

Super Pixel

Amir Noori Shirazi

Siegen University

SuperPixel



Ongoing:

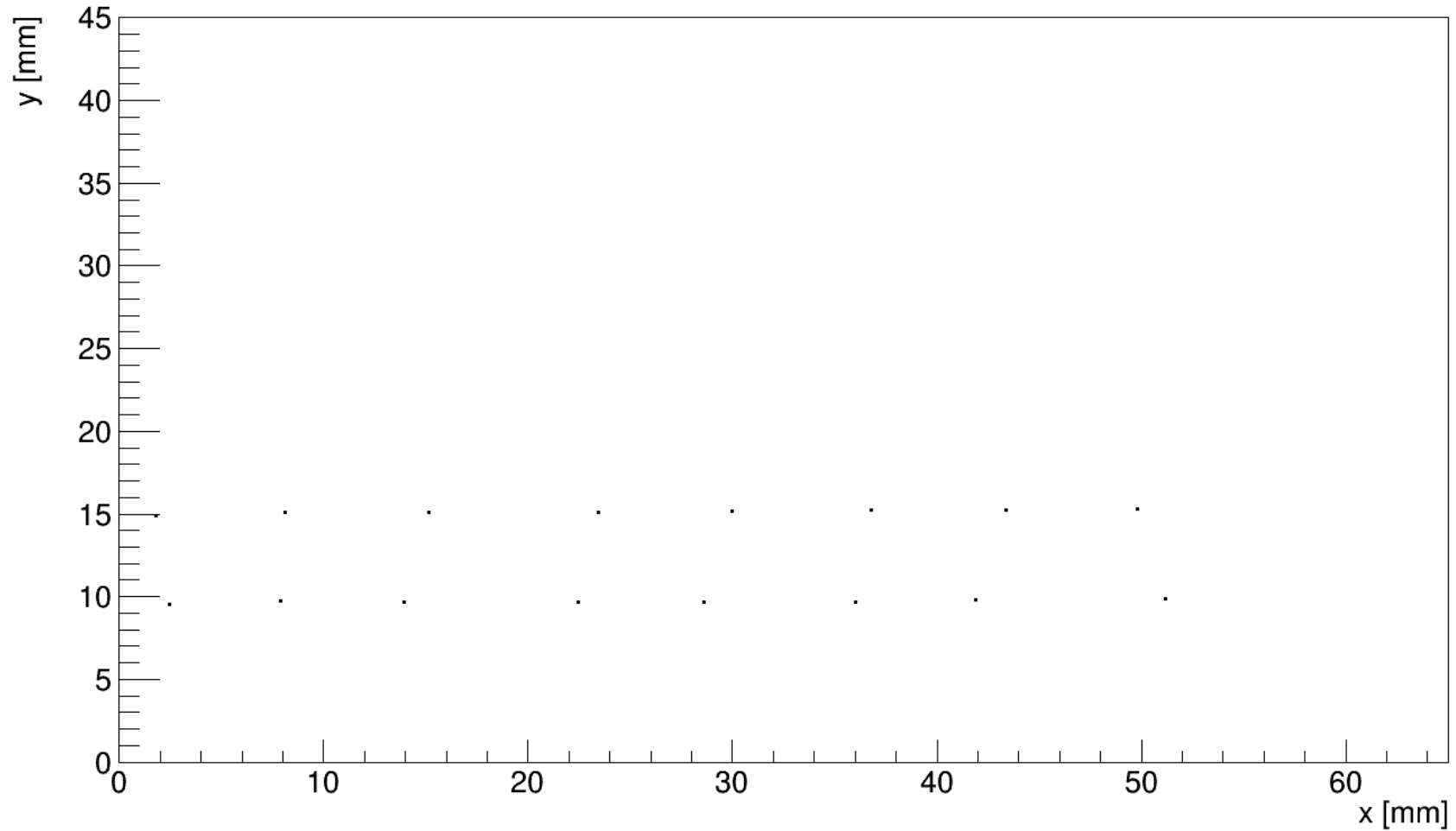
- The Main goal is to use each chip for finding the tracklets and then using Kalman filter or Cellular Automaton for connecting candidate tracklets.
- Using Super pixel (Claus Kleinwort)
- **InGridSuperPixelProcessor** (available in my branch)
 - `_Win`: for super pixel scaling
 - $a=2^{(_Win)} \Rightarrow w= 256/a$
 - The shape of each super pixel is square.
 - Hits for each super pixel is defined based on the center of gravity of all hits in a super pixel (I called it SuperHit).
 - Output is SuperHit: including, CellID0 (SuperPixel), CellID1(chipID),Position and time. Number of pixels in each SuperPixel and Covariance Matrix will be added very soon.
- Using an algorithm for finding tracklet (I am working on RANSAC: Random Sample Consensus)



SuperPixel

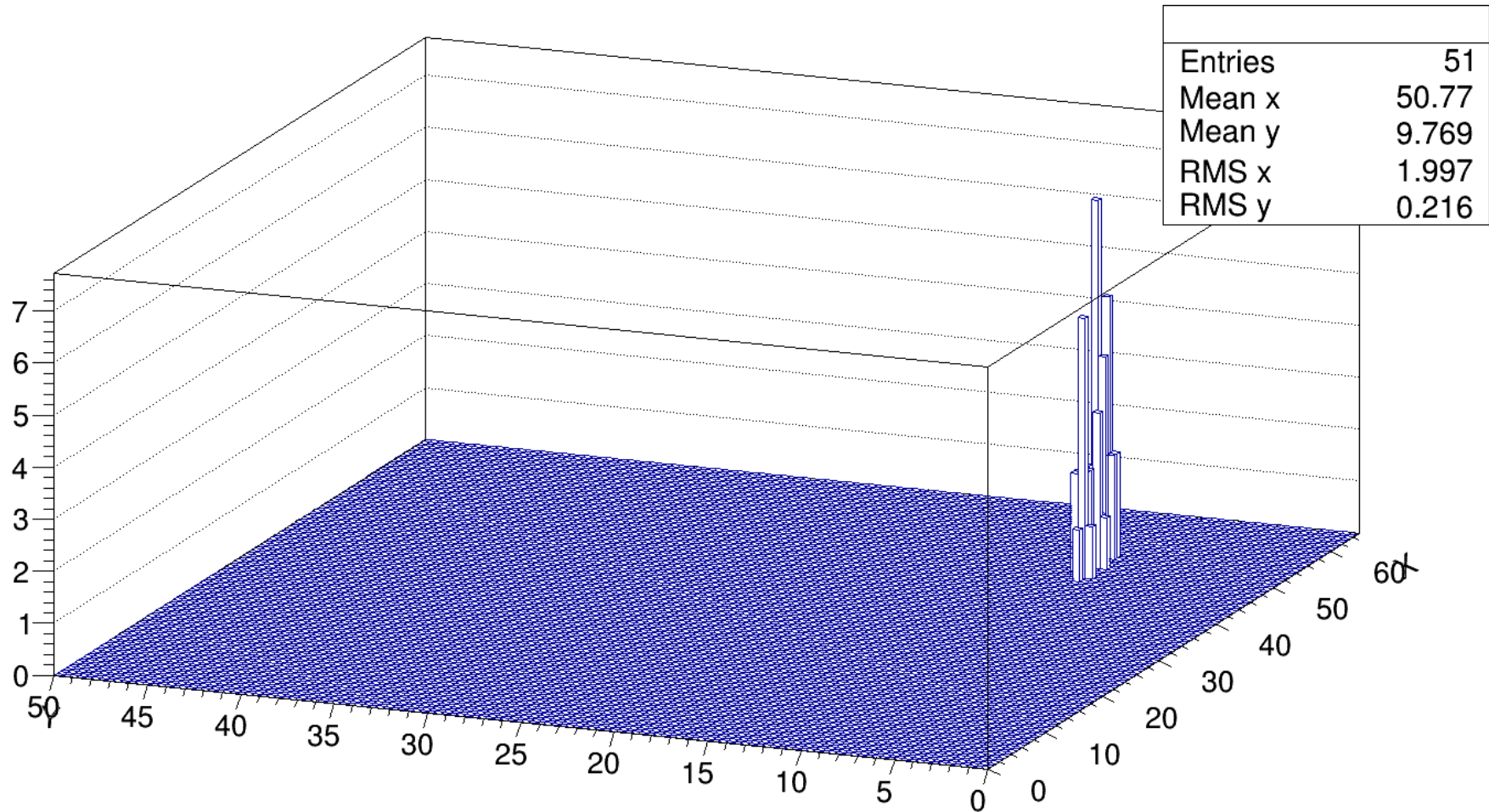


Drawing_no_Tracks_16_Hits



_Win= 1

SuperPixel

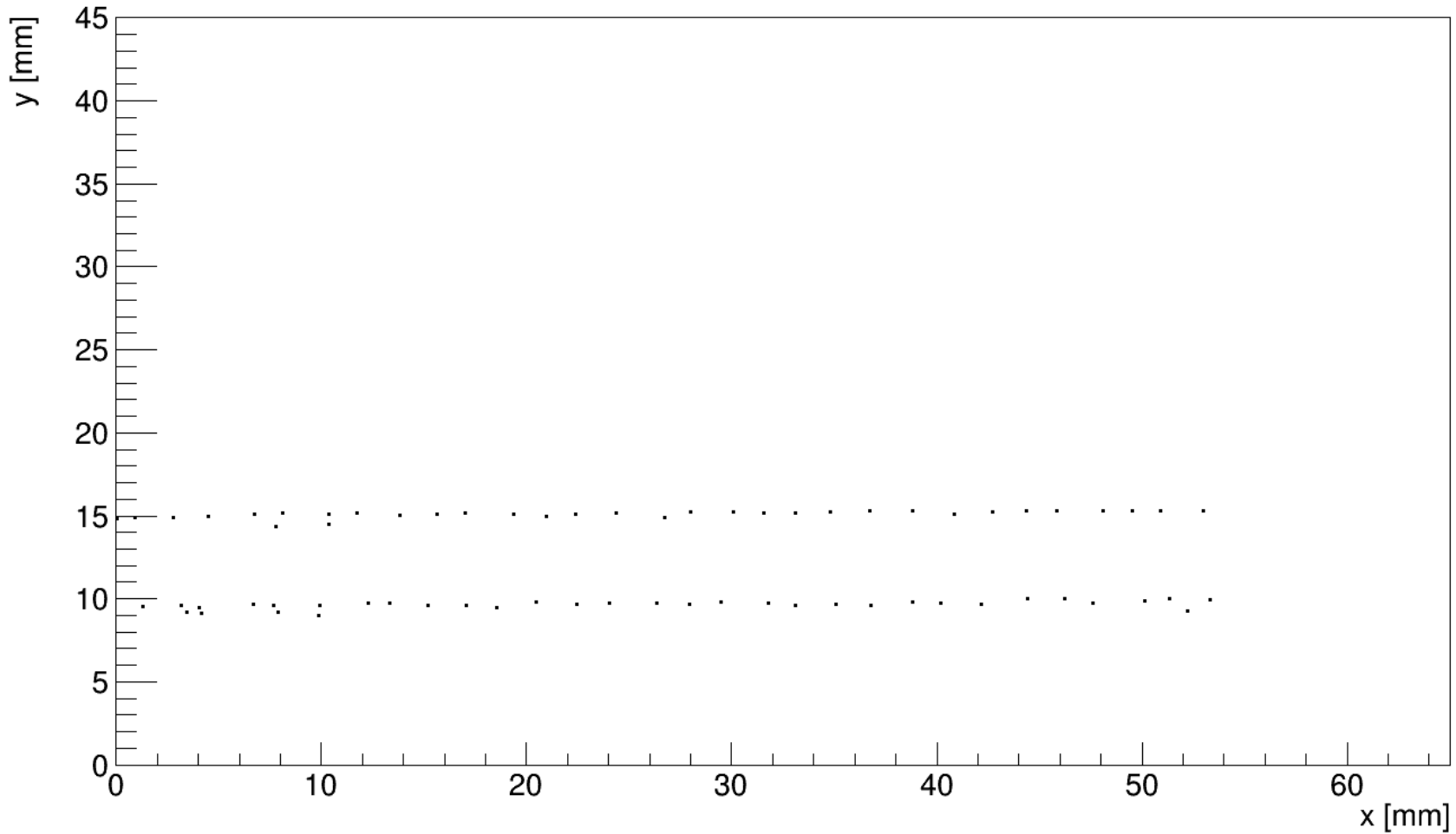


_Win= 1

SuperPixel

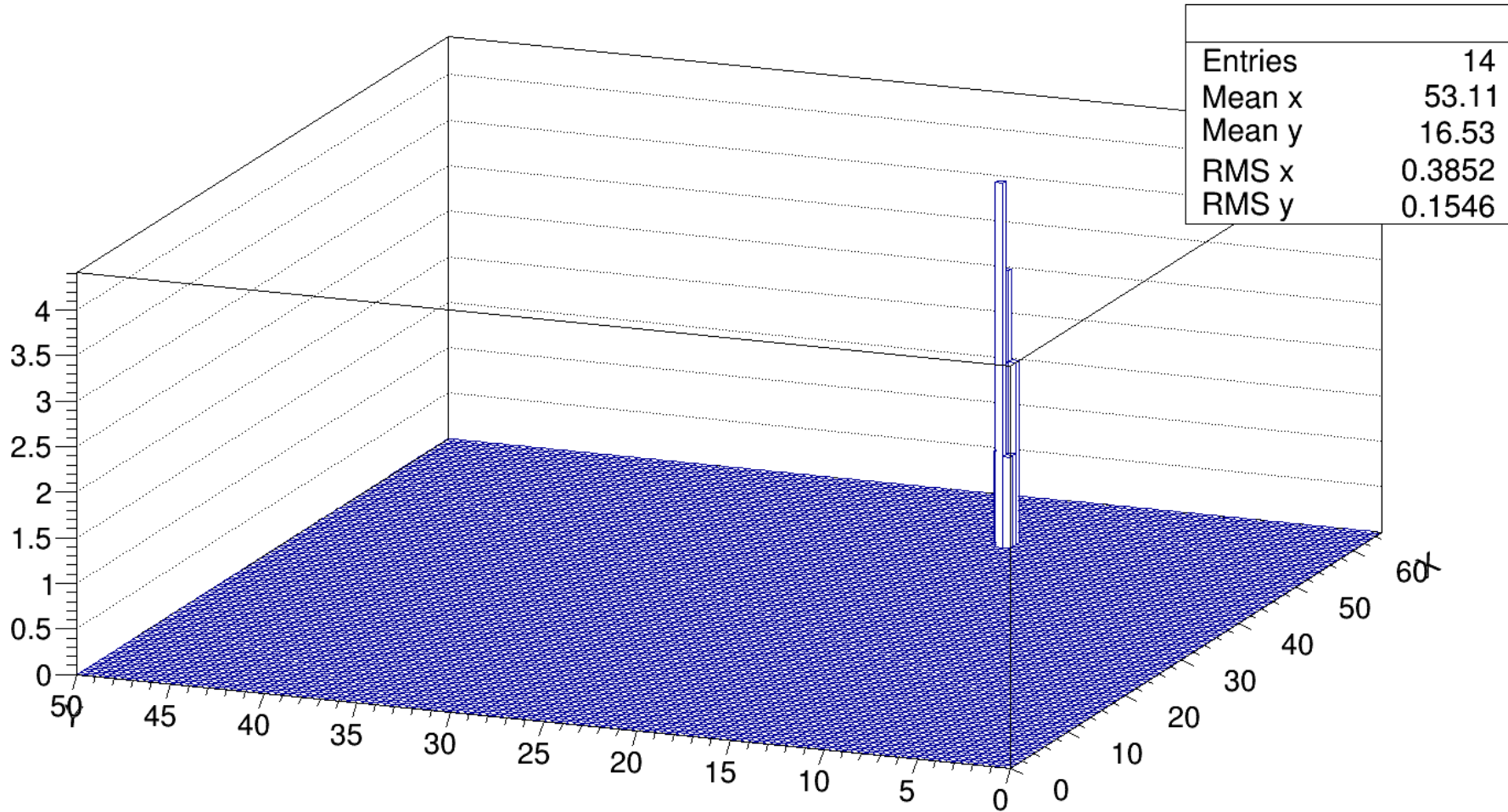


Drawing_no_Tracks_68_Hits



_Win= 3

SuperPixel



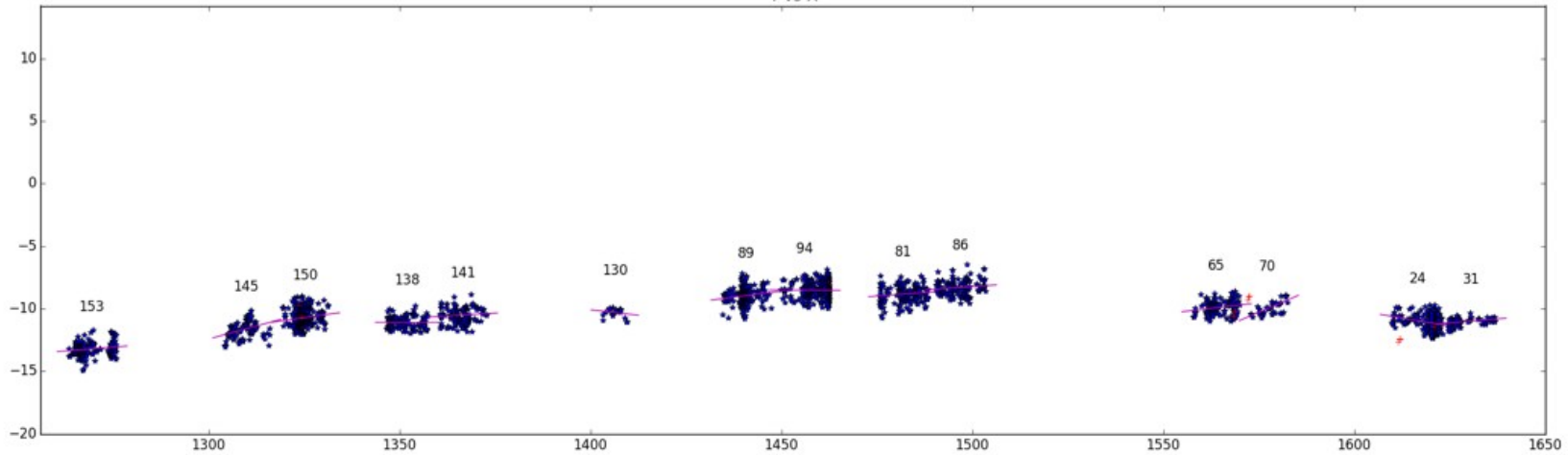
_Win= 3

SuperPixel

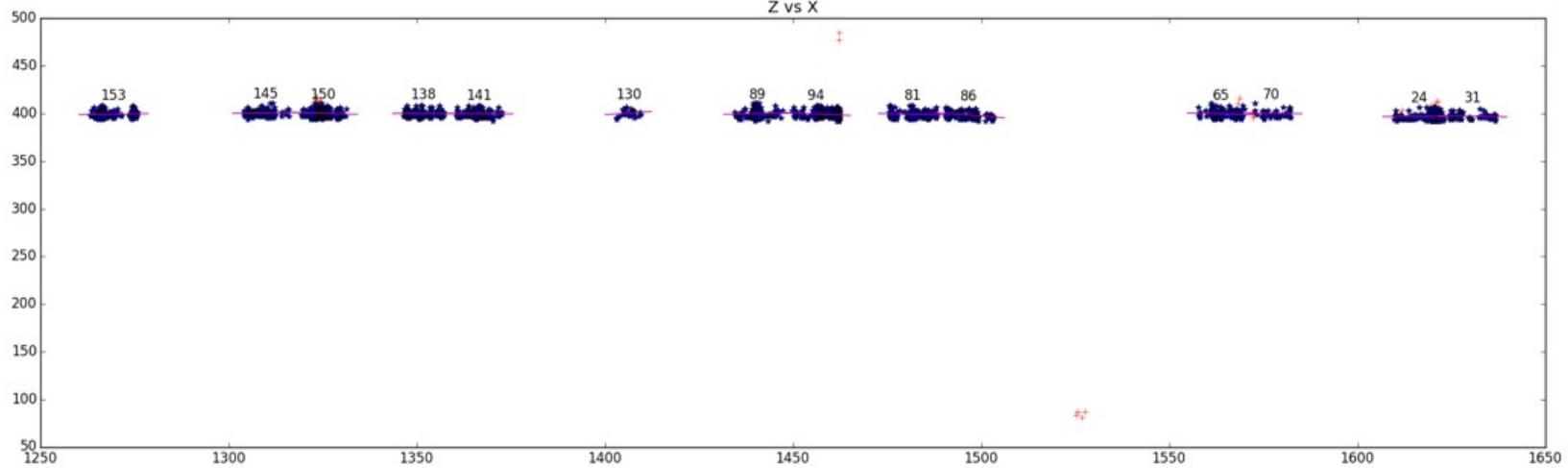


run 0 event 0

Y vs X



Z vs X



Claus Kleinwort used super pixel for test beam (Python).