Telescope Synchronization

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TrigerID Sequence Number

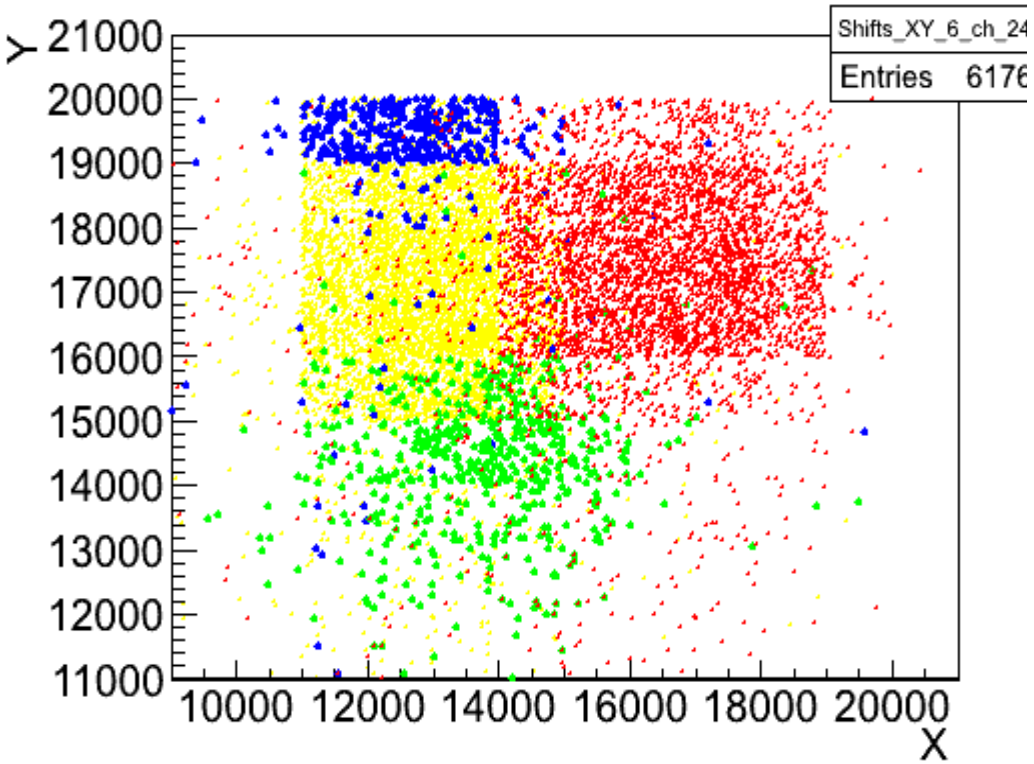
```
Event --> 32767
found 1 blocks
 Trigger ID = 32767
 Seq Num = 1508909
Event --> 32768
found 1 blocks
 Trigger ID = 0
 Seq Num = 1508910
 Number of hits1 : 1
 Maxvalue of channel 2 = 0
Event --> 32769
found 1 blocks
 Trigger ID = 1
 !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
 Seq Num = 1508911
 Number of hits1 : 2
 Maxvalue of channel 2 = 0
Event --> 32770
found 1 blocks
 Trigger ID = 2
 Seq Num = 1508912
 Number of hits2 : 2
 Maxvalue of channel 2 = 0
Event --> 32771
found 1 blocks
 Trigger ID = 3
 Seq Num = 1508913
 Number of hits2 : 2
 Maxvalue of channel 2 = 0
Event --> 32772
```

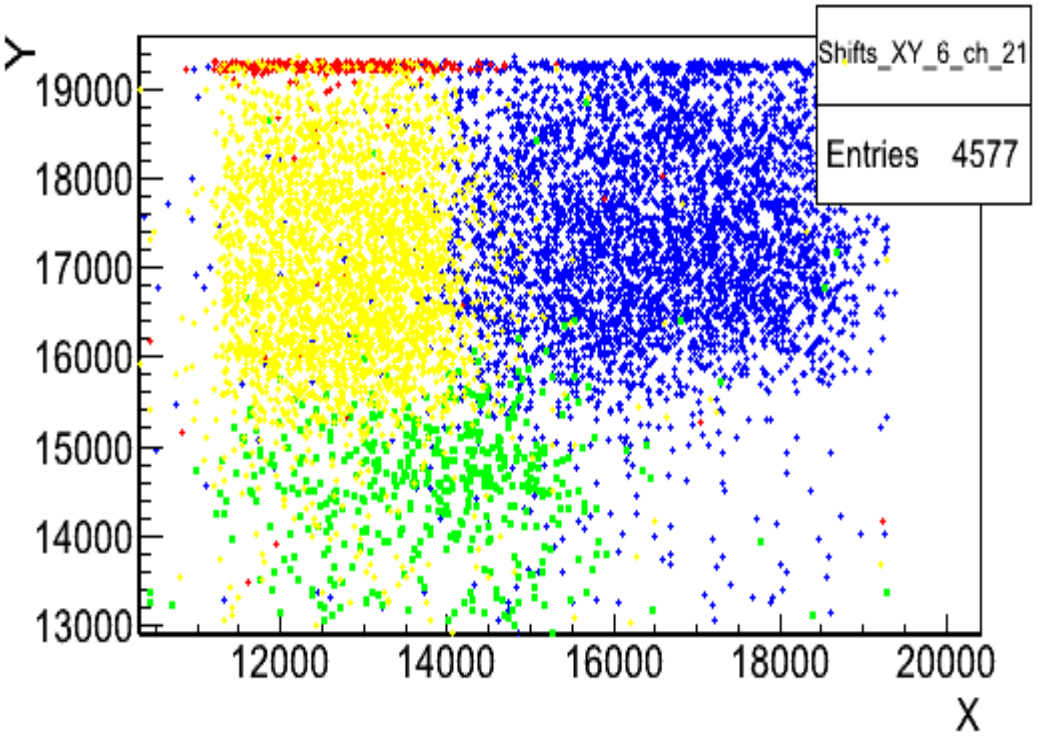
- ~/trunk/fcal/include/FCALEvent.h
- Next to get trigger and Sequence number:
- boost::uint32_t GetSeq() const
- boost::uint16_t GetTriggerID() const
- I also count just number of read events
- TriggerID jumps to 1 at 32769

Putting files together

- Read simultaneously trees from two files.
- TelAna file has to be written now inside the executable file.
- Synchronization done by (SeqNow-SeqZero)±N
- In case of right shift N found one can distinguish between pads
- I made too small binning in the beginning and got slightly bad pad structure.

Pads Structure





- Big Bins → 10 times smaller
- Pads 21-22-23-24 are shown

How it was done

- For each channel and each event maximum of signal is found
- Threshold for found signals was applied
- First telescope plane coordinates DigX[0][0] and DigY[0][0] were taken for the pad structure plots
- TelHist000NNN.root files are ~4M
- Number of tracks will be reduced after requiring only 3 hits per X and Y telescope planes.

Geometry (config files)

- GenConfig.py produced by Titi corresponds to next geometry
- Position inside the DUT can be changed in a few mm
- For Tungsten Distance should be up to last W plate