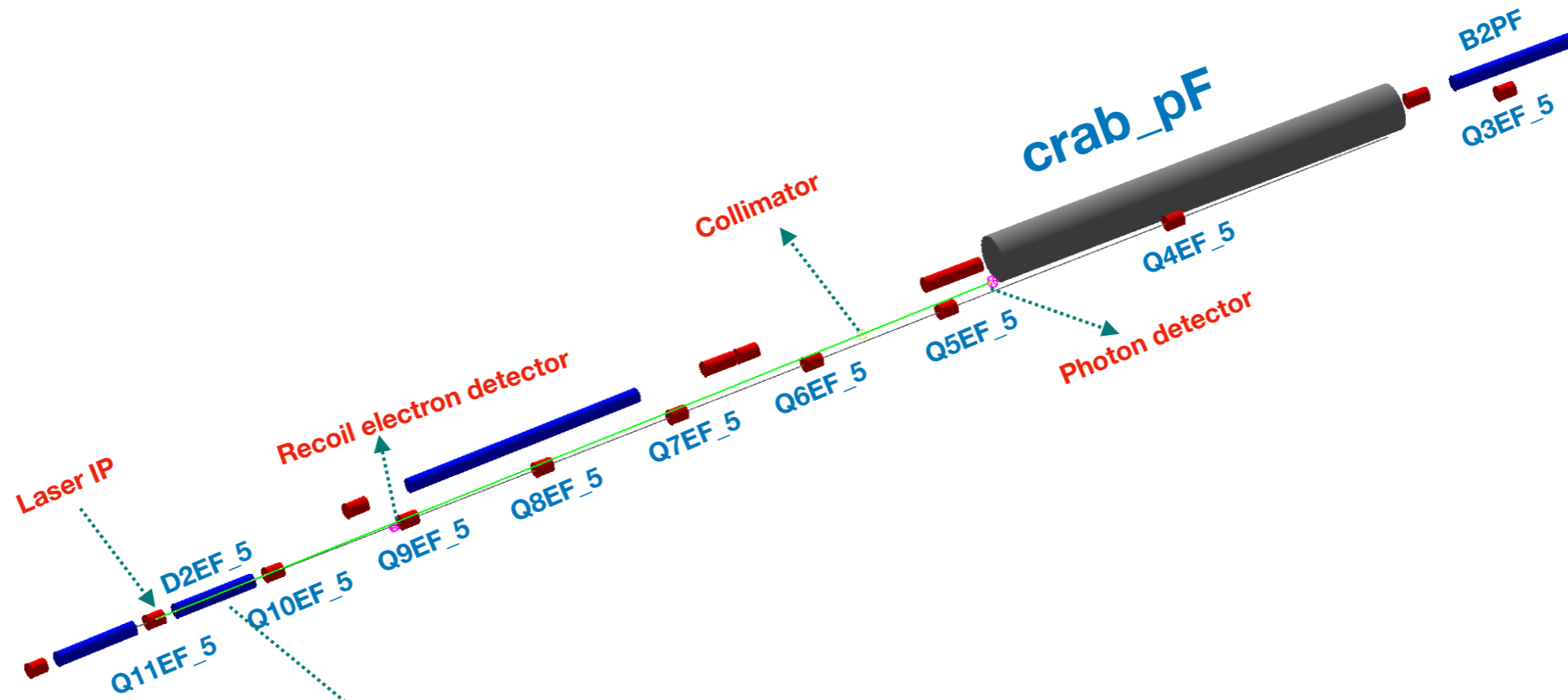

The Compton polarimeter in IR6

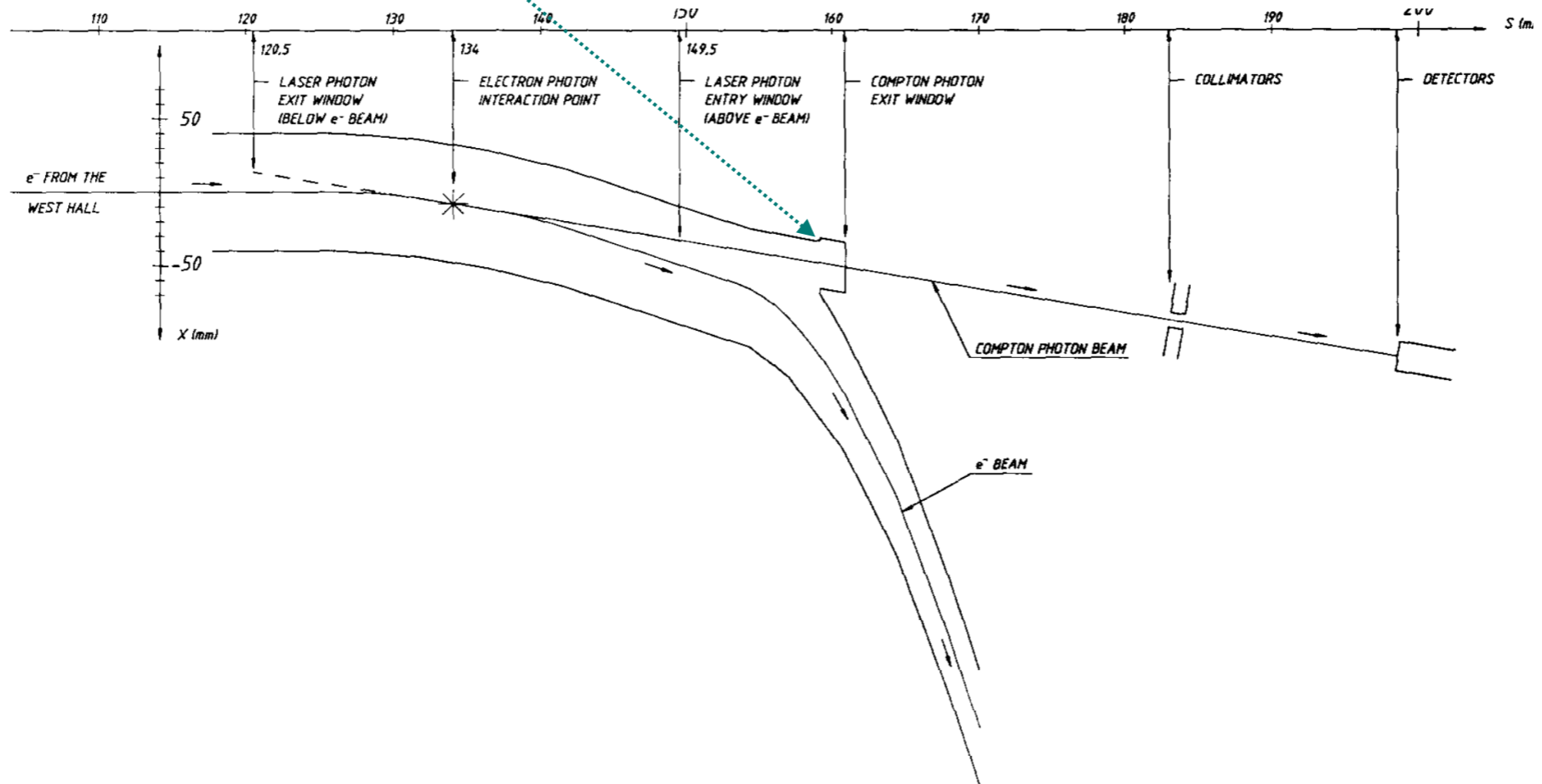
—update of the exit window and the recoil electron asymmetry

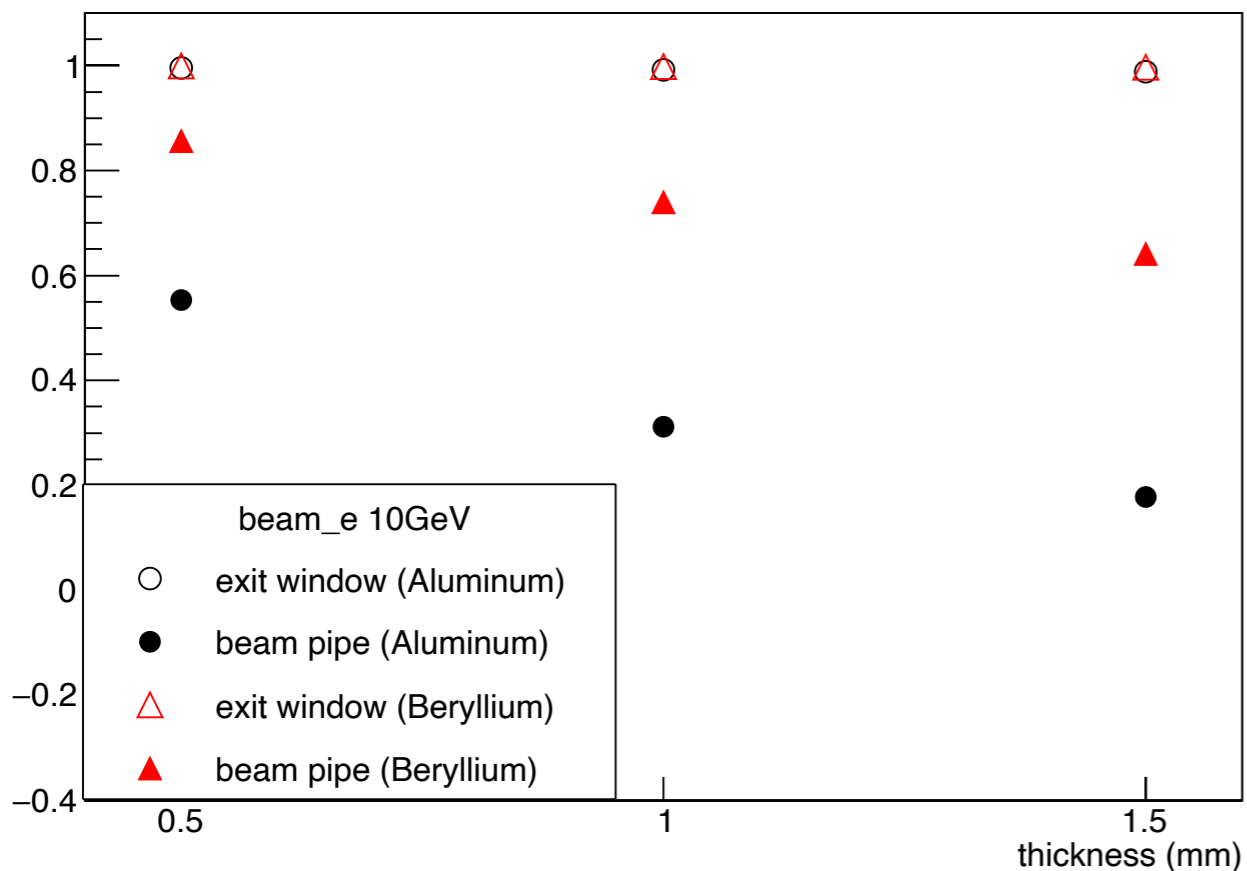
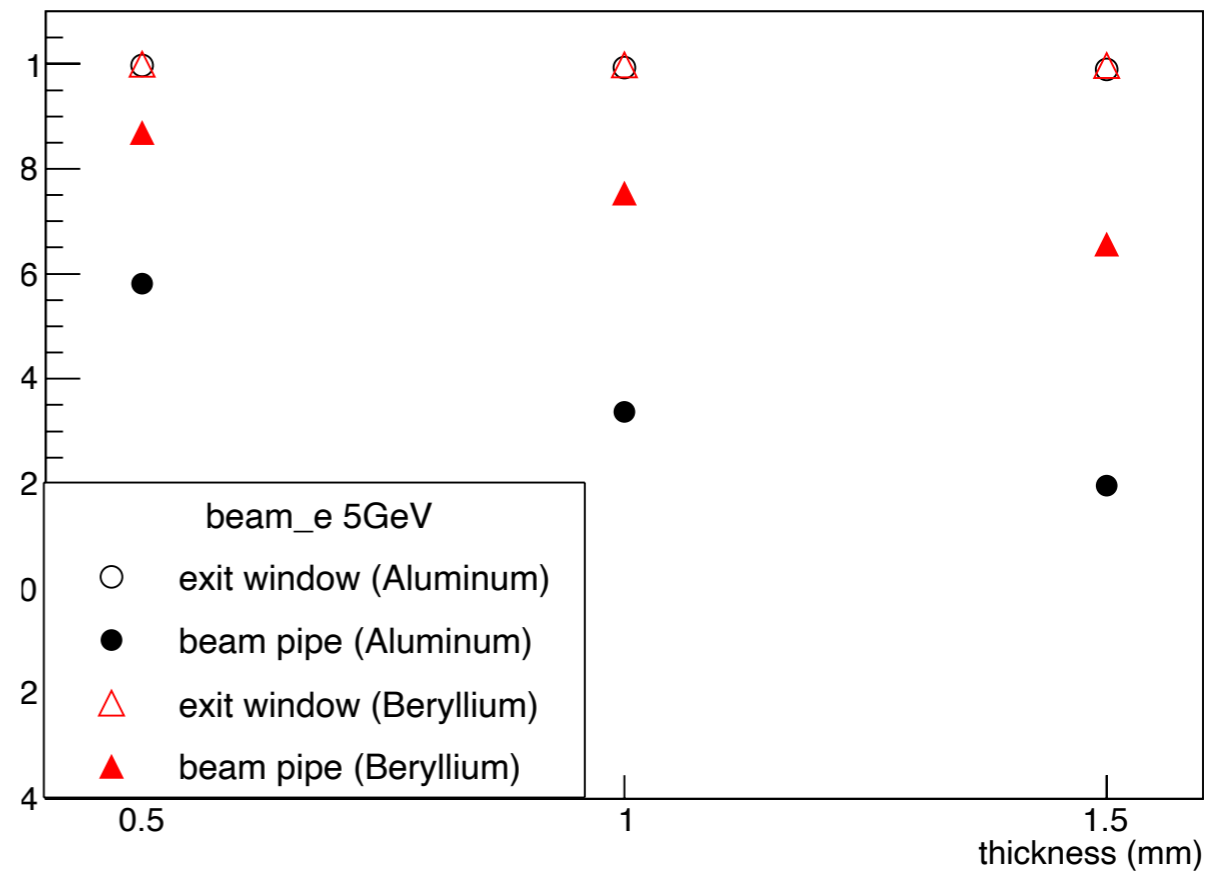
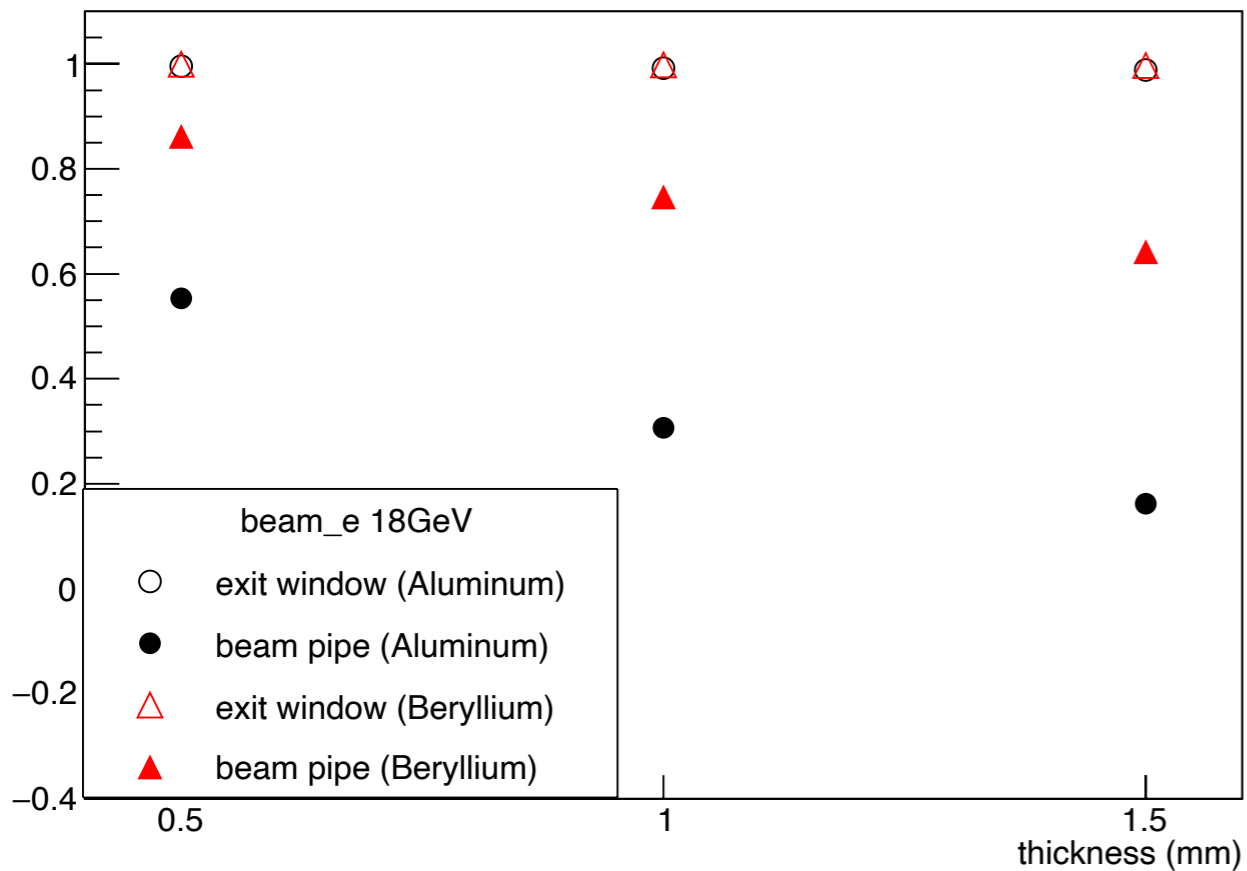
Zhengqiao Zhang
BNL

Exit window for scattered photons



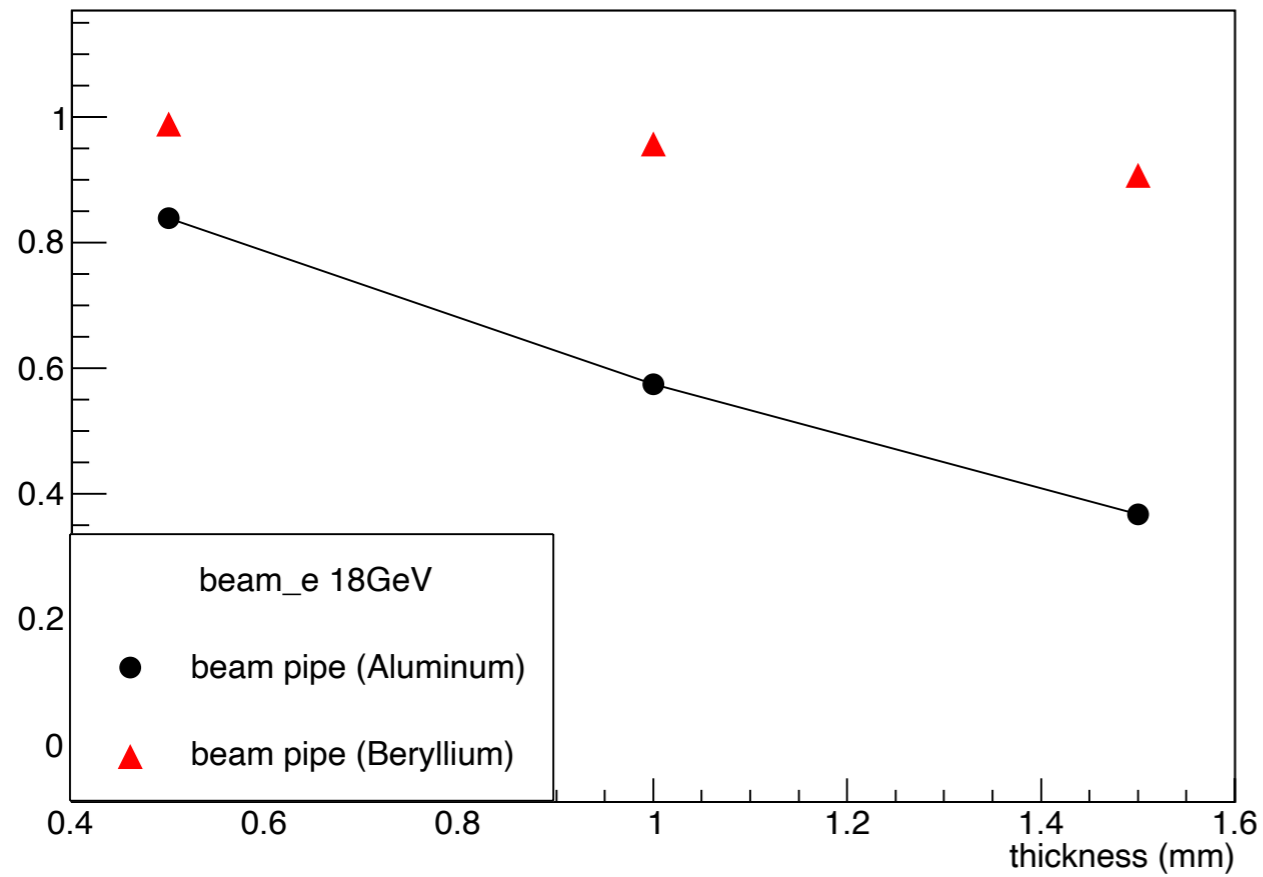
Exit window



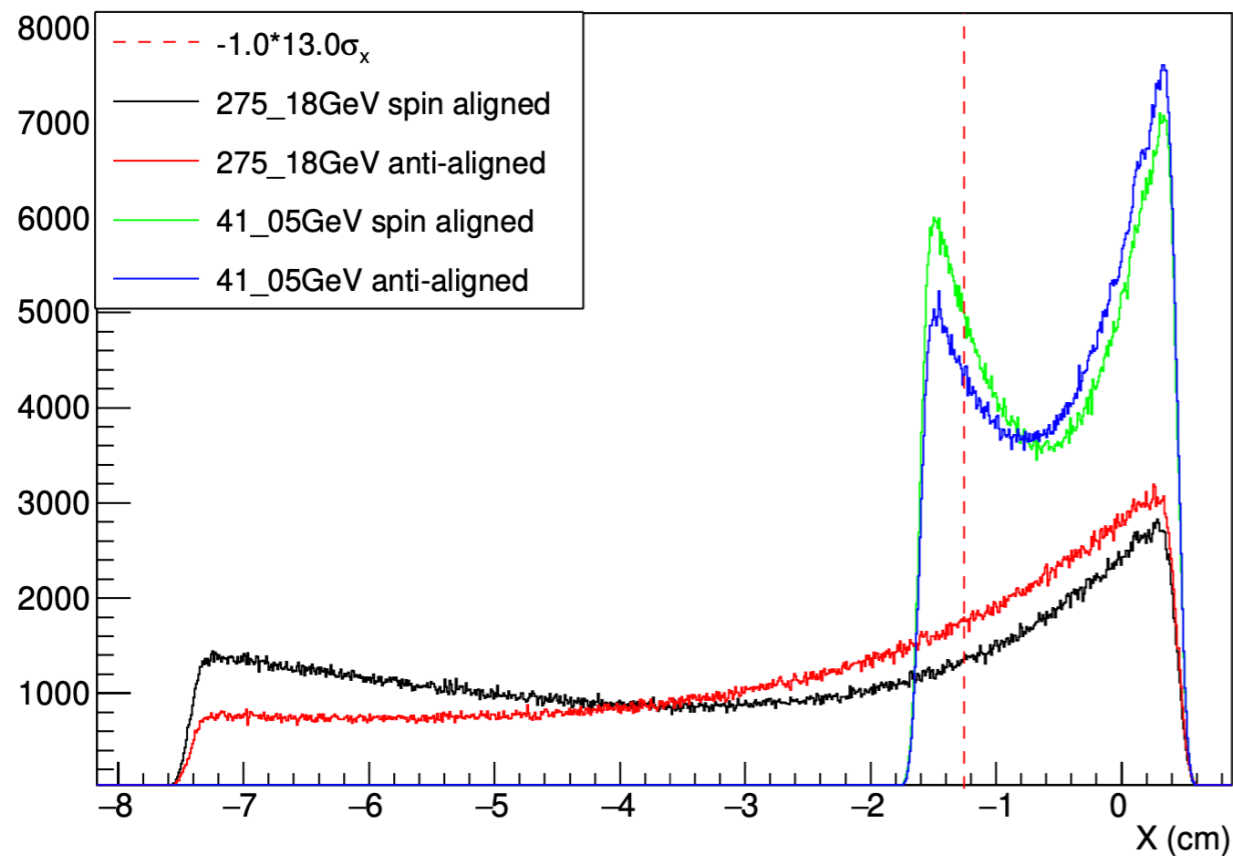


The exit window is near the center of the dipole. It is perpendicular to the scattered photons. The exact geometry is not decided yet. It would like the HERA design. The exit window can significantly improve the acceptance.

Beam pipe effect for scattered electrons

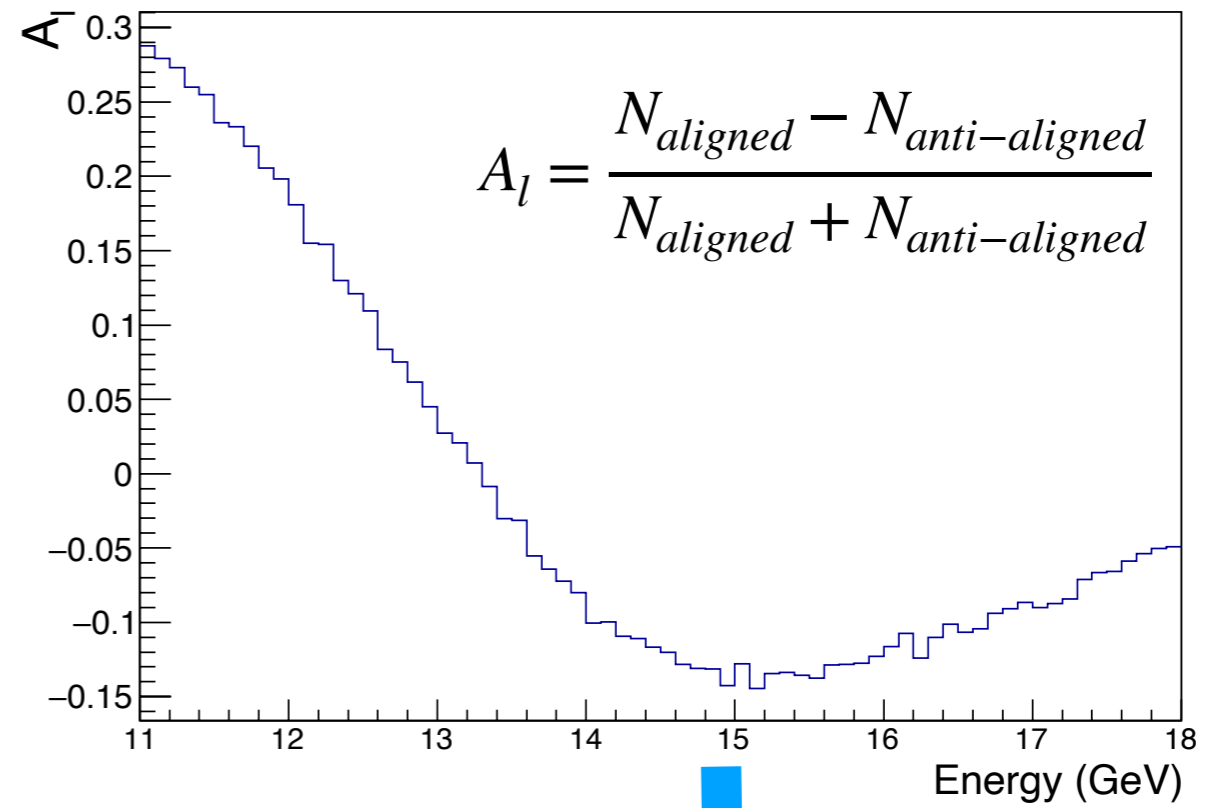
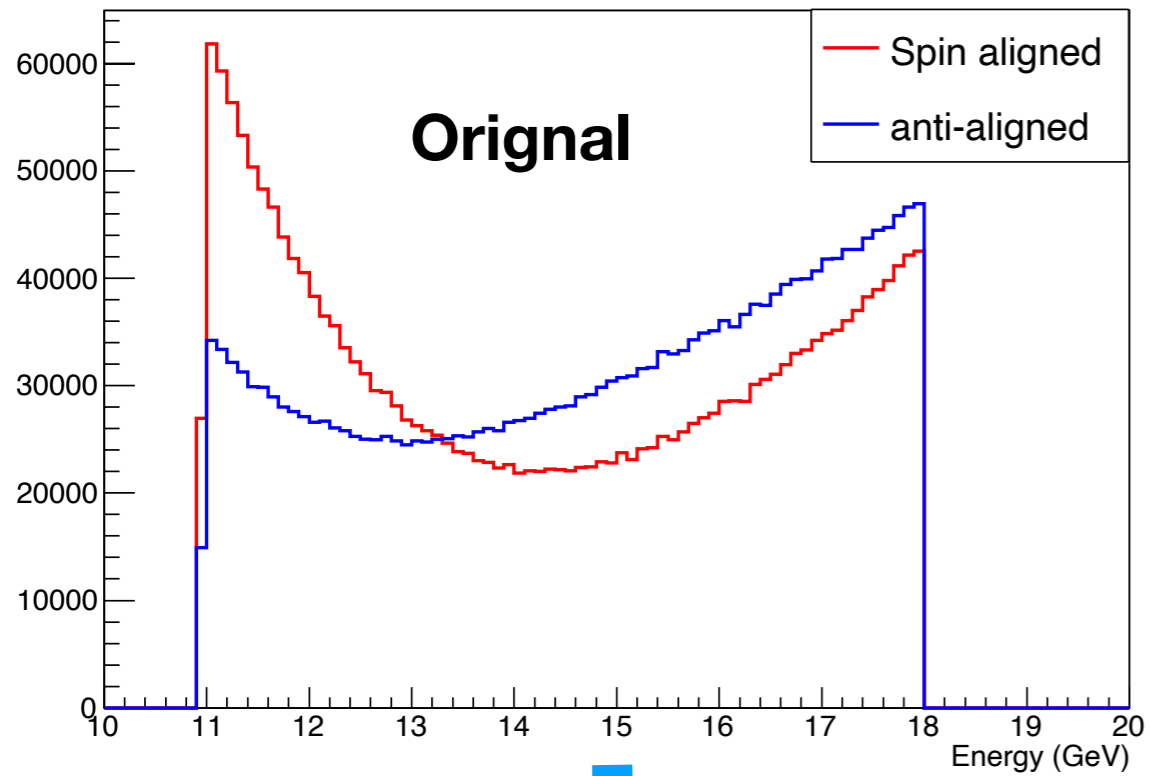


The exit window is not necessary if we can use Beryllium 05mm thickness (~98% acceptance) beam pipe.

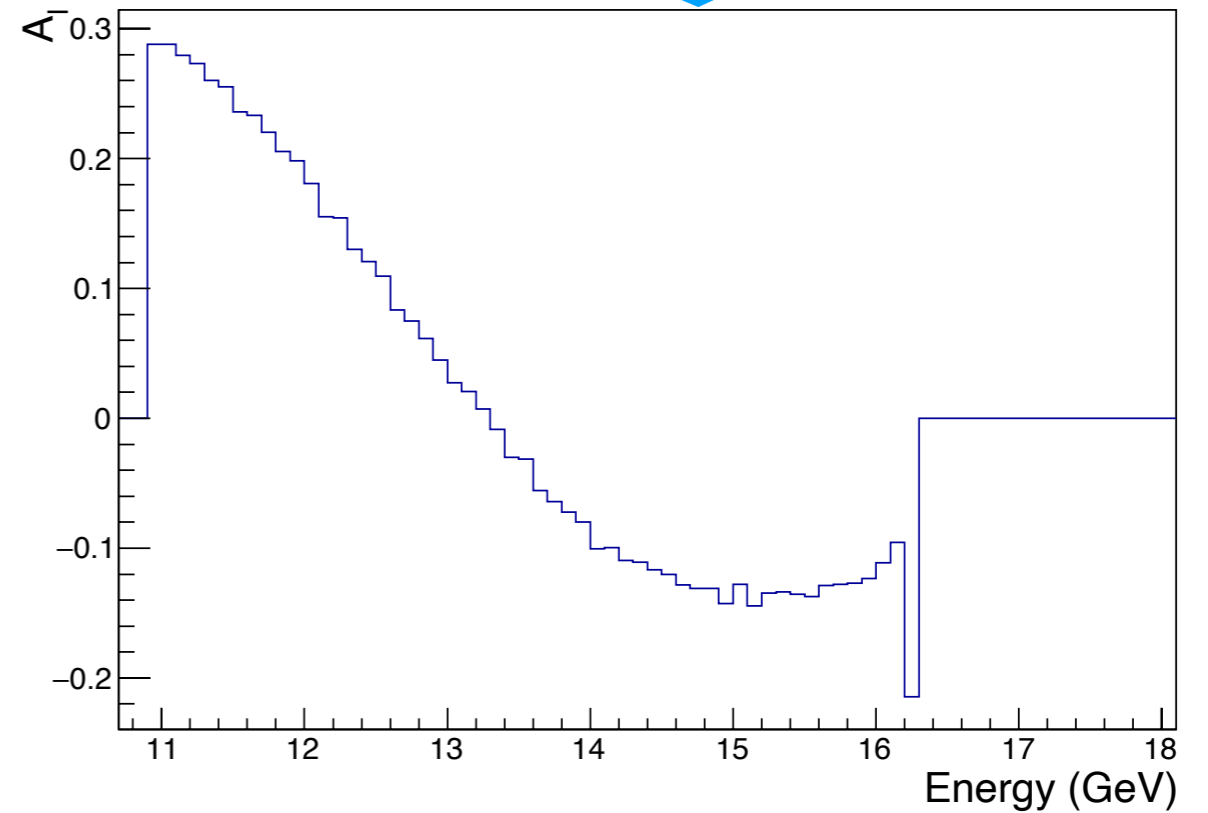
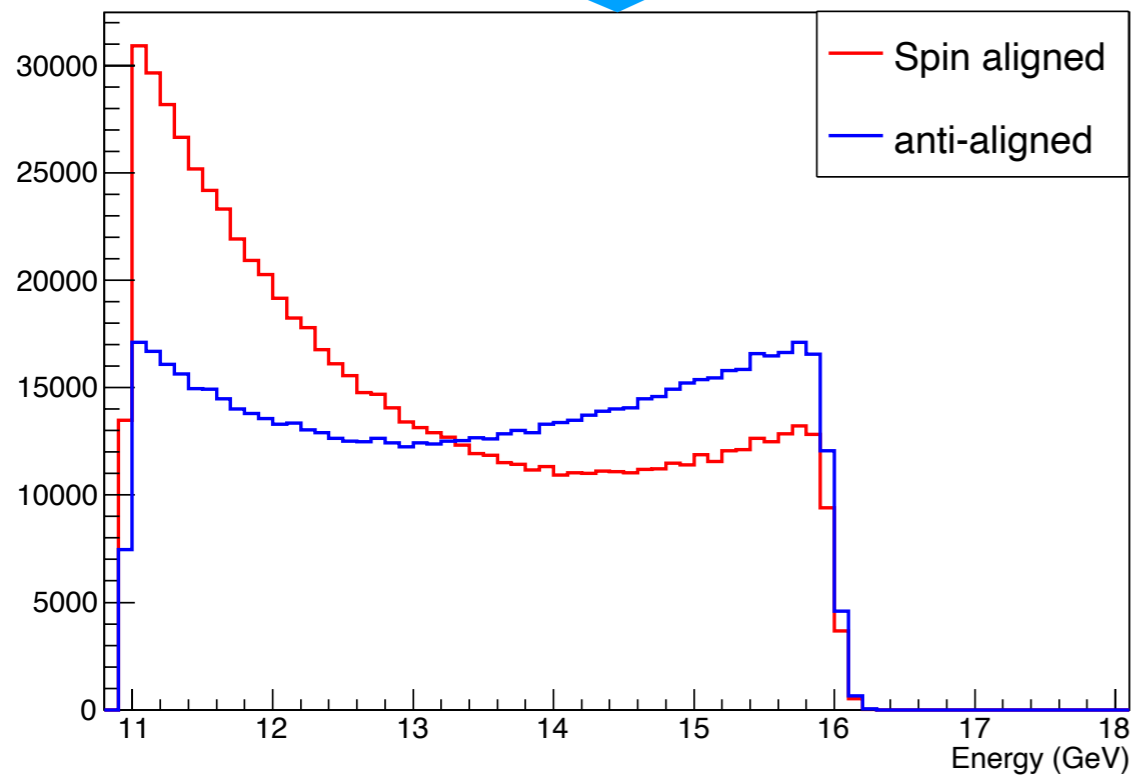
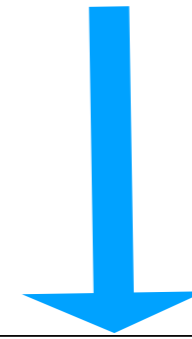
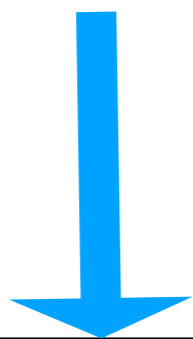


The same study is being conducted for other energies.

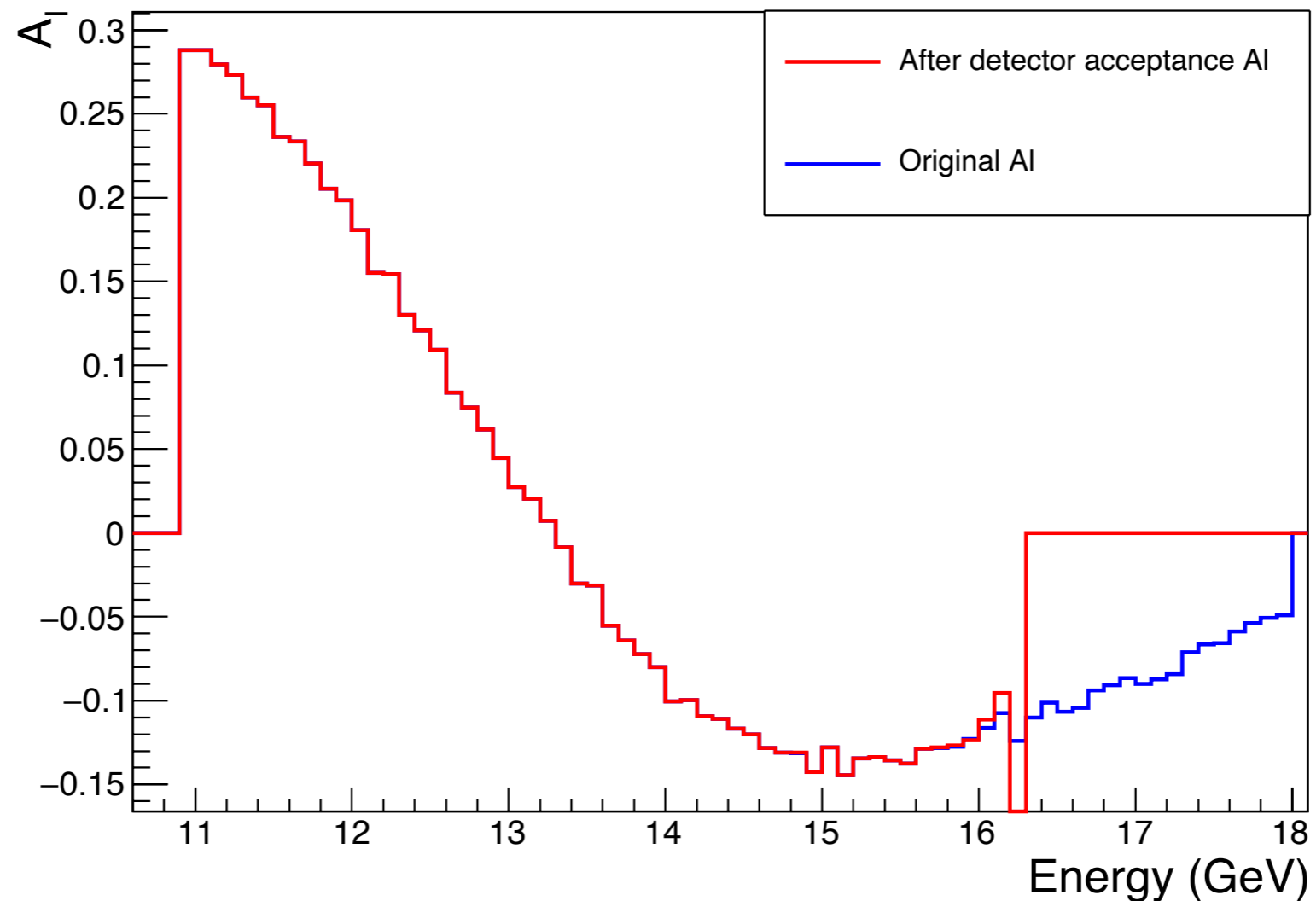
Asymmetry for recoiled electrons



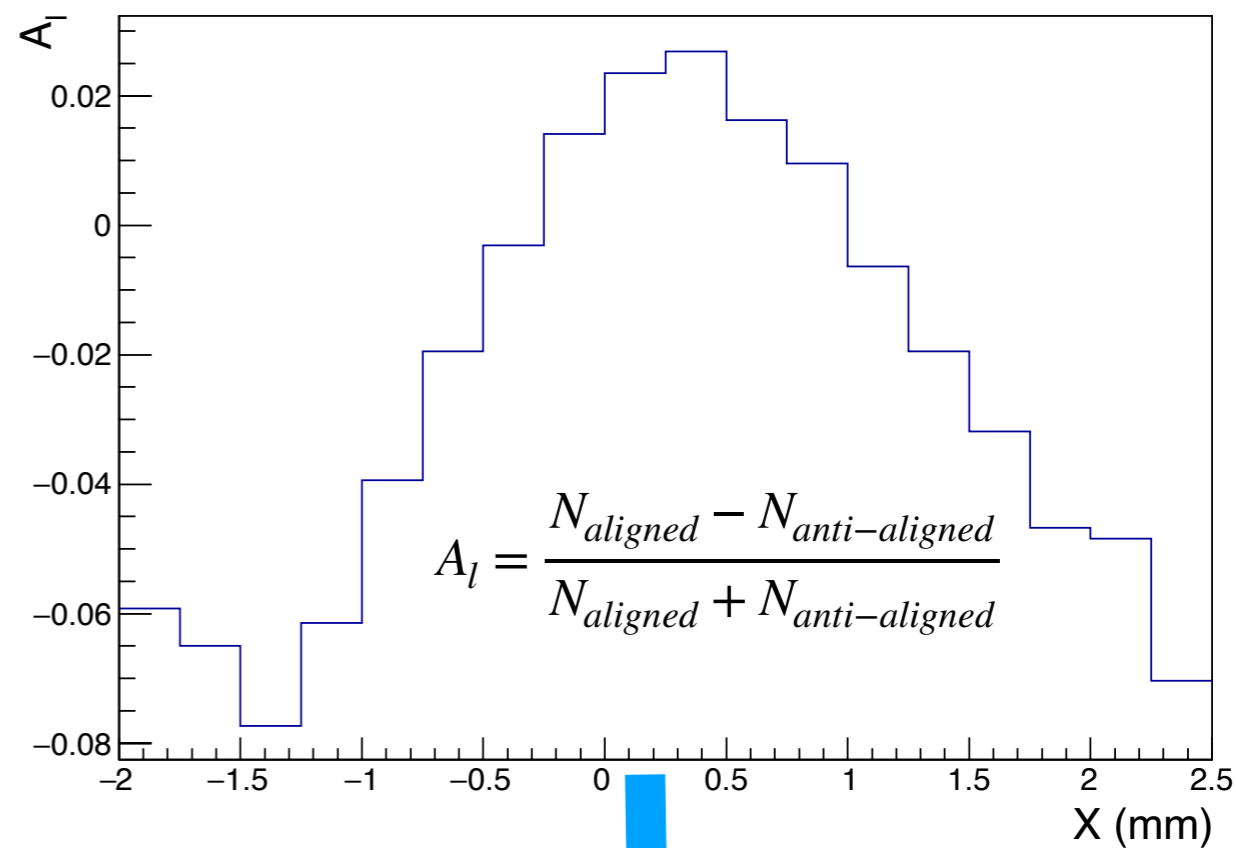
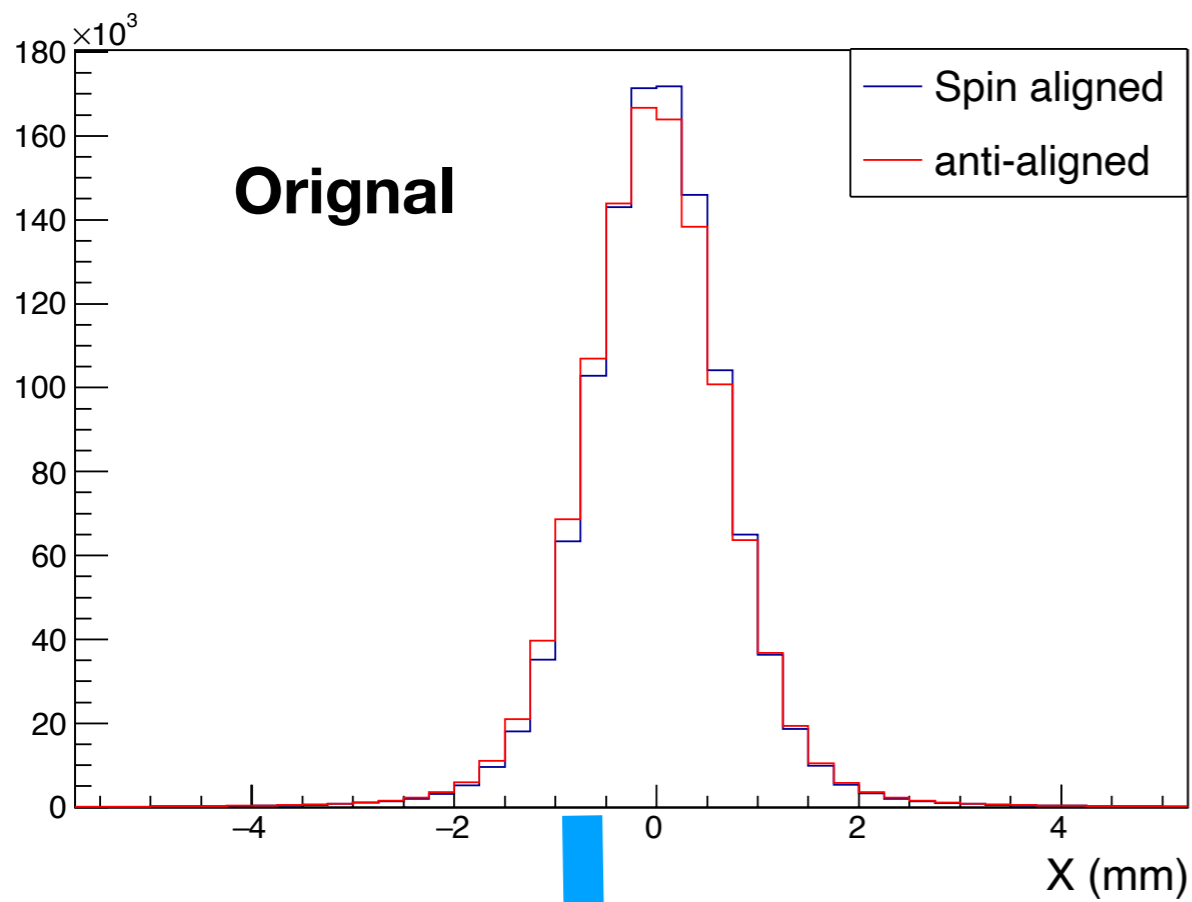
Detector acceptance



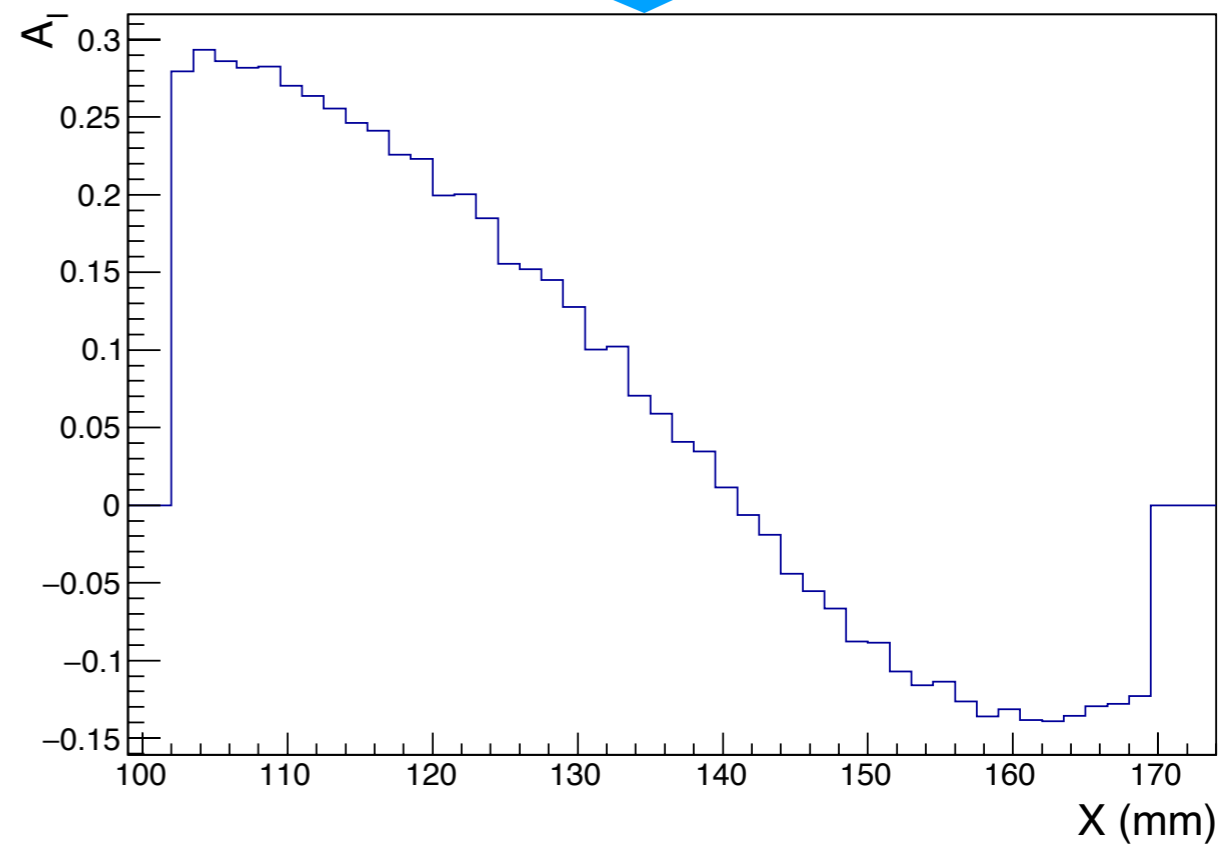
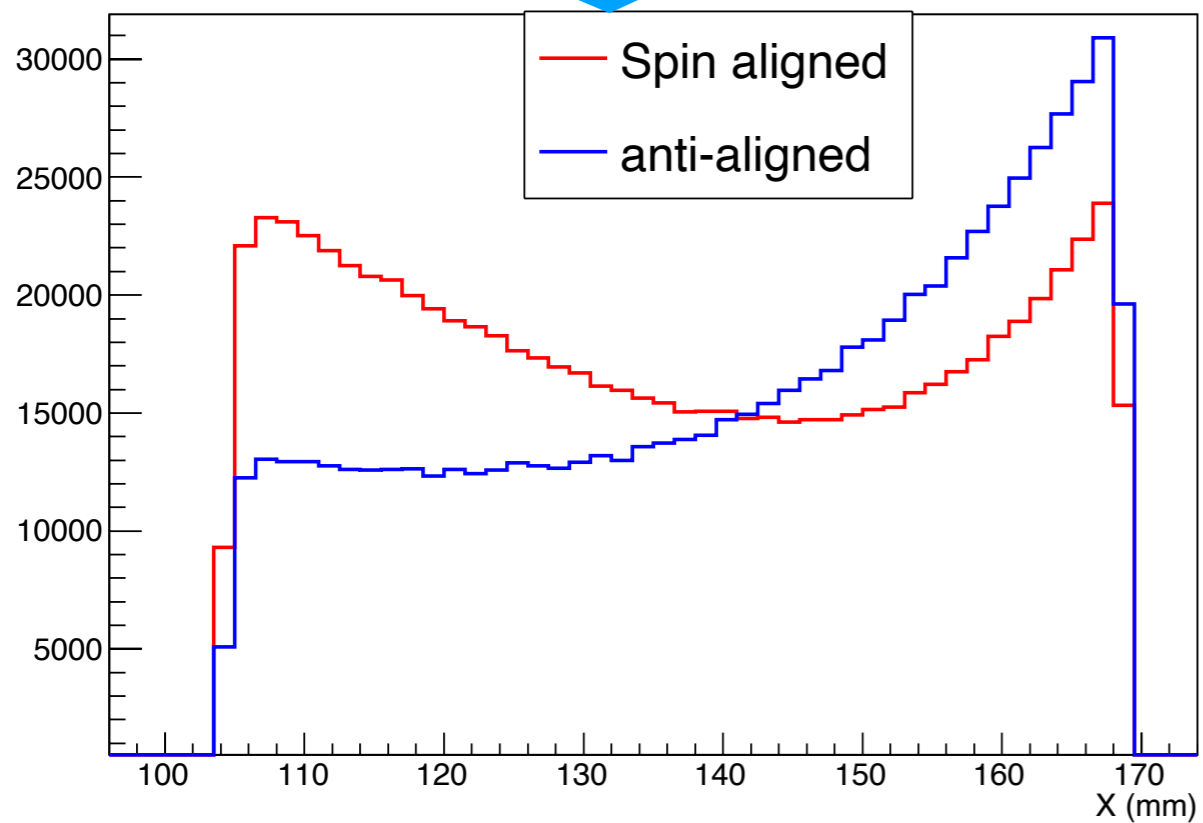
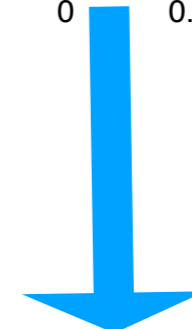
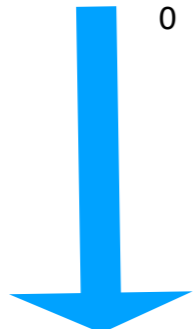
Original asymmetry and after detector acceptance asymmetry



The study for the asymmetry after the beam pipe effect is ongoing, I would not expect too much change if we use Beryllium 05mm thickness beam pipe.



Detector acceptance



Thanks!