

# Updates and Discussion Topics

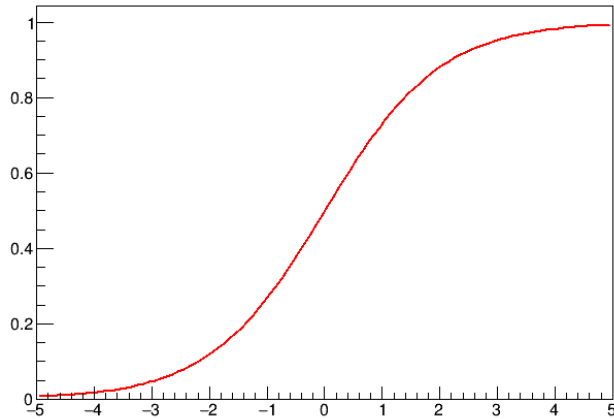
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# Raster Calibration

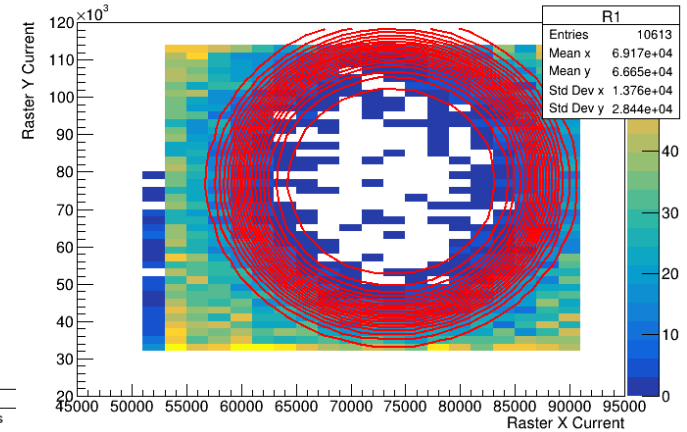
The Raster is calibrated by fitting the carbon hole, a feature with known size and position, with a radial sigmoid function. This extracts the center of the target and the conversion from raster current to position.

Sigmoid Function

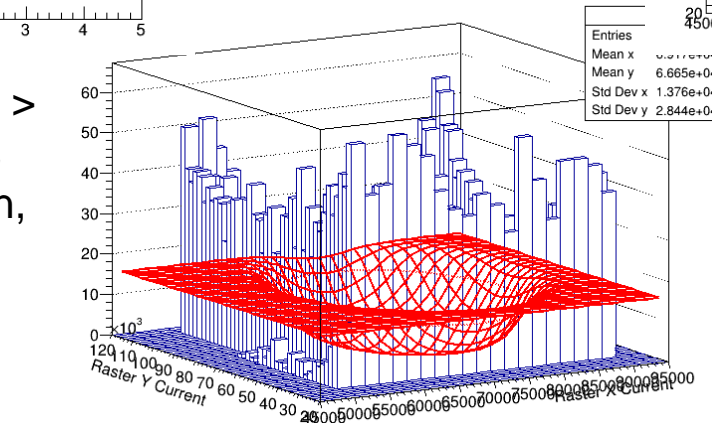


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A sigmoid is like a step function of variable "hardness".

Raster 1 Carbon Hole



Raster 1 Carbon Hole



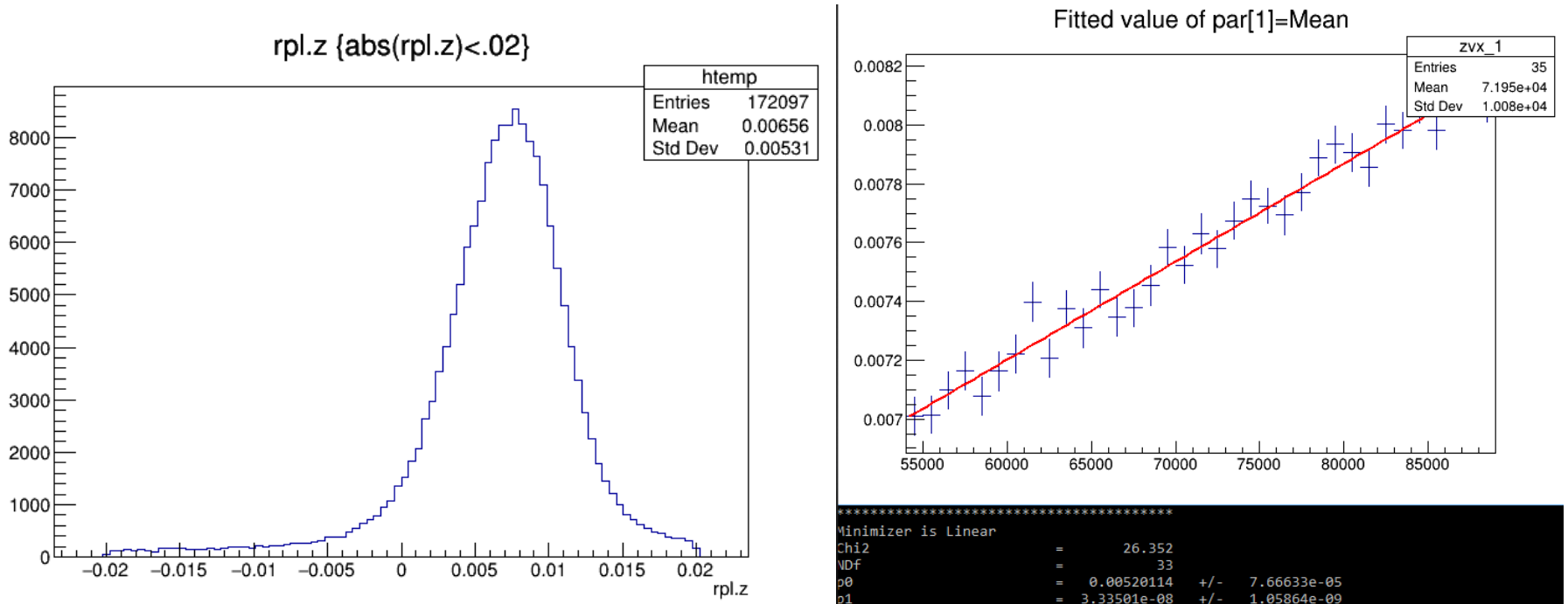
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While a 2D plot allows for better fit verification, a "lego" plot allows us to verify the function has the expected features.

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The red circles represent a contour. The densest area is the zero crossing. This corresponds to the edge of the carbon hole.

# Improvements Done

- Optimizing Horizontal with Z of Carbon Foil

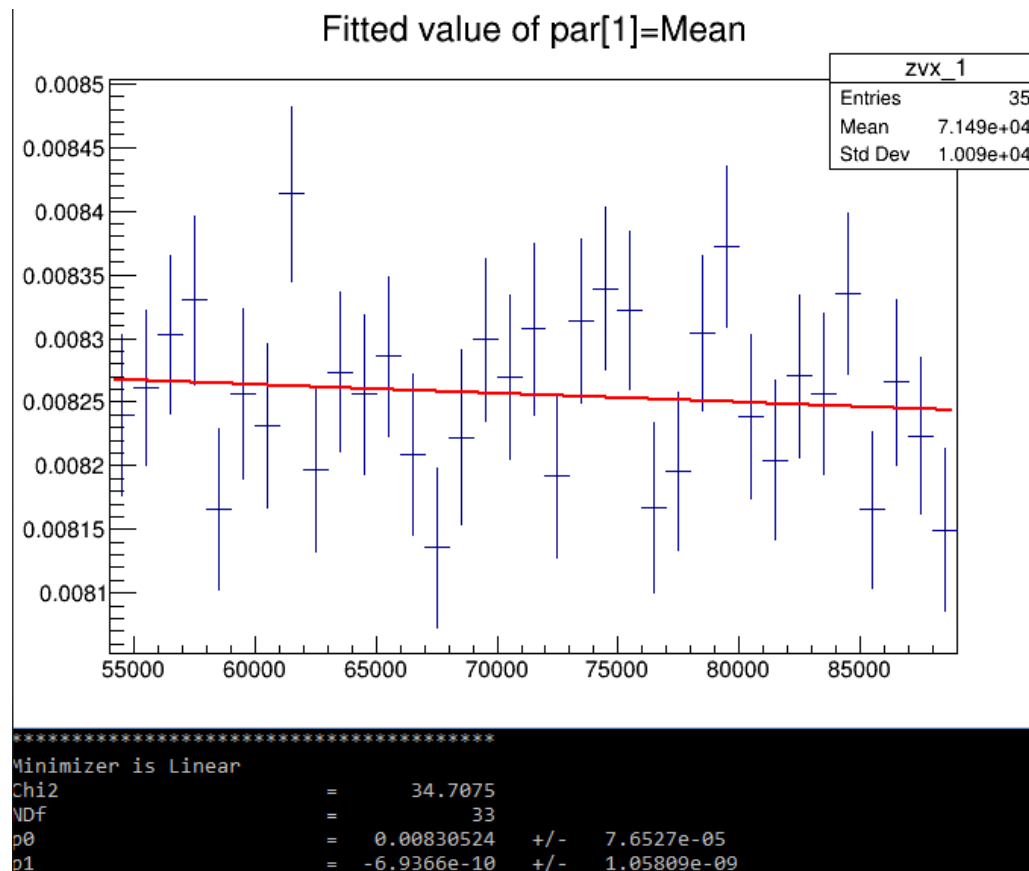
Before:



# Improvements Done

- Optimizing Horizontal with Z of Carbon Foil

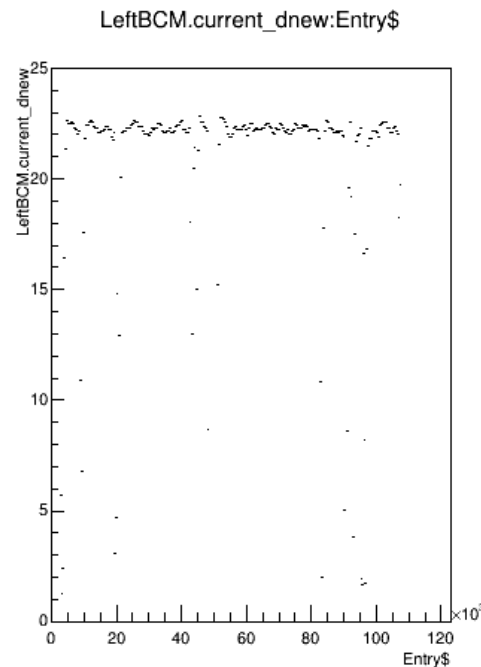
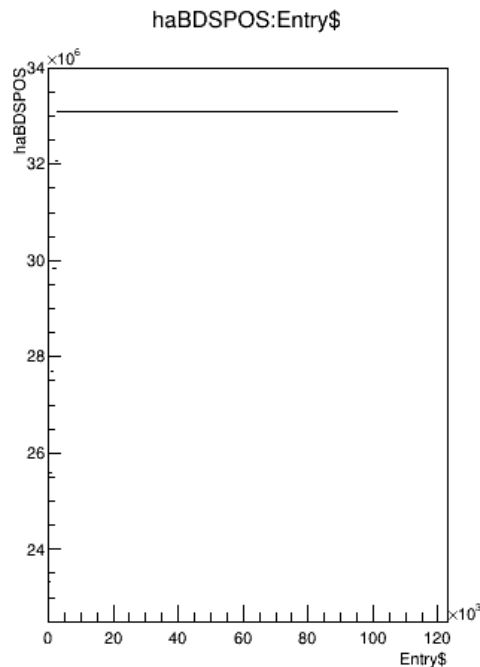
After:





# Runs with Target Movement

- Do these pose a problem? If so, what do we do?
- Example: Run 1607 is Tritium





# Pass 2?

- There is a lot of talk of when we will move to pass 2
- Is there any remaining tasks before we proceed to this?
  - For example, calibrations that need updating or studies that will affect the DB