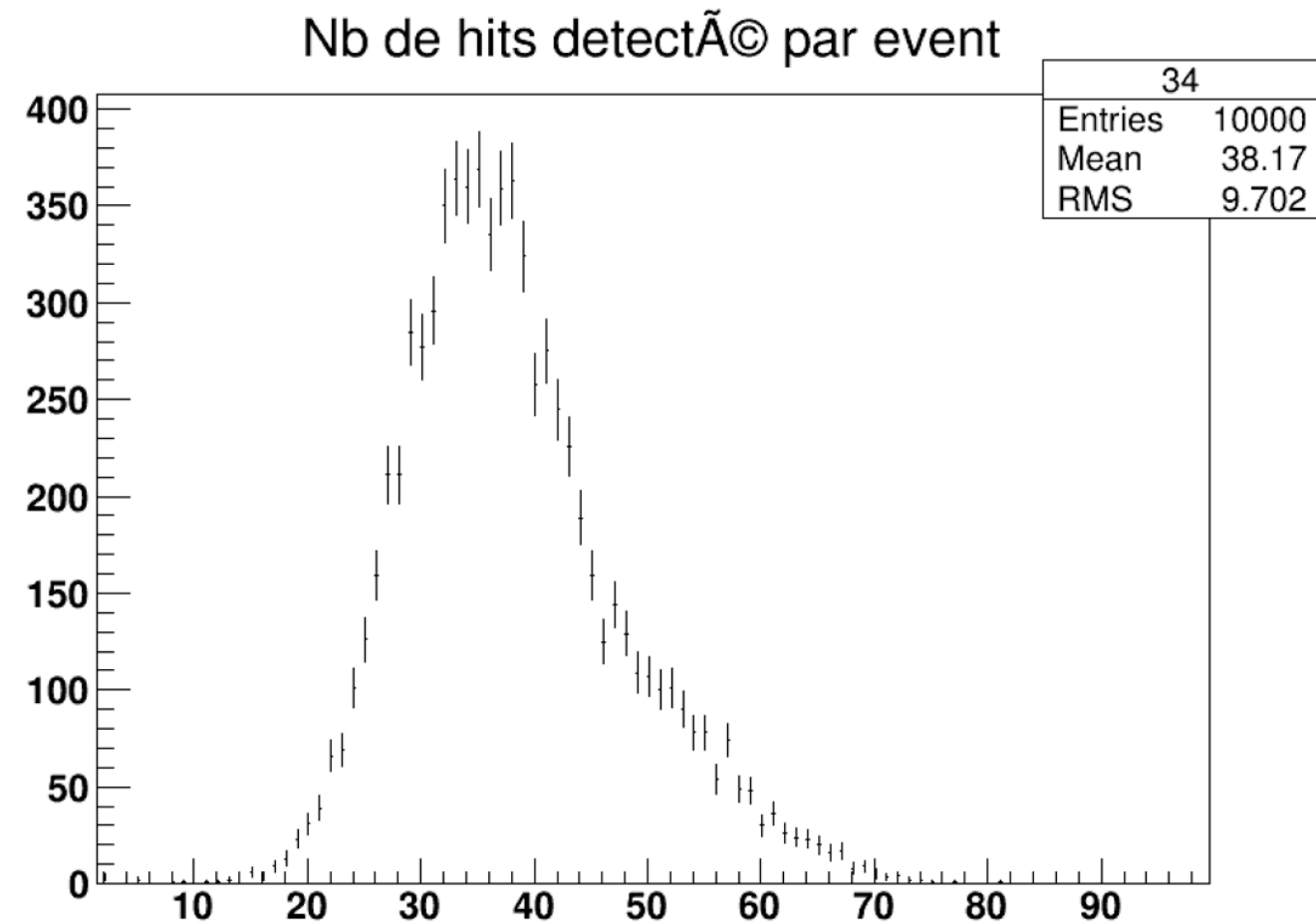
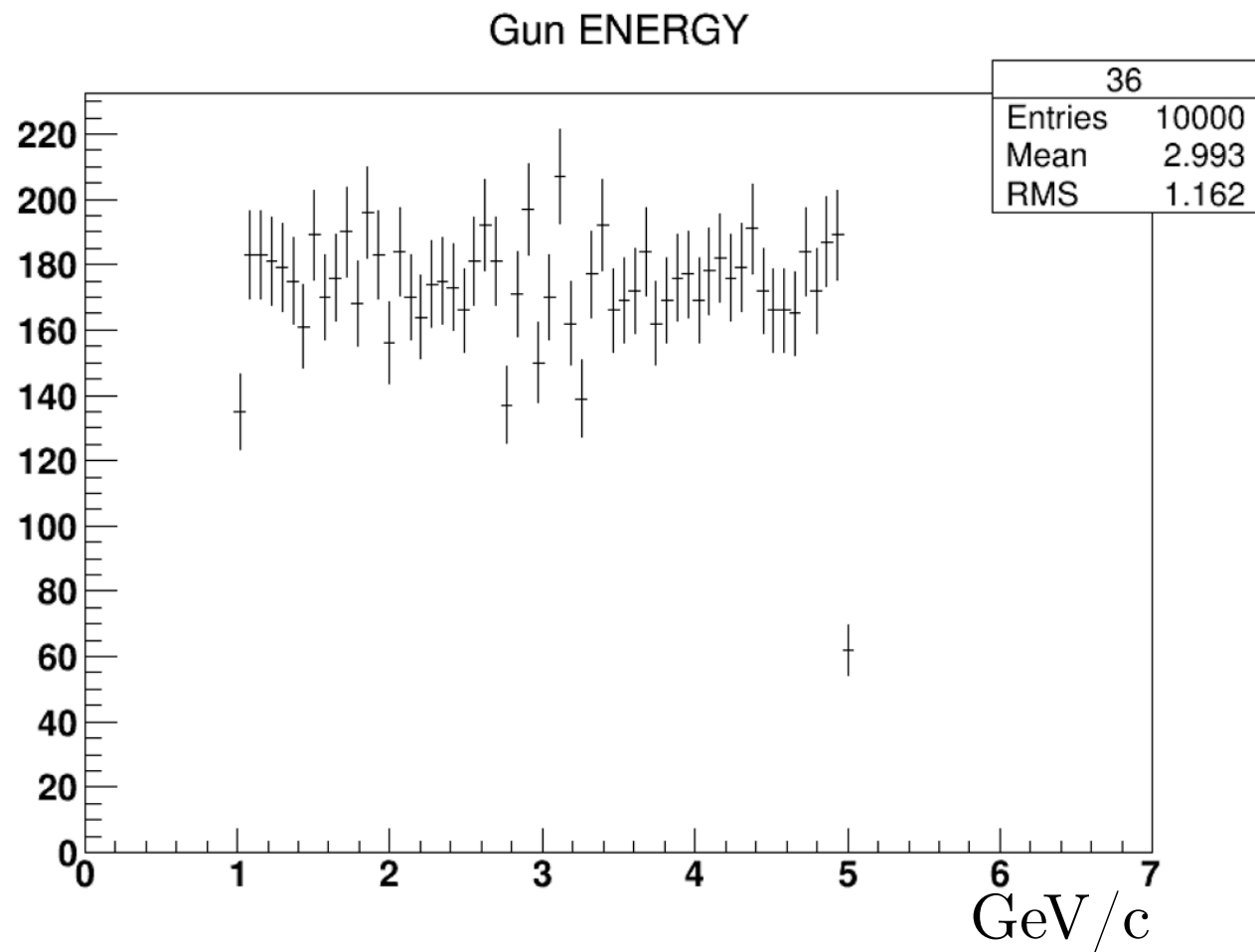
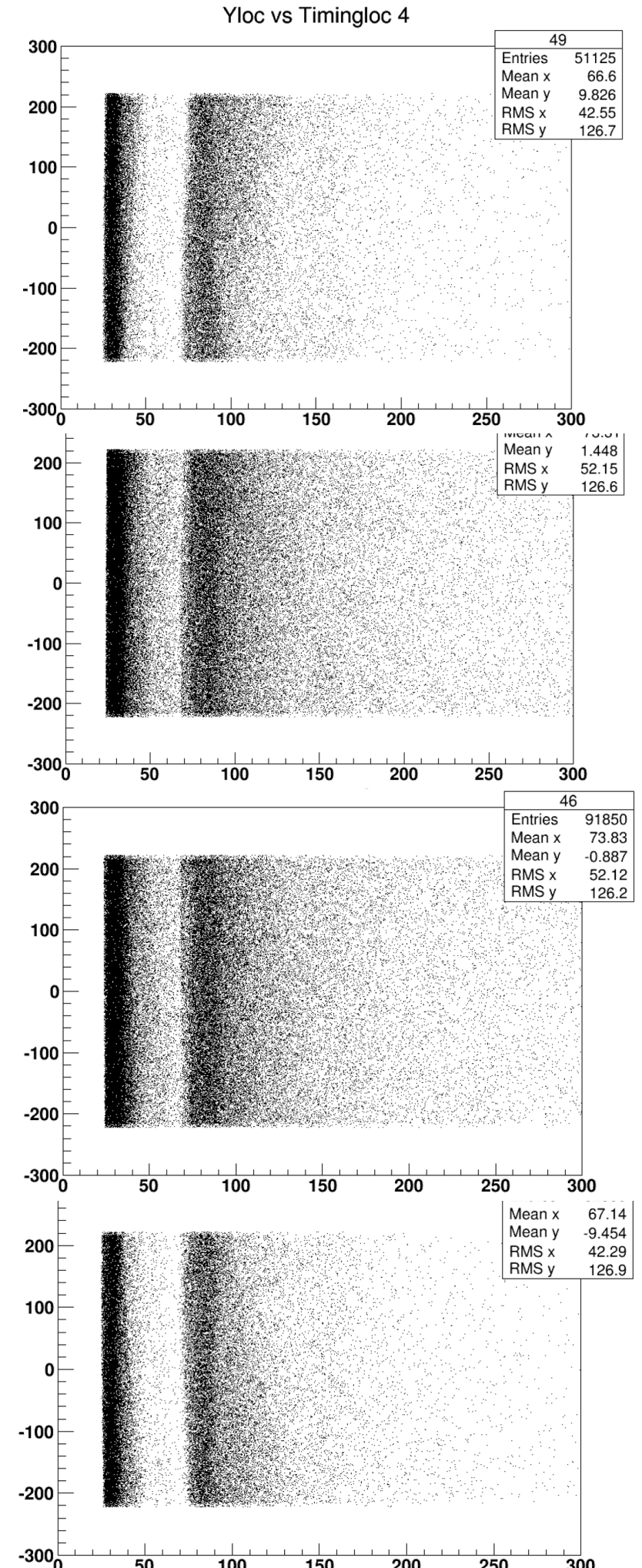
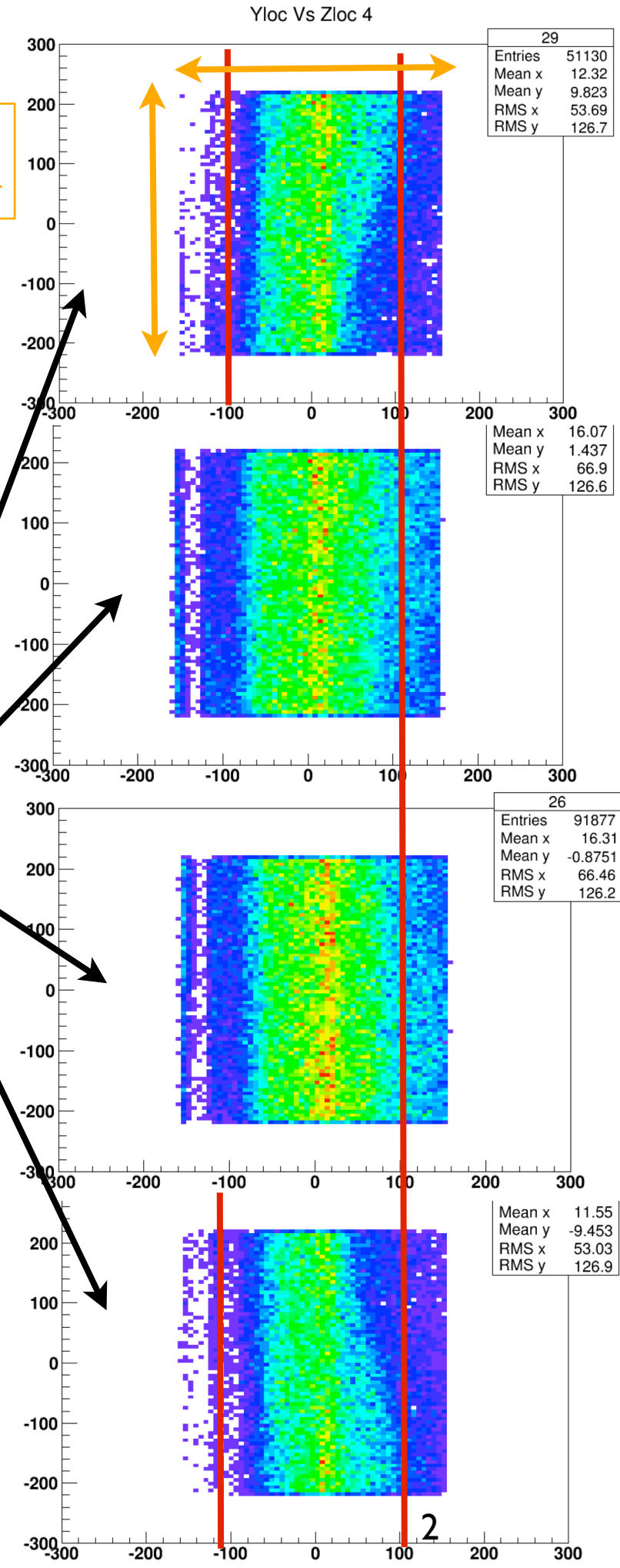
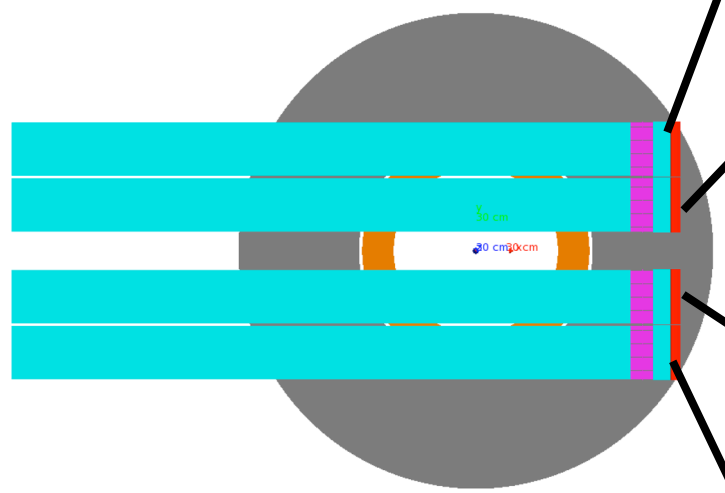


- pion from 1 to 4 GeV/c
- randomly generated in phi and theta ($<11^\circ$)

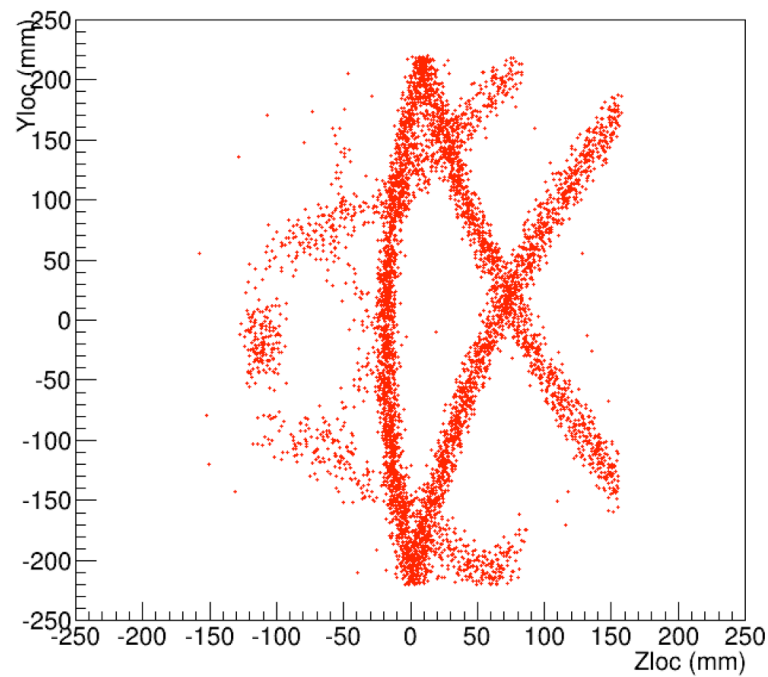
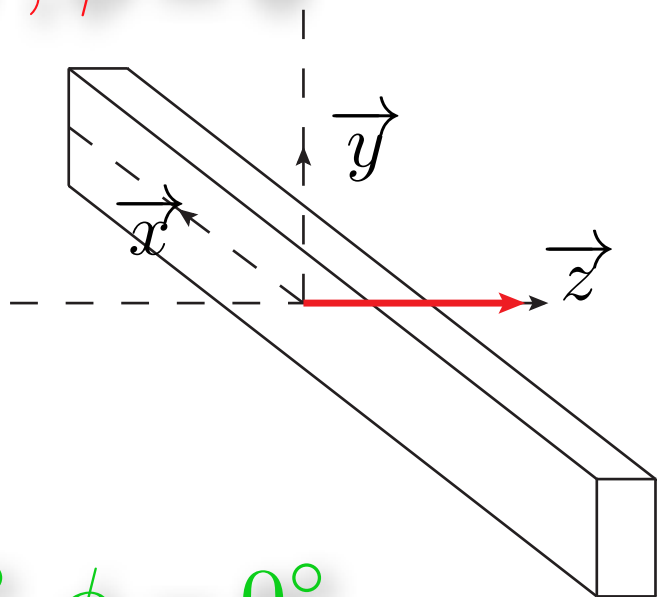


437mm x 312mm

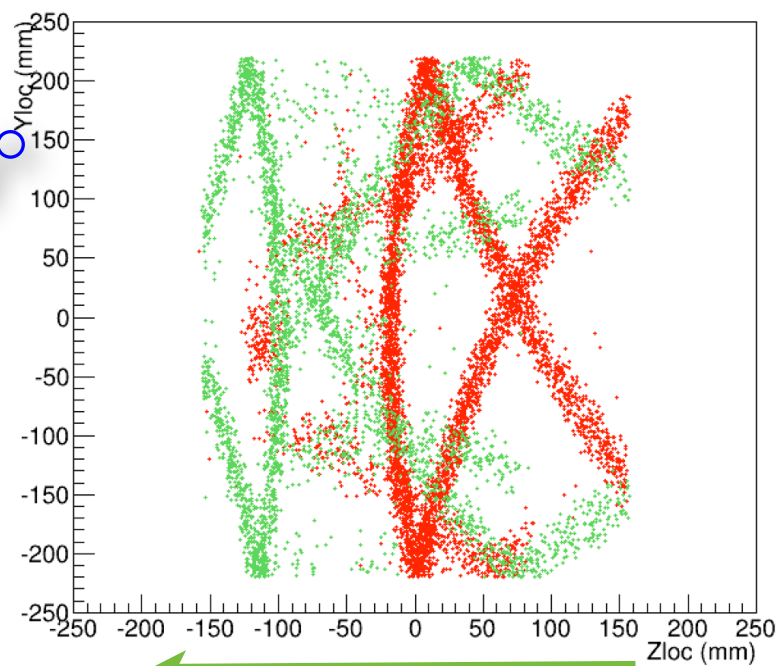
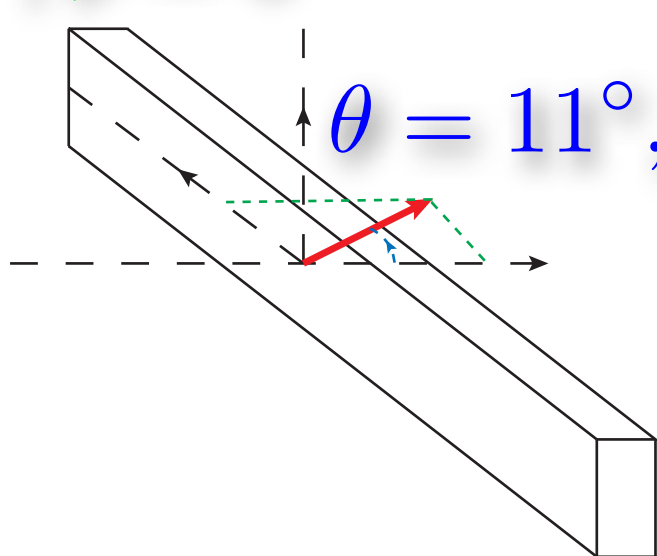


No need to instrument all the surface with PMTs

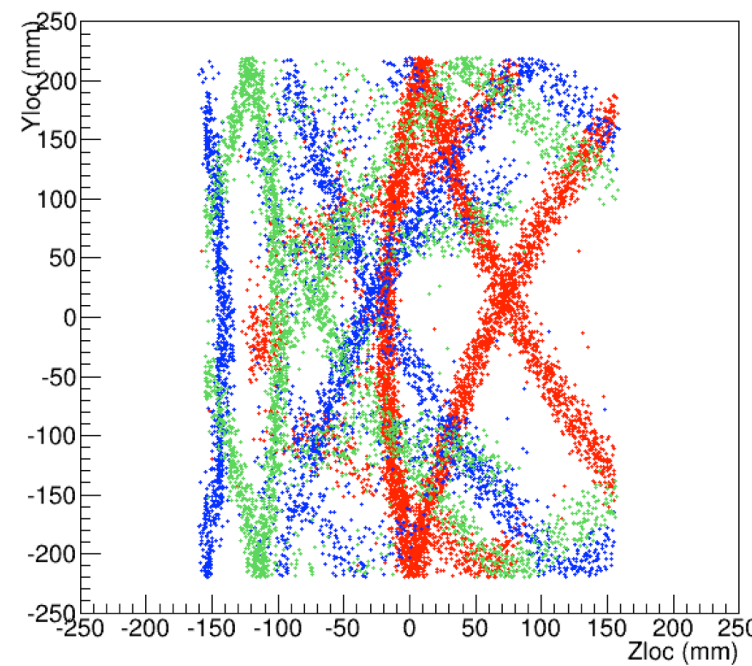
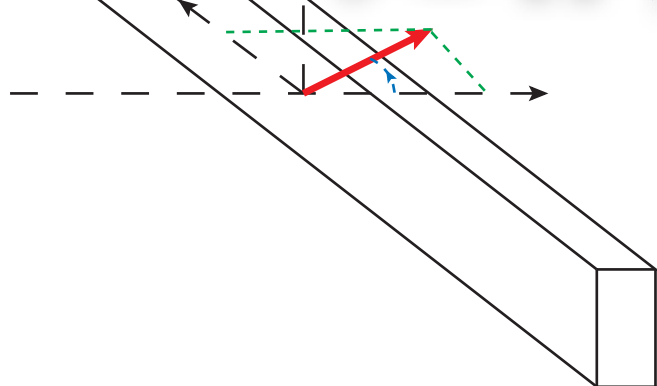
$$\theta = 0^\circ, \phi = 0^\circ$$



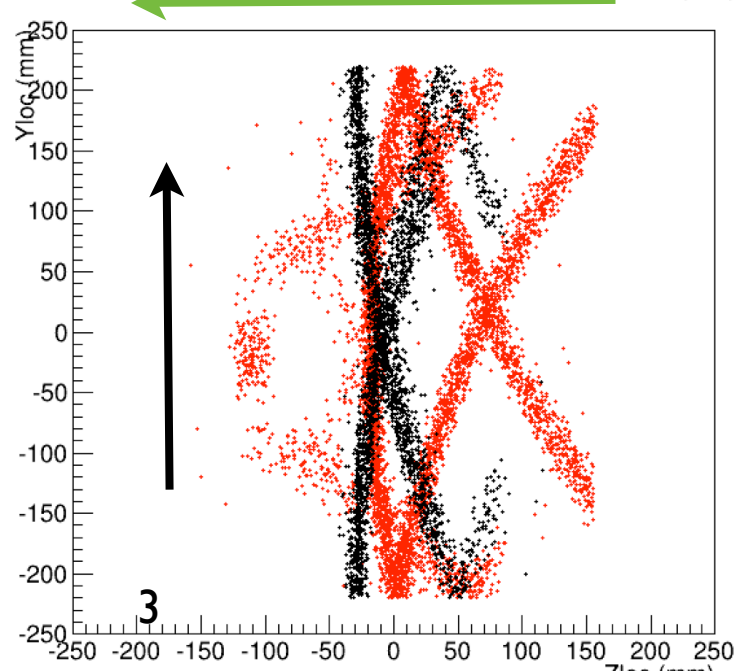
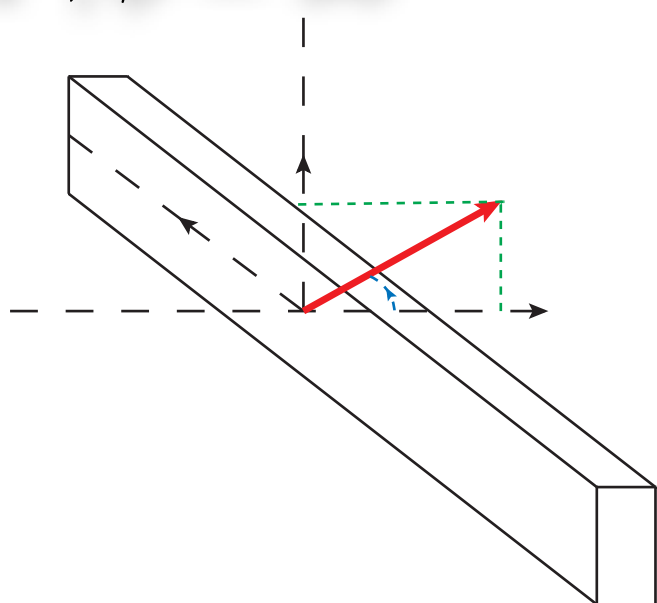
$$\theta = 6^\circ, \phi = 0^\circ$$



$$\theta = 11^\circ, \phi = 0^\circ$$



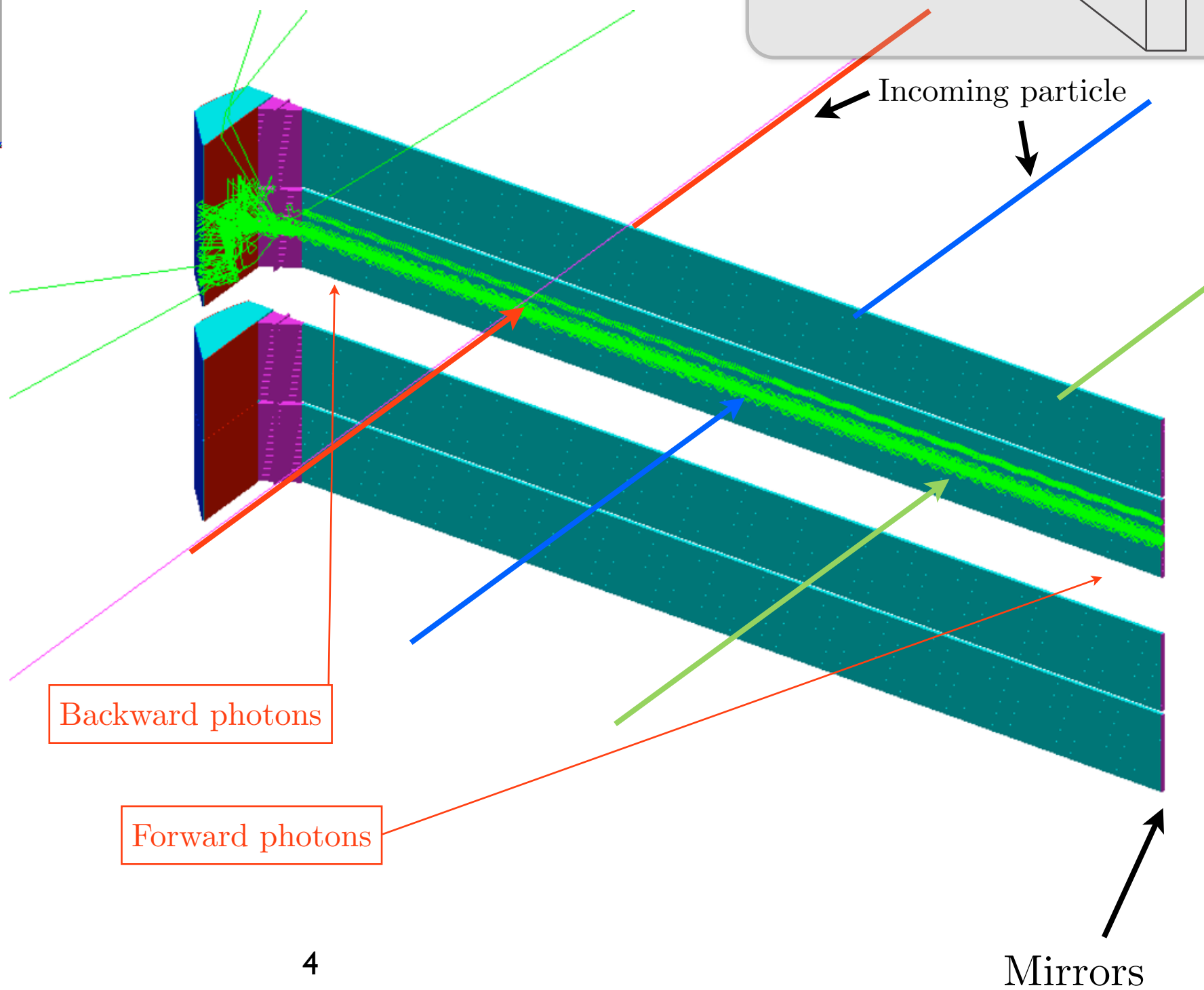
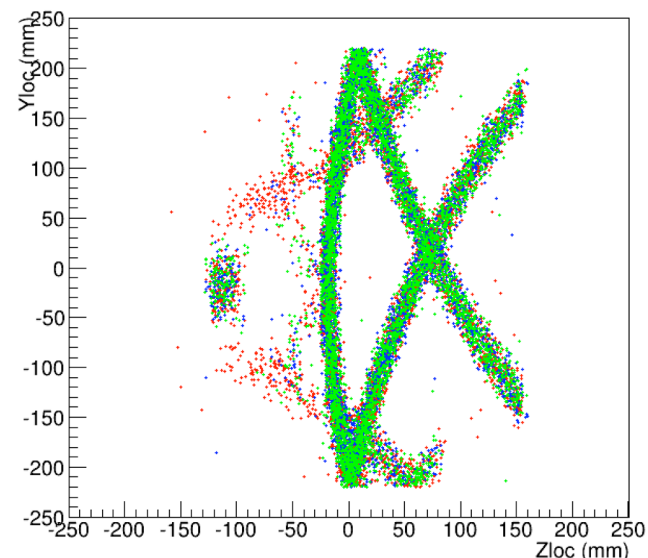
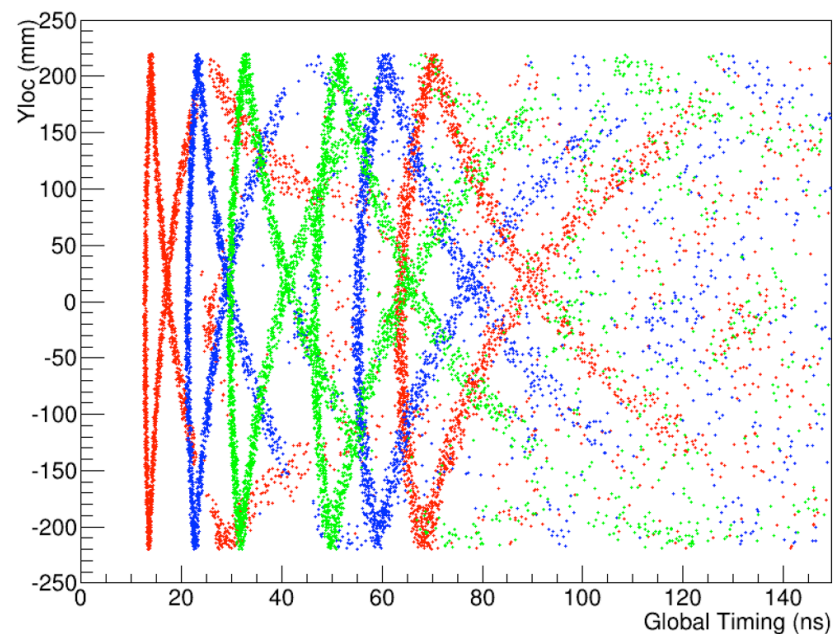
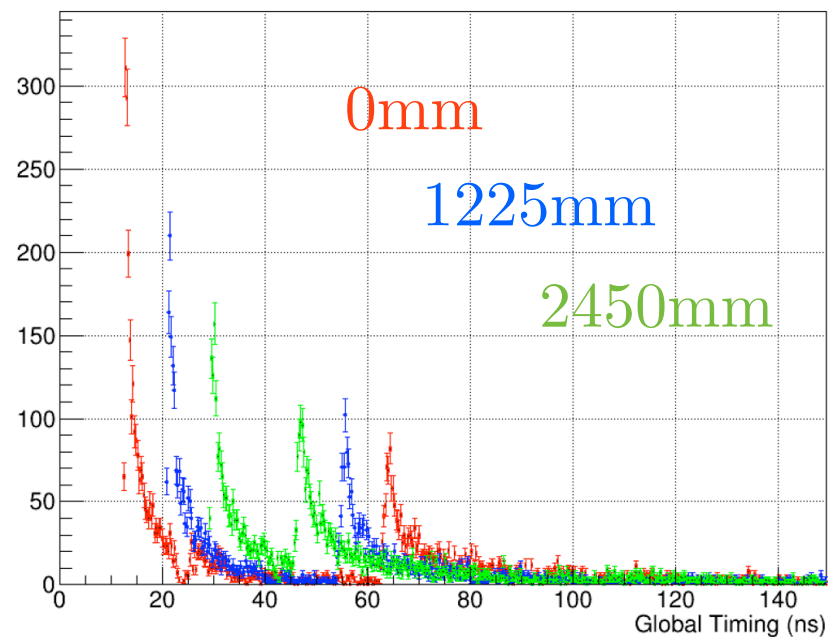
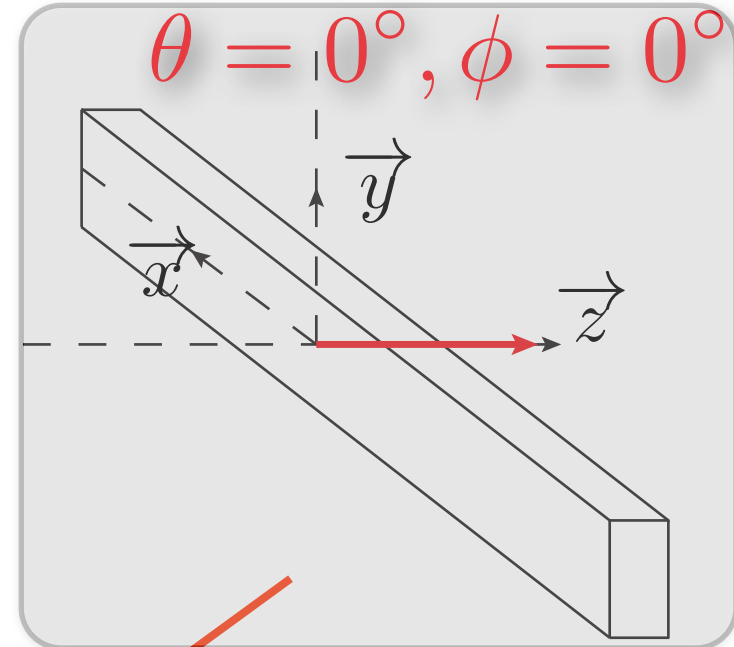
$$\theta = 11^\circ, \phi = 90^\circ$$



3

x dependance of a perpendicular track:

100 pions @ 4 GeV/c



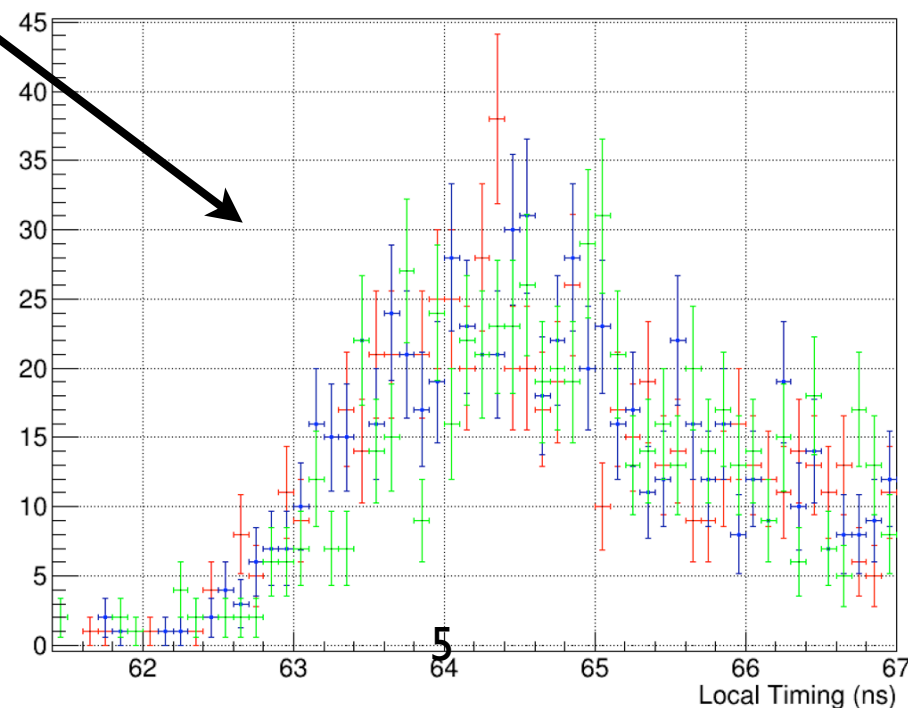
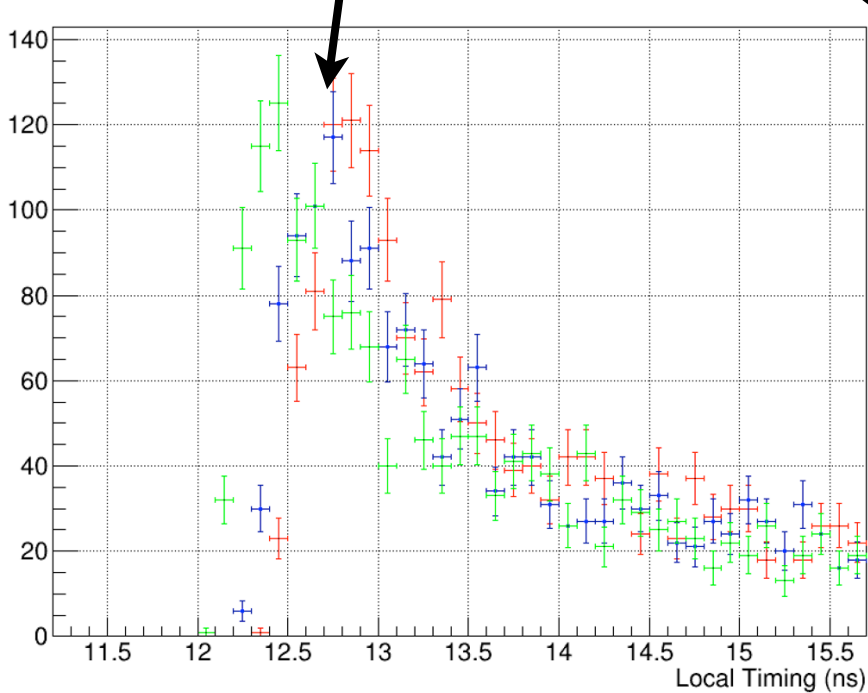
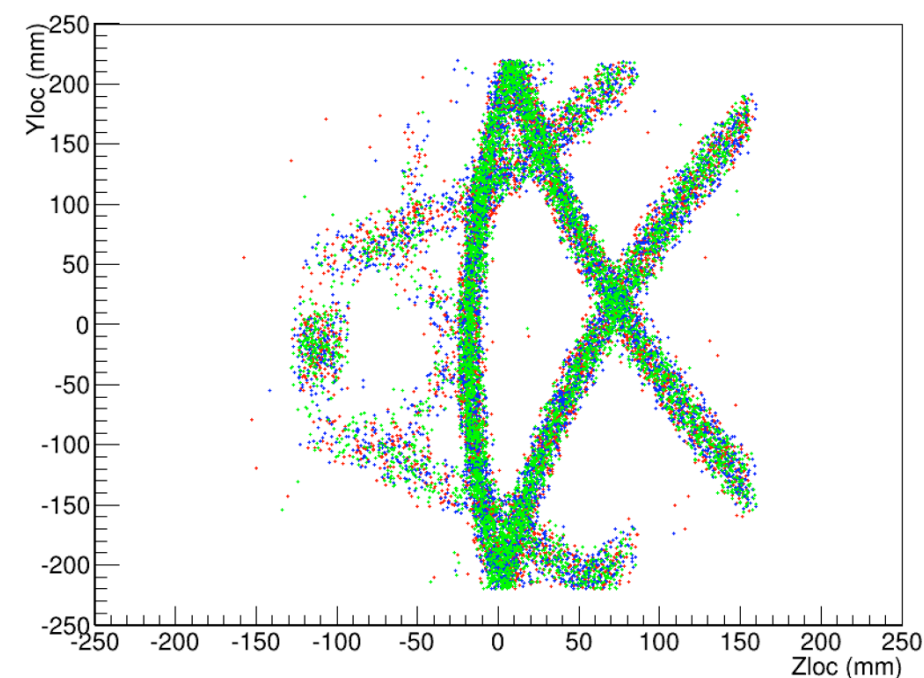
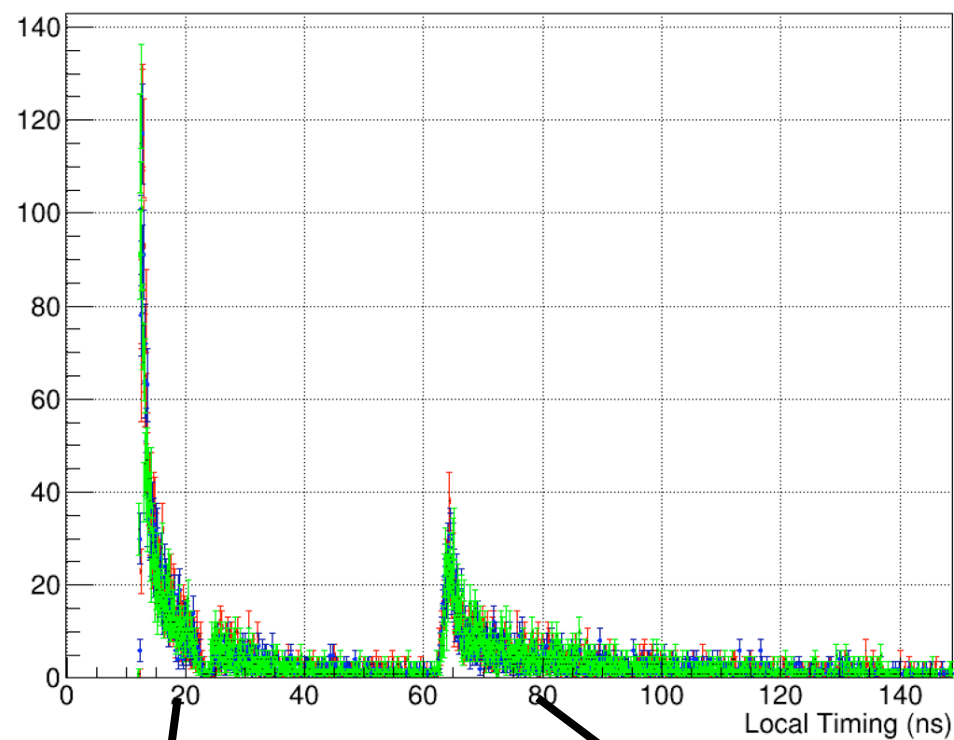
x dependance of a perpendicular track:

100 pions @ 4 GeV/c, x -position =

0cm

+2cm

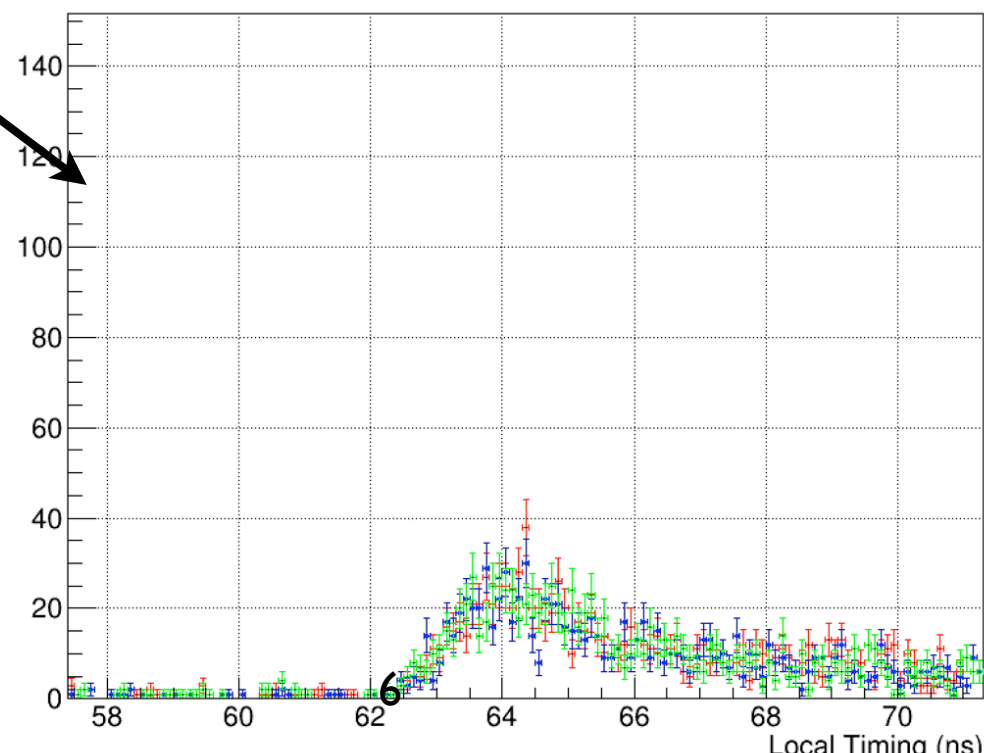
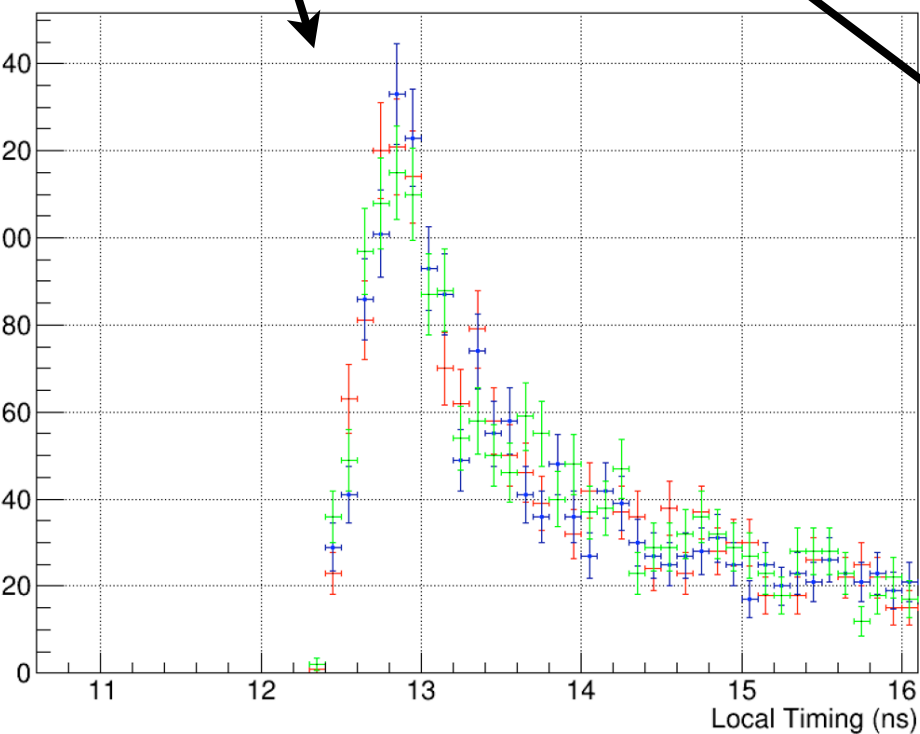
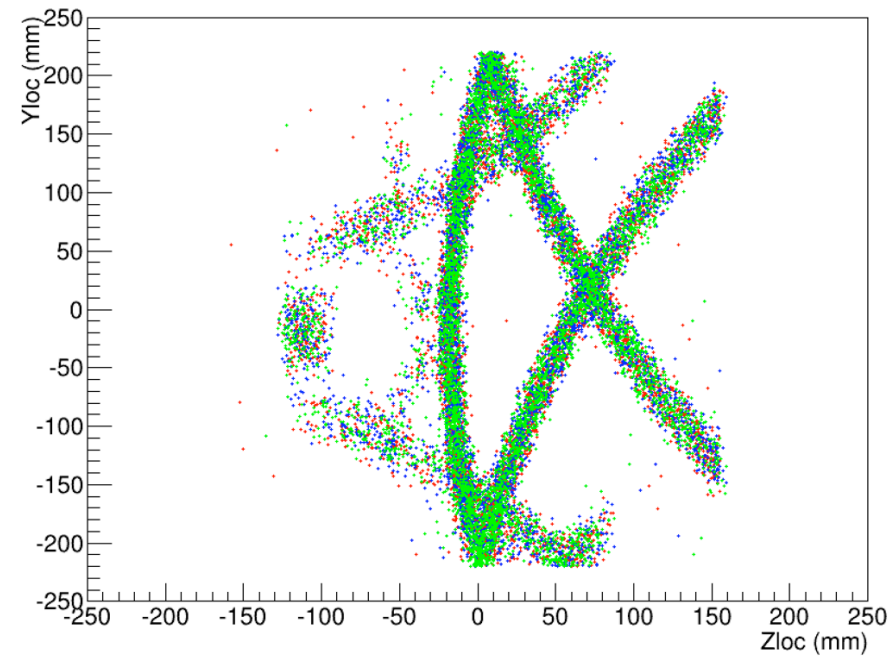
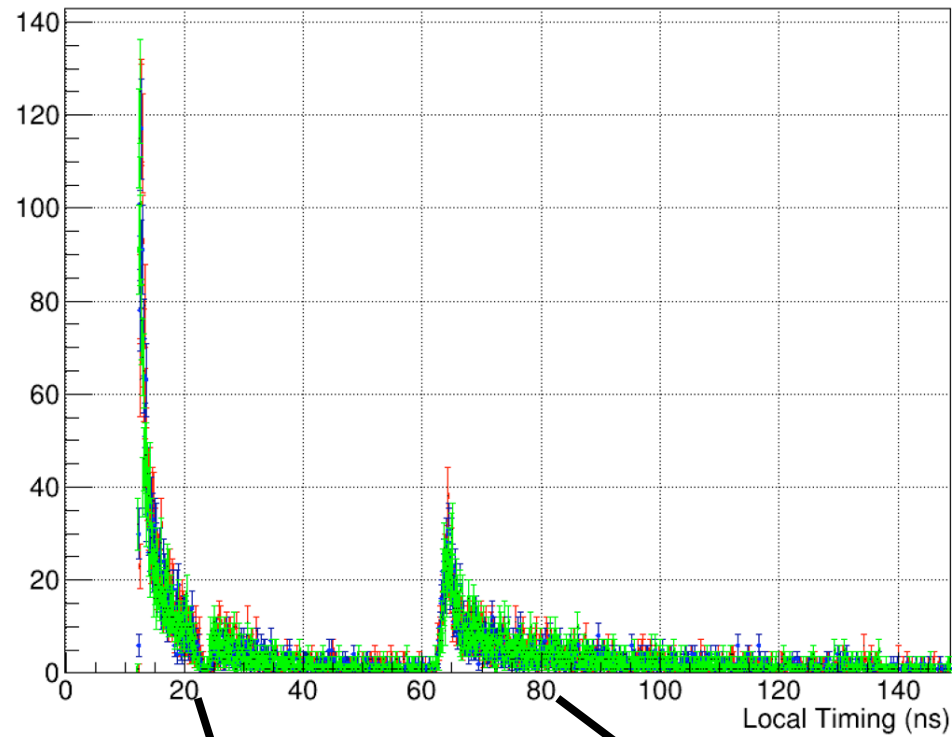
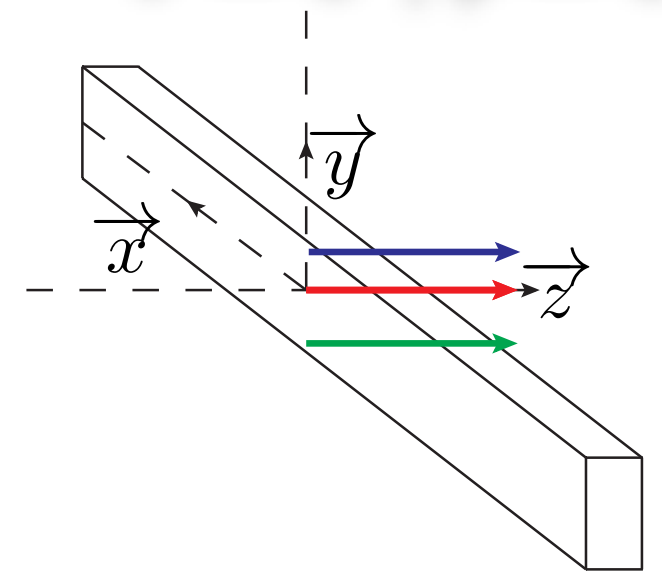
+5cm



y dependance of a perpendicular track:

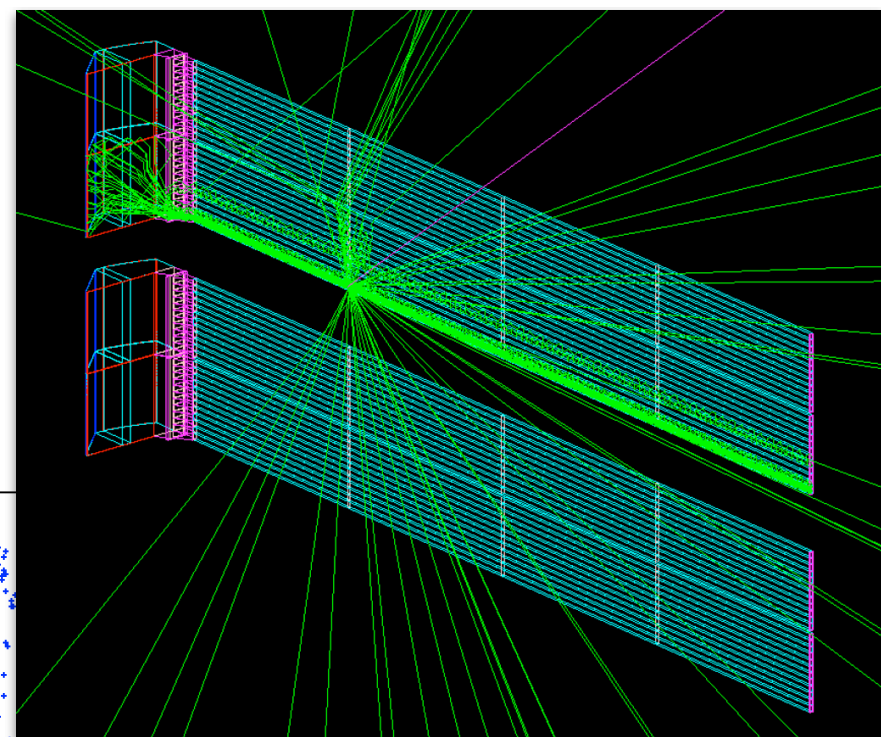
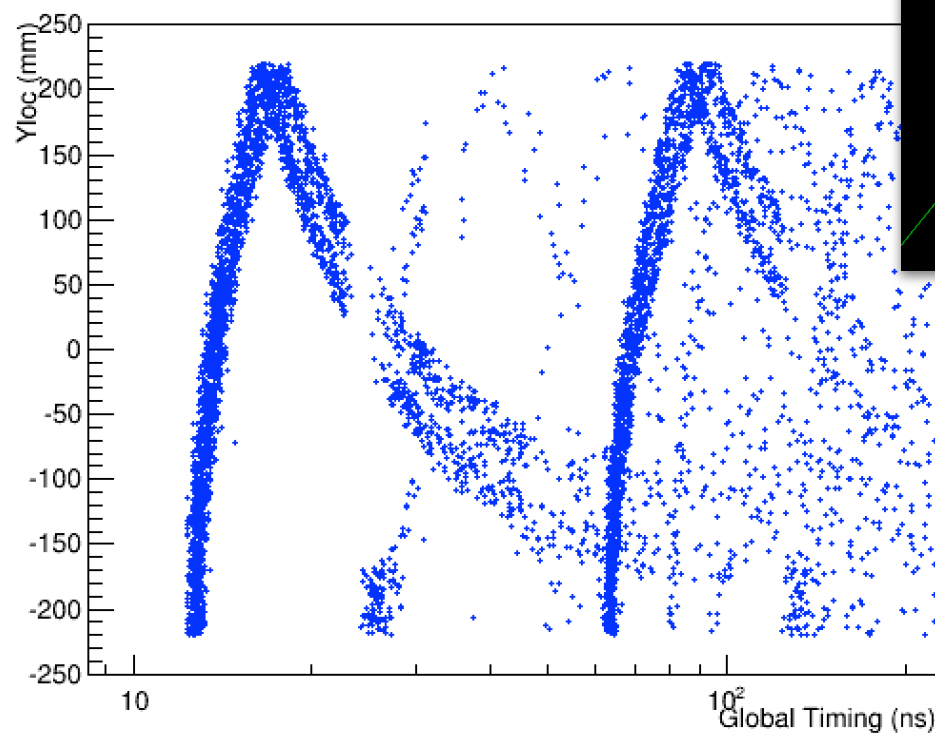
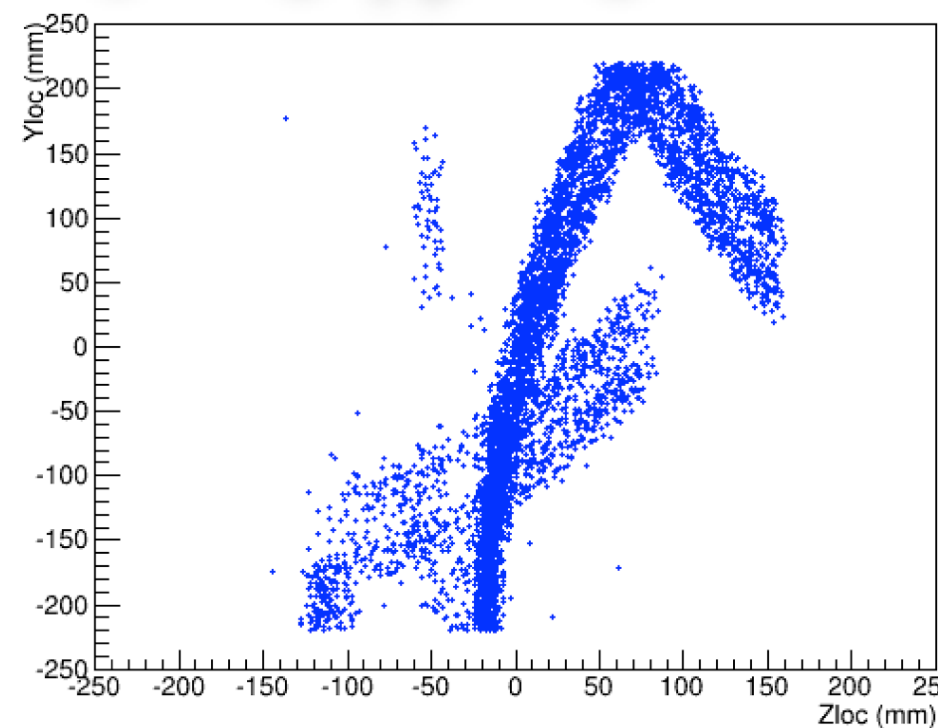
100 pions @ 4 GeV/c

$$\theta = 0^\circ, \phi = 0^\circ$$

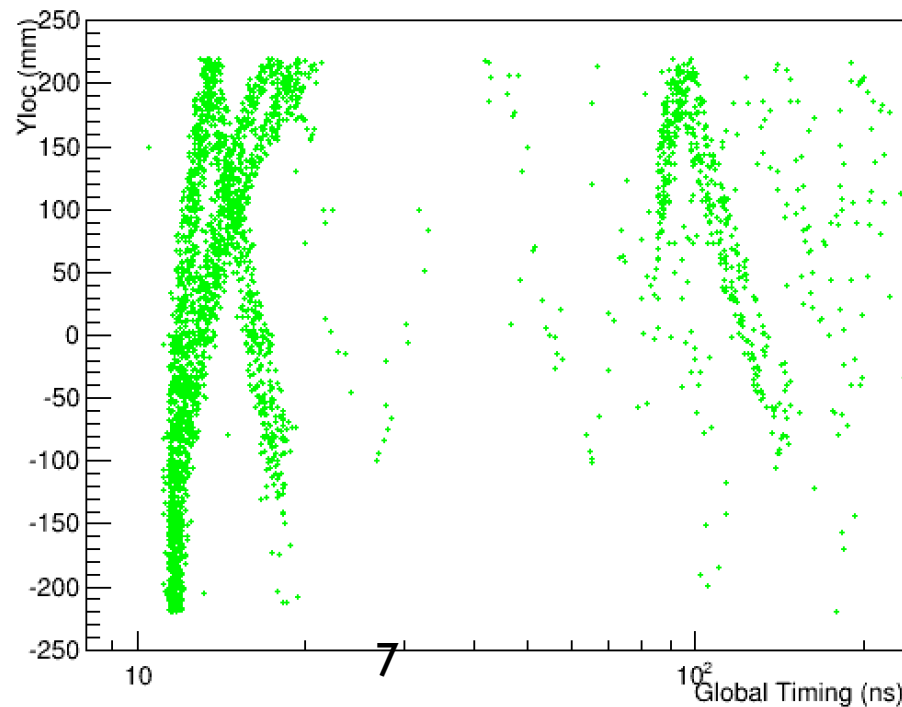
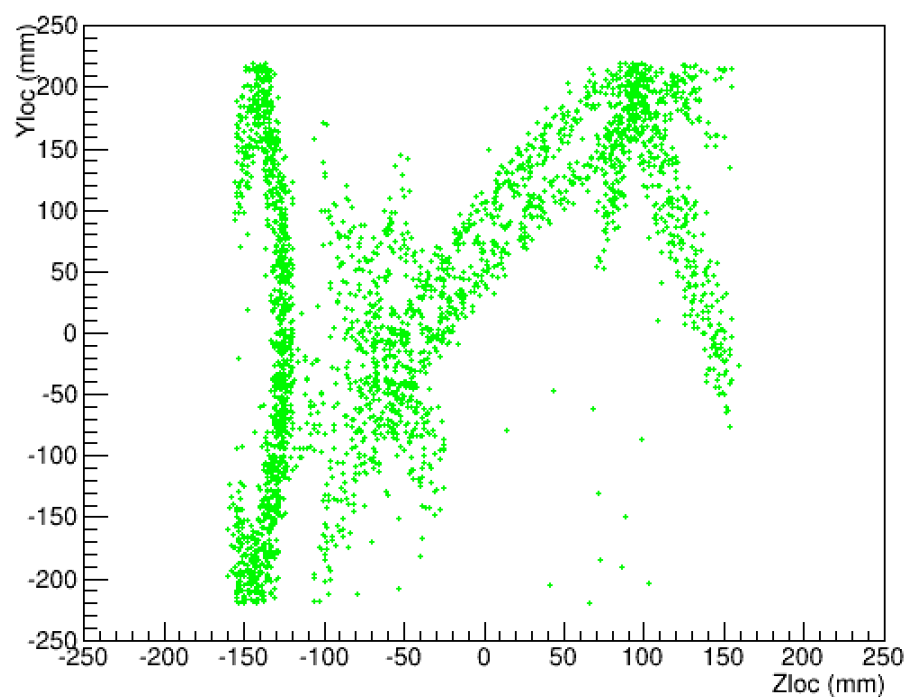


Some more complicated patterns: (edges of the FBlock)

$$\theta = 0^\circ, \phi = 0^\circ$$



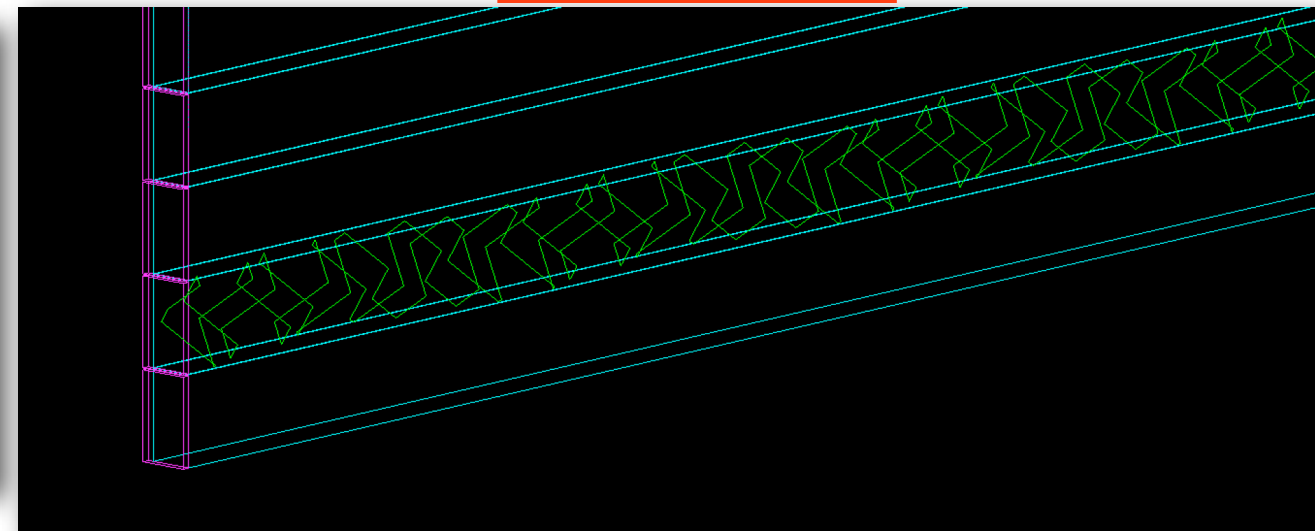
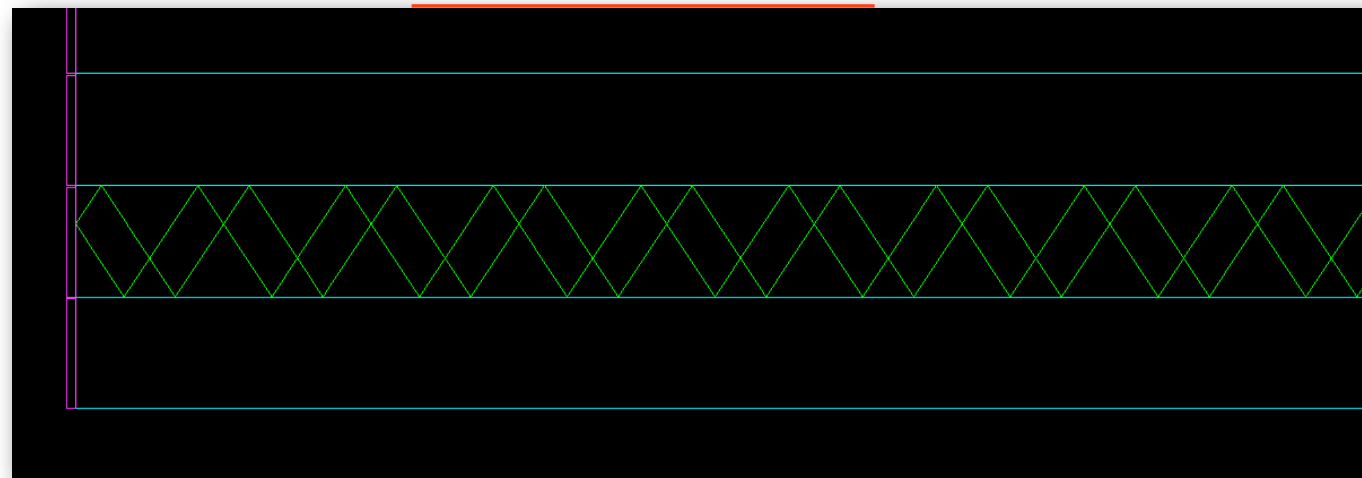
$$\theta = 6^\circ, \phi = 45^\circ$$



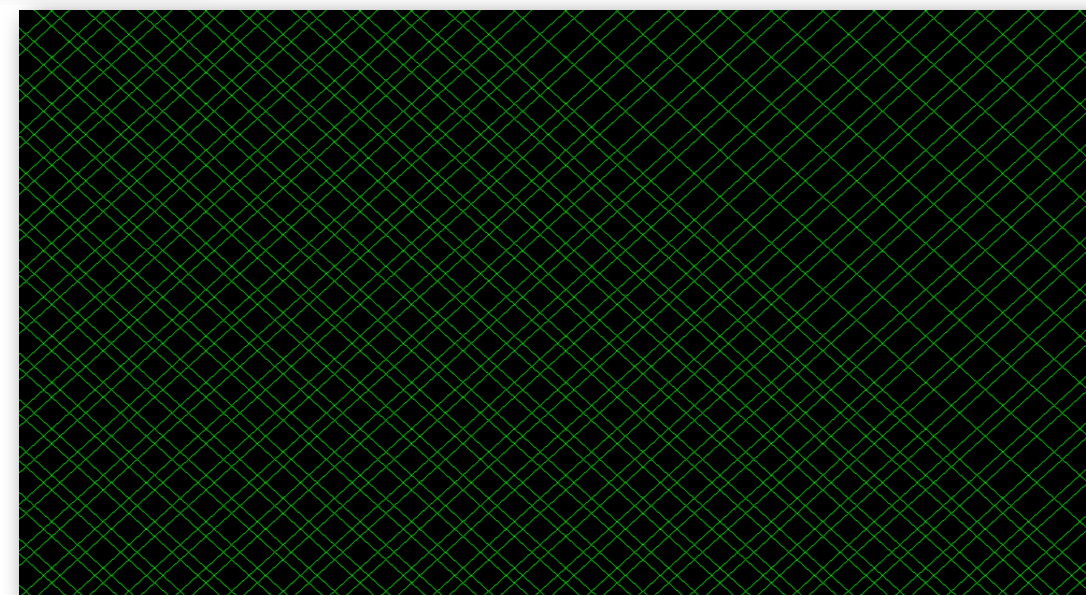
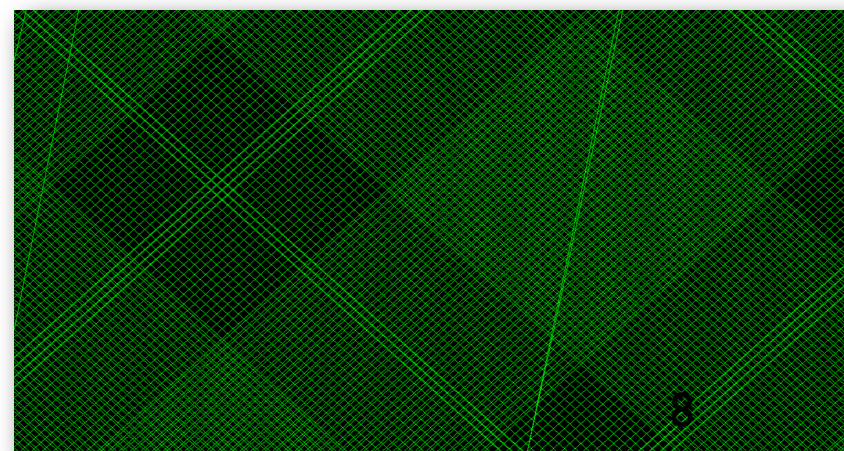
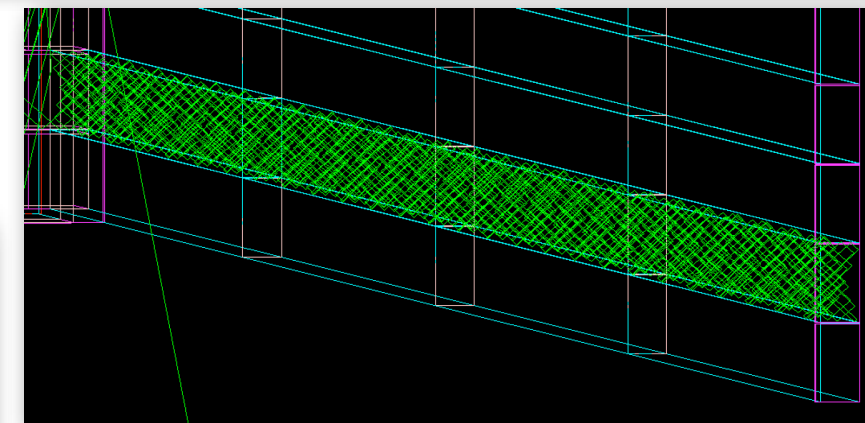
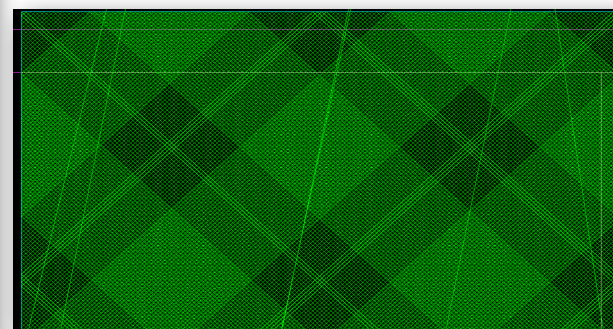
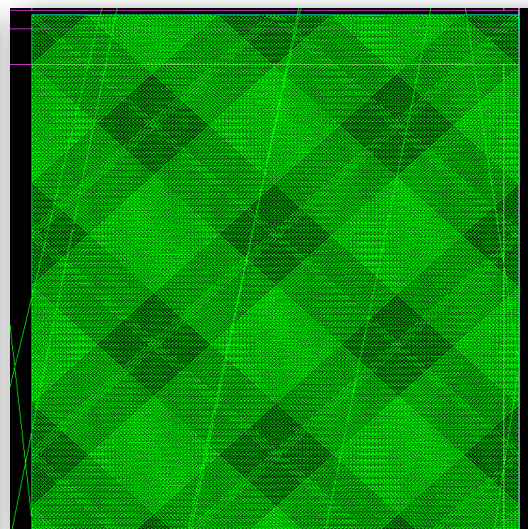
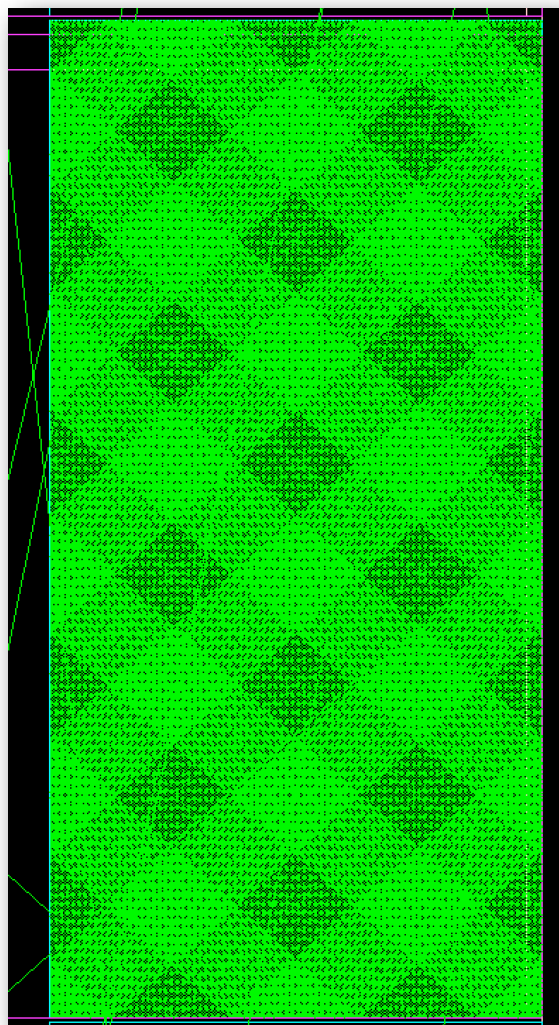
Once upon a time one photon in the bar

Side view

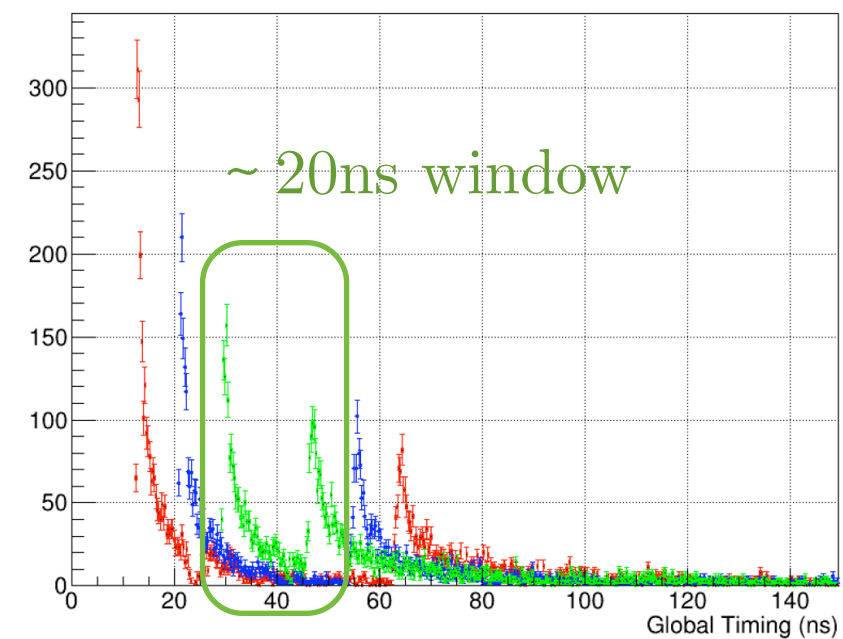
3D view



Transverse view:



- The Readout out should be located as far as possible from the beam line



- Due to our acceptance, there is no need to instrument the full PMT surface with the present FBlock design
- The reflections from the FBlock sides introduce in some cases complicated patterns, that may be difficult to analyse for the reconstruction
- Design a new focusing scheme with a longer boxe (avoiding side reflections) filled with oil matching the index of refraction of the fused silica