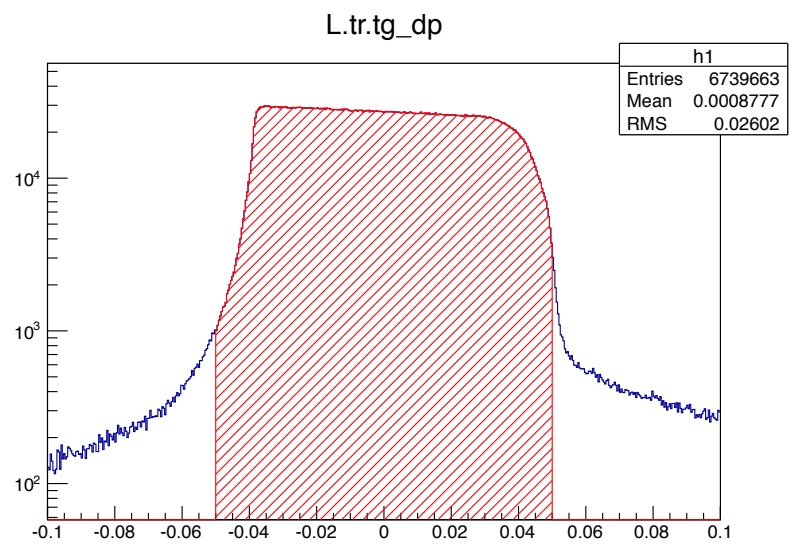
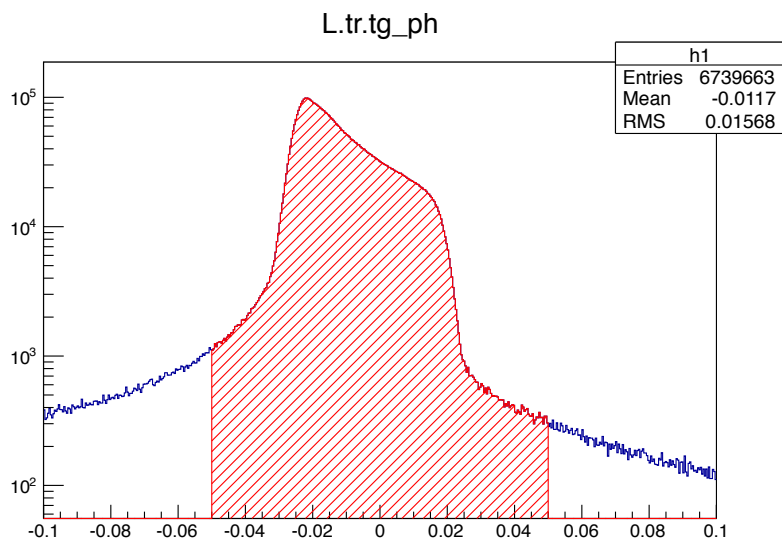
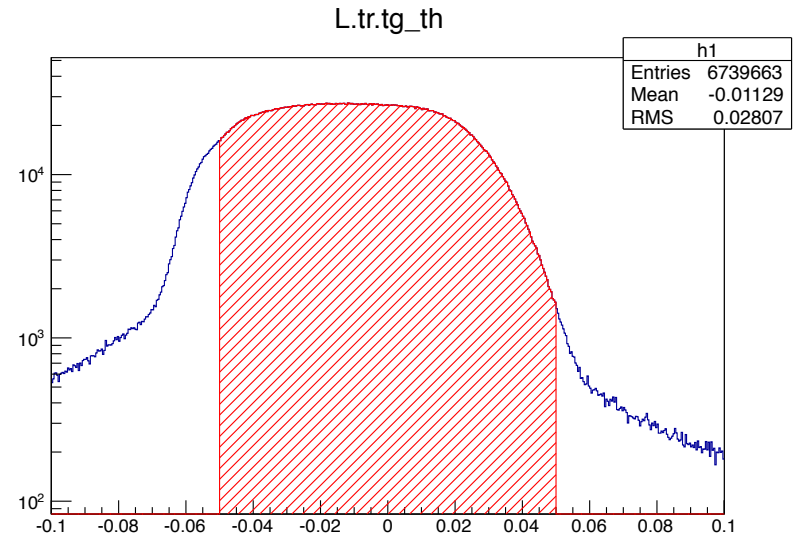
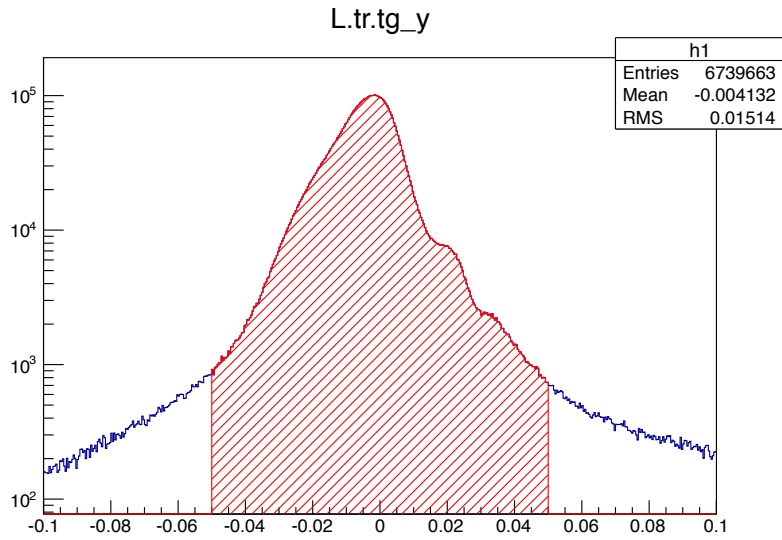


Raw Asymmetries

Melissa Cummings

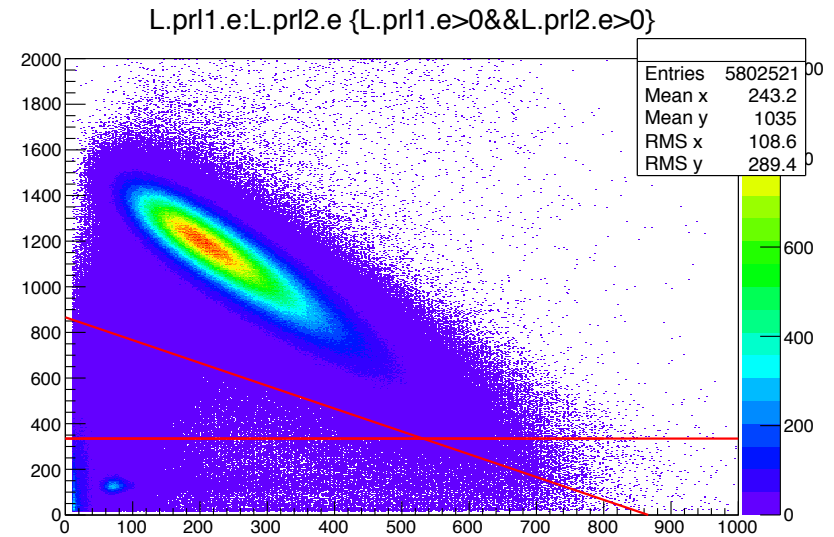
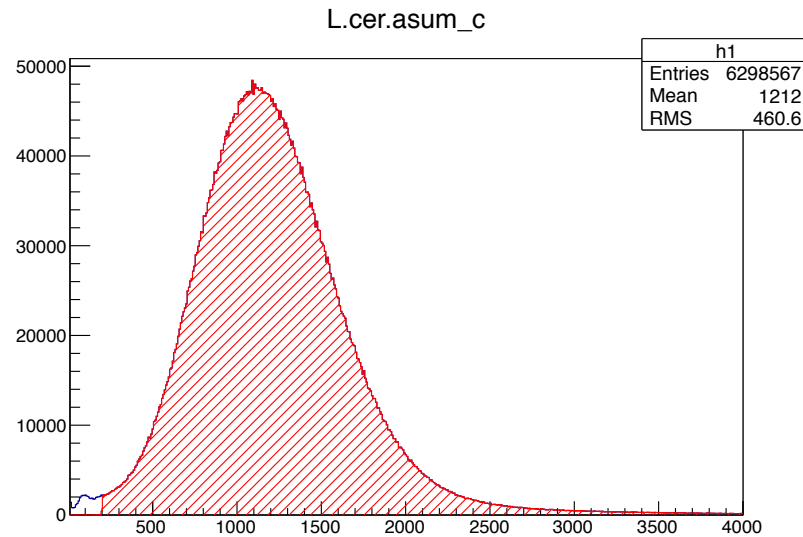
07/10/13

Acceptance Cuts



run 5839, E = 2.2 GeV, p0 = 1.468 GeV/c, Target Field = 5T, Longitudinal

PID Cuts



Also Cut On:

- Event Type (T3 for LHRS)
- Single Track Events
- One Cluster in VDC

run 5839, E = 2.2 GeV, p0 = 1.468 GeV/c, Target Field = 5T, Longitudinal

Method

$$A_{raw} = \frac{N^+ - N^-}{N^+ + N^-} \quad \leftarrow \text{Sorted into 50 MeV nu bins}$$

$$EA_{raw} = \frac{2}{(N^+ + N^-)^2} \sqrt{\left(N^+ \sqrt{N^-}\right)^2 + \left(N^- \sqrt{N^+}\right)^2}$$

↓ Summed over all runs in a setting

$$A_{raw_tot} = \sum_i \frac{A_{raw_i}}{(EA_{raw_i})^2}$$

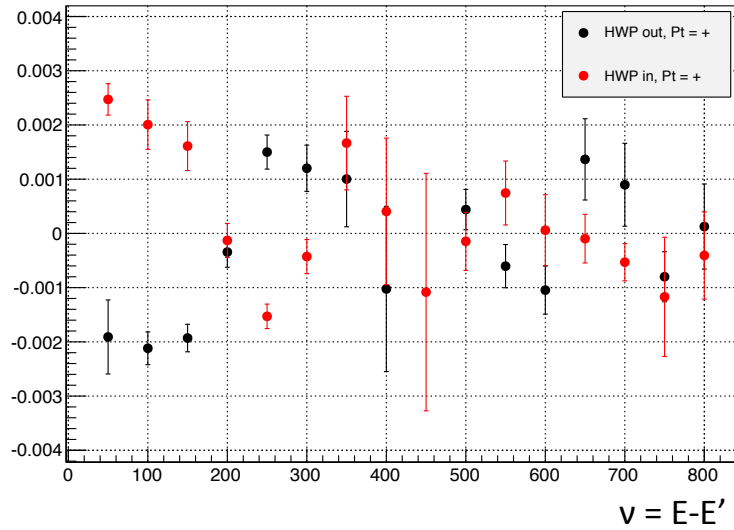
$$A = \frac{A_{raw_tot}}{A_{raw_weight}}$$

$$A_{raw_weight} = \sum_i \frac{1}{(EA_{raw_i})^2}$$

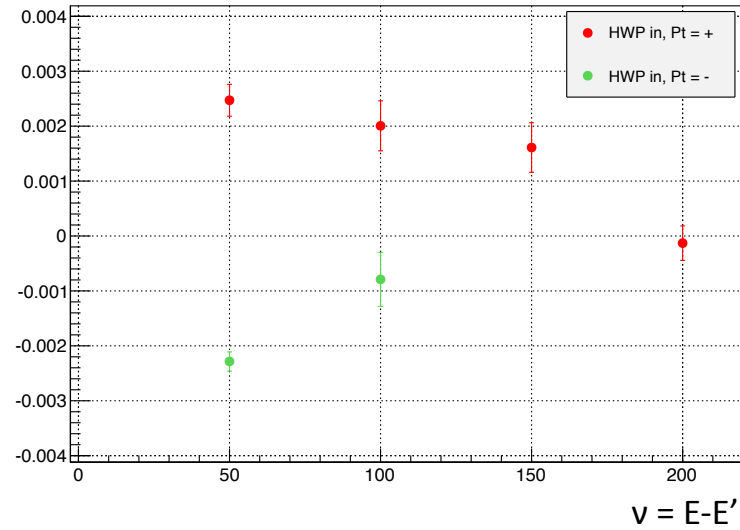
$$E = \frac{1}{\sqrt{A_{raw_weight}}}$$

Sign Checks

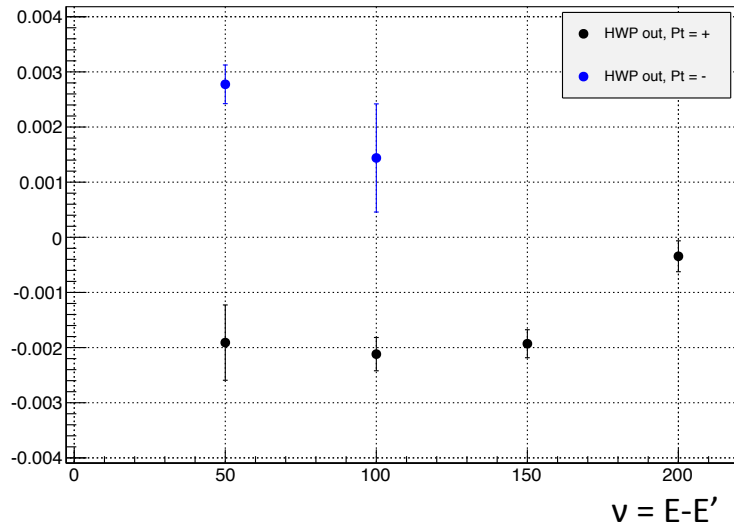
Raw Asymmetries, E = 2.2 GeV, 5T Target Field, Longitudinal



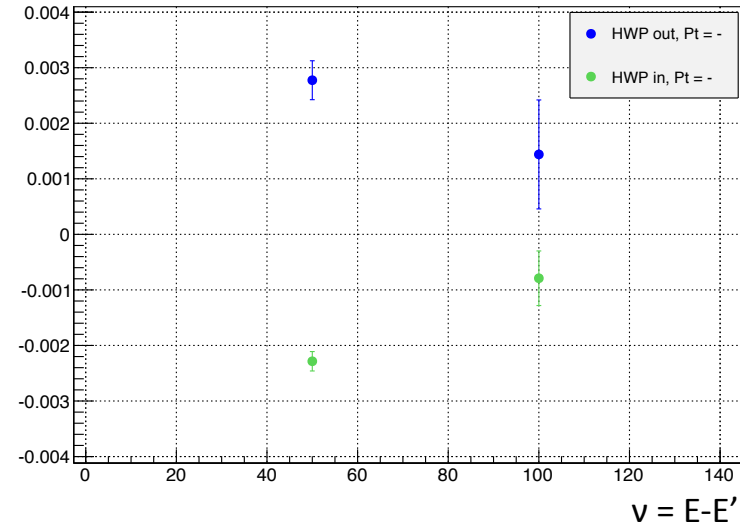
Raw Asymmetries, E = 2.2 GeV, 5T Target Field, Longitudinal



Raw Asymmetries, E = 2.2 GeV, 5T Target Field, Longitudinal

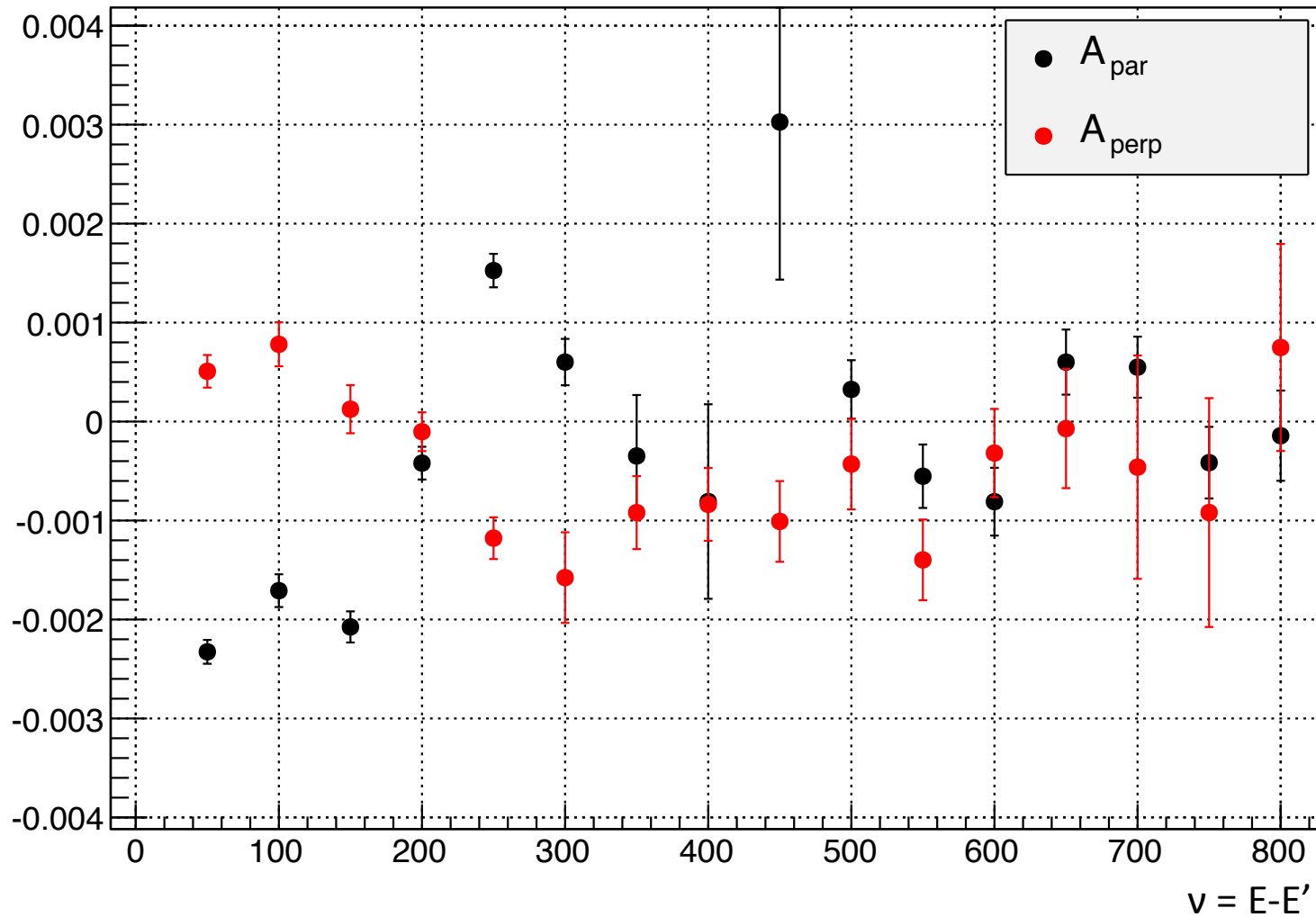


Raw Asymmetries, E = 2.2 GeV, 5T Target Field, Longitudinal

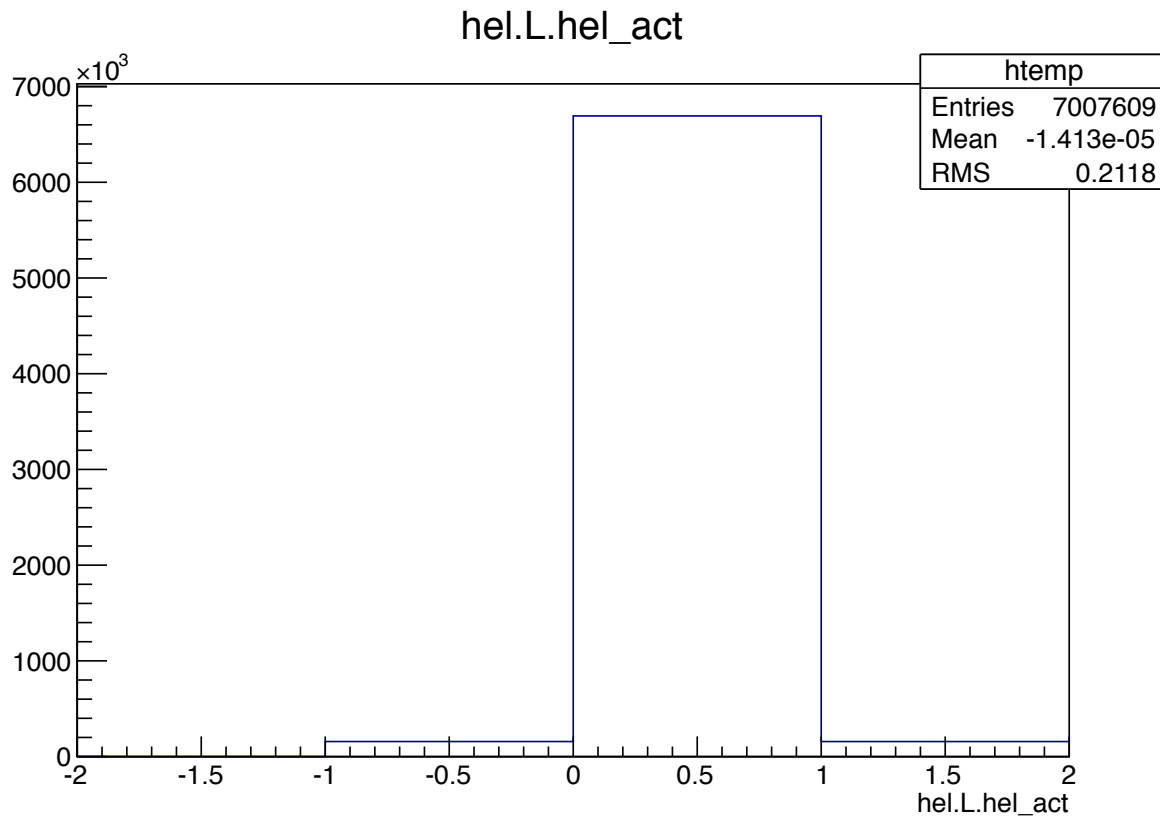


Asymmetries

Raw Asymmetries, $E = 2.2$ GeV, 5T Target Field



The Problem...



Of the 268 runs I
looked at, 208
have this issue.