

Analysis Progress

for the d_2^n analysis meeting

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November 18, 2010

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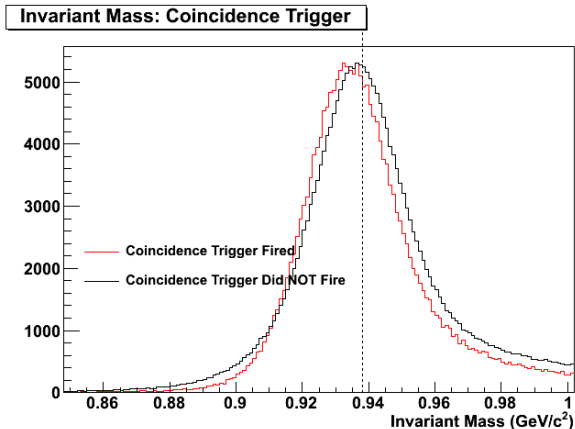
Location of Δ Peak

- Should the Δ really sit at 1232 MeV in our one-pass data?
- Peak location can be affected by pion production, acceptance
- Gregg's preliminary simulations suggest that the apparent Δ mass should be **less than** 1232 MeV
- It's possible our low-momentum correction is not necessary

Planned solution: Keep low- p correction in BB.tr.p, but also output p *before* the low-momentum correction. If necessary, we can switch to the latter in a later stage.

W and Trigger Types (i)

- It turns out that the W spectrum is sensitive to cuts on trigger type

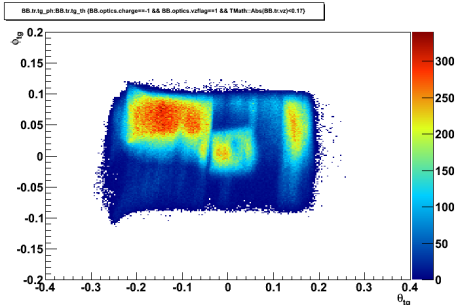


- The different triggers have different acceptances (especially in early data)
- T2 events passed through a different part of the magnet from T5

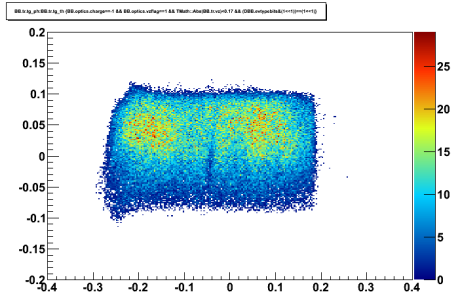
W and Trigger Types (ii)

- The effect is not large, but we should probably calibrate with as uniform an acceptance as possible
- This means the T1 trigger:

All triggers

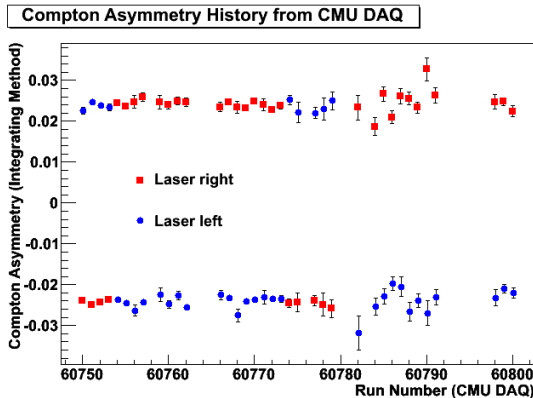


T1 only



Uses for the Compton

- 1 Determine beam polarization over a period of runs
 - 2 Confirm status of HWP
- It turns out there's a sign change in March that doesn't correspond to a HWP change...
 - This will need to be investigated



Replays on the Farm

- I'm working on getting replays of BigBite production runs going on the batch farm
 - Seamus has been kind enough to share G_E^n 's bash scripts
- 1 Get clean analyzer build working
 - ▶ 64-bit (less overcrowded farm) ... making progress
 - ▶ 32-bit backup ... done!
 - 2 Script to generate job submission scripts
 - ▶ Looks good, but job submission will be the final test
 - 3 Script to submit jobs
 - 4 Script to confirm whether jobs were successfully completed

Summary

- BigBite Optics
 - ▶ Calibration needs some simulation work, but we don't need to delay replays
 - ▶ Proton peak should be calibrated using only T1 data
- Beam Polarization
 - ▶ Will need to pay close attention to sign flips in the analysis
- Production Replays
 - ▶ Framework is under construction

What's Next?

- Farm Replays
- BigBite Optics
 - ▶ Recalibrate proton peak from T1 data only
 - ▶ Test new code
- Annual Report
 - ▶ Deadline is December 1
 - ▶ Check out http://www.jlab.org/~dseymour/Parno_d2n_2010.pdf and give feedback!