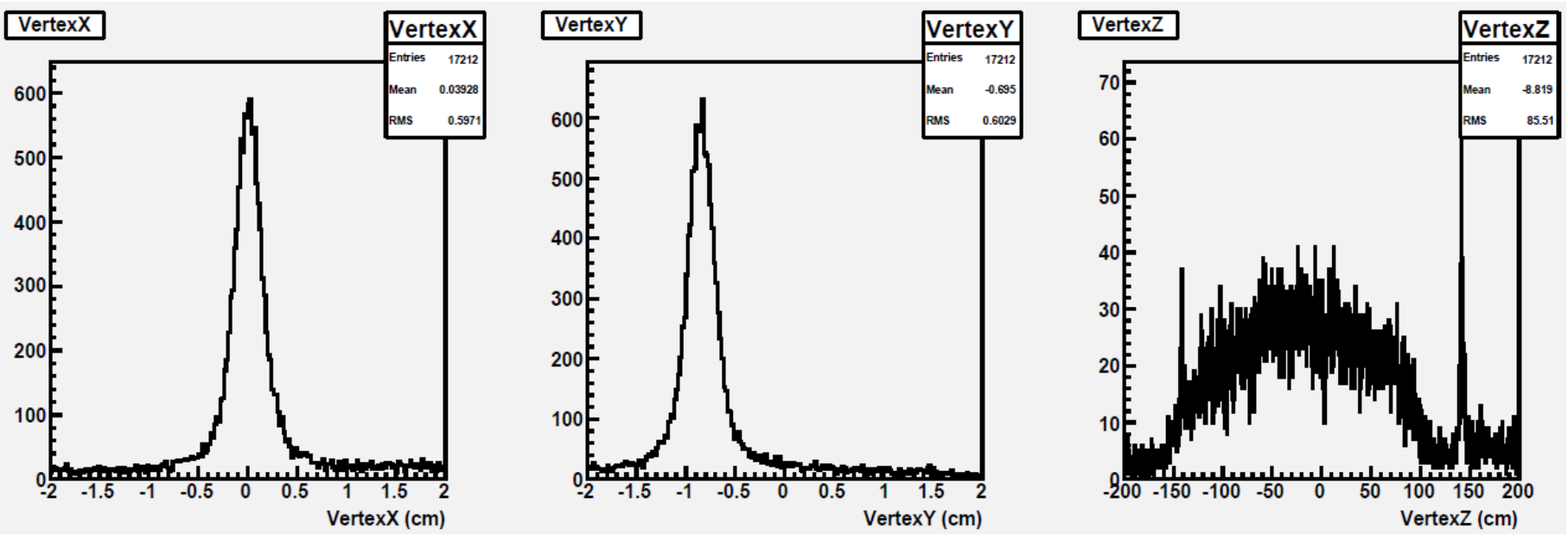
Update on STAR

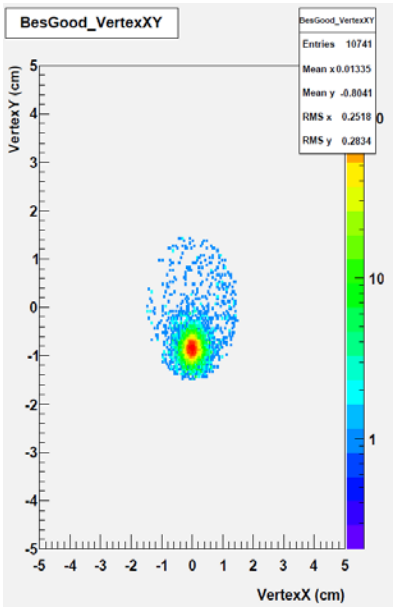
AGS/RHIC Time Mtg
February 18, 2014
Bill Christie

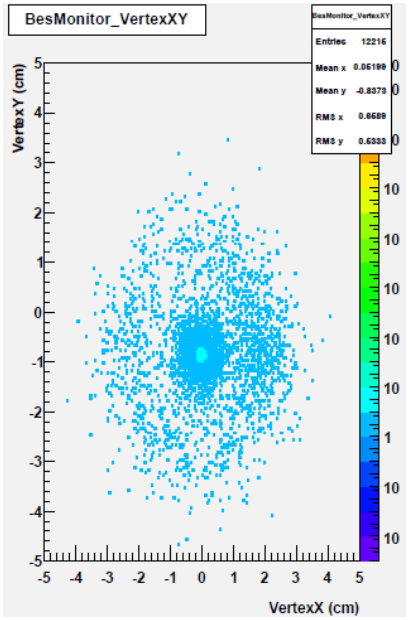
Summary:

- We started looking for collisions Thursday morning (2/13/14). Determined the Global timing shift we had to make to get trigger signals into digitizer gates about 4 that afternoon.
- Got a start on calibrating trigger counters Thursday night.
- Tried continuing work on Trigger setup Friday night, but turned out that beams were mis steered at STAR, so no progress.
- Beams steered into collision at STAR again about 2 pm Saturday. Found that beams were barely hitting each other with the Thursday settings.
- Got second primary trigger detector calibrated by about 9 pm Sunday evening.
- Started running close to a full suite of Triggers on first Fill Monday morning (after PS failure in RHIC).
- Tweaking triggers today, but close to finished, and should be stable for remainder of the run.
- Continuing concern about un wanted beams ending up in STAR.

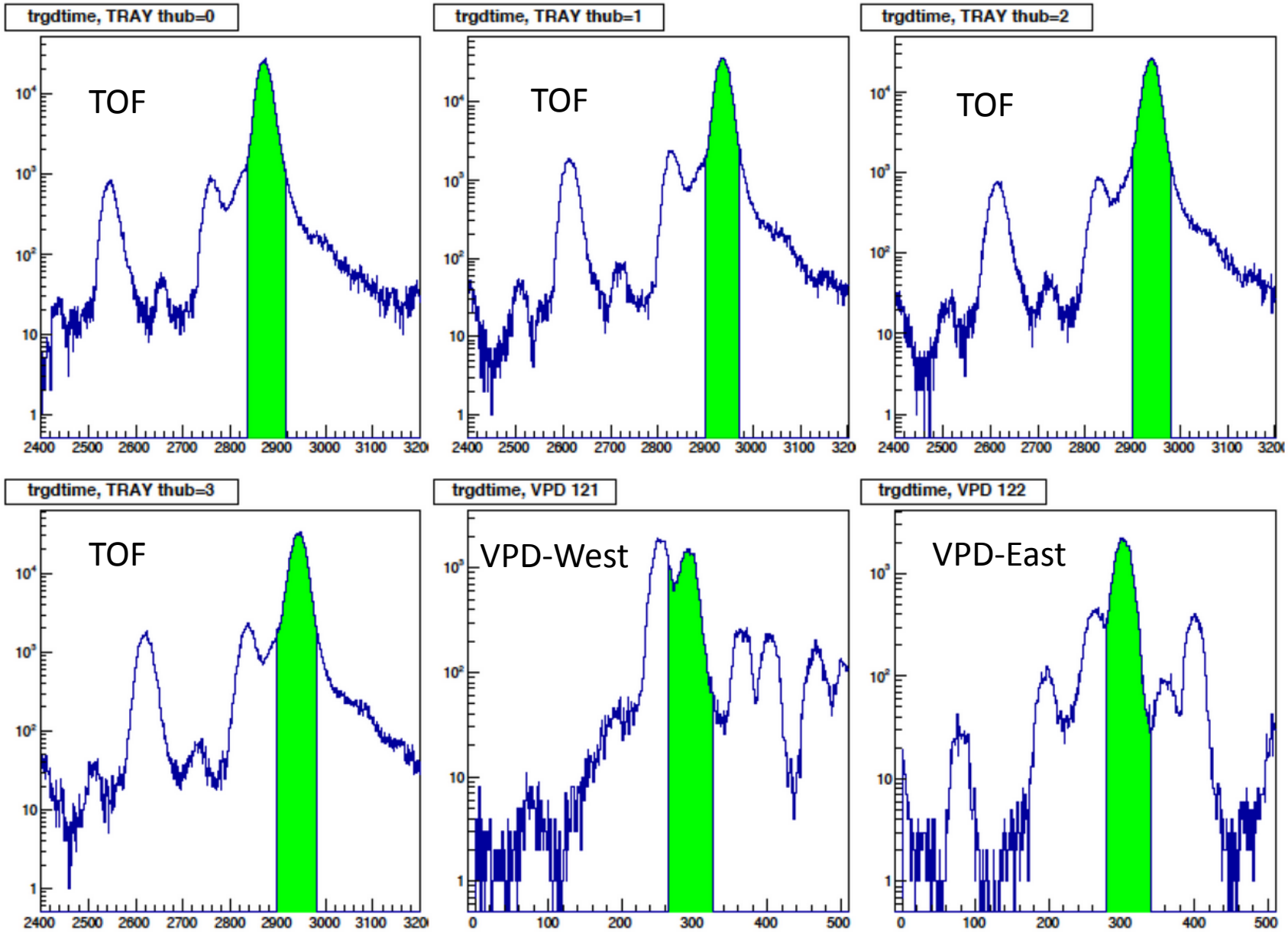
Some output plots from the High Level Trigger (online tracking trigger).





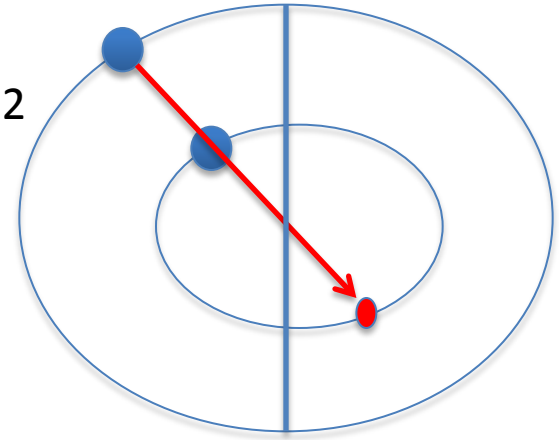


Believe that we indications the injection into Blue Beam has issues. Fill 17696

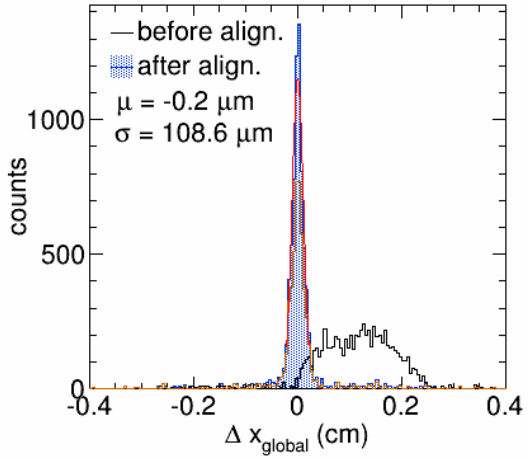


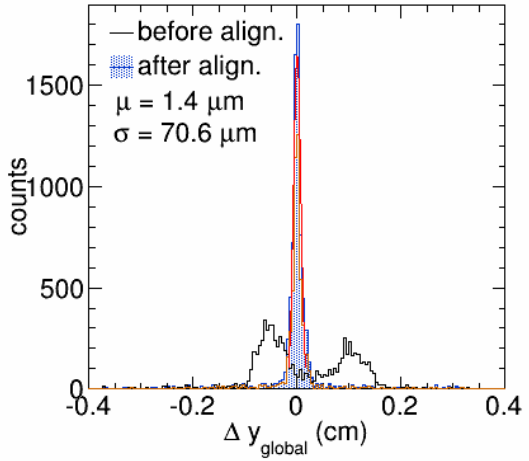
PXL residual from cosmic rays

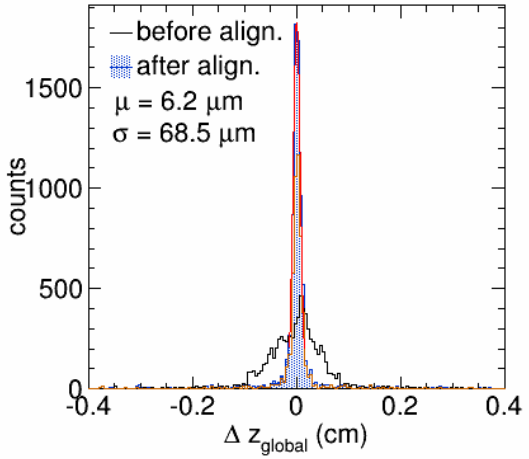
Schematic 2
PXL halves



Use detector half survey.
Project tracks from one half to other and look at residual
Align one half relative to first, looks at deviation in x,y and z.
First attempts for global alignment







Guess-estimate of how many “good” events we’re collecting per Fill

Very crude estimate at this point:

- From a Fill this morning (17721) I estimate that there are 180, 000 “Good” events
- If I assume that each fill takes 1.5 hours, and only one is missed per day, we’d get 15 Fills per day. This gives (15 Fills/day)(180 kevts/Fill) = 2.7 Mevts/day
- If this is correct, and we start counting as of Midnight Sunday night, in 21 days we’d get (21 days)(2.7 Mevts/day) = ~57 Mevts.

- STAR Goal for this run is 150 Mevts of “Good” collisions.

I’d estimate the uncertainty in this estimate to be at least +- 50%.