Update on the Compton Model 8/18

G. Blume

Old Dominion University
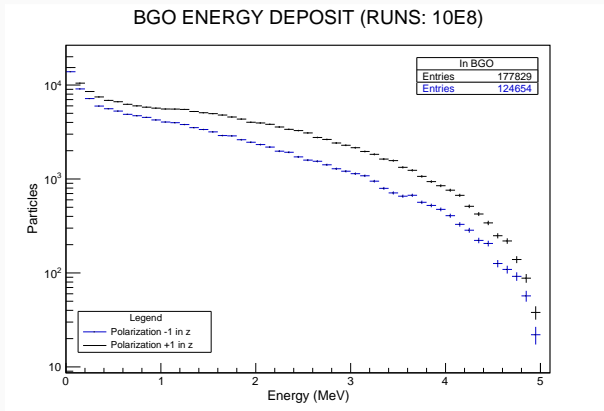
August 18, 2022

Current Points
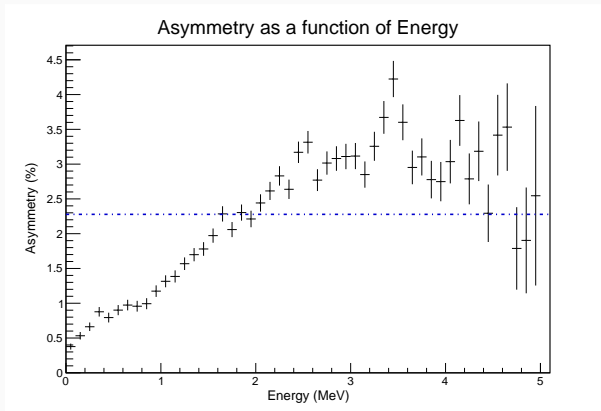
- Asymmetry
- Using the farm
- Geometry hierarchy
- sh files

Jefferson Lab

- Produced plot for asymmetry data for 1 billion runs

BGO ENERGY DEPOSIT (RUNS: 10E8)

In BGO	
Entries	177829
Entries	124654

Legend
Polarization -1 in z
Polarization +1 in z

Particles

Energy (MeV)

Jefferson Lab

- Produced plot based on the asymmetry data for shown previous

- Joe previously mentioned I should look at something with the form <Asym> = Integral(Asym*Number)/Integral(Number)
- This number is the number of xrays in each bin
- However, we have to different spectra being used to produce the asymmetry (+/- polarization)
- Should I be scaling by the average?
- I use the asymmetry in decimal form not percentage
- I tried this and got just a value (as expected)but nothing I am super excited to see (.016)

Jefferson Lab

- Everything seems to be working as expected after the conversation Joe and I had the other day
- I made a technote detailing how I get code to run on the farm
- Test run did 1 billion runs in 6 hours as opposed to 16 hours for my computer
- I am not sure I am using it to its full capability... it doesn't seem all that more efficient
- Results are of the expected form (Not attached because they are the same as shown prior

Jefferson Lab

- This doesn't seem to have an impact on the result but I keep getting a few "stuck" particles
- Essentially, for 1 billion runs I will have like 10-20 particles get this stuck notification
- It occurs at the lip of my B-Field
- They self correct in time but has anyone had this issue previously?
- It only happens on the farm

Jefferson Lab

- I have been working on writing an sh file with the help of Sami to automate my runs.
- Preliminary tests are working but it is still in progress, just wanted to update

Jefferson Lab