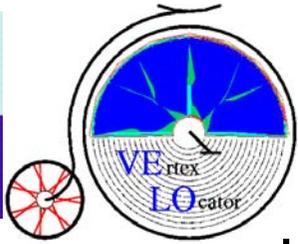


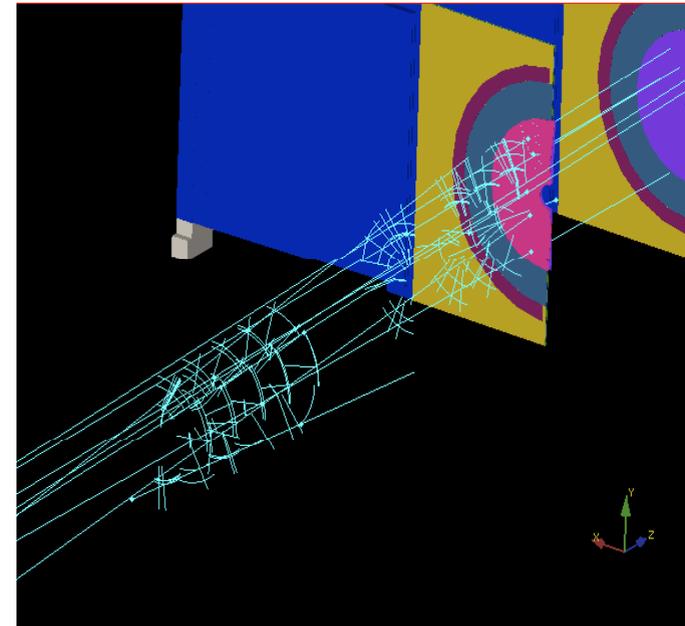


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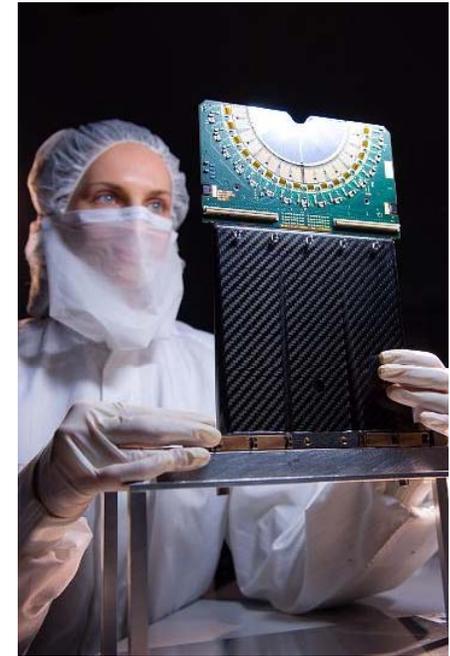
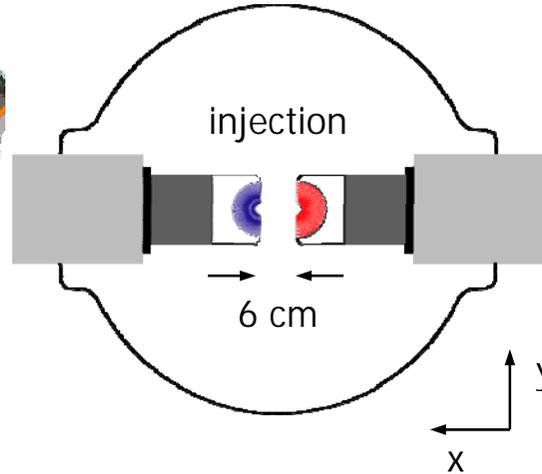
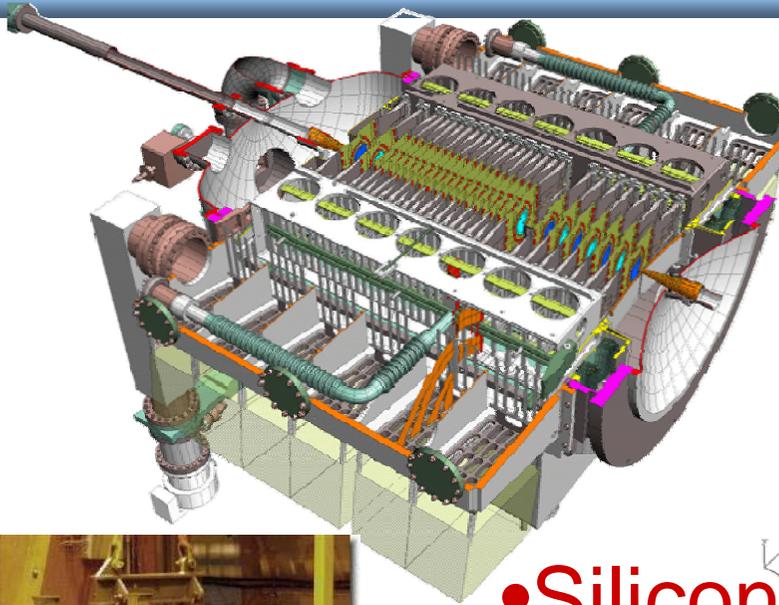
First LHC beam induced Tracks Reconstructed



On behalf of
LHCb VELO group



LHCb VELO



• Modules constructed in Liverpool

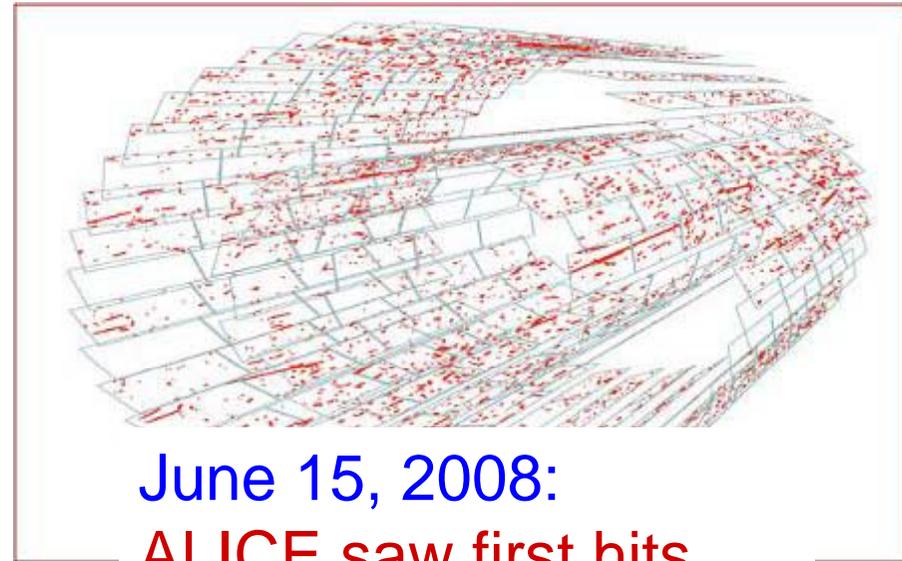
- Silicon Vertex Locator
- R/Phi geometry
- In vacuum
- 8mm from LHC beam



LHC Experiment Commissioning



- Early 2008:
Cosmics observed
in all LHC
experiments

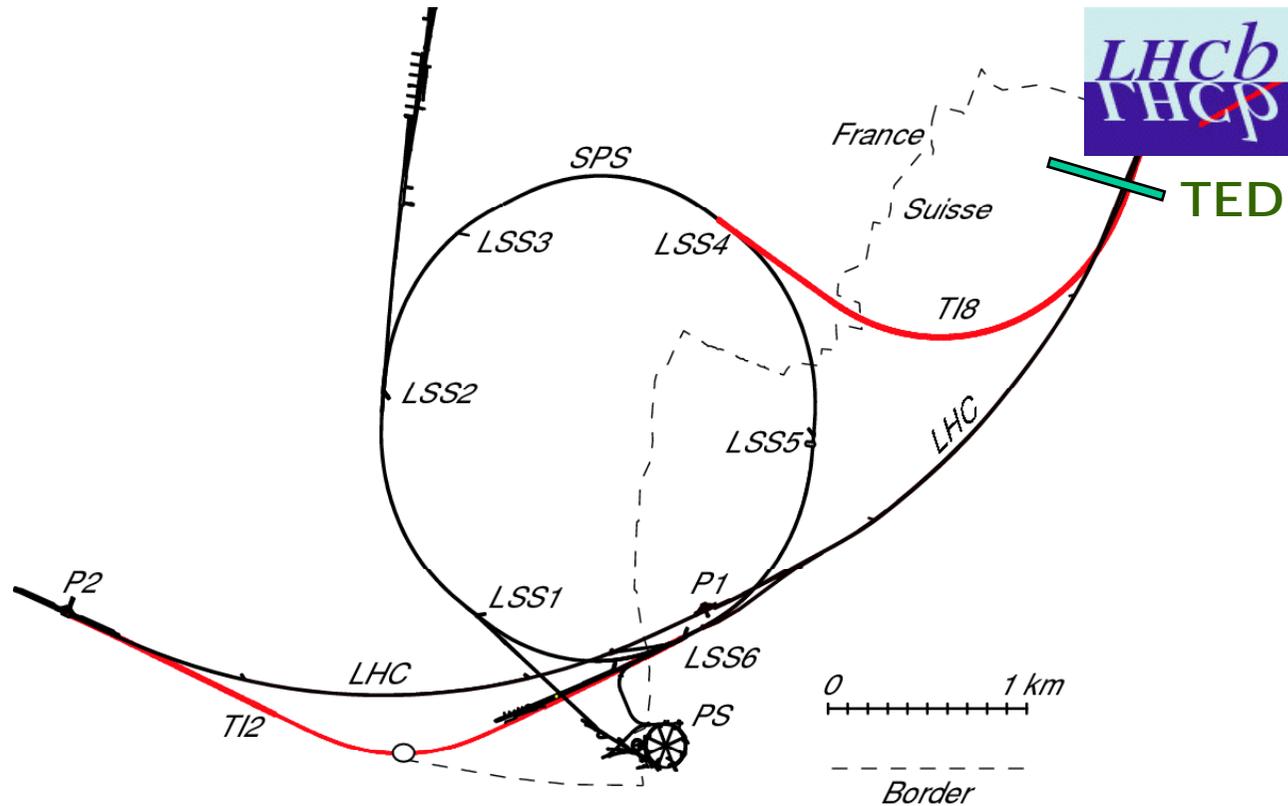


- June 15, 2008:
ALICE saw first hits
in silicon pixel detector
During clockwise beam
Synchronisation test

- 17:30 Friday 22nd August

Synchronisation Test of anti-clockwise
LHC Beam

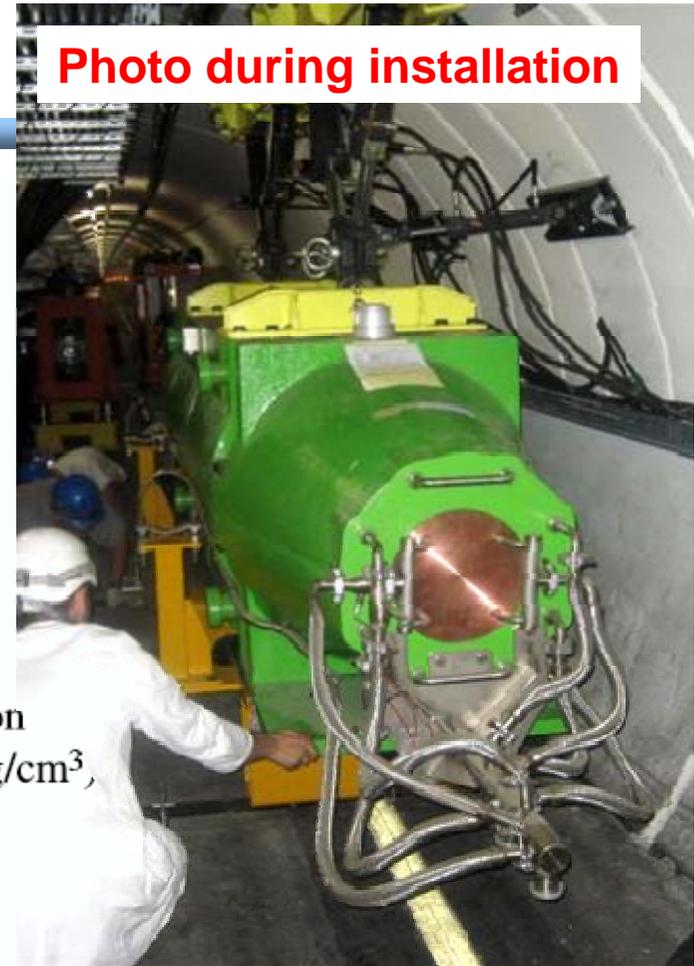
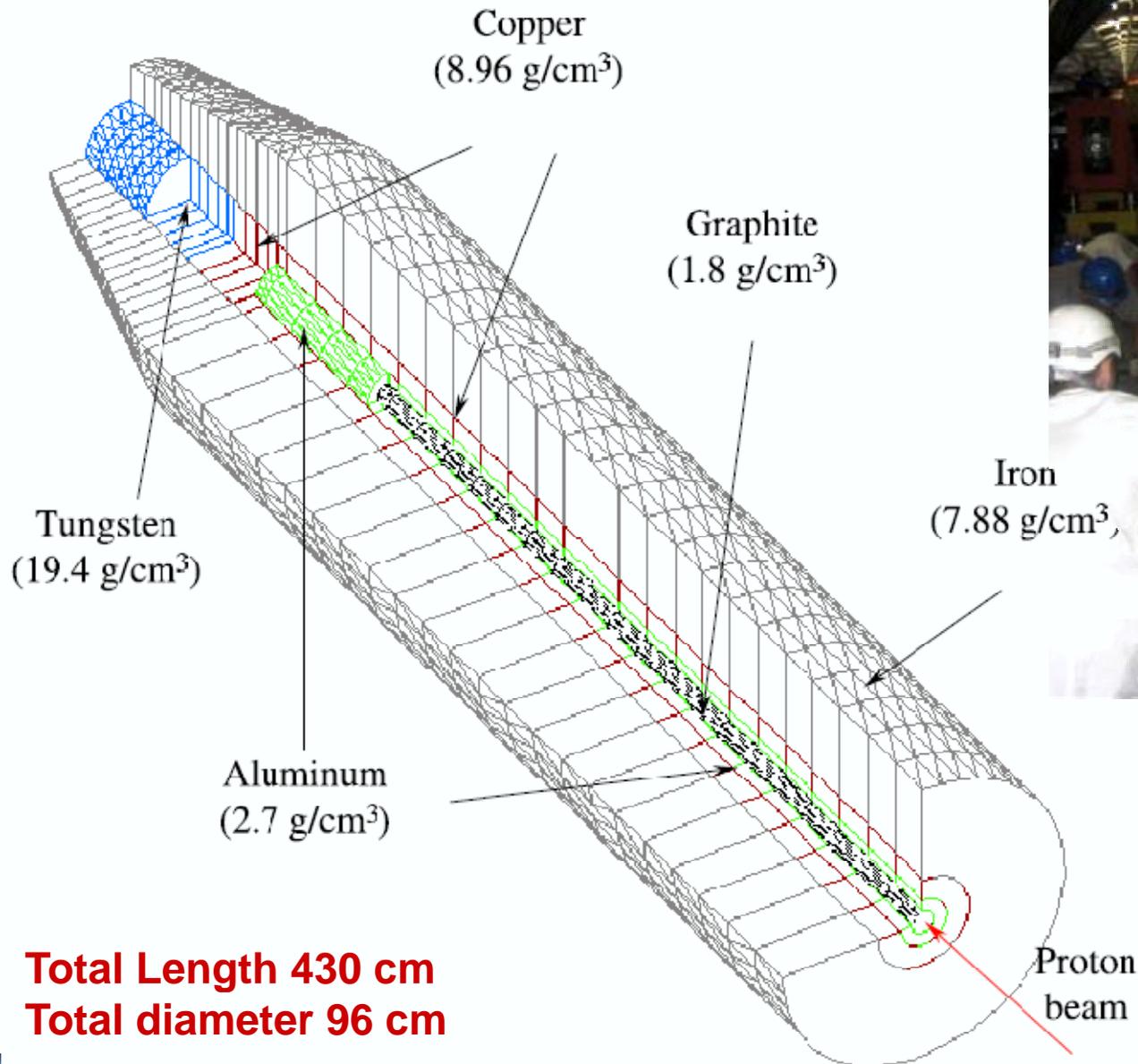
Layout of injection regions



- Beam
 - 1 shot every 48 seconds
 - $5 \cdot 10^9$ protons per shot

TED Beam Dump

Photo during installation

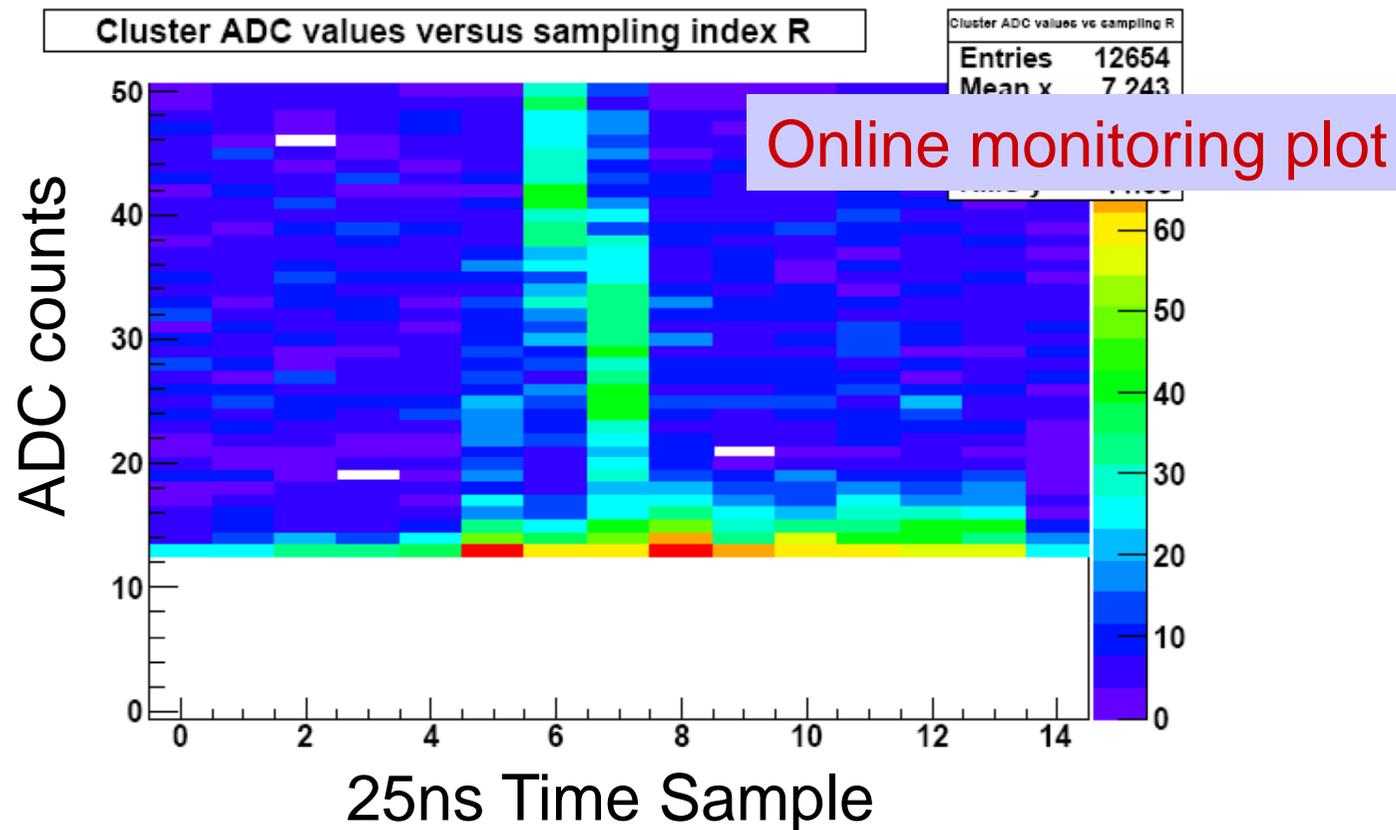


Total Length 430 cm
Total diameter 96 cm

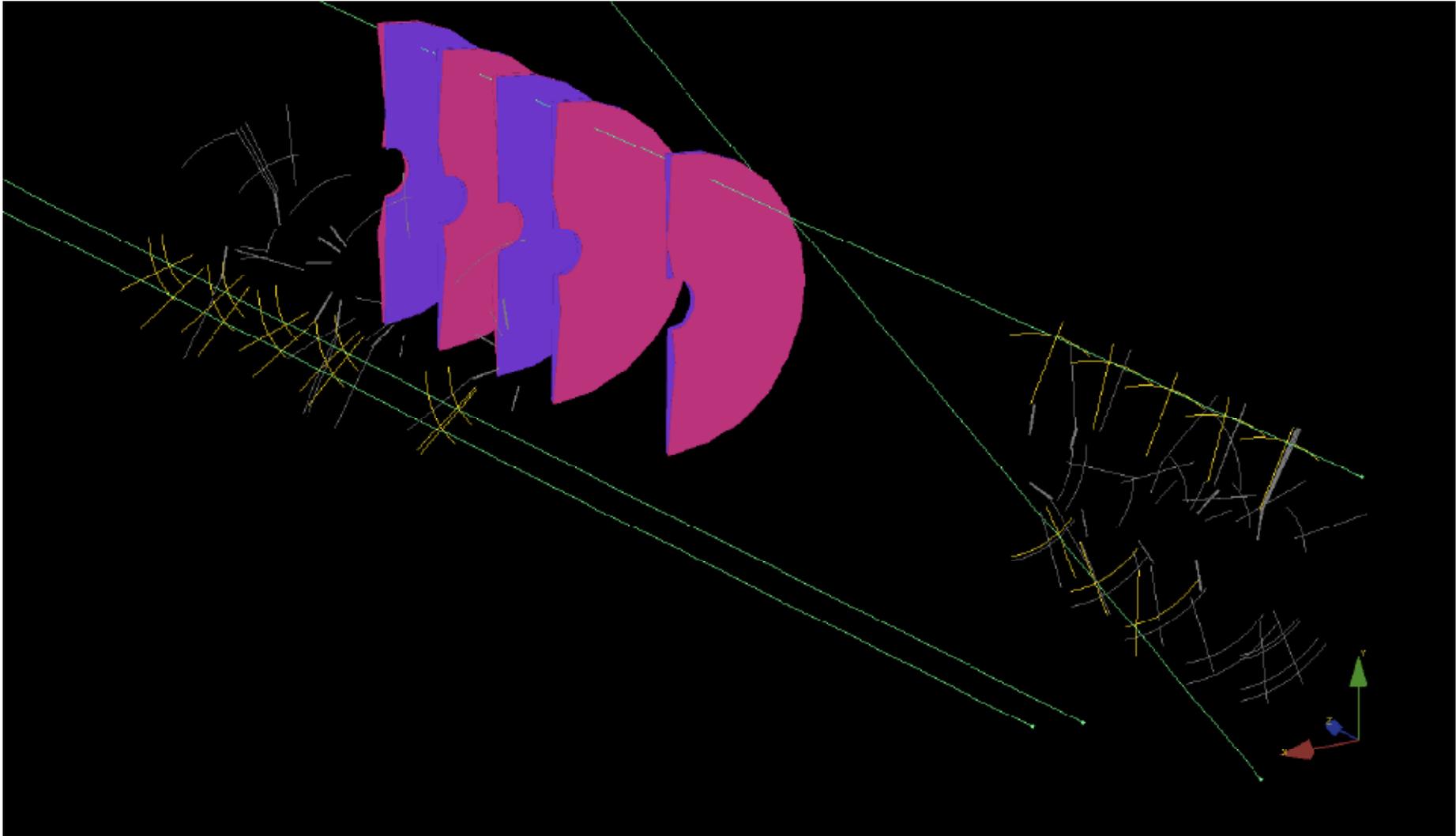
A perspective view of the FLUKA geometrical representation of the TED beam-dump. 008

Friday 22nd August

- Trigger from Calorimeter scintillator pads
- VELO set to readout 15 x 25ns time samples



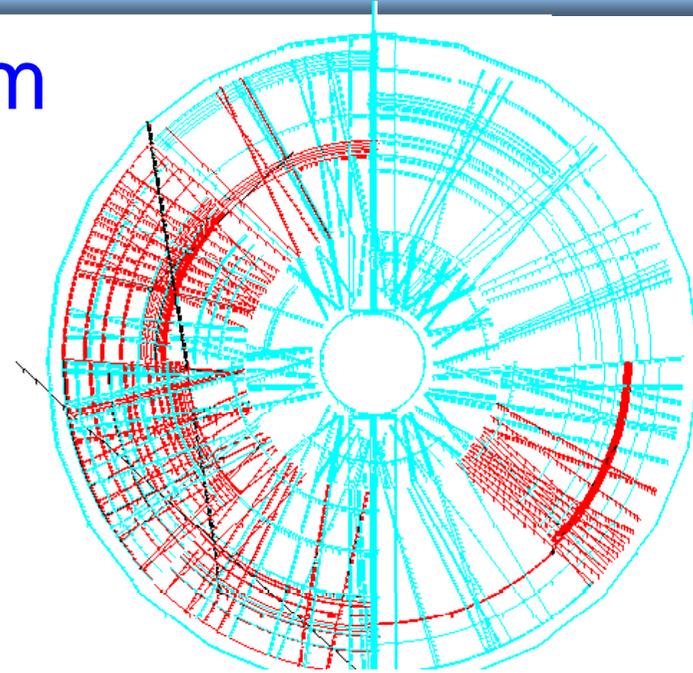
The First Event



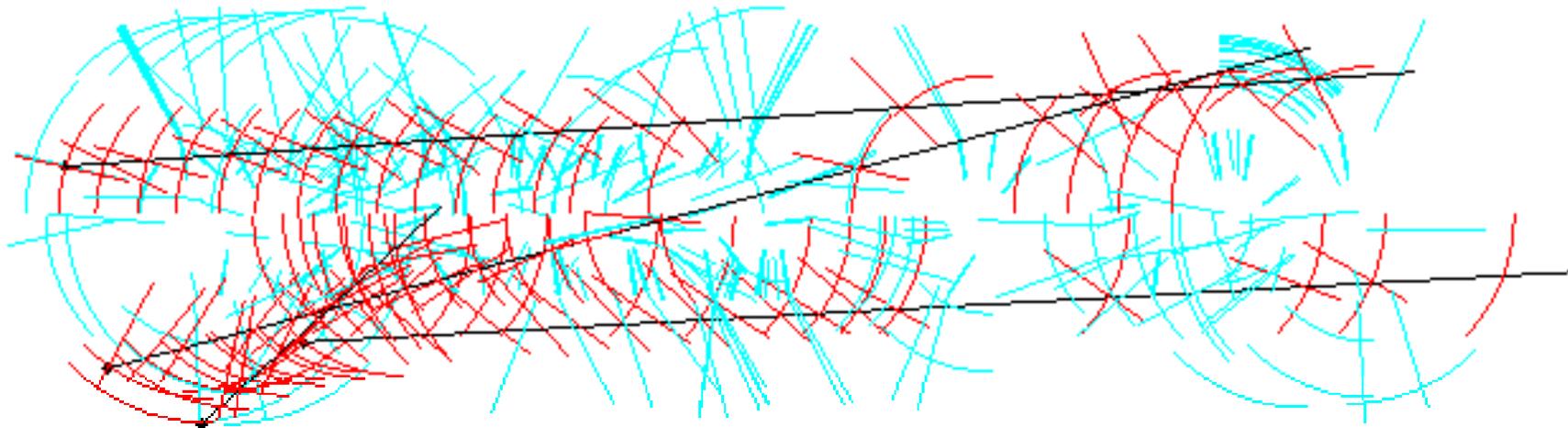
Sunday 24th August

- Requested additional beam
- Full Detector powered

Cluster associated to a track
Track

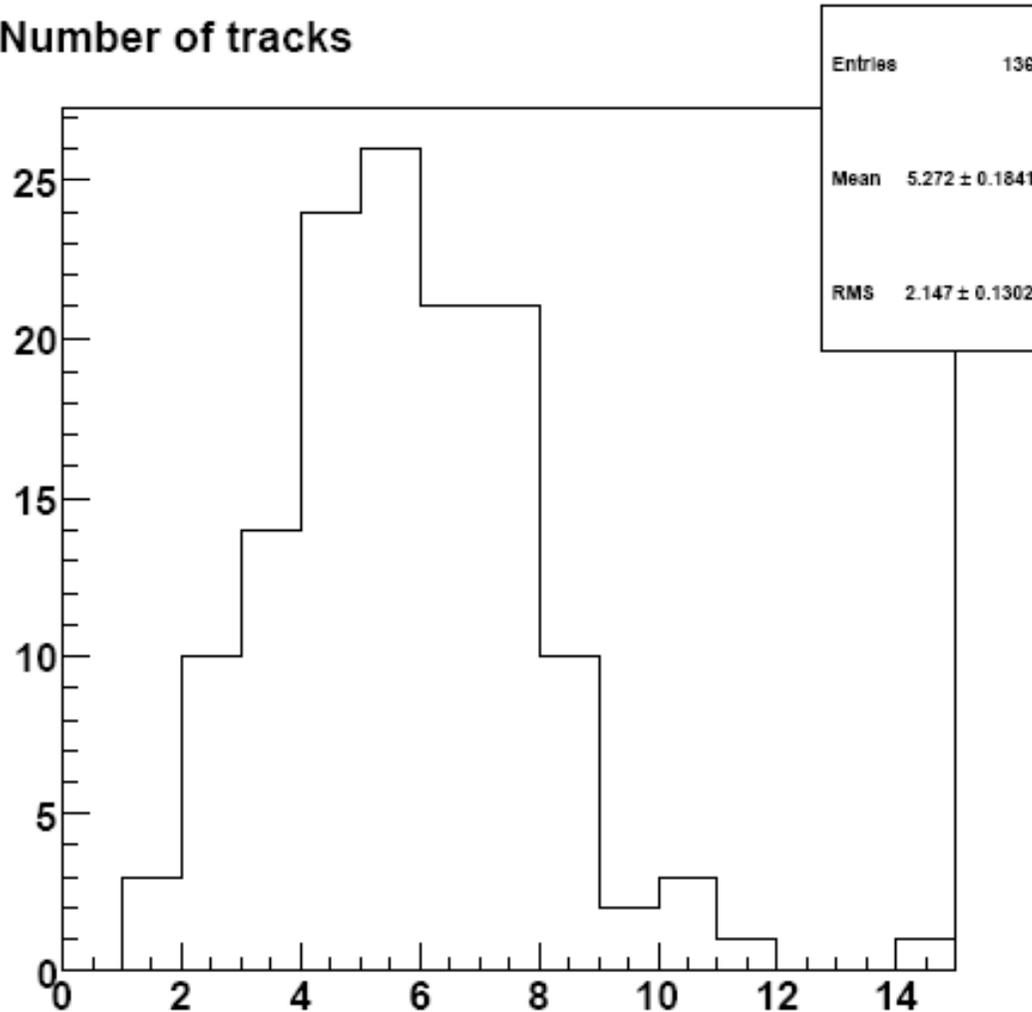


Run 30933
Event 8



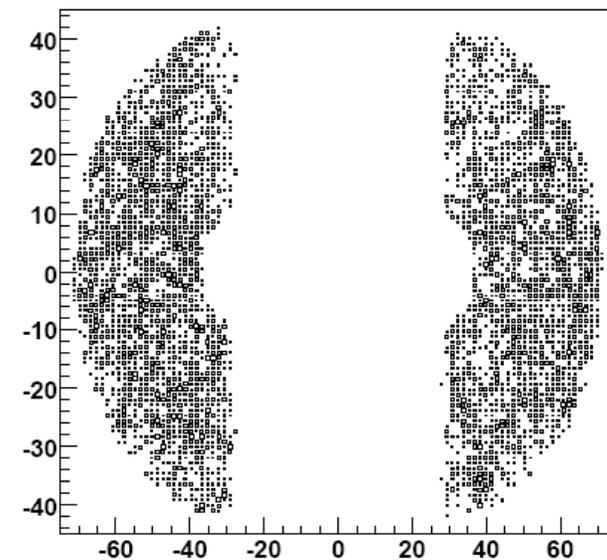
Number of Tracks per Event

Number of tracks

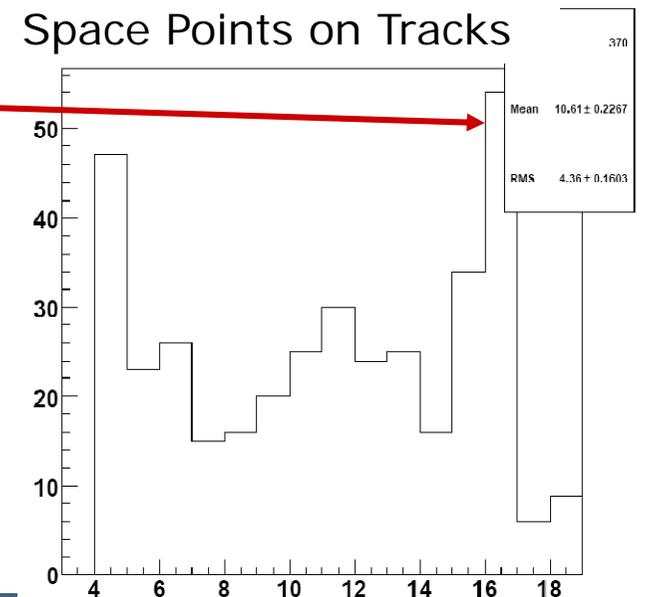
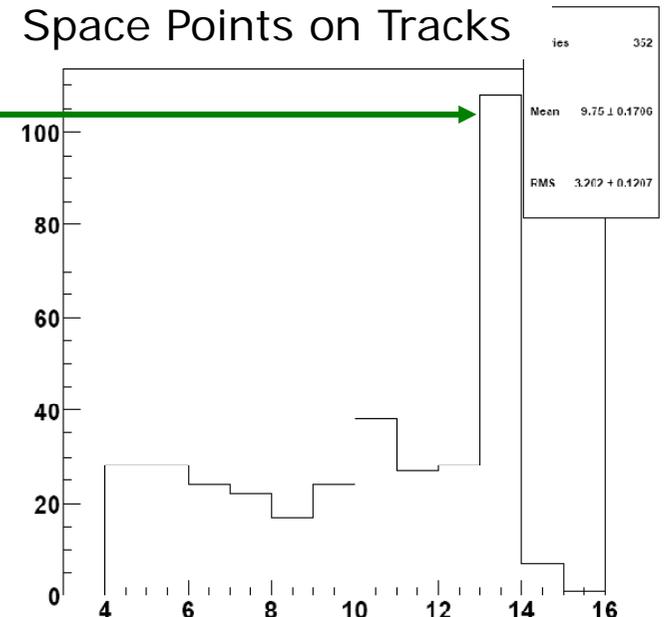
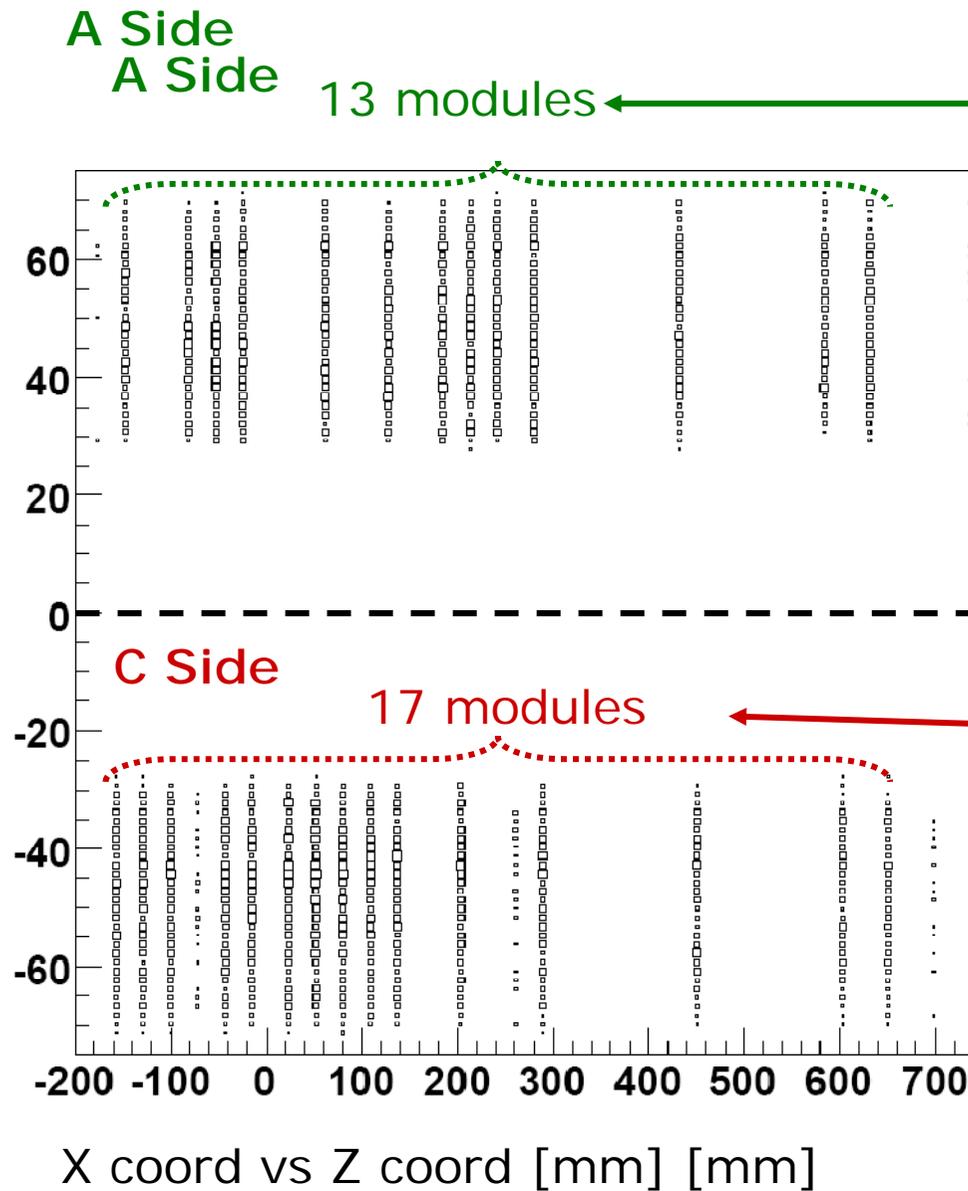


- 700 tracks reconstructed
- Average of 5 tracks per event
- Residual distributions show good alignment

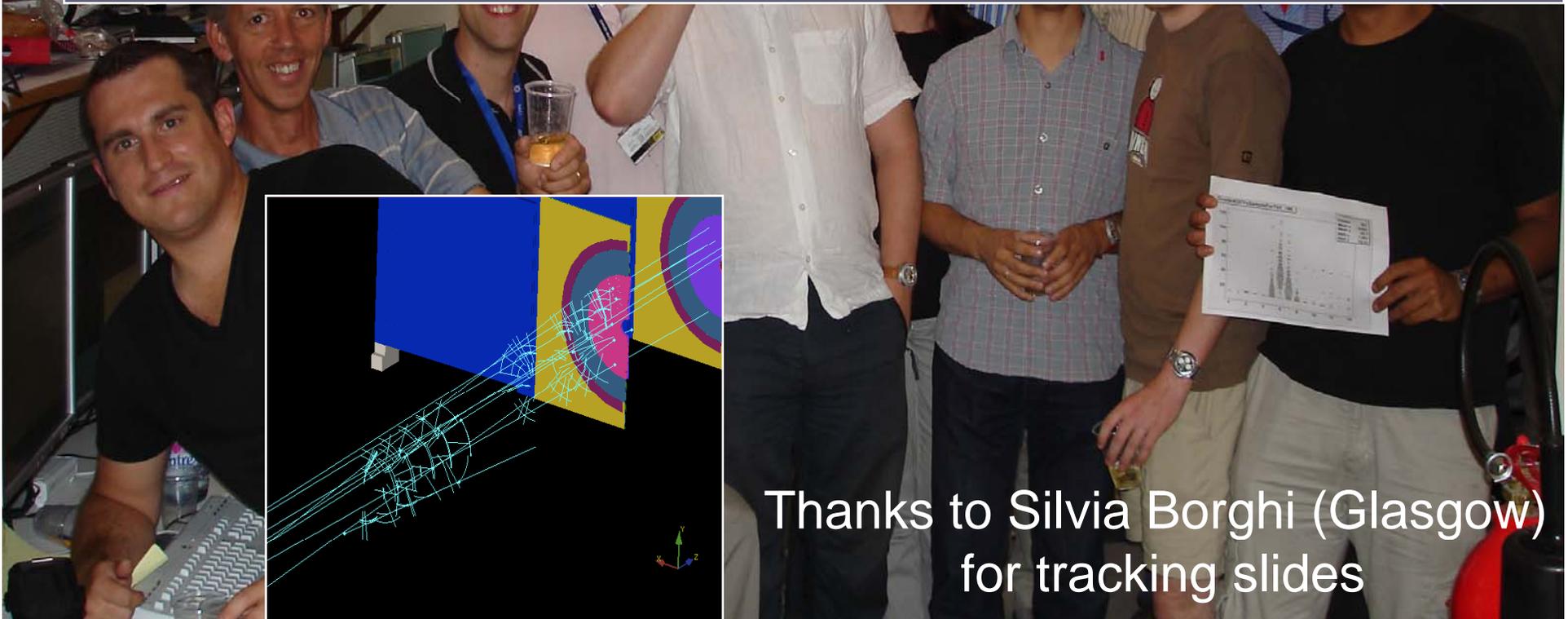
X coord vs Y coord [mm][mm]



Space Point Distribution for Tracks



- LHCb VELO reconstructs first beam-induced tracks
 - 700 tracks fitted
 - Up to 19 hits per track
- Looking forward to first circulating beam 10th September



Thanks to Silvia Borghi (Glasgow)
for tracking slides