Heep Analysis

- Analyzing the KaonLT and PionLT experimental data at low Q^2 (0.5, 0.38 and 0.42 GeV^2).
- Currently working on the single and coin heep studies from the KaonLT data.

Single data:

$$\text{Experimental Yield} = N * PS/\varepsilon_{tot} * Q_{tot}$$

Coin data:

$$\text{Experimental Yield} = N/\varepsilon_{tot} * Q_{tot}$$

SIMC Normalization:

In this case, I made **weighted plots** to compare the experimental yield.

Weight = weight * normfact / genevents.

I ran all simc input files for **200,000** events.

Cut Information (HMS):

H_hod_goodscinhit == 1 && H_hod_goodstarttime == 1&&H_dc_InsideDipoleExit == 1

H_gtr_dp>=-8.0 && H_gtr_dp<=8.0
H_gtr_xptar>= 0.08 && H_gtr_xptar<=0.08
H_gtr_yptar>=-0.045 && H_gtr_yptar<=0.045

H_cer_npeSum >=0.5 && H_cal_etotnorm >=0.8 && H_cal_etotnorm <=1.2

W <=1.0