

Raw Asymmetries

Melissa Cummings

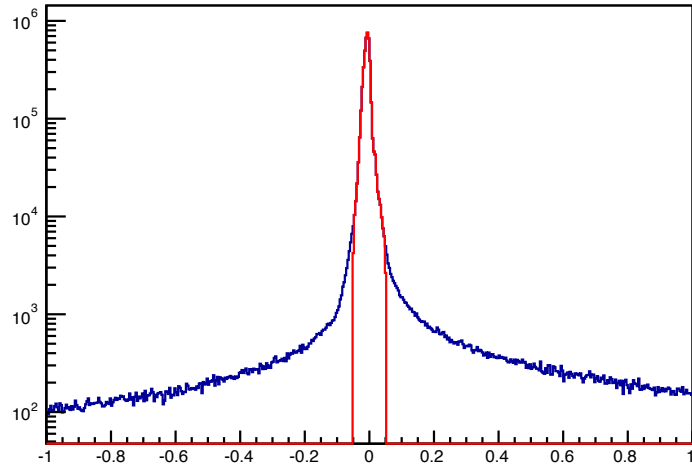
08/07/13

For Today

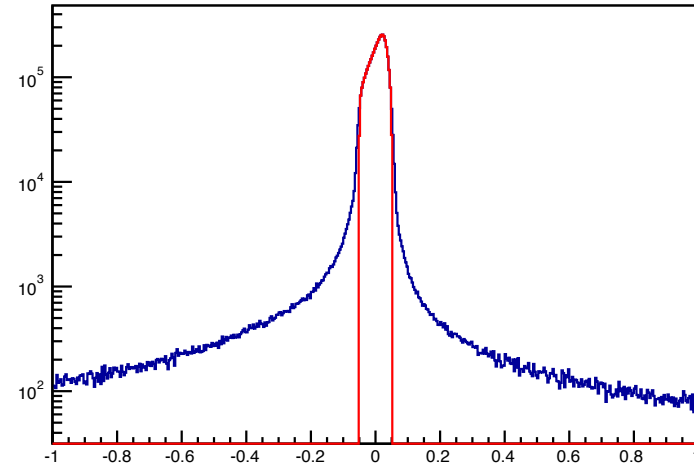
- Method
- Results for 2.2 GeV, 2.5T

Acceptance Cuts

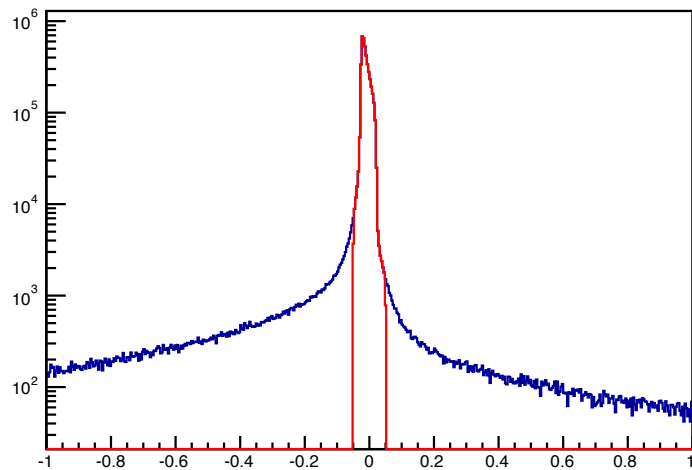
Y Cut: L.tr.tg_y



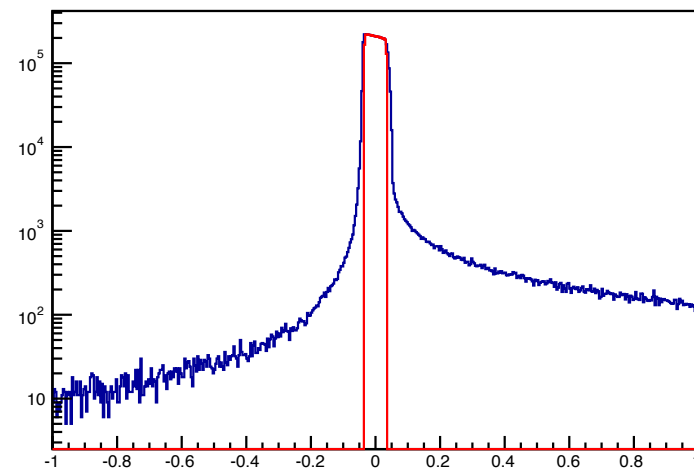
Theta Cut: L.gold.th



Phi Cut: L.gold.ph

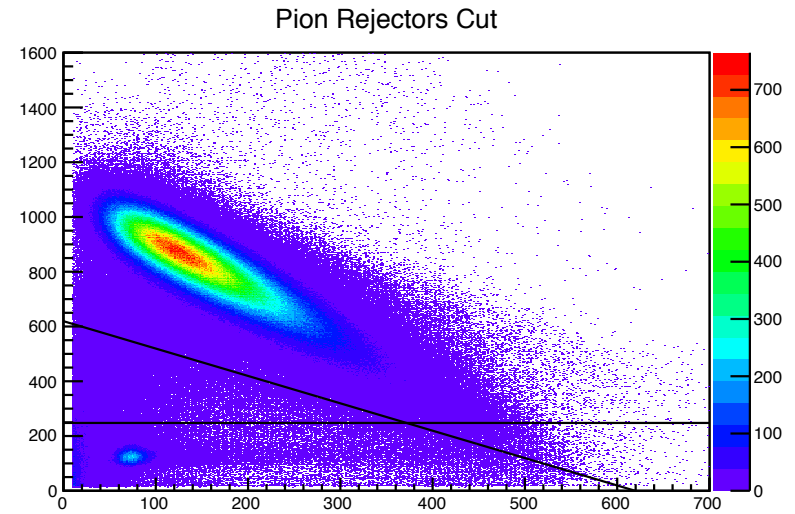
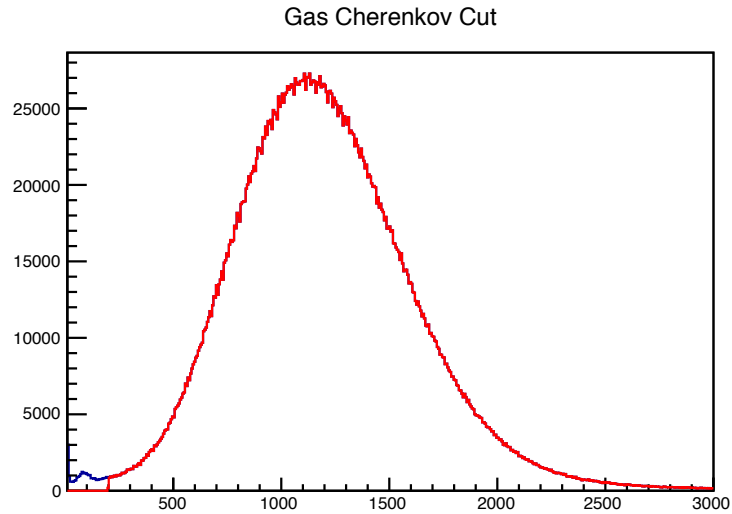


dp Cut: L.gold.dp



run 3871, p0=1.041 GeV/c

PID Cuts



- Also cut on:
 - Event type: T1(T3) for RHRS (LHRS)
 - Single track events
 - Single cluster in VDC

Method

- Events are sorted into 50 MeV bins in ν ($\nu = E - E'$)
- Asymmetry is calculated for each bin:

Still need to normalize to charge/lifetime!

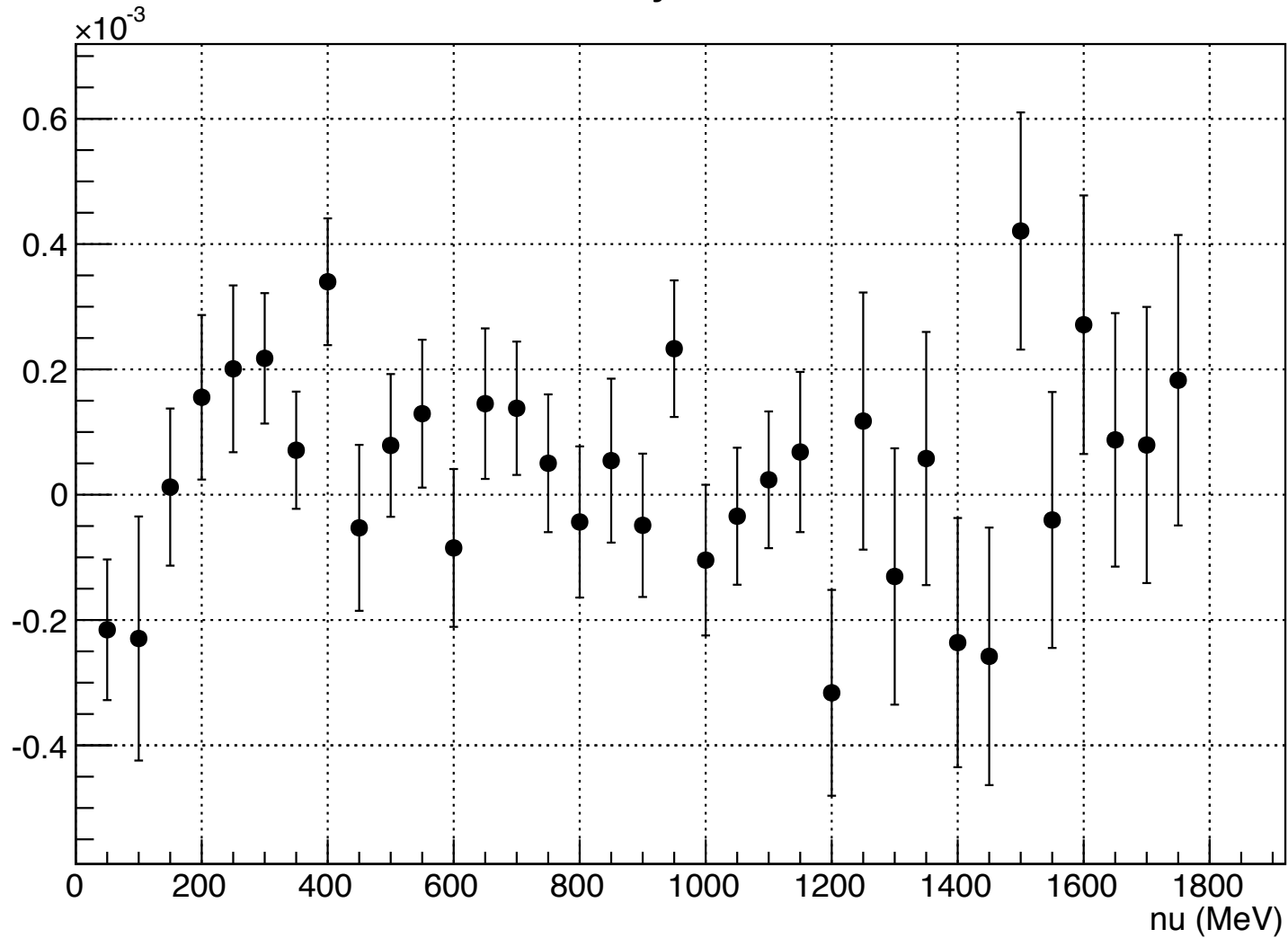
$$A_{raw} = \frac{N^+ - N^-}{N^+ + N^-} \quad \delta A_{raw} \approx \frac{1}{\sqrt{N^+ + N^-}}$$

- Runs are summed together using a weighted average:

$$A = \sum_i \frac{A_i / \delta A_i^2}{1 / \delta A_i^2} \quad \delta A = \sum_i \sqrt{\frac{1}{1 / \delta A_i^2}}$$

2.2 GeV, 2.5T, Transverse

Raw Asymmetries



For Next Time

- Include charge/lifetime information
- Complete analysis for all energy settings
- Physics asymmetries