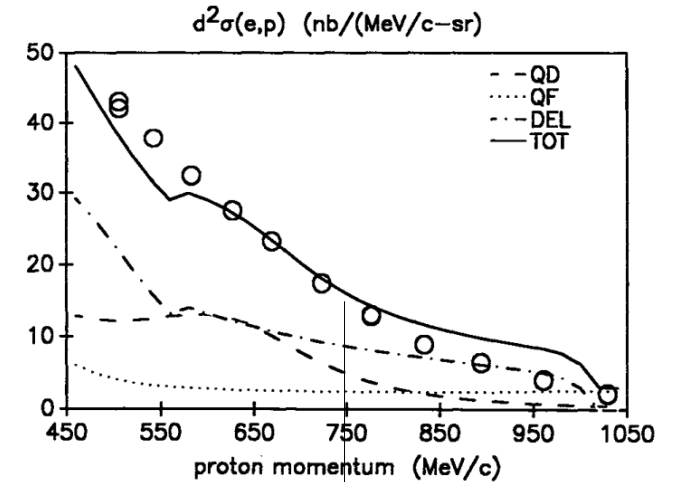
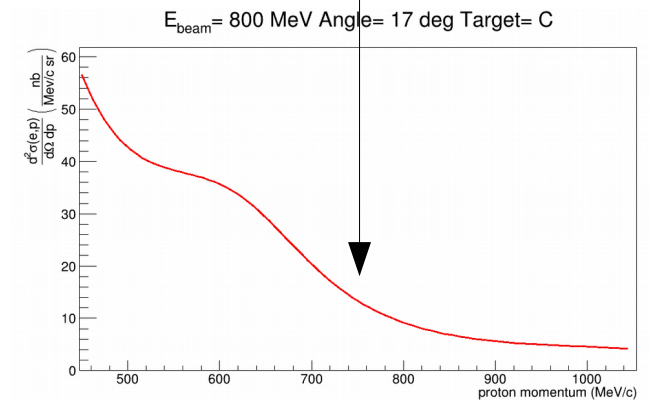
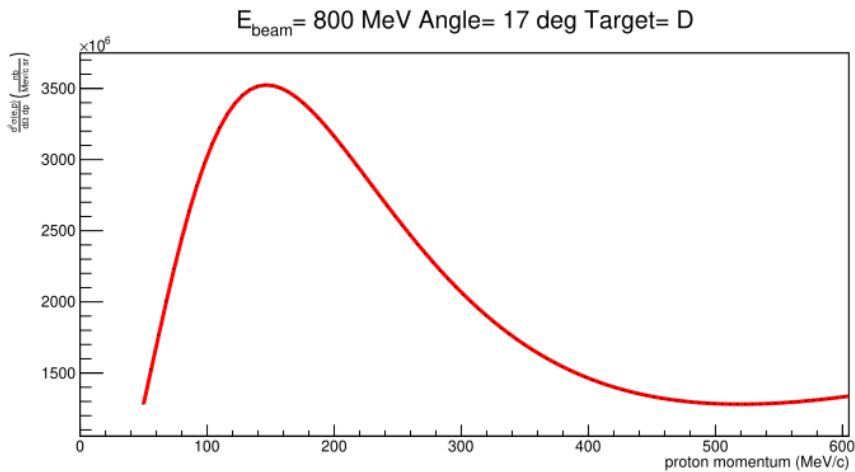


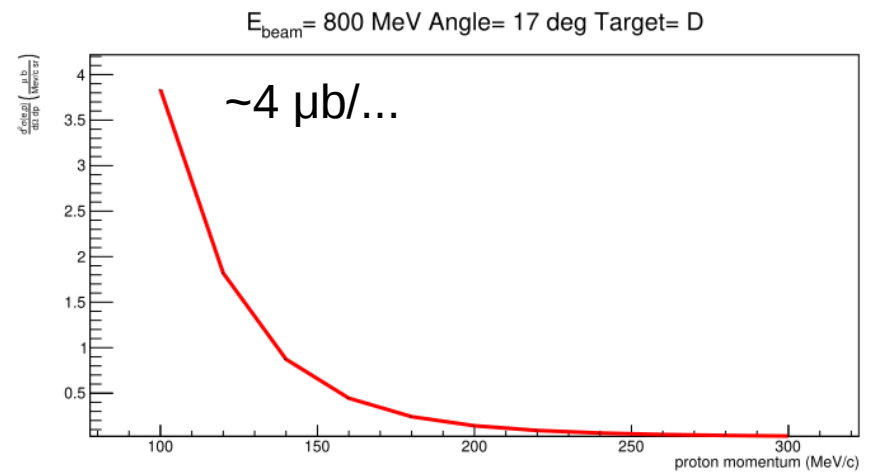
FIG. 8. Comparison of the EPC model with data¹⁴ for a proton momentum spectrum at 17 deg for 800 MeV electrons on carbon.



After cross checking with Dipangkar and test in other computers, we found it was a compiler issue:



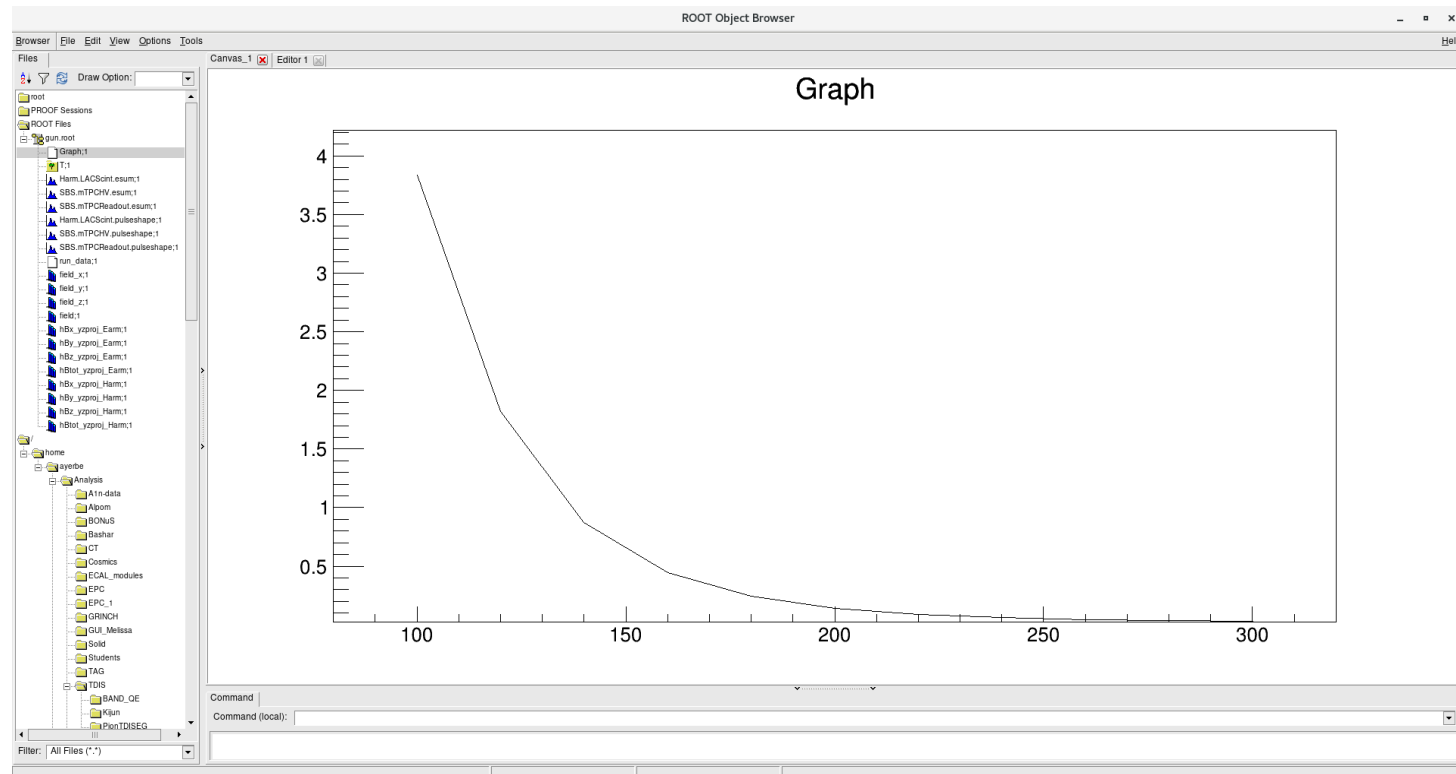
gcc 8.1



gcc 4.9

With the function under control, it took some time to understand how to plug it into the simulation and compile it with **CMake** (Hive Mind was not useful in this case).

Screen shot of the epc.f function stored in the **g4sbs** roottree



There were also some debugging time with the method to store the variables into a rootfile (thanks to Eric who took time to check the problem)

Present status:

- New class (G4SBSTDISGen.cc/hh). Implementing all the possible reactions, with its own particle generator.
 - I will mimic the generators already present (advice from Eric, Andrew and JC).
- **Tim Hobbs** and **Patrick Barry**, they provided a very simple code to compute Sullivan process and contributions to the $e+n \rightarrow p + e' + X$ process (in fortran and python respectively).
 - Need to study how convert them into a function (arguments to pass, and what to return, mainly).
- DIS2020 canceled, MAYBE remotely sessions...