

E02-013 Analysis Update

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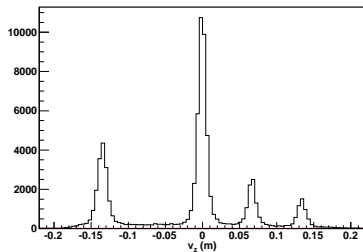
August 5, 2009

- ▶ Setting up *genbox*
- ▶ Continuing Replays
 - ▶ Most of the way through kin3
 - ▶ Kin 2 done - need some analysis
 - ▶ Asymmetry preliminarily comes out close to as before!
- ▶ Optics
 - ▶ Have set of vertex calibrations
 - ▶ Need to do momentum

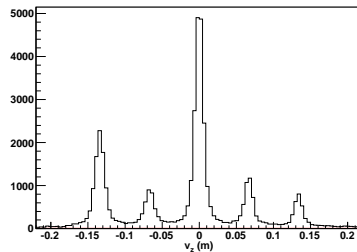
Vertex Calibration

► Finished set of calibrations

vzcentral - Kin 4

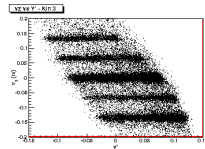
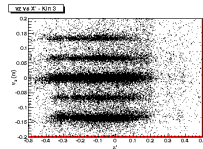
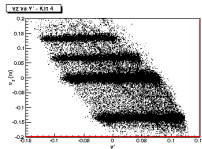
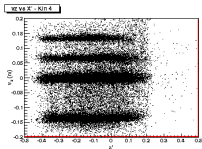
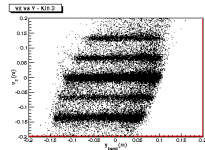
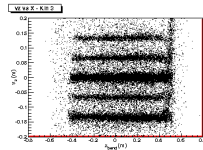
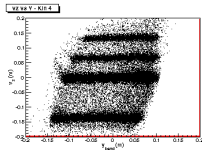
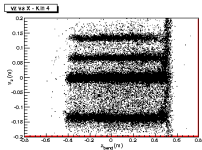


vzcentral - Kin 3



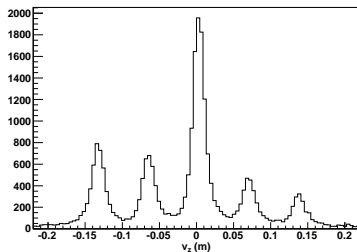
► Kin 3,4 agree well

Vertex Calibration

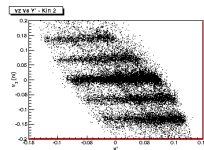
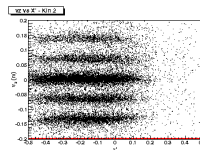
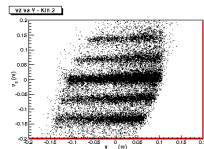
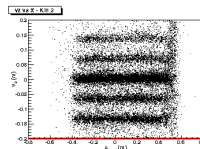


Vertex Calibration

vzcentral - Kin 2



- ▶ Kin 2a is different - foils runs do not exist for 2b
- ▶ These need to be replayed with good DC database
- ▶ All previous replays have spacing of 0.6 cm



Kin 2 Pass 2 Analysis

- ▶ Kin 2 pass 2 redux replay done
 - ▶ Needs thorough analysis! (tof offset calibration not carefully done)
 - ▶ Obtained preliminary raw asymmetry near what was found before!
- ▶ Found old post-processing files
 - ▶ Reproduces asymmetry close to previous analysis

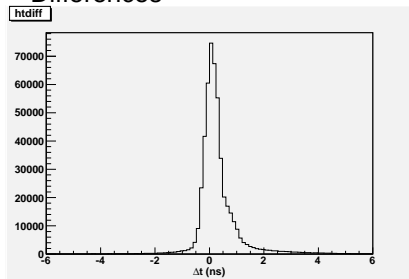
Comparison Analysis

Procedure for each event:

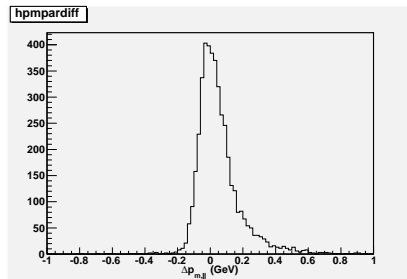
- ▶ Find events with matching raw event number
 - ▶ If match events, find matching neutron arm events
 - ▶ If match, calculate if agreement on neutral QE elastic
 - ▶ If no match, see if neutral QE

Comparison Analysis

Differences

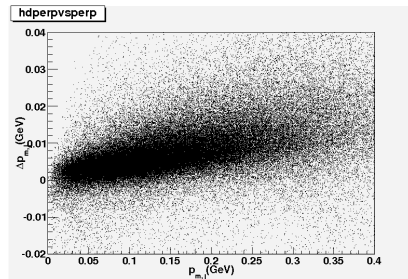
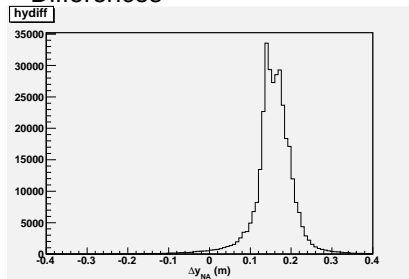


- Time smeared fairly wide



Comparison Analysis

Differences



- Neutron arm y position is shifted about 18 cm for kin2, 3 (not 4)

Comparison Analysis

	In Old	In New
N neutral QE	736	627
N Agree		460
No trig event in other set	56	36

For a few runs:

	Reason in set	
Charge ID changed	8	5
W	5	6
pm,perp	26	15
pm,par	55	34
mm	41	27
no NA match to compare	72	46

To Do

- ▶ Look into differences between kin 2 runs
- ▶ Finish momentum calibration, momentum corrections to v_z
- ▶ Come up with satisfactory kin 2b vertex reconstruction
- ▶ Need ToF resolution profile for MC - re run MC with it