Current status of Test Beam data analysis

Olena Karacheban, CMS-FCAL weekly meeting,
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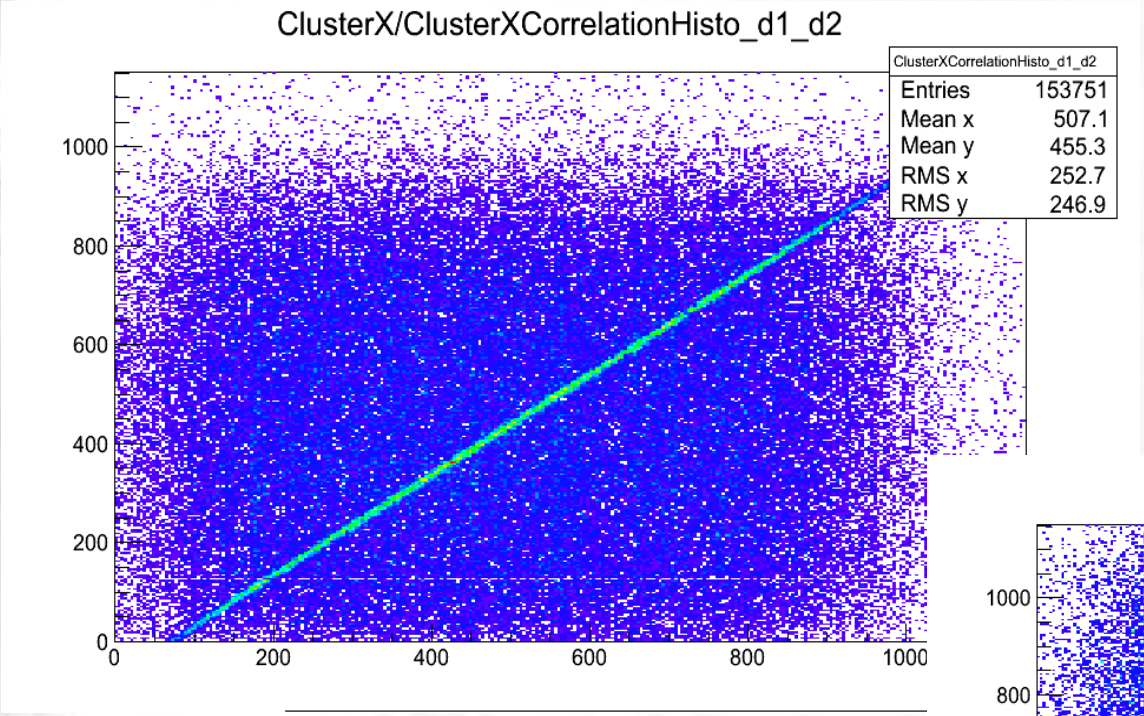
EUTelescope software

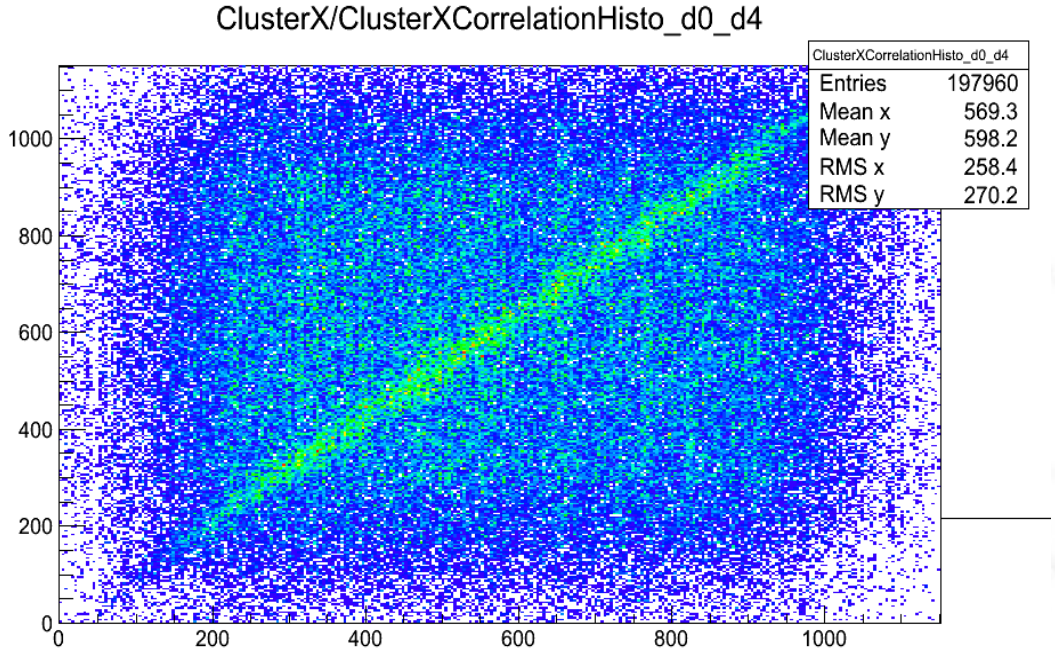
Offline analysis includes few steps:

- converter → format from raw to lcio, create HopPixel;
- clustering → use HotPicel to create SensorOffset;
- filter → minimise clusters;
- hitmaker → use SensorOffset to do PreAlignment;
- align → precise alignment;
- fitter → build final tracks → DUT analysis.

Correlation between the number of hits in neighbouring telescope planes.

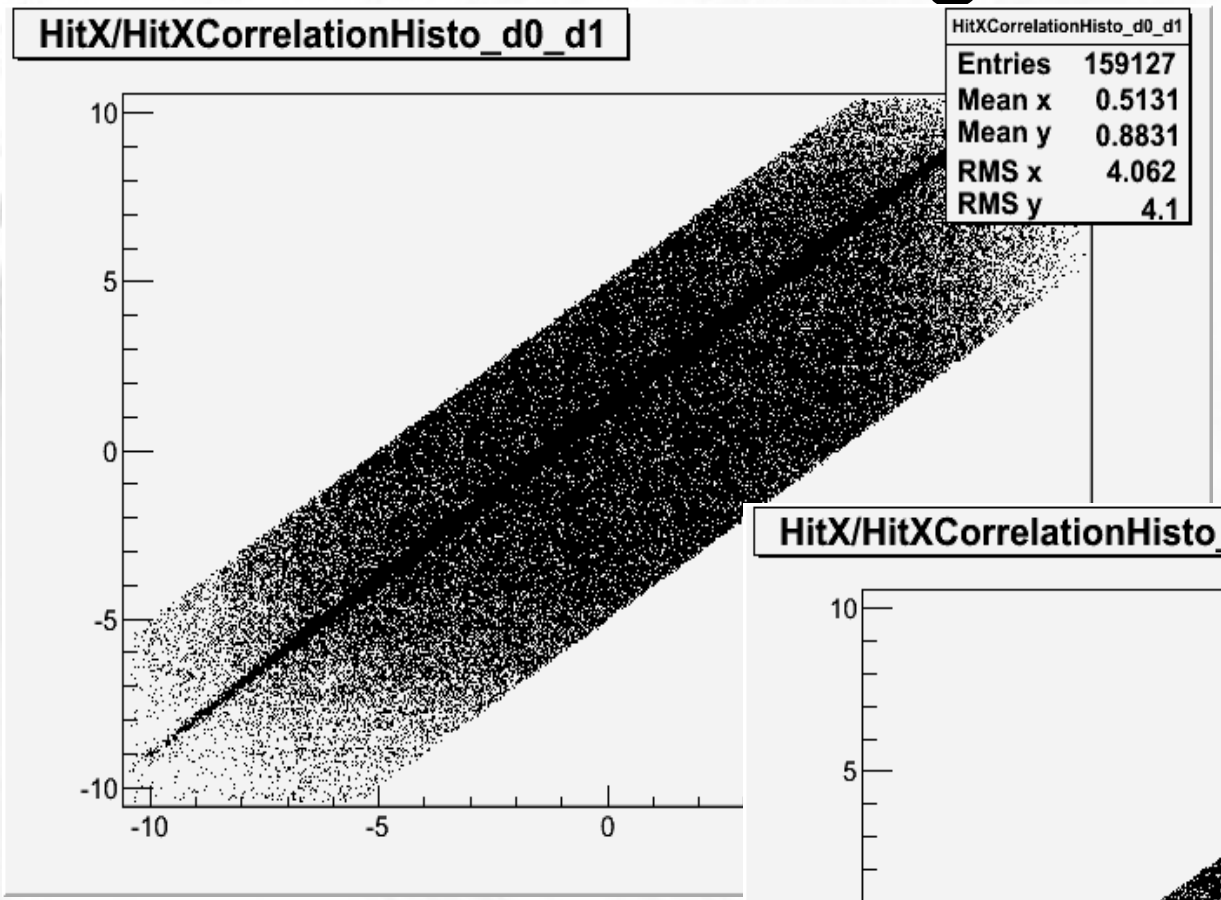


← One of the planes is shifted by over 100 pixels.

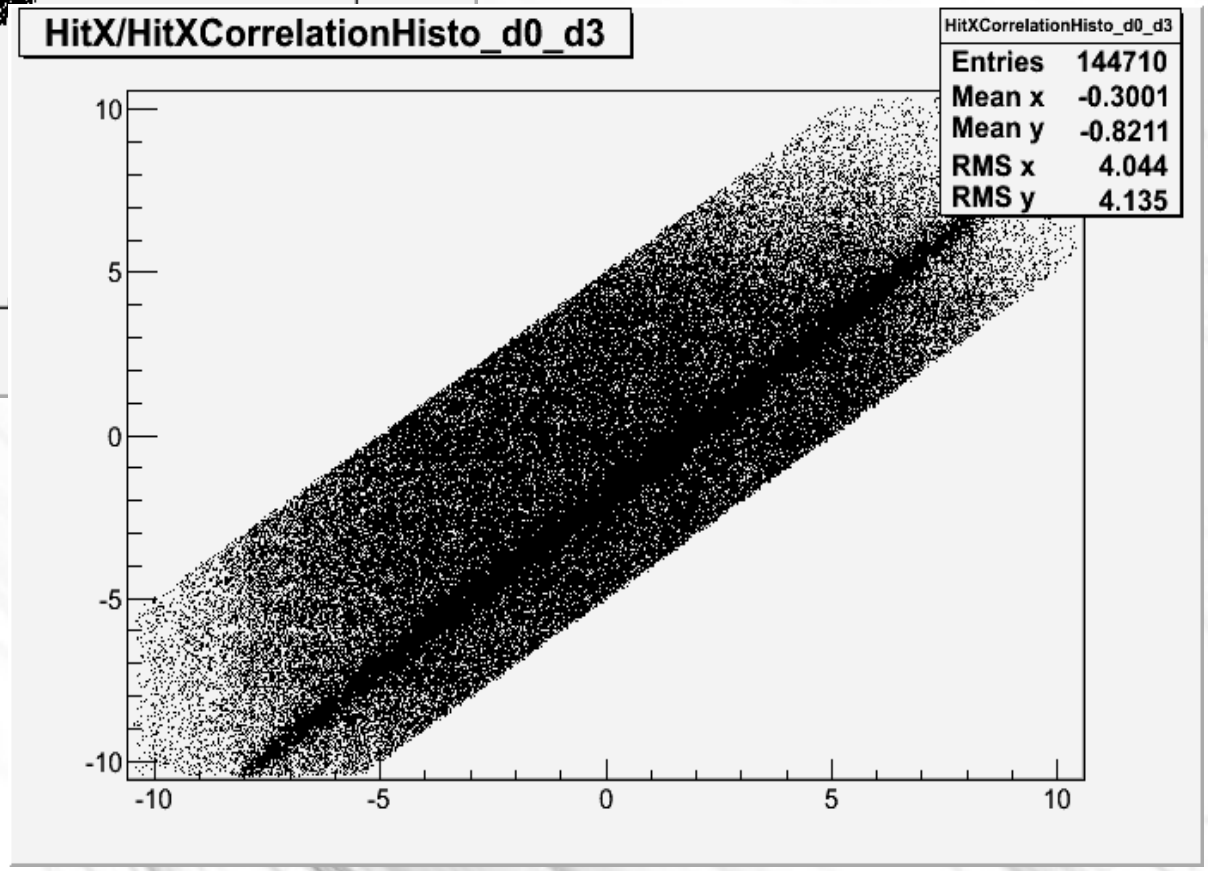


Correlation becomes wider for not neighborhood sensors. →

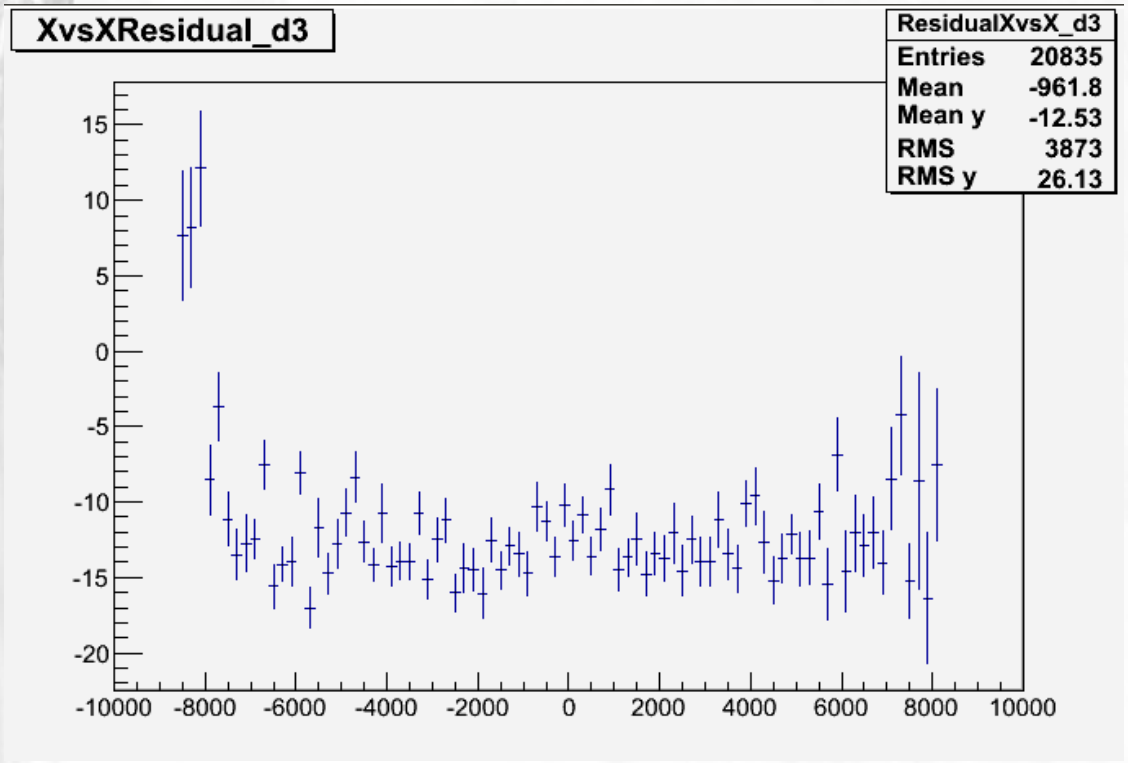
Our file for alignment - run288

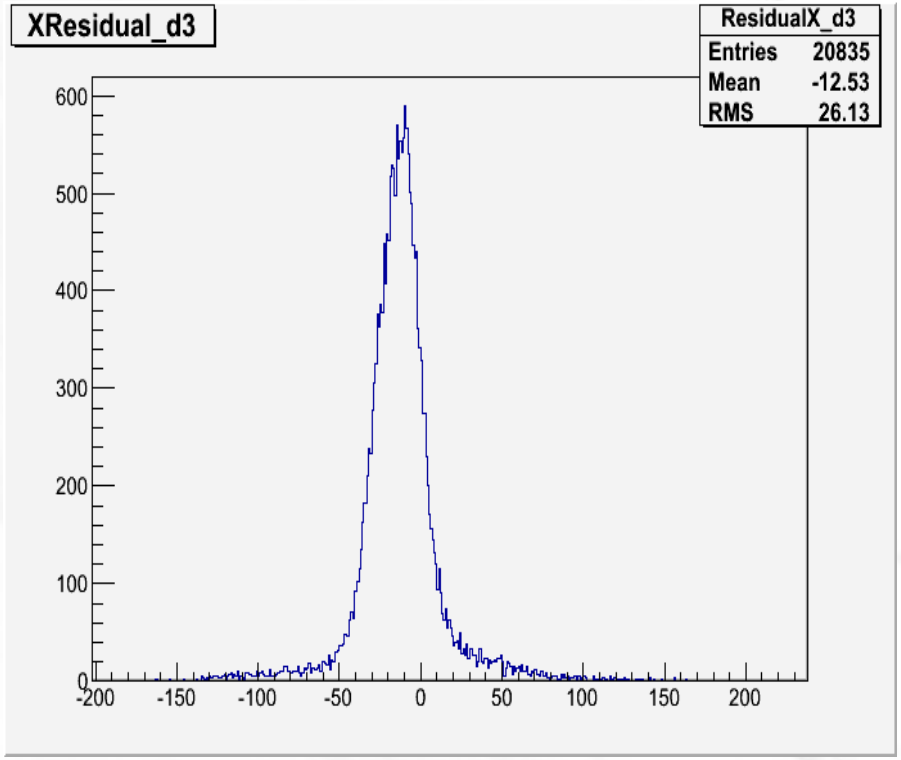


Correlation plots after Hitmaker step



Residual for 3rd sensor





Plans

- In the first approach alignment file is done.
- For all runs with detector we need to stop on EUTelescope soft hitmaker step and apply the same for all runs alignment. Fot this we need our Marlin processor.
- We need DUT description example.
- Our own fitter program and synchronisation program should be written.