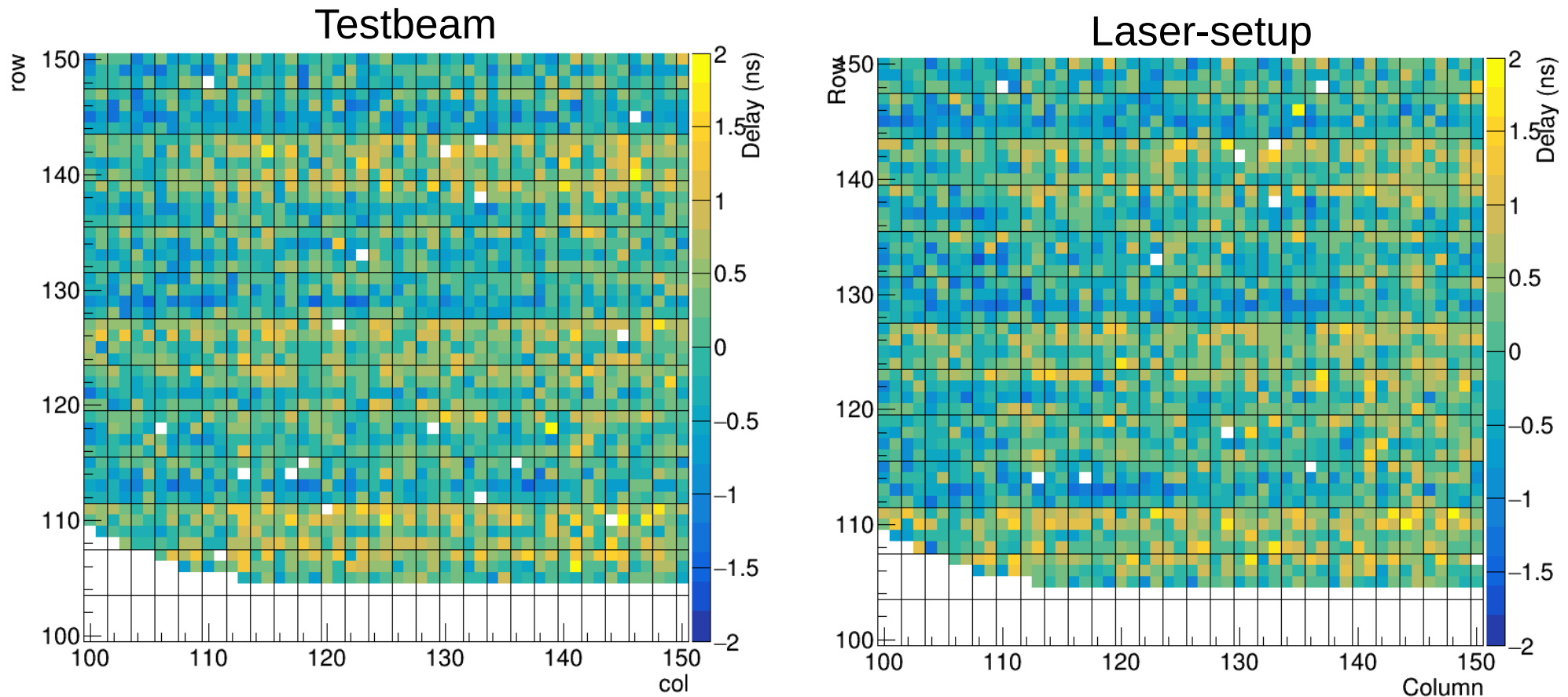


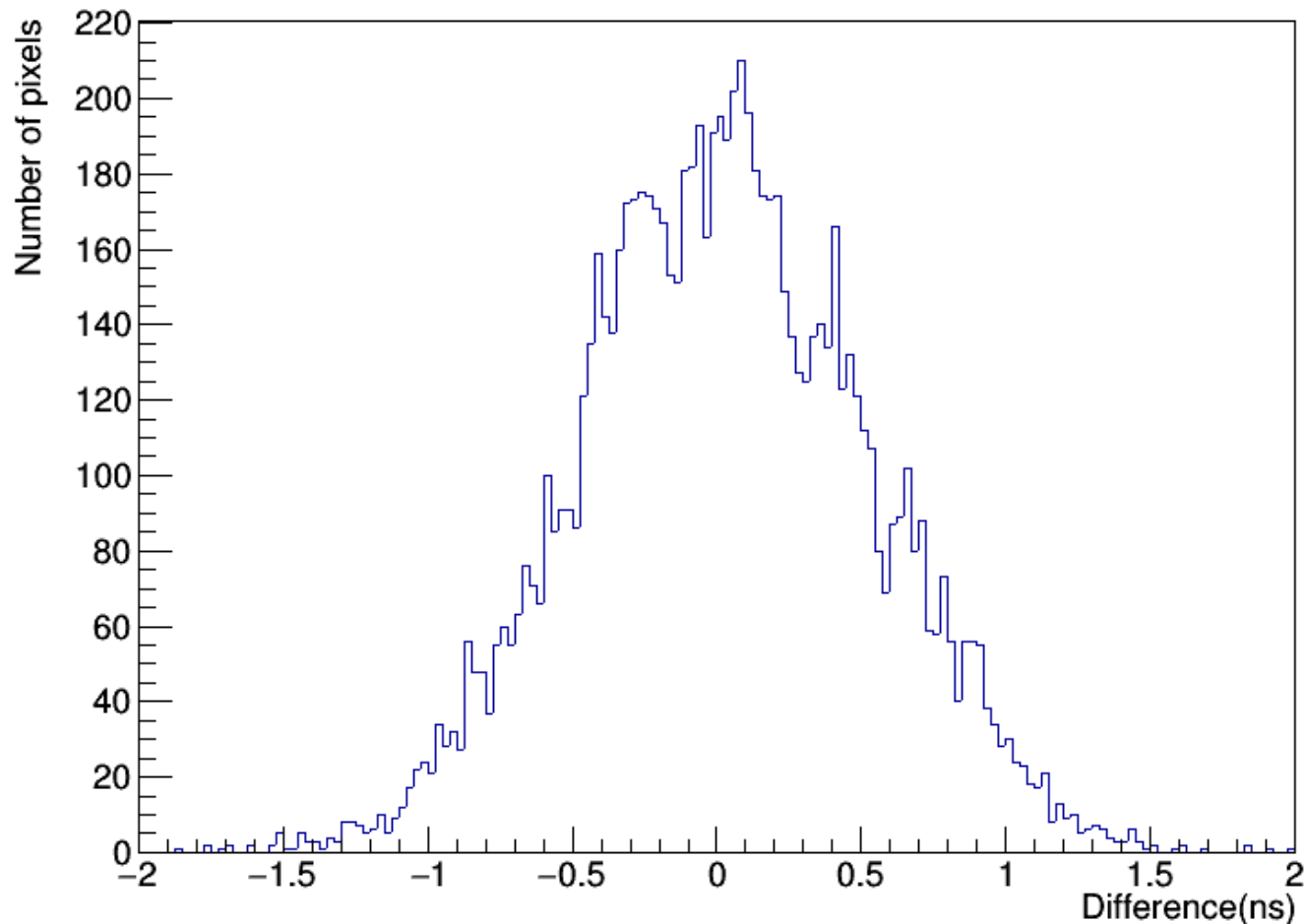
Testbeam vs laser setup



Criteria which are used to select the hits that are displayed above:

- ToT > 160 for laser-setup at 10lkrum
- ToT > 150 for testbeam at 5lkrum
- Number of hits in a cluster equals 1 for both testbeam and laser-setup

Testbeam vs laser setup



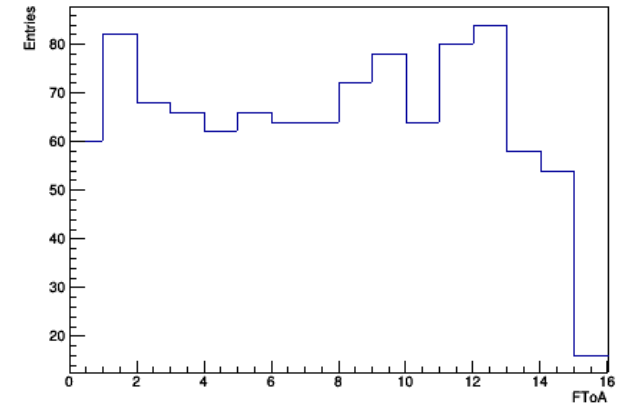
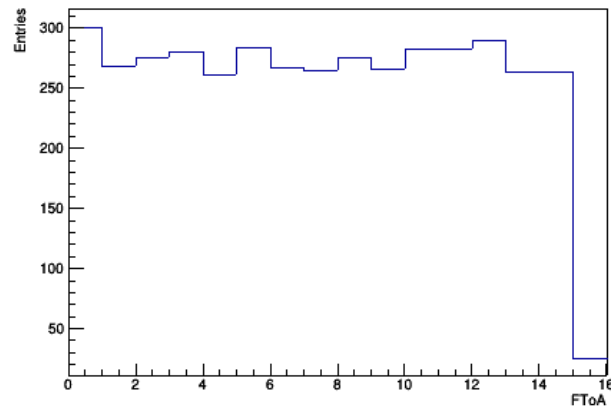
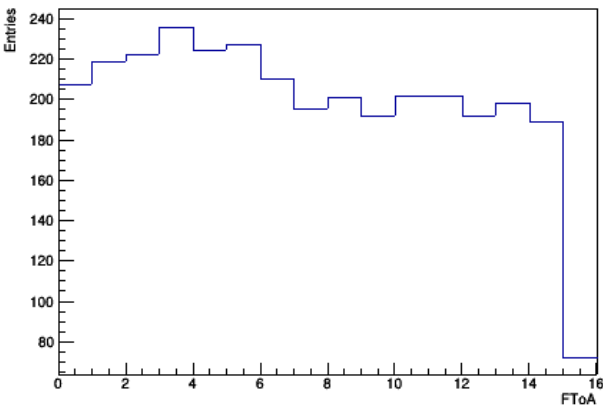
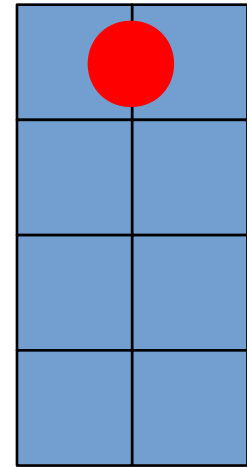
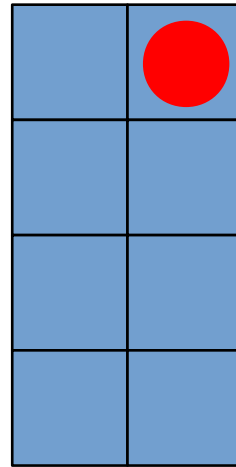
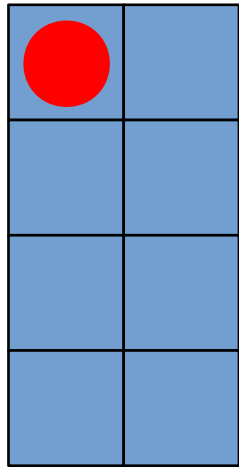
I am uncertain why there is this difference in time.

Could be due to:

- Timing resolution of telescope?
- Difference between MIP and laser pulse?
- Different threshold (700 vs 1000)?

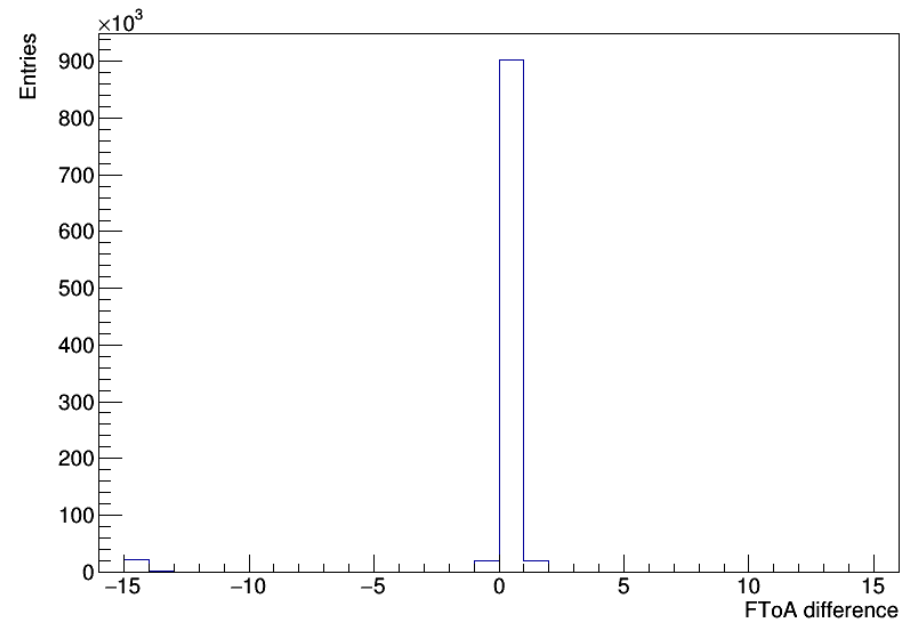
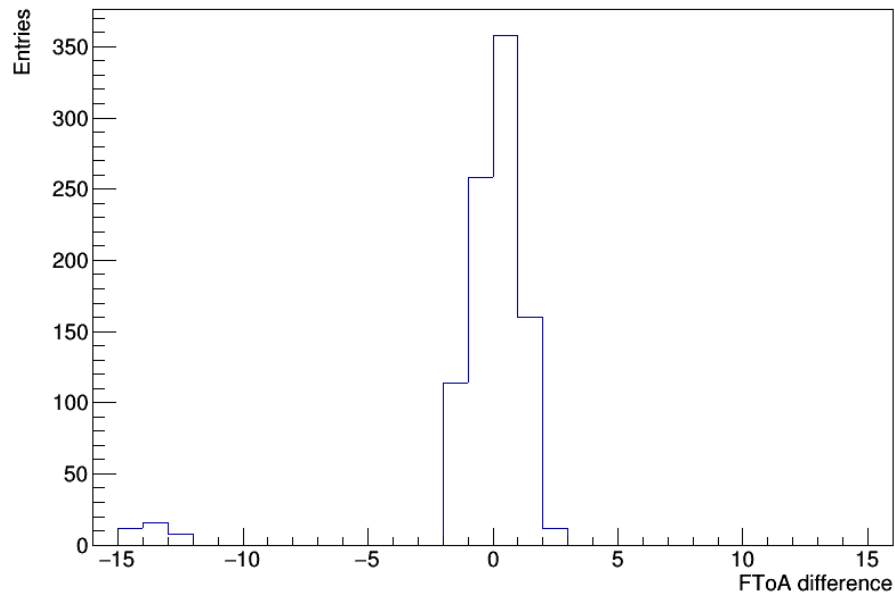
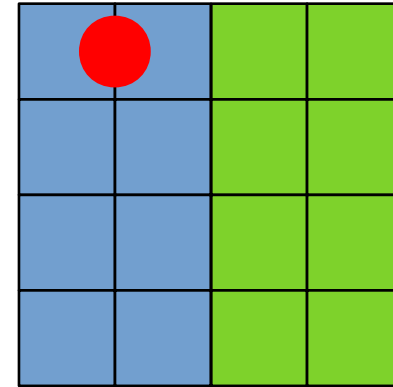
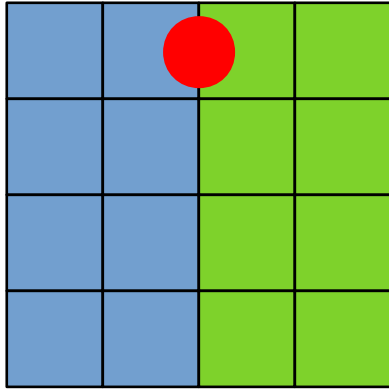
Threshold difference is currently under investigation

FToA of hit (within superpixel)



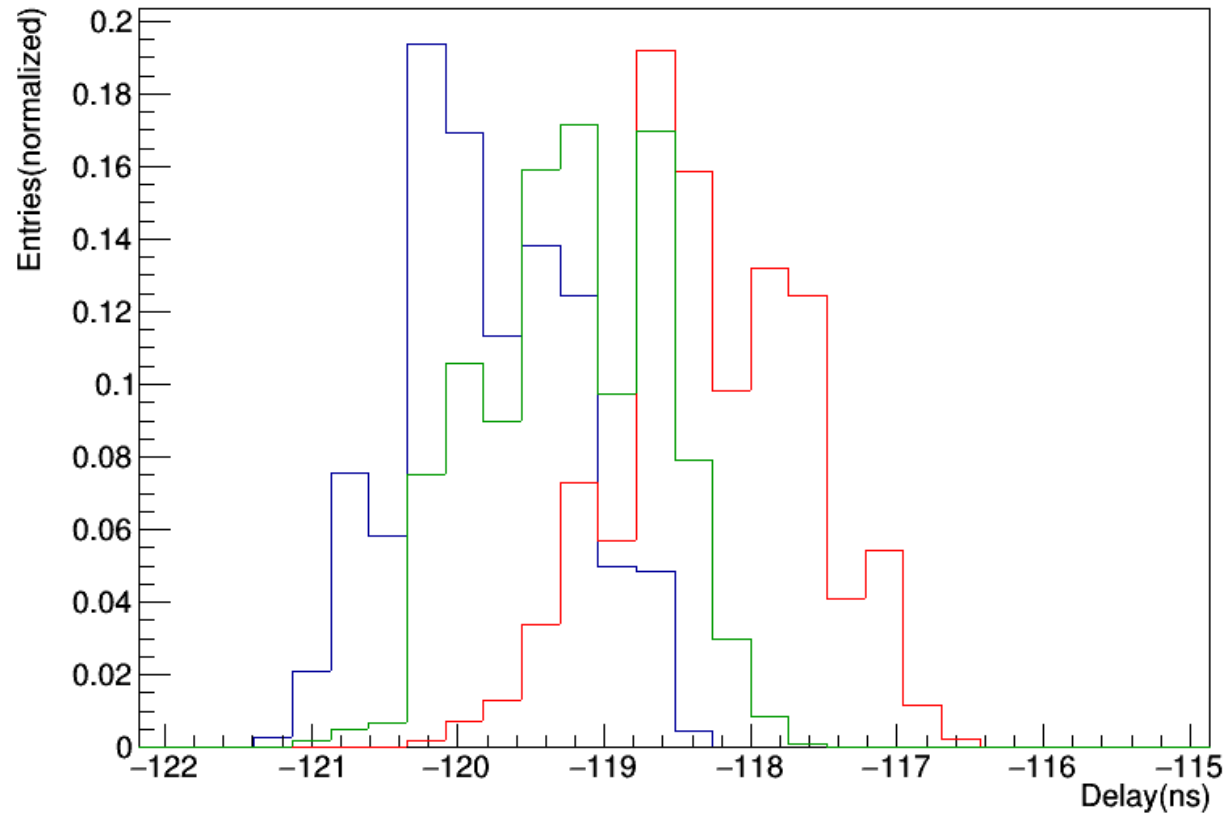
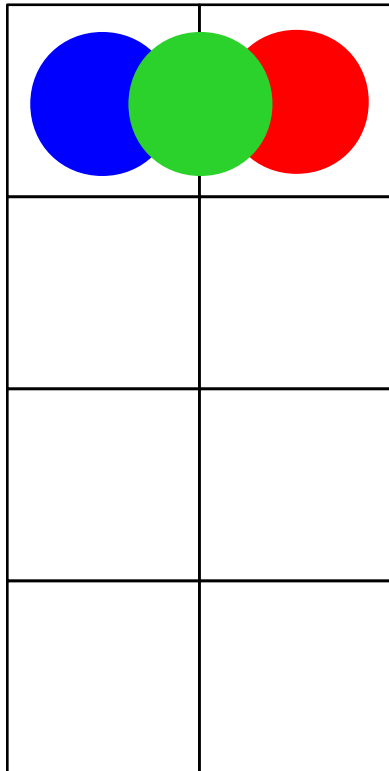
The distribution of FToA seems not to be affected by a double hit within a superpixel

FToA difference between two hits



The time of the hits within the same superpixel seems to be determined by 1 pixel

But which pixel in the superpixel determines the time of both hits?



The delay for a hit on both pixels seems not to be dominated by the fastest/slowest pixel of the two pixels

Next steps?

Timepix is synchronised with an external 40MHz clock since yesterday.

This same 40MHz clock (but down-scaled to 10MHz), is also linked to the pulse generator for the laser/trigger

→ An absolute timing delay can now be determined, with this it is possible to see which of the two pixels determines the time of the hit

