Analysis Progress

for the d_2^n analysis meeting

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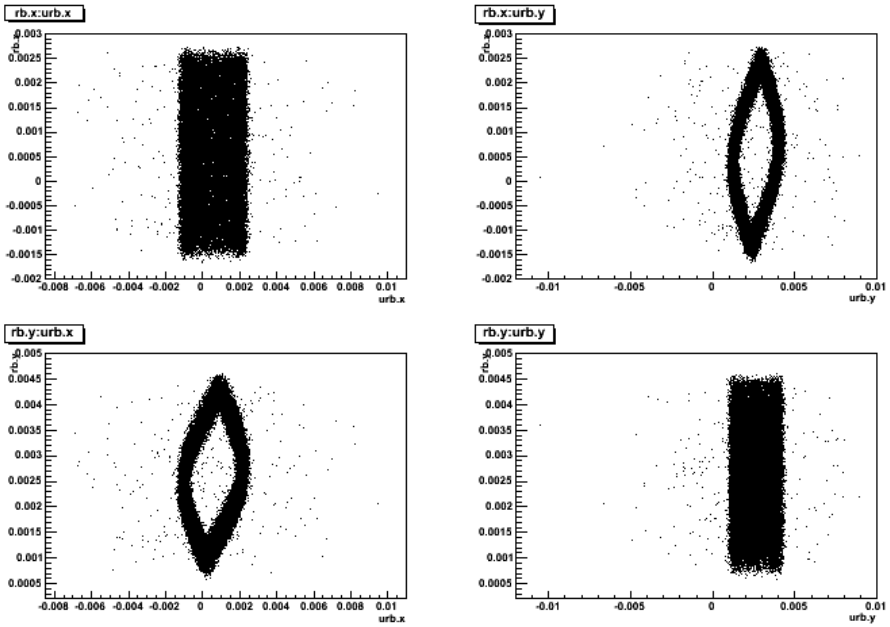
1. Raster Mapping
2. Raster Calibration
   - Sign Ambiguity
   - LHRS vs. BigBite
3. Analysis Lessons Learned
4. What's Next?

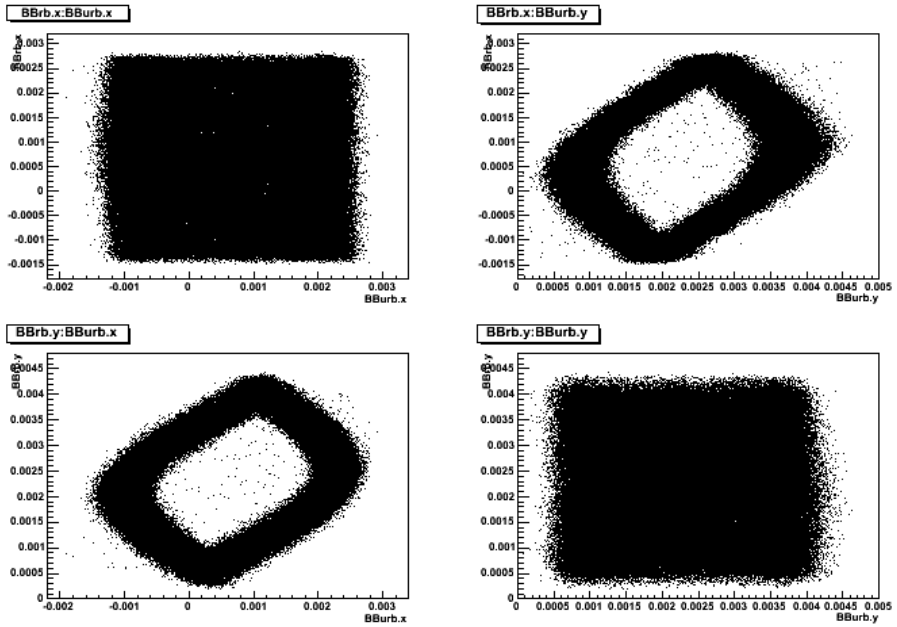
Raster Mapping Error

- Quite some time ago, Jin noted that the raster x/y cables were swapped
- The fix is a new DB mapping
- I'd thought we had this in our DB ... turns out we don't!

LHRS



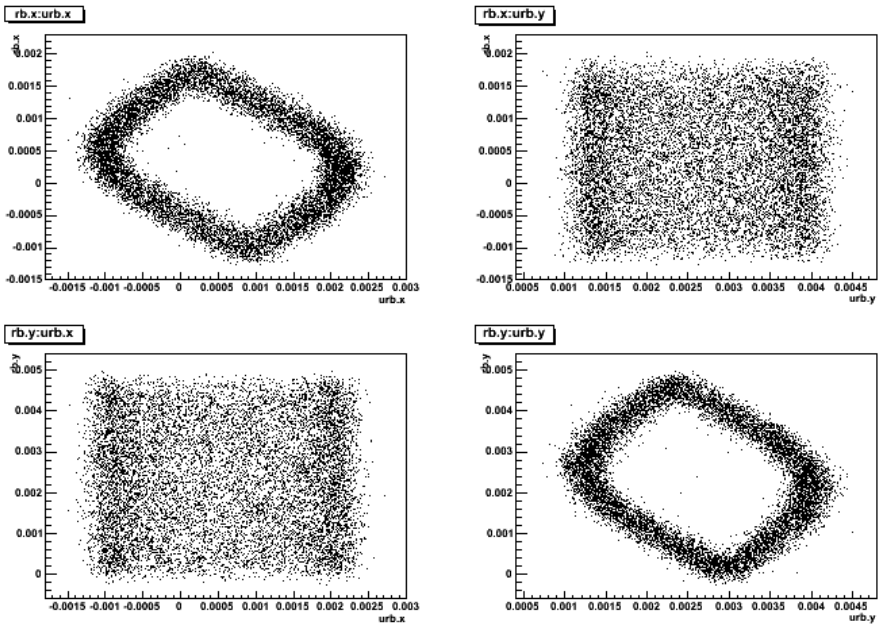
BigBite



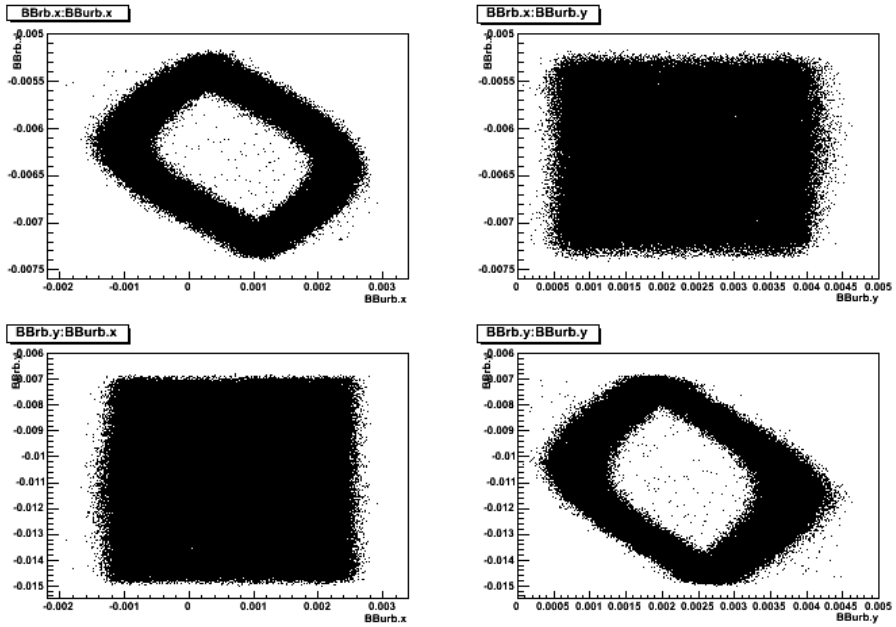
Raster Mapping Fix

- New cable maps fix the problem
- I got new LHRS and BigBite maps from Jin and Kalyan

LHRS



BigBite



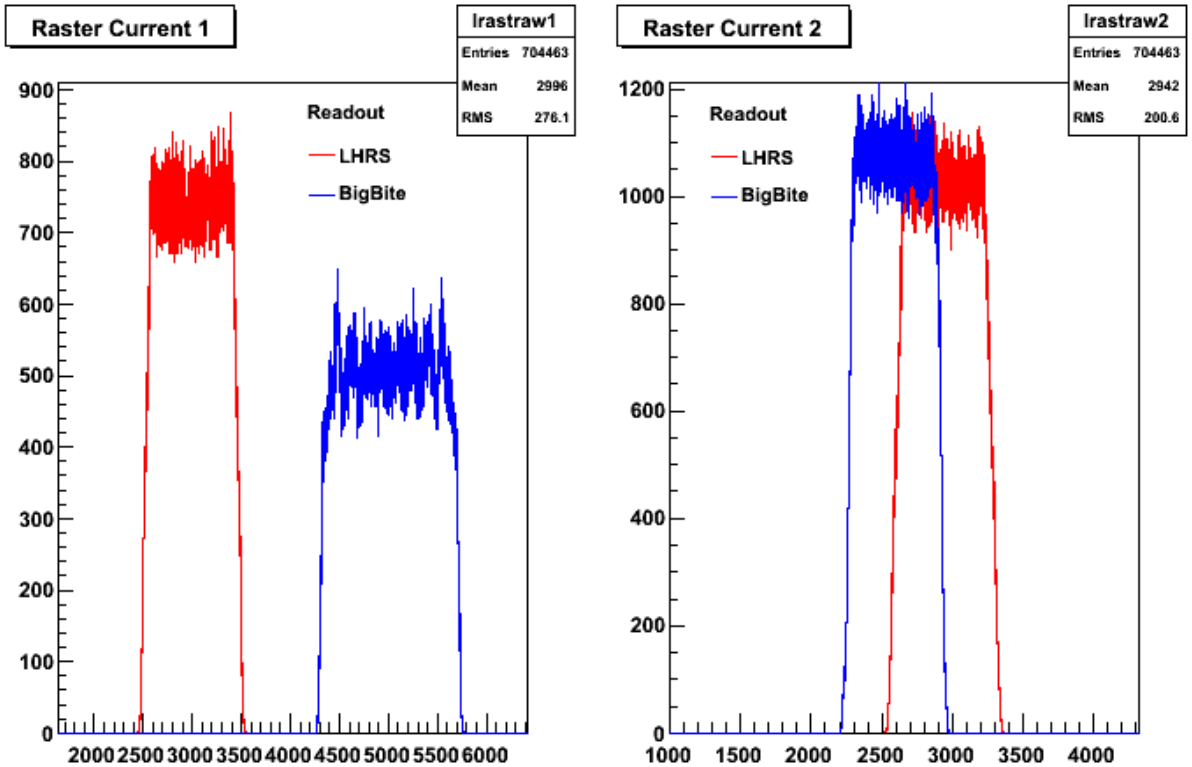
Raster Sign Ambiguity

- Raster current is read out by a Pearson probe, a passive transformer.
- Sign of output voltage is ambiguous
  - Depends on how raster cable is oriented in probe
- Sign change affects coefficients from raster calibration
- Solution: Correct sign $\longrightarrow$ correlations to target variables
  - rb.x : L.gold.y
  - rb.y : missing mass

LHRS vs. BigBite

- There will be electronics differences between the two arms
- This means separate calibrations for each:
  - rb.Raster (LHRS)
  - BBrb.Raster (BigBite)

Run 1249 (Unified DAQ → Same Data)



Analysis Lessons Learned

- I've started going through Transversity talks and progress reports
- Many types of problems (major and minor) are documented there
- I'm compiling a list on the wiki: **Analysis Lessons Learned (d2n)**
- Linked from main page (under Special Topics)
- Still a work in progress

What's Next?

- Question from Jin: What's our plan for ^{3}He elastic data?
  - He'd like a cross-check with the helicity sign
- Raster Calibration
  - Resolve raster sign ambiguity
  - Identify run periods with stable beam positions
  - Perform raster calibration for each run period
- BB Optics
  - Start on vertex corrections with magnet-on runs runs with rastered beam
- Compton
  - Analyzing power work continues in background
  - Systematics (Cavity State ID)