CUSP GEANT4 status

Giovanni De Cesare February 21 2024

Items lists

Done (results stored in the shared Google Drive GEANT4CUSP)

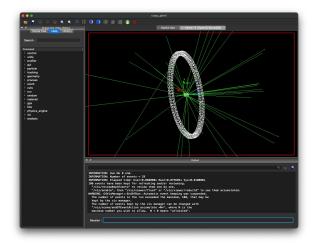
- a) Basic tests of the Monte Carlo code
- b) github repo organized with a directory (*send_box*) for user contribution (to avoid conflicts)
- c) Parallel 60 keV beam with 100 % polarized and unpolarized photons
- d) Comparing unpolarized physic list with polarized with $p = (0,0,0) \rightarrow same results$, as expected
- e) Point like 60 keV beam impinging on one detector (see the screenshot)
- f) <u>Toy model (qdml integration)</u> (see the Google Drive toy model folder and this presentation)

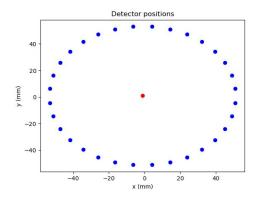
To Do

- a) Detailed tracking
- b) Test of different physics list (as suggested by Riccardo)
- c) Better organization of the archive and data (file naming, fit header, etc...)

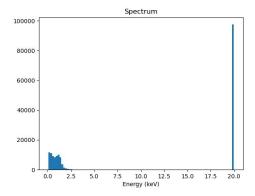
Toy model integration

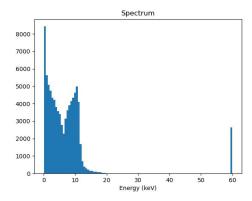
- Toy model v1,2,3 events data release (one for each detector position on Google drive)
- Quick look
- Data analysis



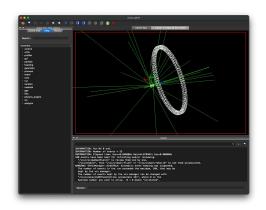


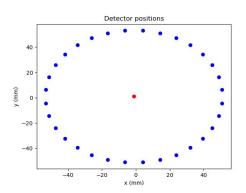
90 degree scattering (v1)

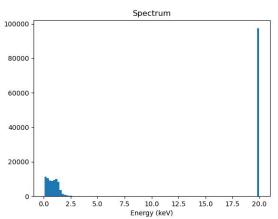


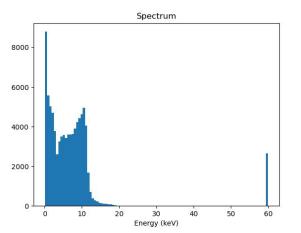


Forward scattering (v2)









Backward scattering (v3)

