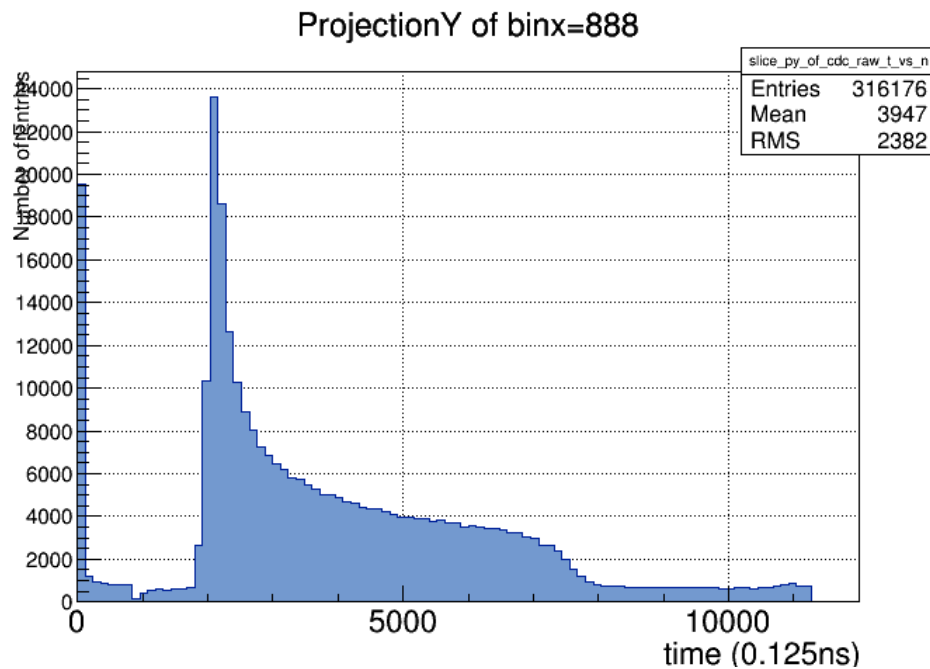


Evidence for Straw Deformation

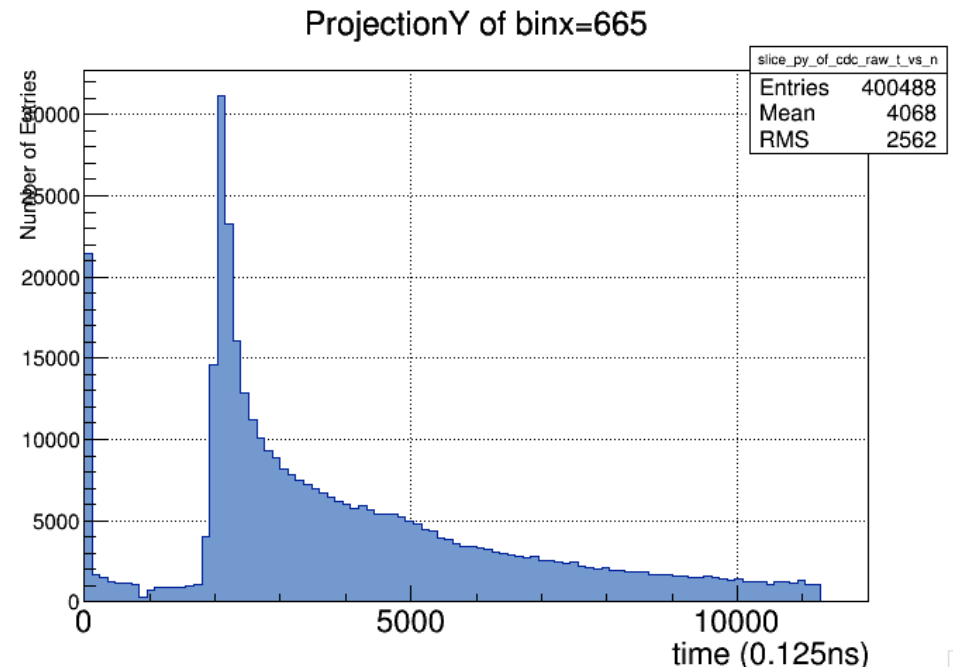
Evidence for Straw Deformation

- It was noticed very early in the running of the CDC at Jlab that the timing spectrum for the CDC was not as expected.

“Good” straw



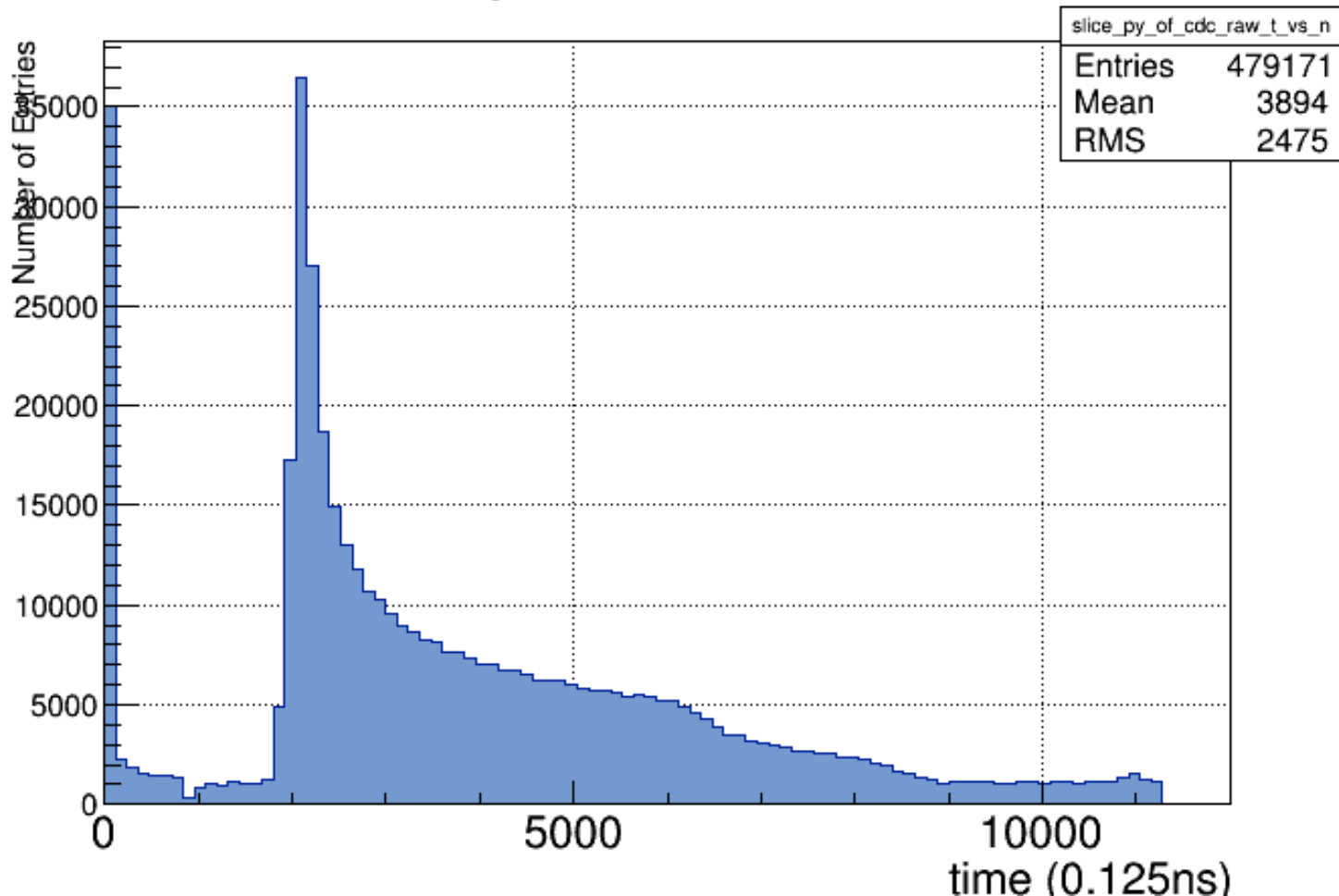
“Bad” straw



Evidence for Straw Deformation

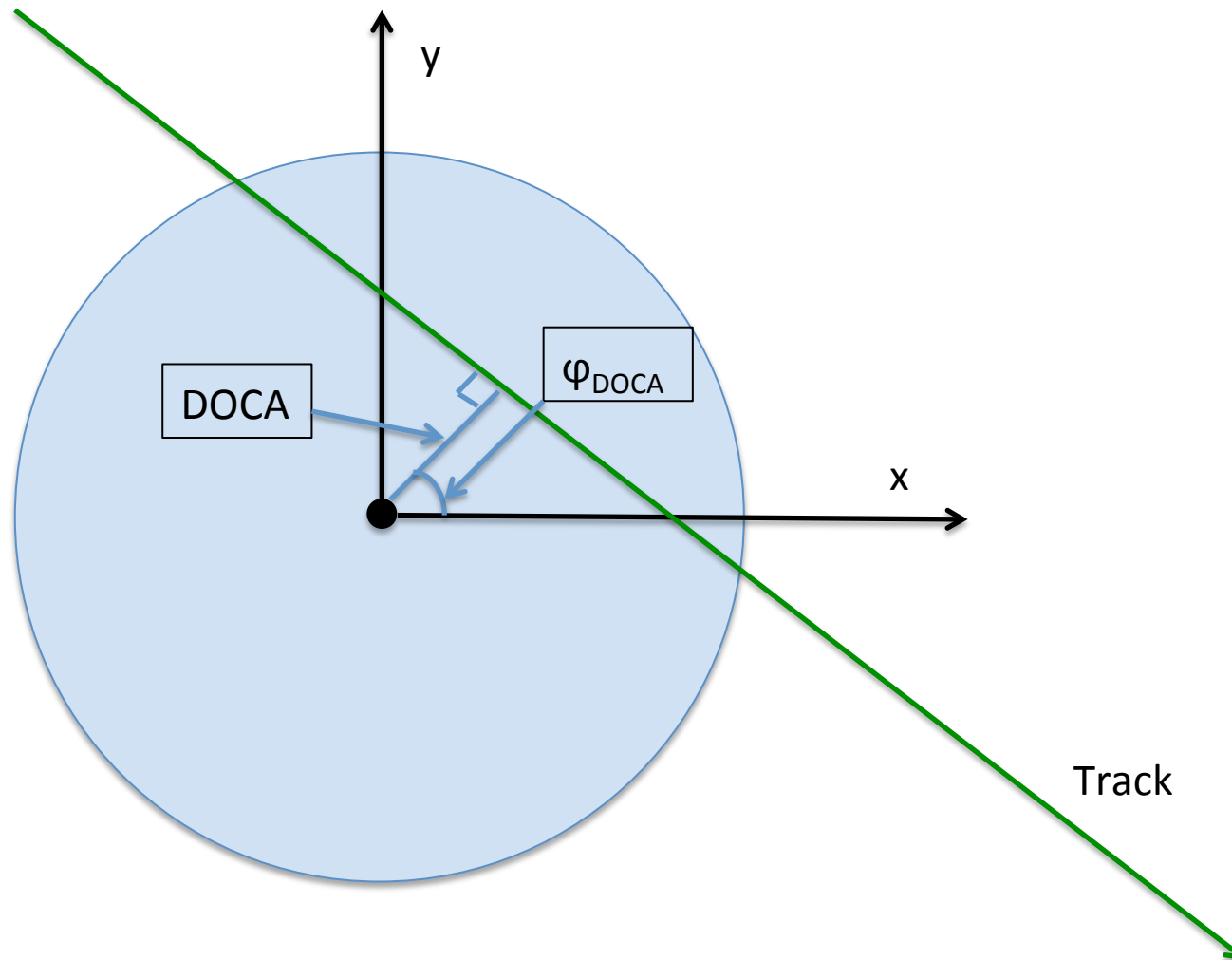
- It was noticed very early in the running of the CDC at Jlab that the timing spectrum for the CDC was not as expected.

“Intermediate” straw
ProjectionY of binx=566



Evidence for Straw Deformation

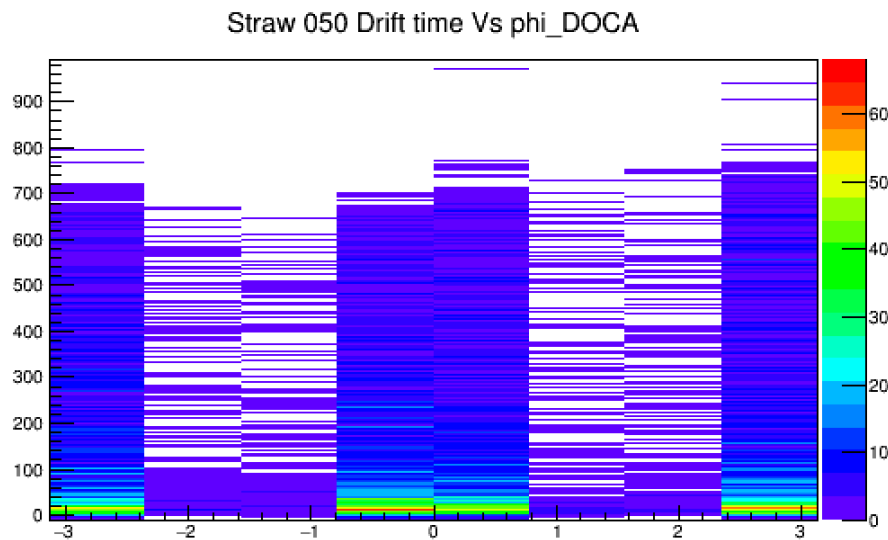
- Look at the timing distribution as a function of the " φ_{DOCA} "



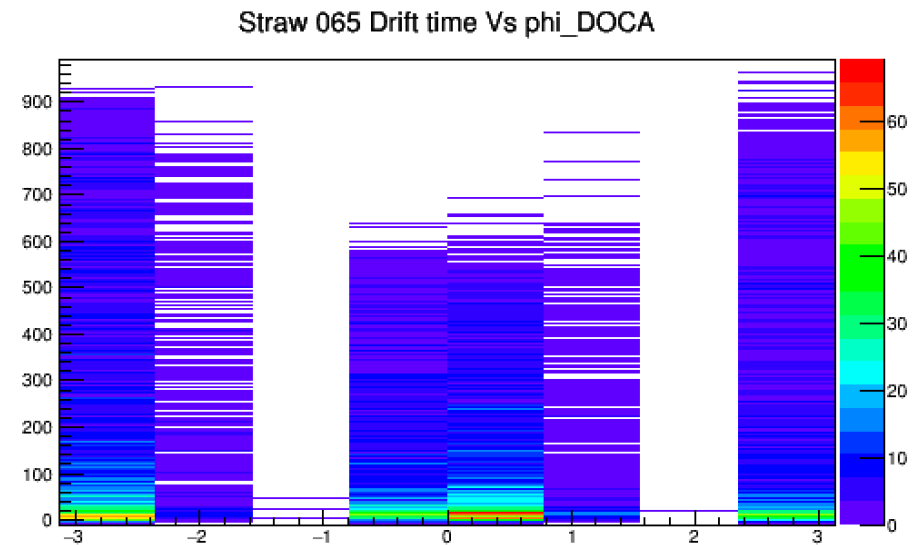
Evidence for Straw Deformation

- Look at the timing distribution as a function of the “ φ_{DOCA} ”
- x-axis is φ_{DOCA} in radians, y-axis is measured drift time. Straw is not included in the fit.

“Good” straw



“Bad” straw



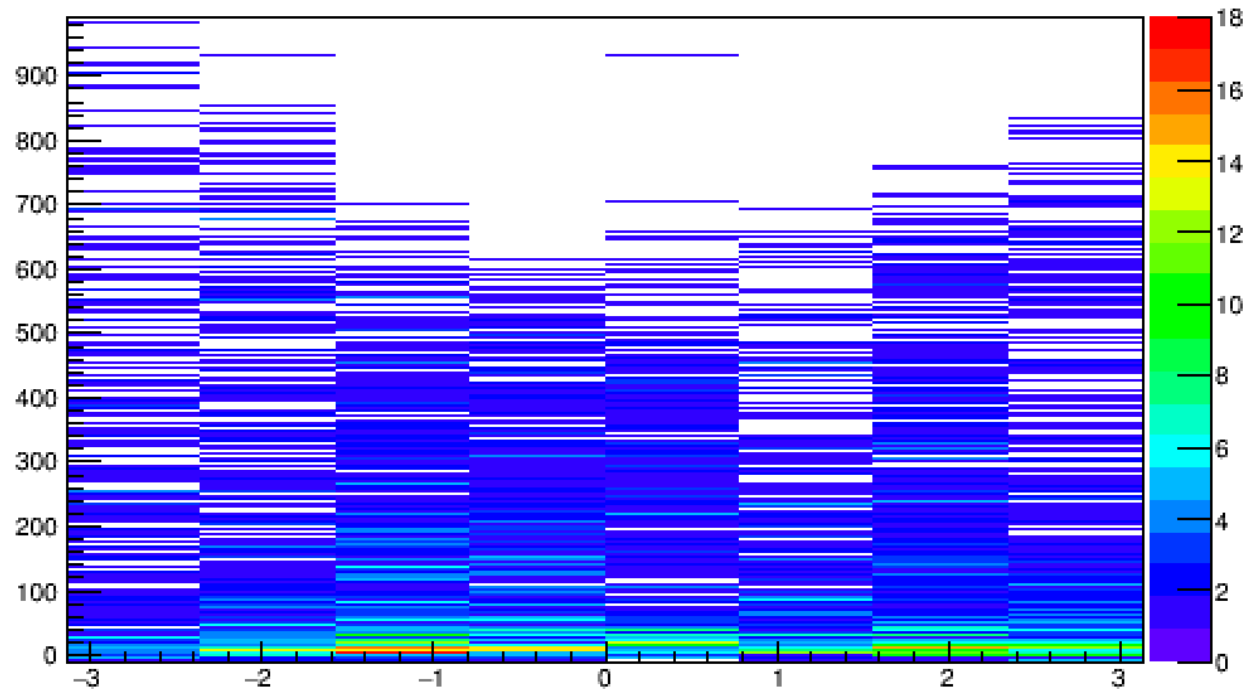
- Investigating if there is a pattern to where the “bad” straws are – hints that there is.
- Include more data to fill in these distributions.
- Need **a lot** of data to determine corrections straw by straw in several bins of φ_{DOCA} and z .

Evidence for Straw Deformation

- Look at the timing distribution as a function of the “ φ_{DOCA} ”
- x-axis is φ_{DOCA} in radians, y-axis is measured drift time. Straw is not included in the fit.

Near the Side

Straw 107 Drift time Vs phi_DOCA

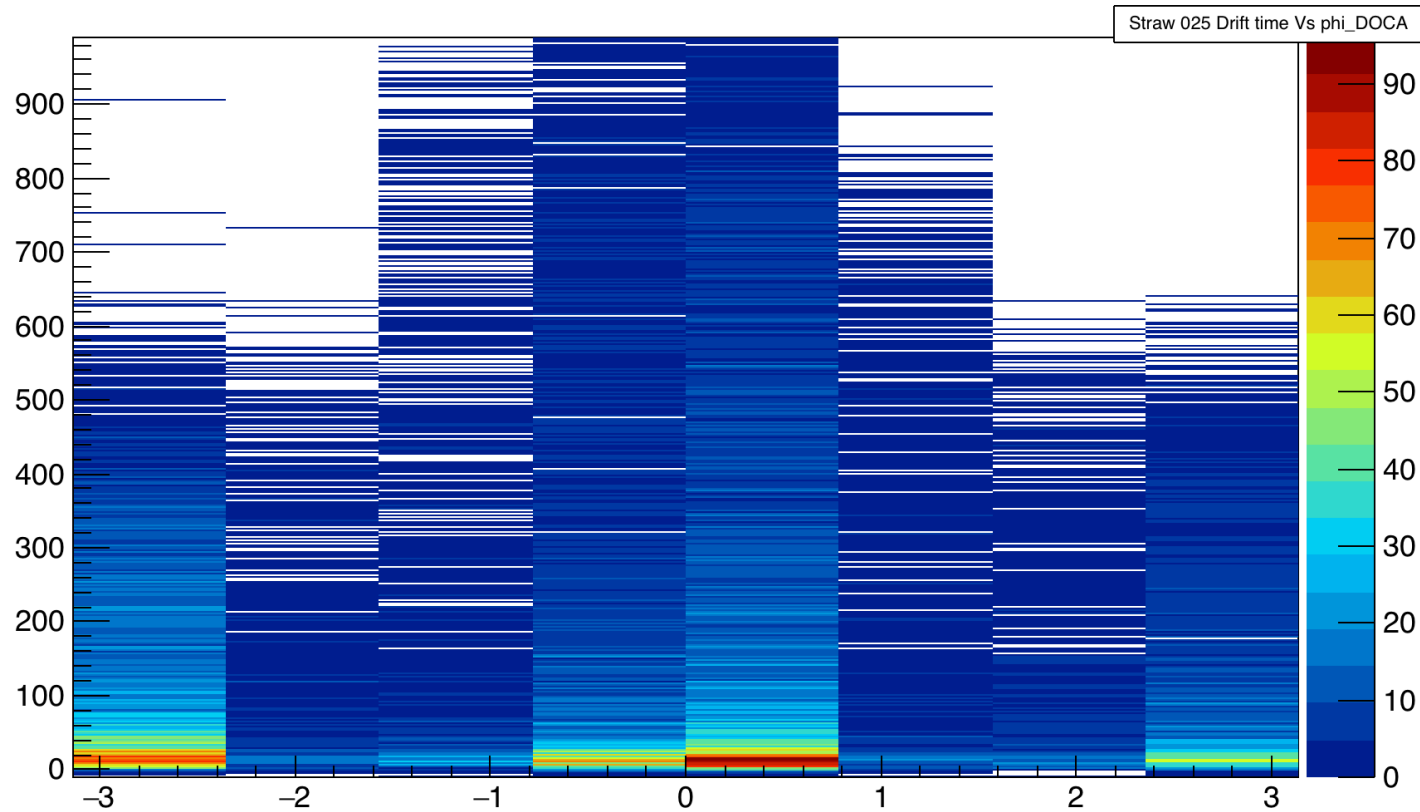


- Investigating if there is a pattern to where the “bad” straws are – hints that there is.
- Include more data to fill in these distributions.
- Need **a lot** of data to determine corrections straw by straw in several bins of φ_{DOCA} and z .

Does this affect the time-distance relation?

- Look at the timing distribution as a function of the “ φ_{DOCA} ”
- x-axis is φ_{DOCA} in radians, y-axis is measured drift time in ns. Straw is not included in the fit.

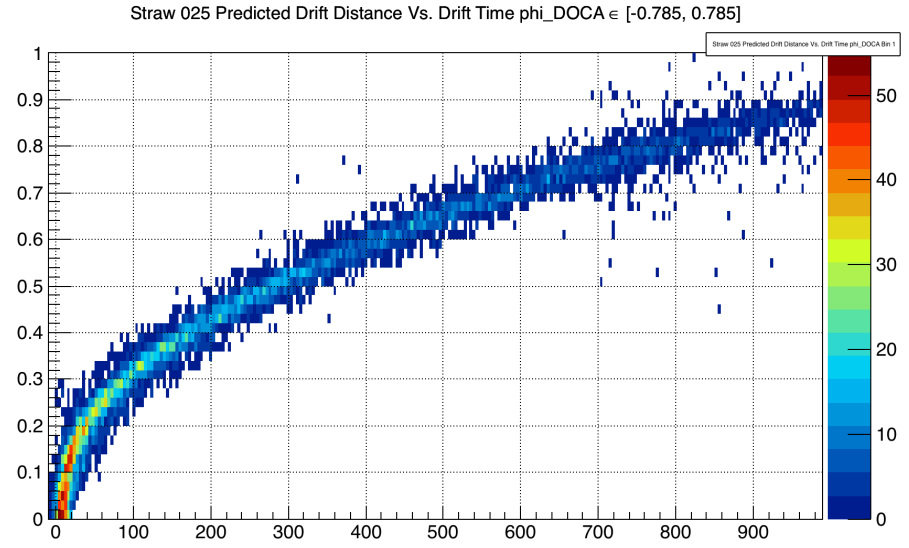
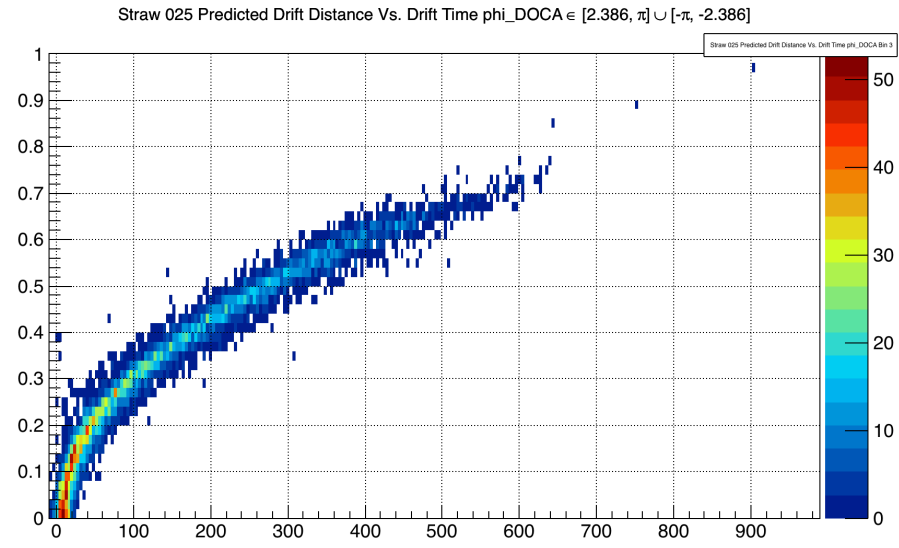
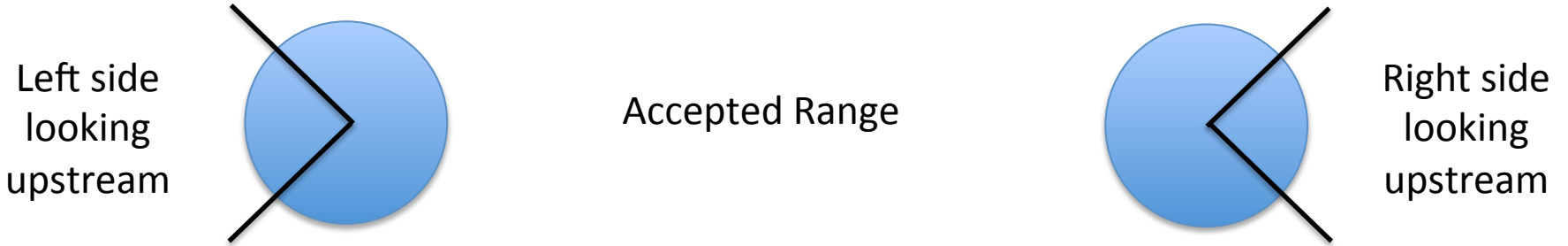
Straw 025 Drift time Vs phi_DOCA



- Take a particularly bad straw and plot the predicted drift distance from the track vs. the time recorded on the straw.

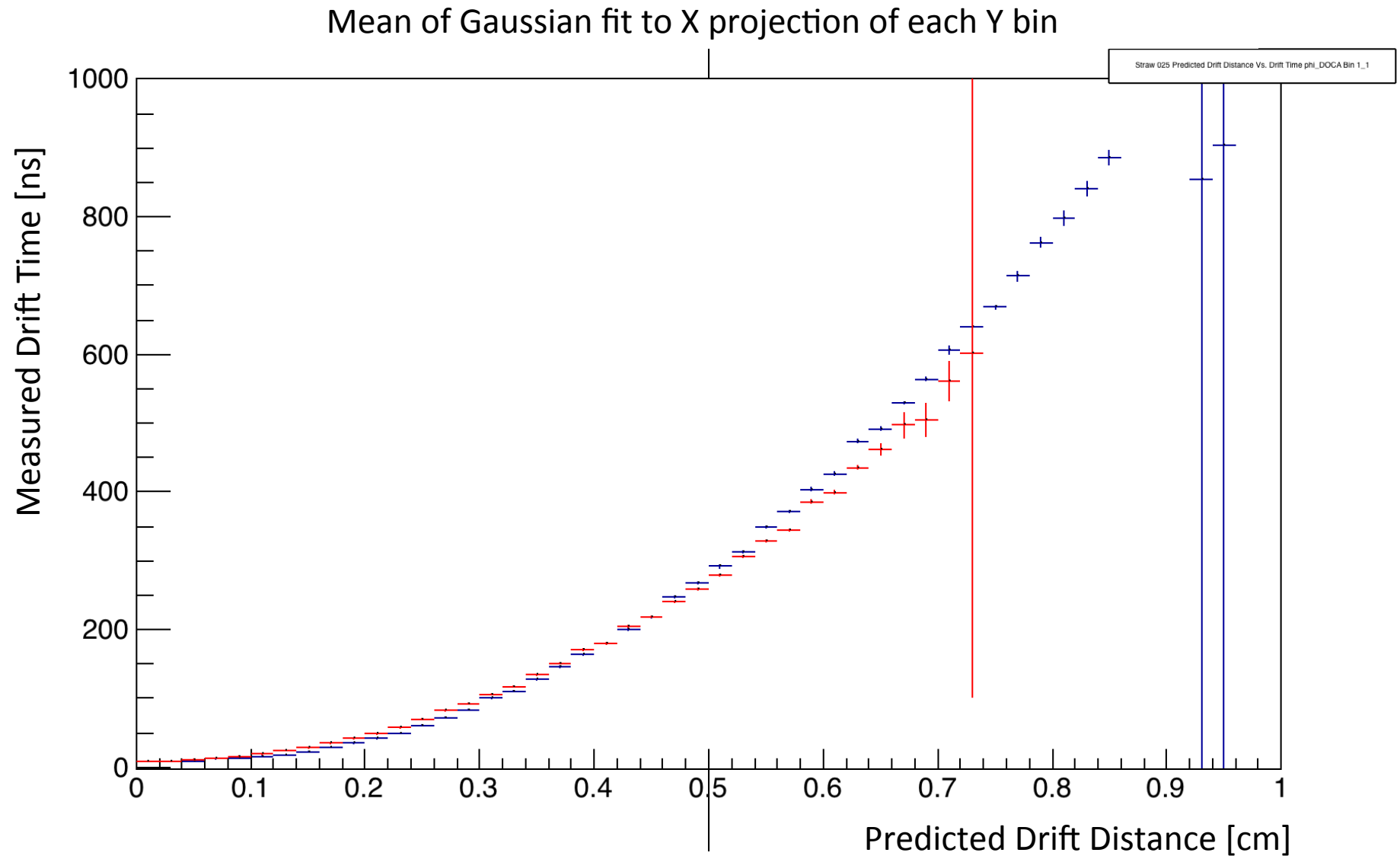
Does this affect the time-distance relation?

- Look at the timing distribution as a function of the “ φ_{DOCA} ”
- x-axis is measured drift time in ns, y-axis is predicted drift distance in cm.
- Straw is not included in the fit.



Now FitSlicesX()...

Does this affect the time-distance relation?



Does this affect the time-distance relation?

Slightly zoomed in...

Mean of Gaussian fit to X projection of each Y bin

