Occupancy Studies for the new FTS`s geometry

Jacek Biernat

Jagiellonian Uni

Menu :

The 1st simullation:

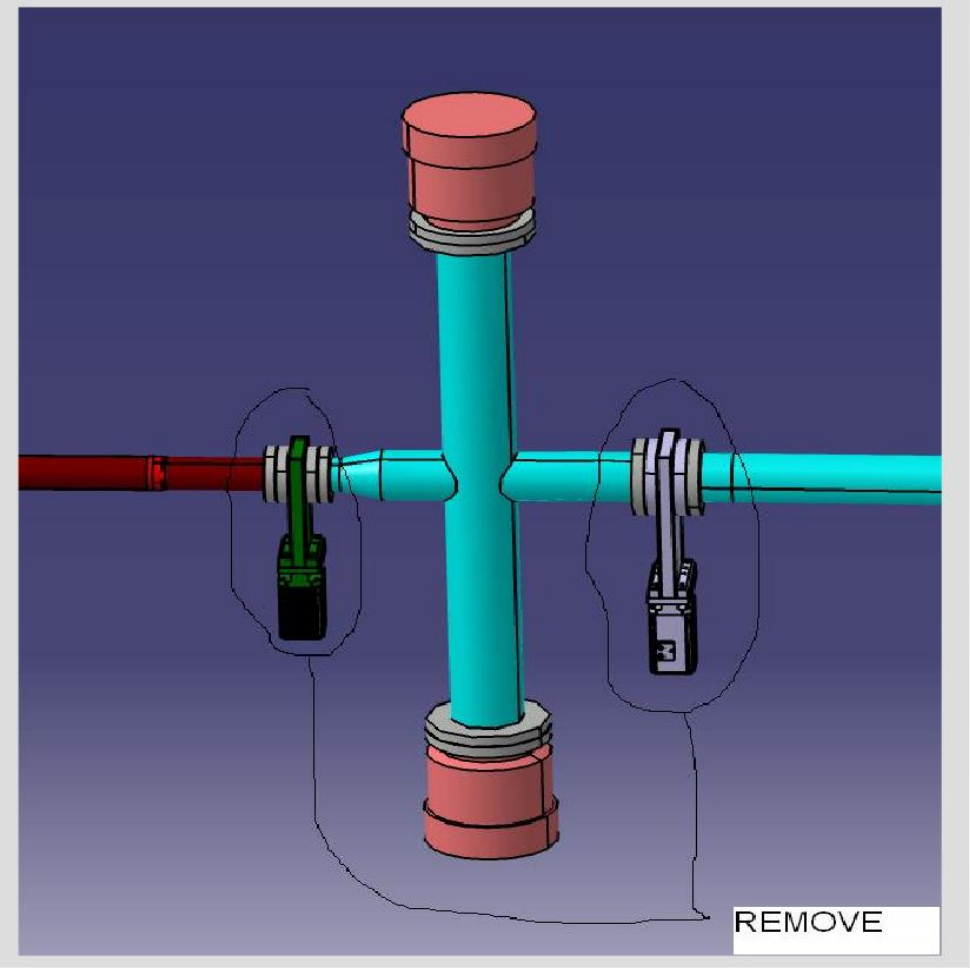
- DPM model was used for pbar-p@15 GeV/c
- 20 000 events were simulated
- Assuming 2 x 10^7 reactions/s
- New FTS geometry, FT5 and FT6 is now closer to each other
- Beam pipe geometry without valves

The 2nd simulation:

- Urqmd model was used for pbar- N@15 GeV/c
- 12 000 events simulated
- Same geometry as mentioned above
- Assuming 10^7 reactions/s

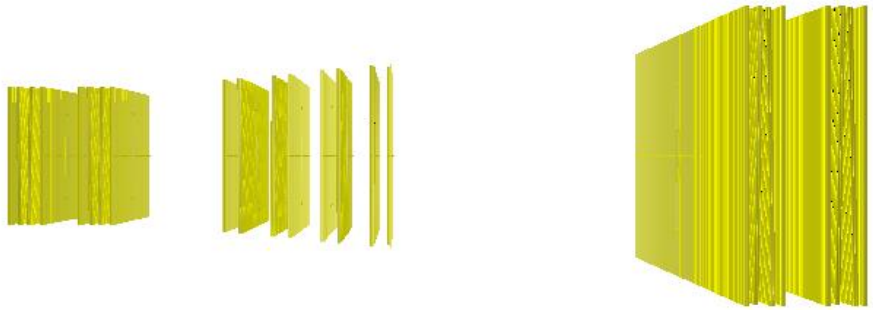
The beam pipe

- Valves removed from the beam pipe



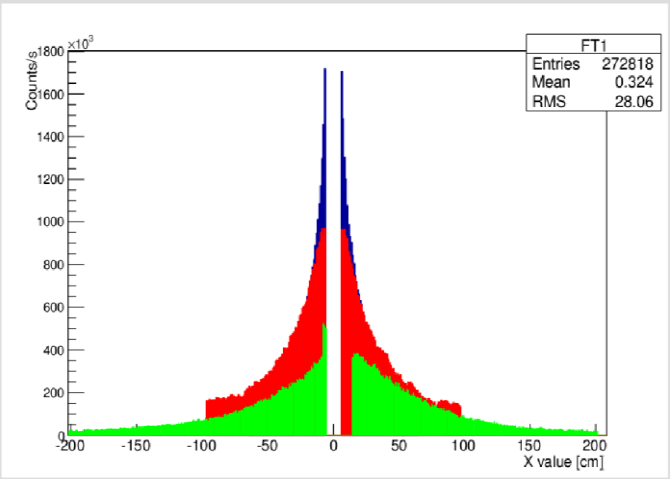
The ”OLD” FTS setup

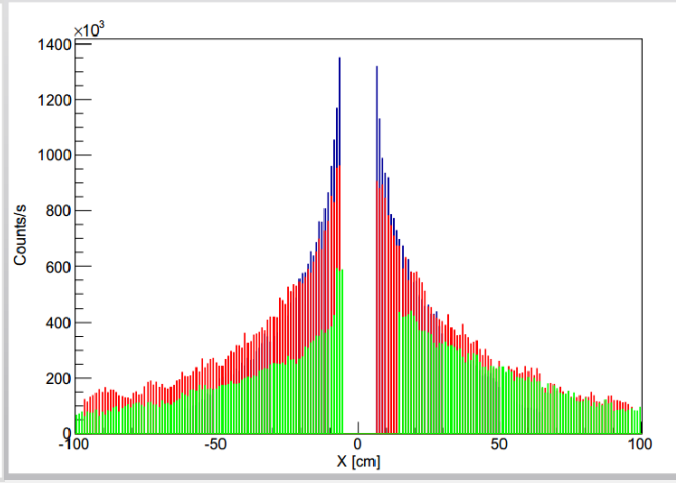
New Forward Spectrometer Geo

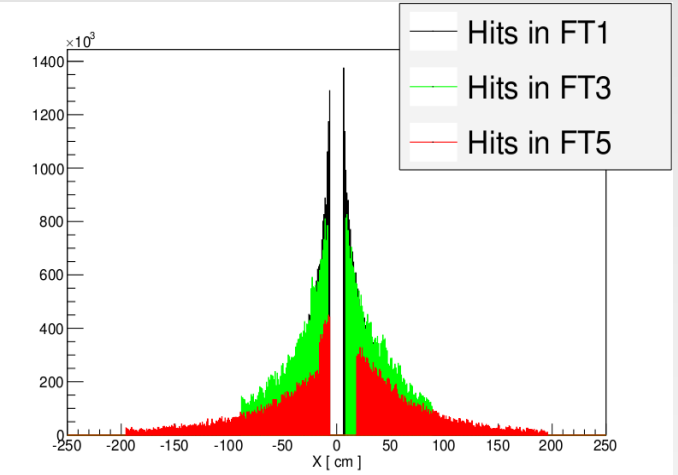


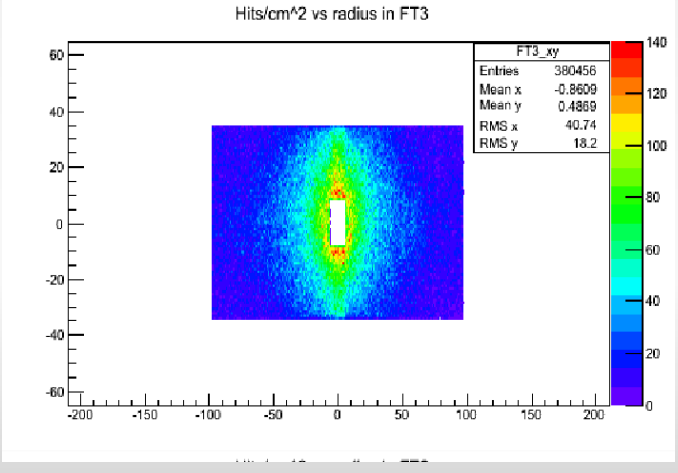
Old vs new 1st

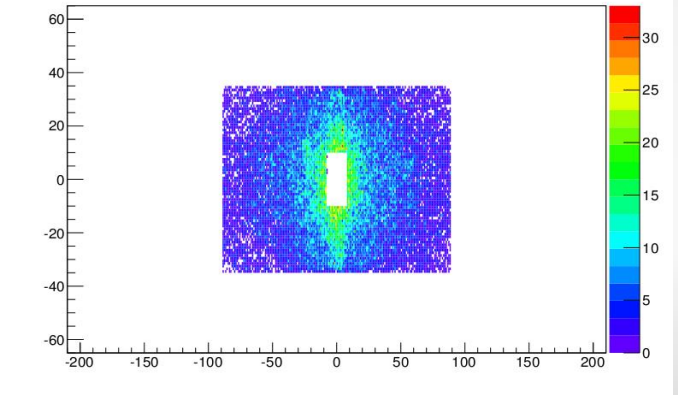
- pbar-p@15 GeV/c
  - Old FTS & old pipe
  - Old FTS & new pipe
  - New FTS & new pipe







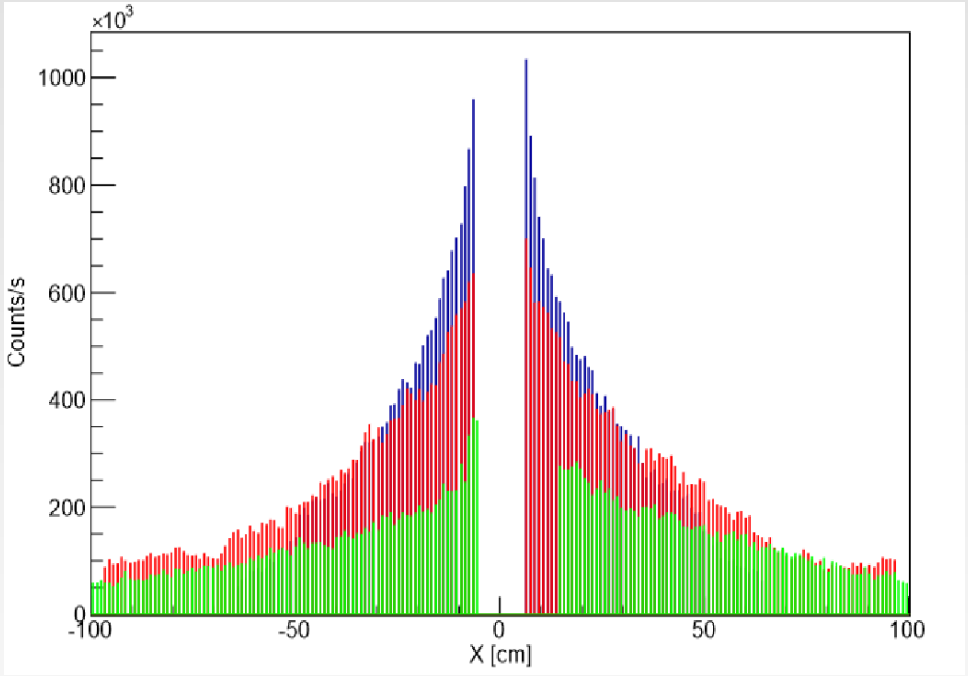




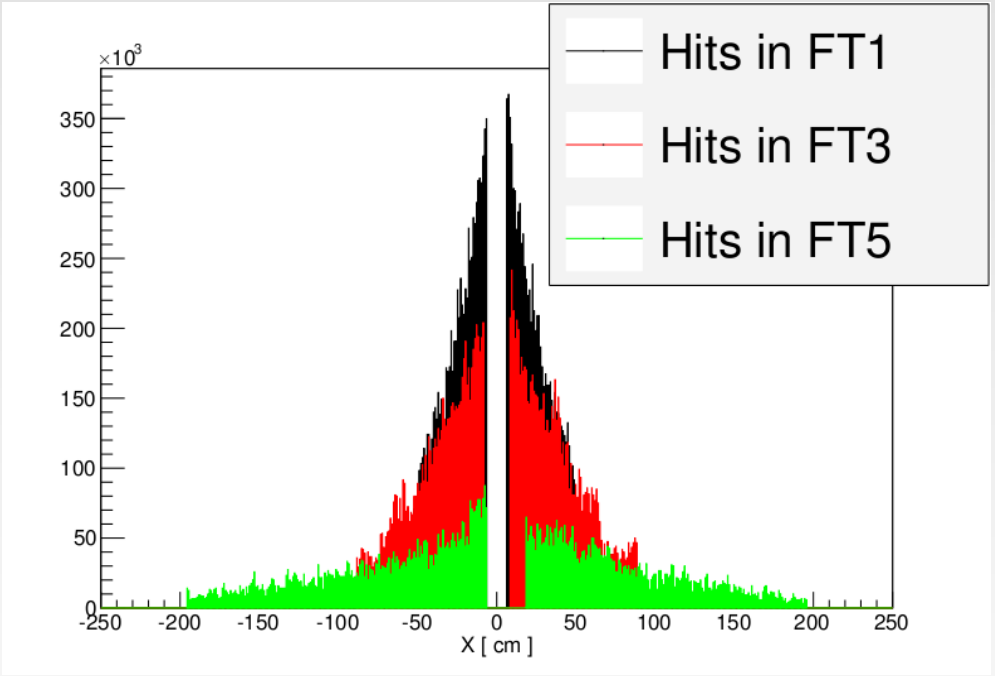
Old vs new 2nd

- pbar-N@15 GeV/c

Old FTS & new pipe

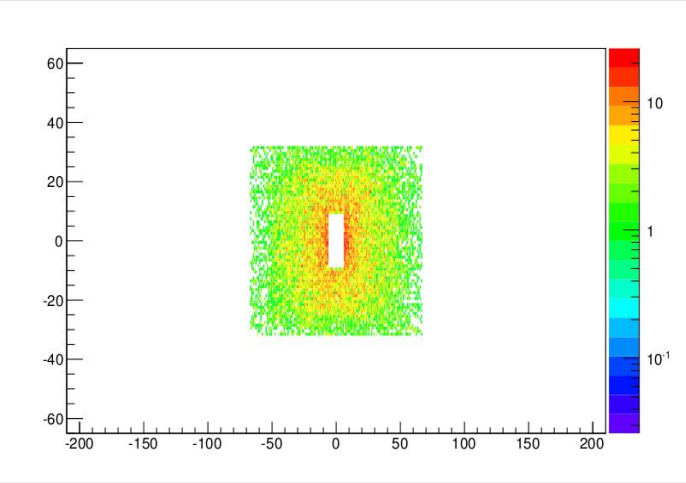


New FTS & new pipe

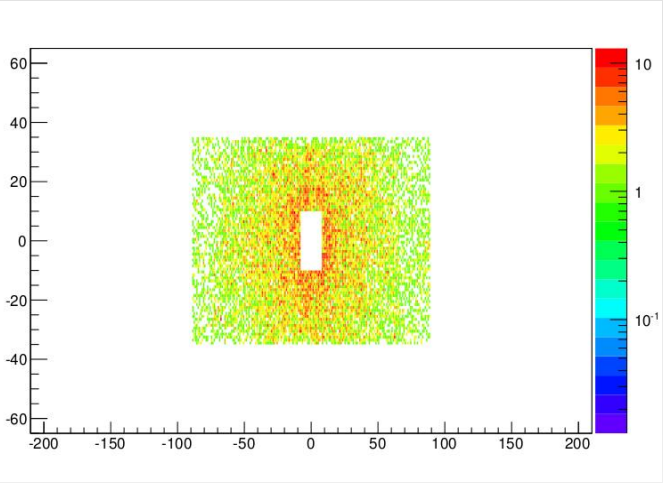


Hits for diffrent FTS stations

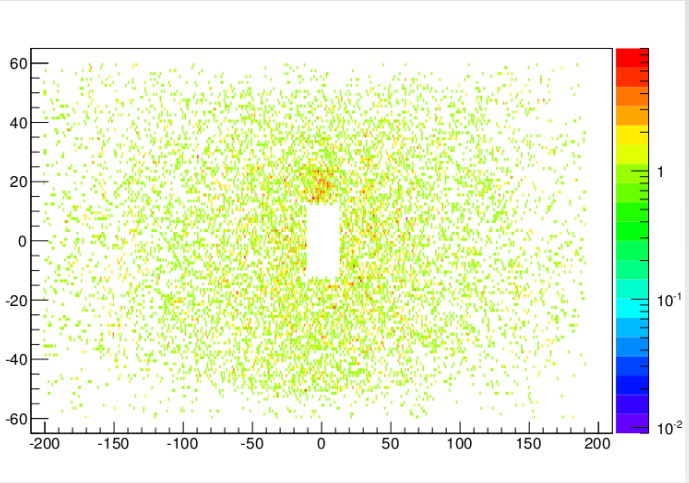
FT1



FT3

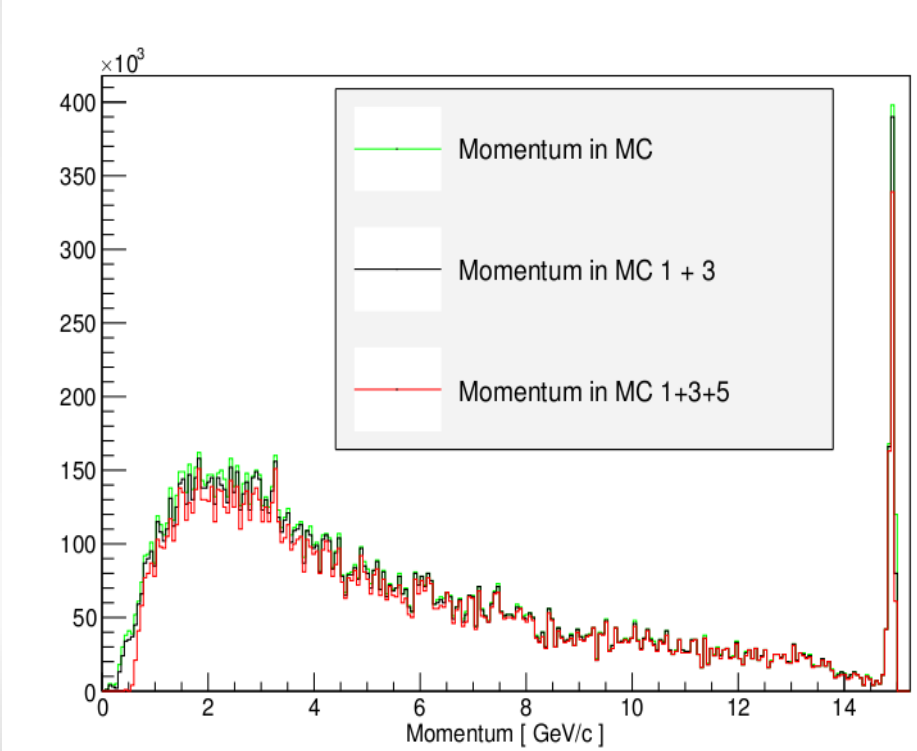


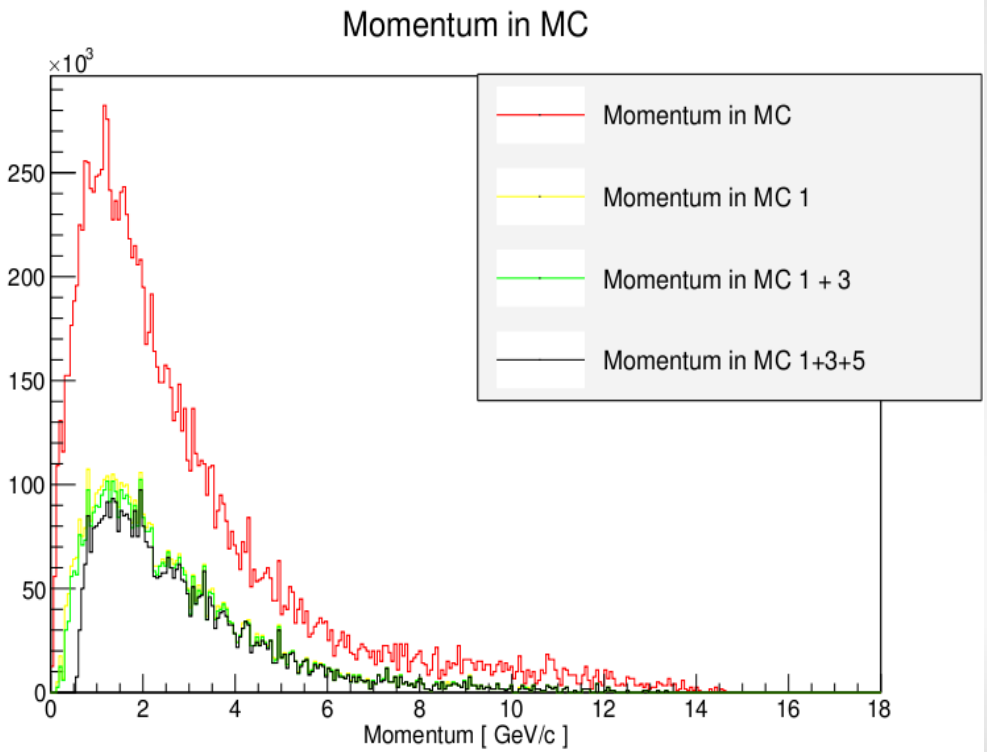
FT5



Momentum acceptance

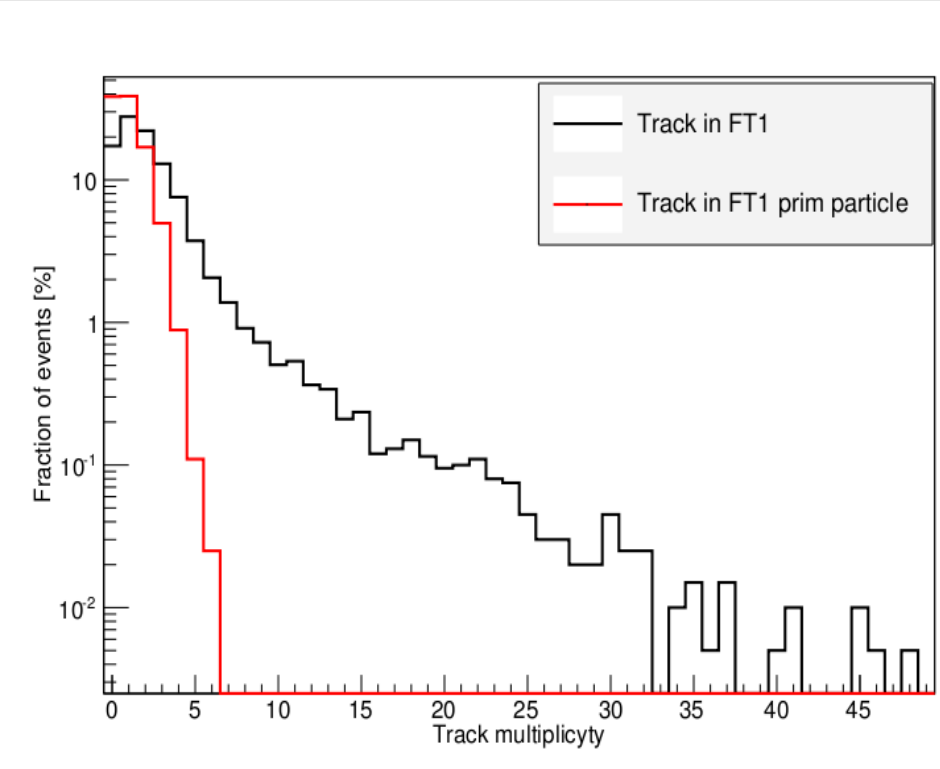
- pabr- p vs pbar-N
- new FTS geo

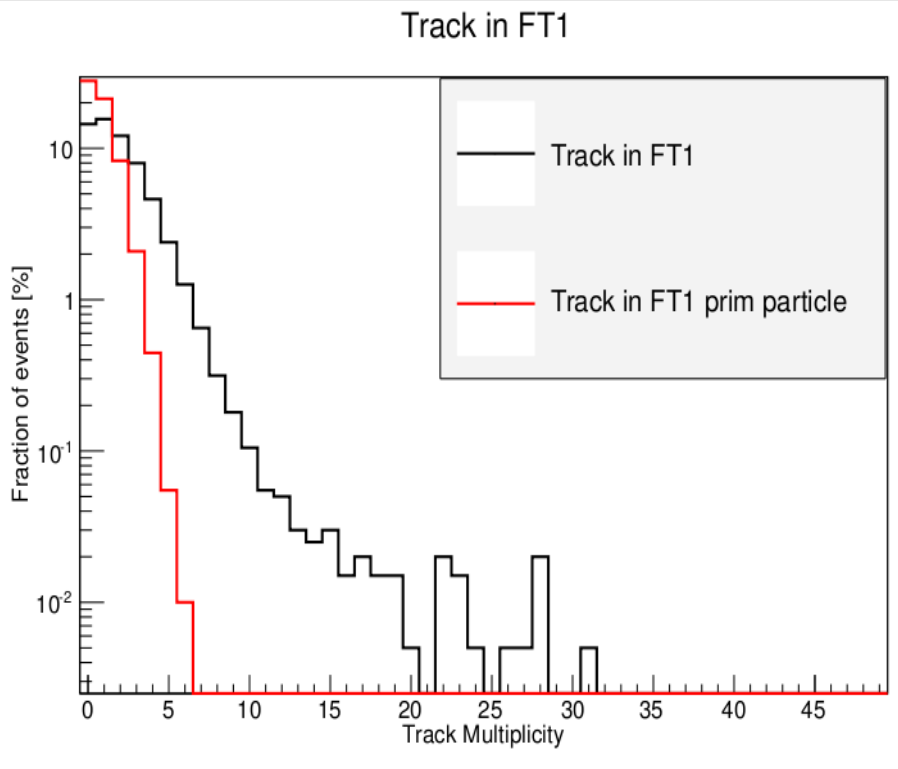




Tracku primery vs secondary particles

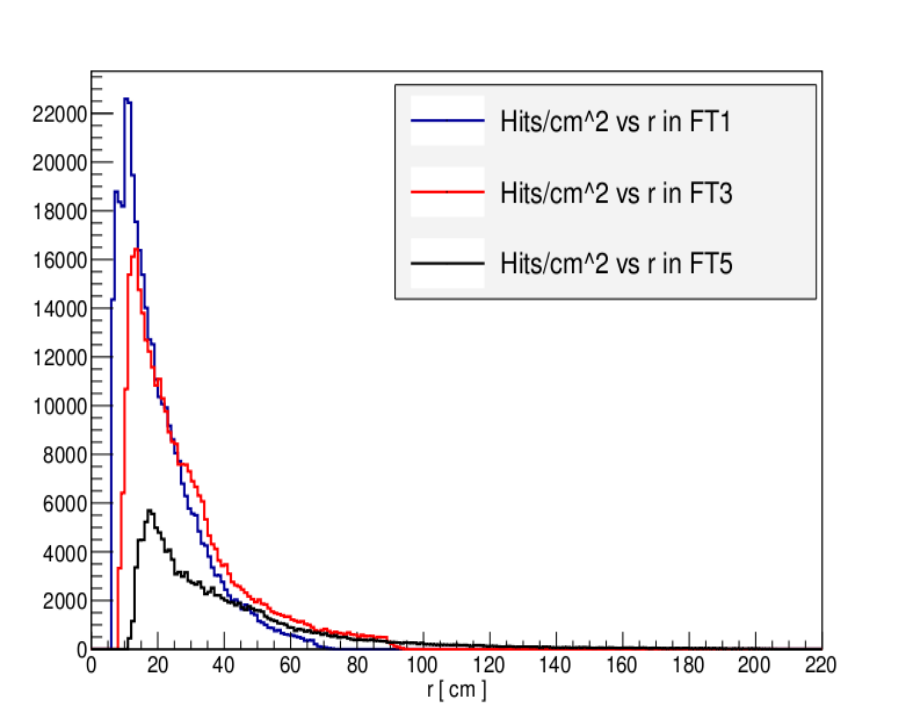
- pbar-p vs pabr-N

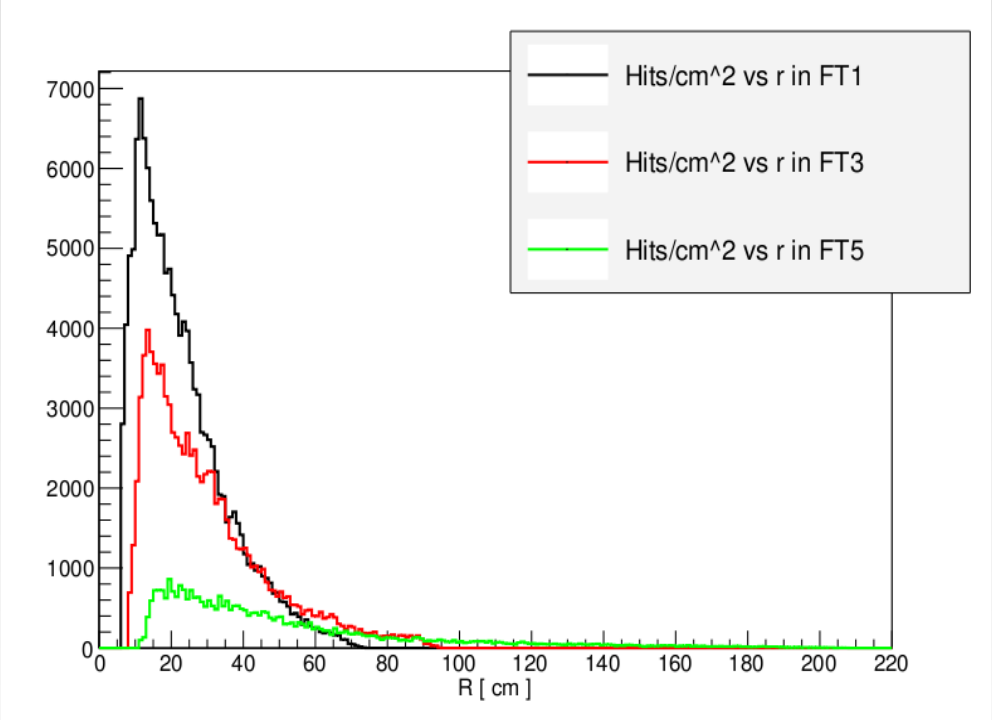




Hits in Tracking Stations

- pbar-p vs pbar-N





Summary

- An improvemnt in the reduction of background comming from scaterd particles (visible in FT3 and FT5 stations for pbar-p), especiali visible for the pbar-N scenario

- No high momentum particles visible in acceptance of the detector for pbar-N