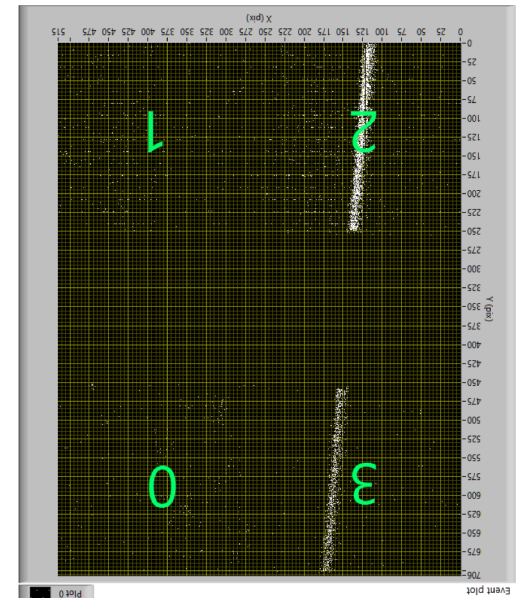


Some results/comments from scanning laser track and Fe55 photons displays (display files provided by Kees Ligtenberg)

- Observed facts: **large difference in #hits per laser track segment in 'top' chips (no. 1 and 2) and 'bottom' chips (no. 0 and 3)**
- Seems **not visible in ToT distributions of the 4 chips**
- Seems **not visible in Fe55 spectra: photopeaks at approx. same position**
- What about random cosmic tracks in laser data?

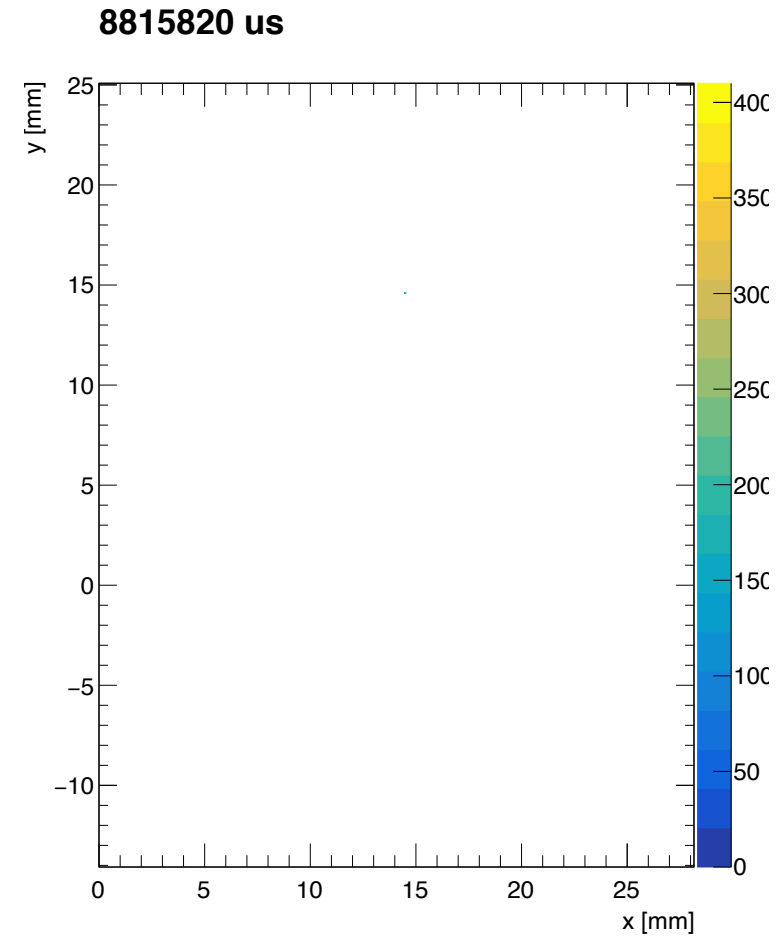
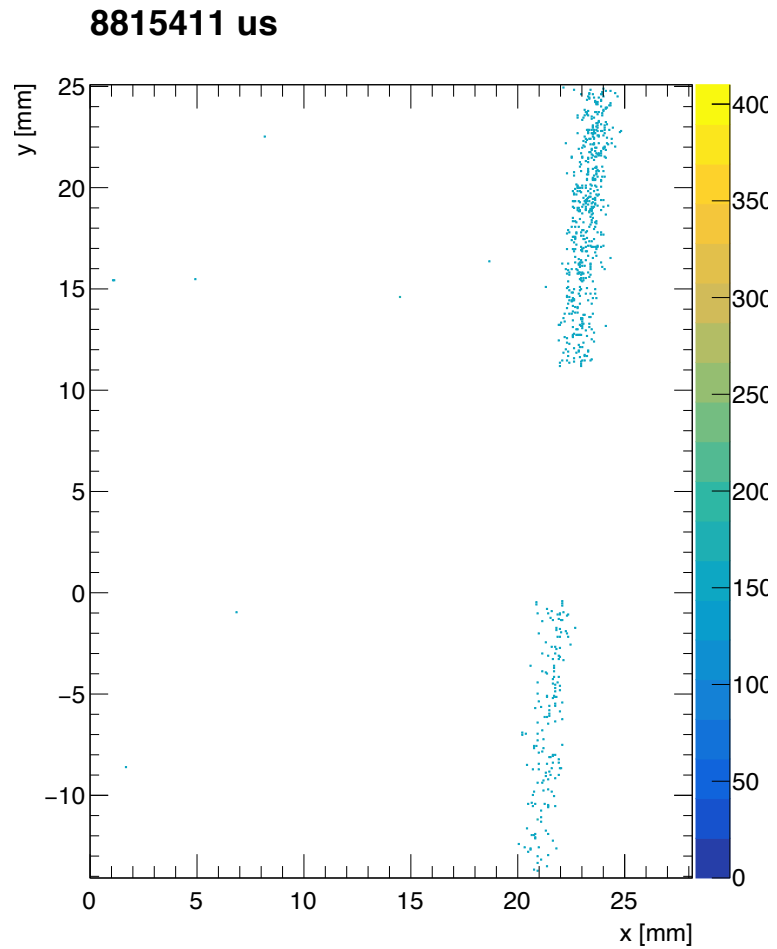
From Fred Hartjes



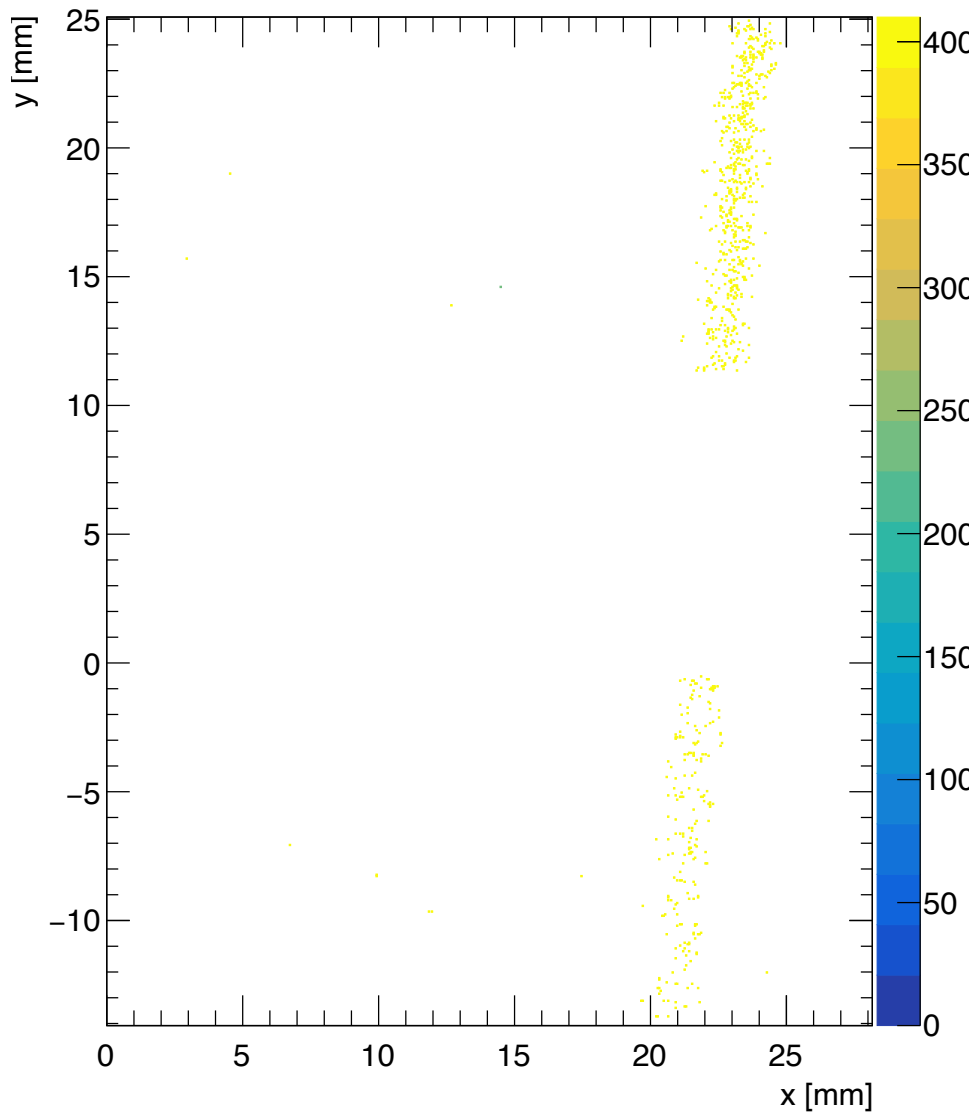
(preliminary) Conclusions

- I counted 107 laser tracks out of 504 frames; in 44 sec: expect 110
- ~6 sec between last laser track in chips 2-3 and first track in 0-1
- ALL laser tracks (every 0.4 sec) had NO OVERFLOW in next 409.7 us frame
- ONLY few “other events” with overflow in next frame
- All laser tracks seem to have LESS hits in bottom chip (3 or 0)
- Not many (long) “cosmics” pass through “top” (1-2) and “bottom” (0-3); these would be quite horizontal tracks. But ALL seem to have ~EQUAL hits in top and bottom chip (but statistics low)

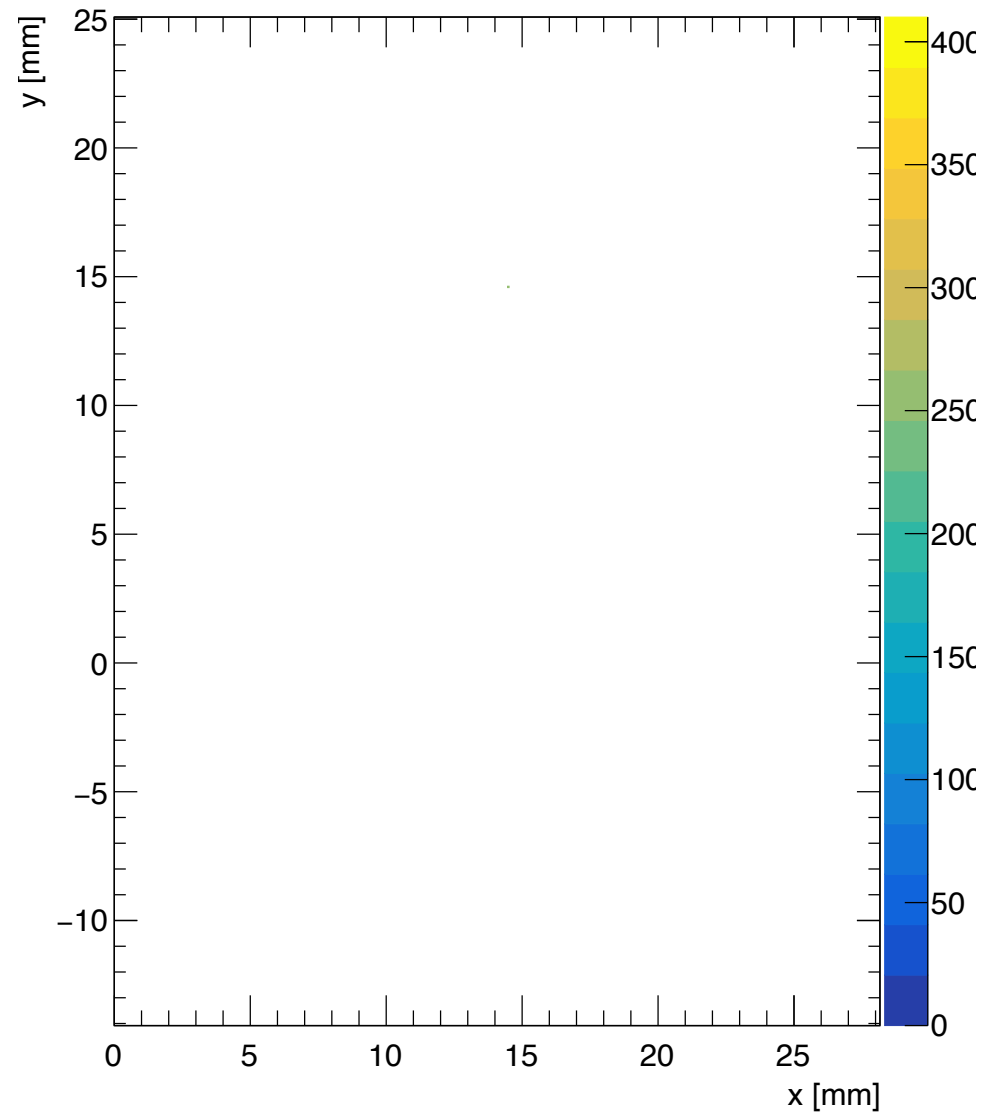
Some examples of laser track frames and succeeding frame



9615360 us



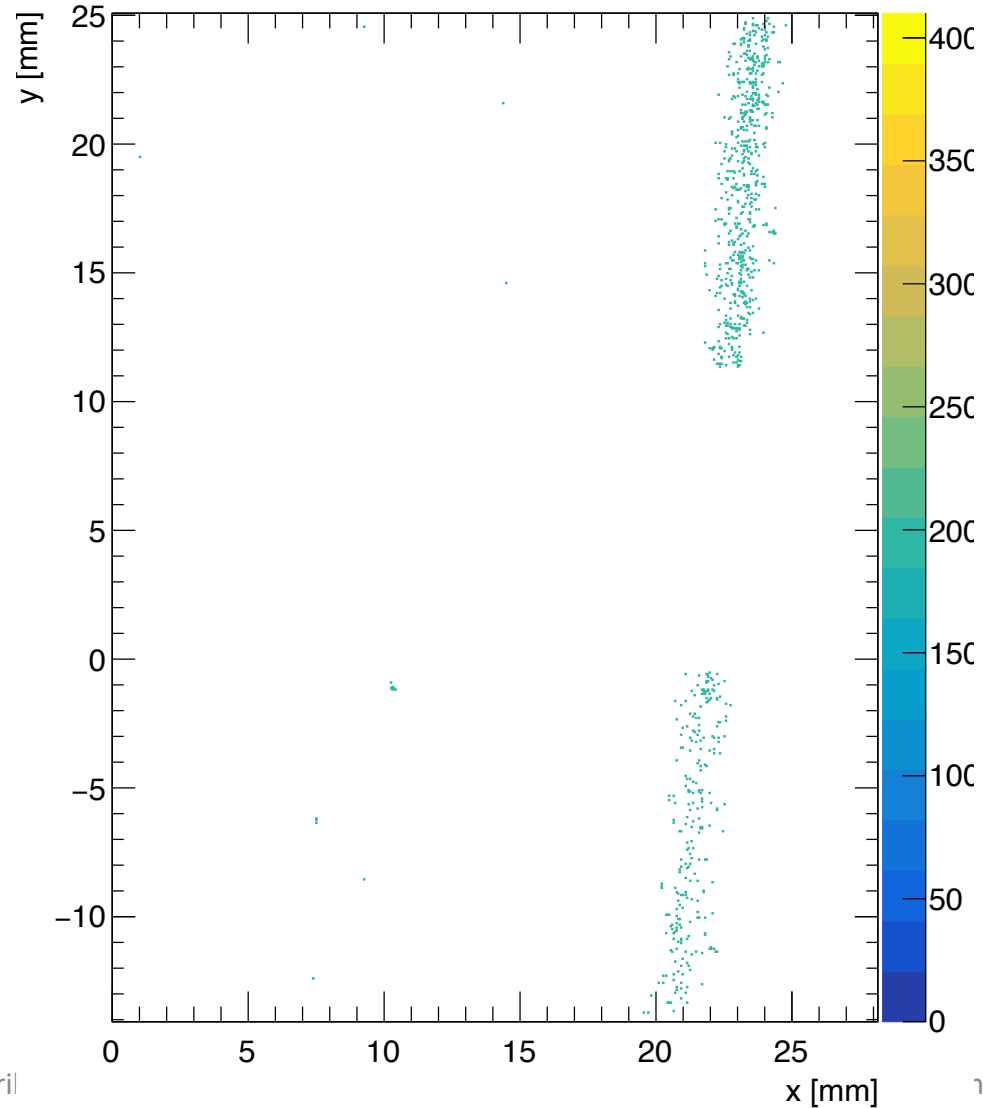
9615769 us



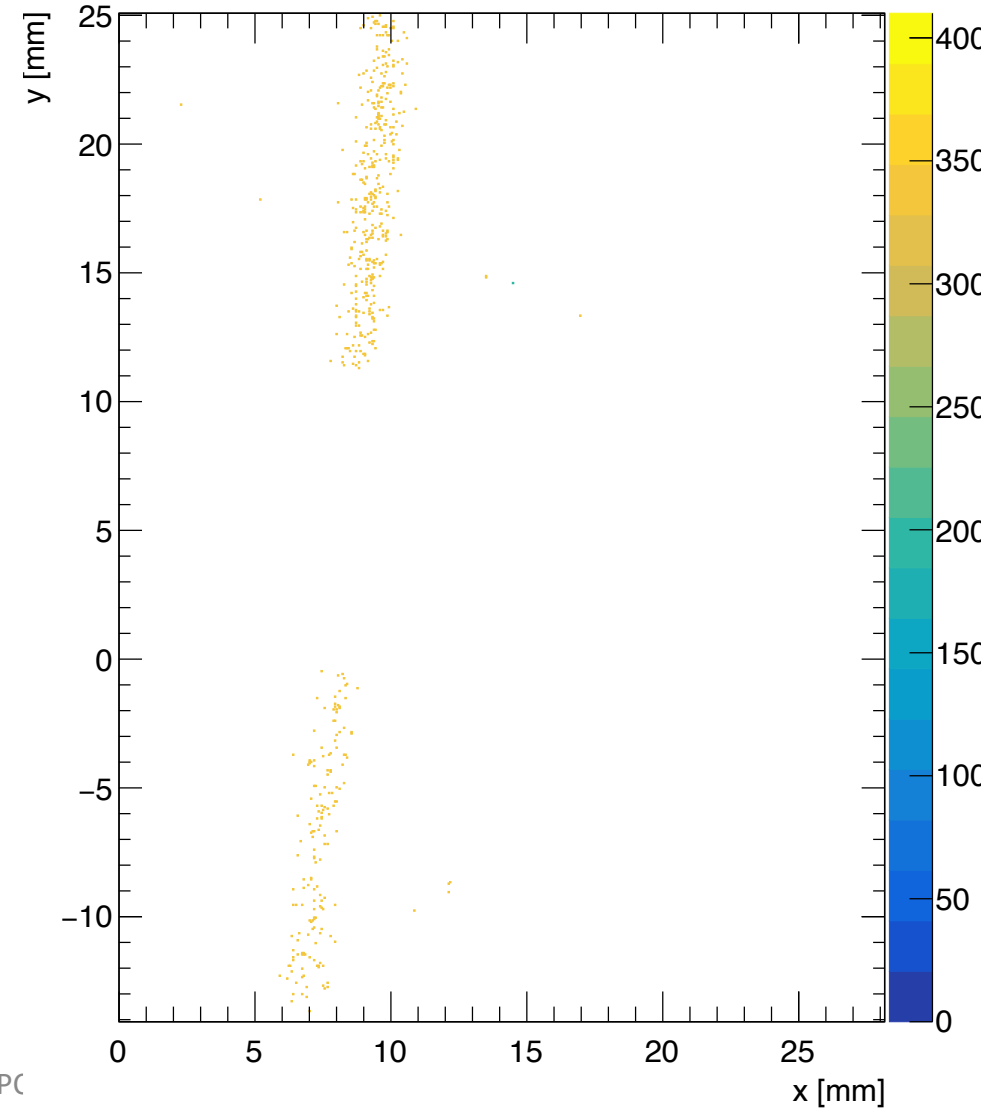
Nothing in second frame, even though hits in first frame close to end-of-time of frame

Last laser on chips 2-3 and first laser on chips 0-1

81616896 us

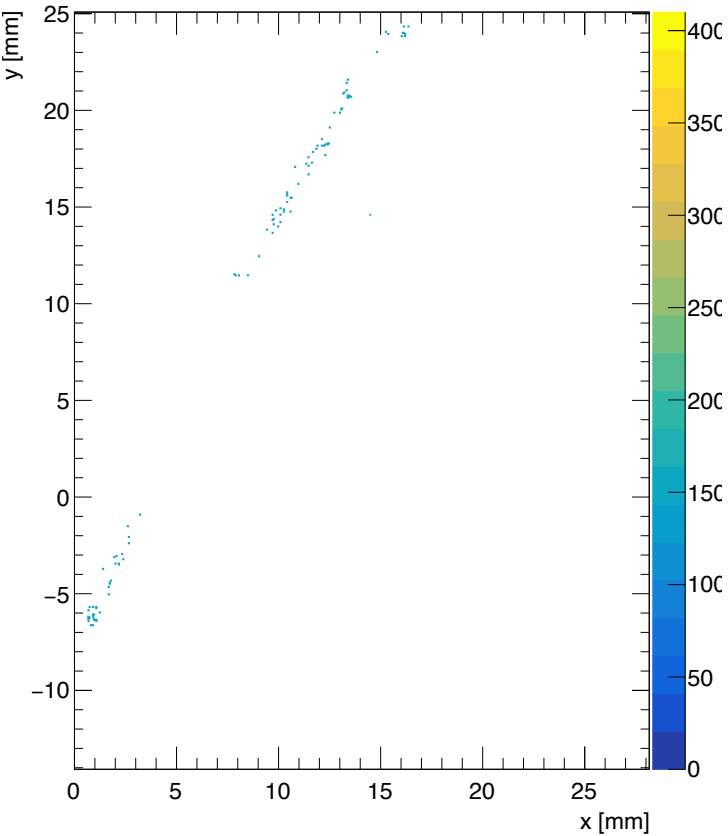


87164518 us

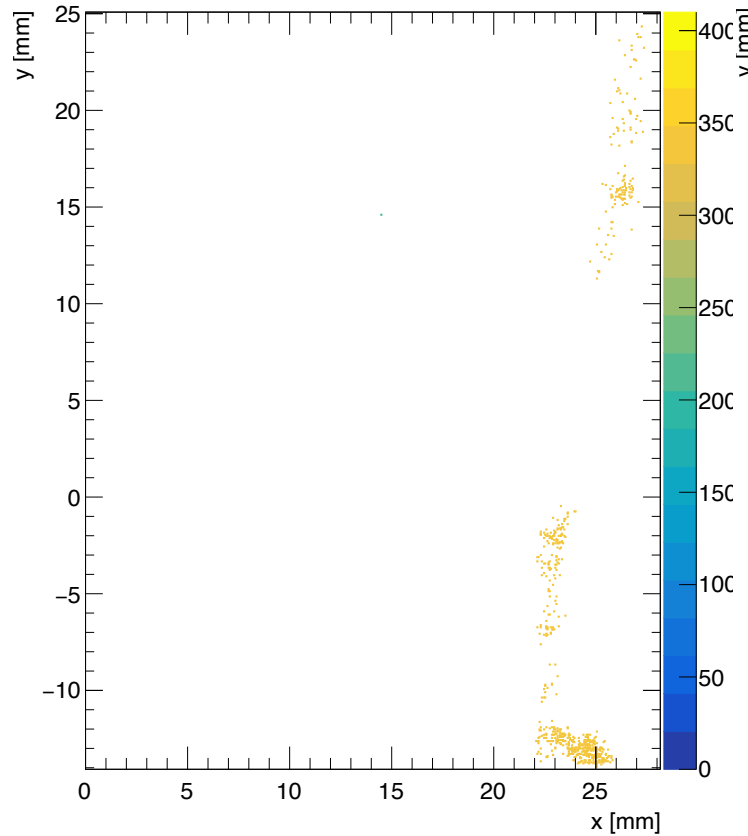


Now some 'cosmics' spanning top (1-2) and bottom (0-3) chips

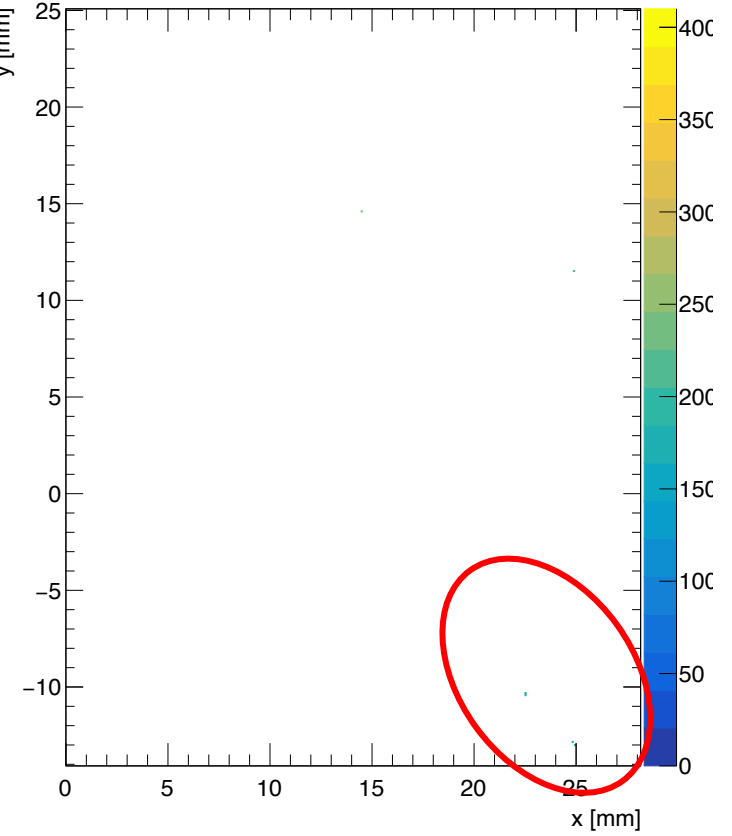
2806169 us



4775116 us



4775526 us



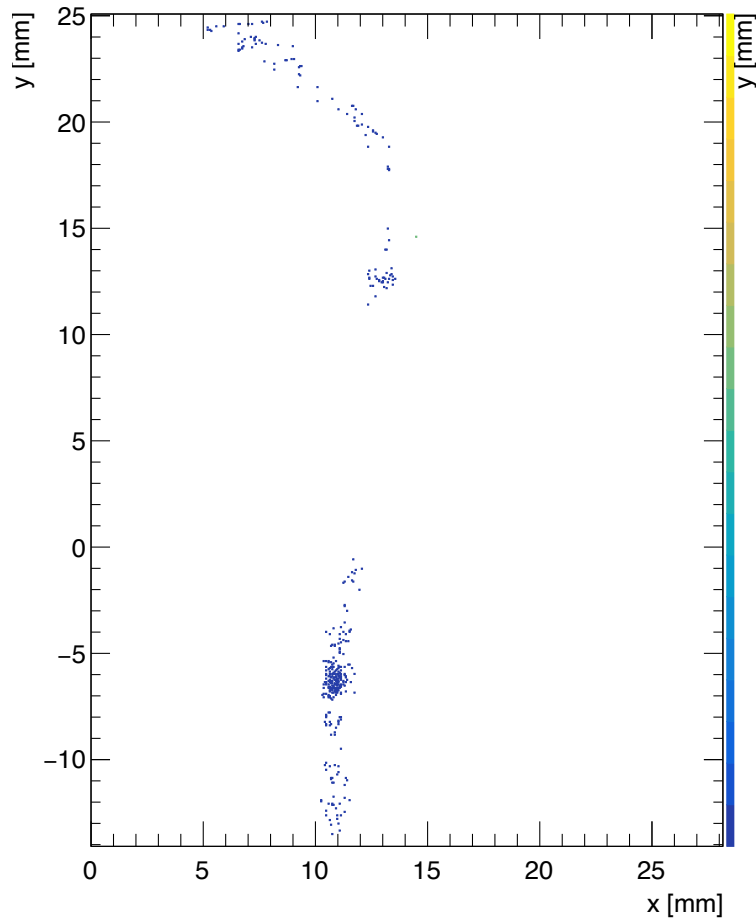
About equal hit density in 0-1

Not less density in chip 3

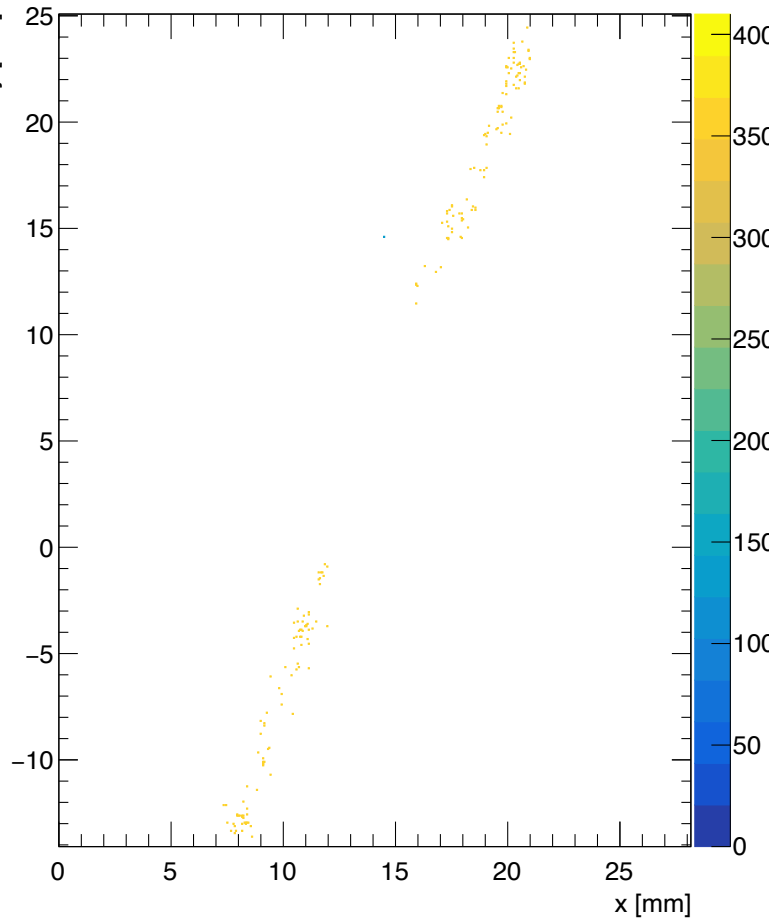
Few overflow (?) hits in next frame

Cosmics cont'd: about equal hits in top and bottom chip

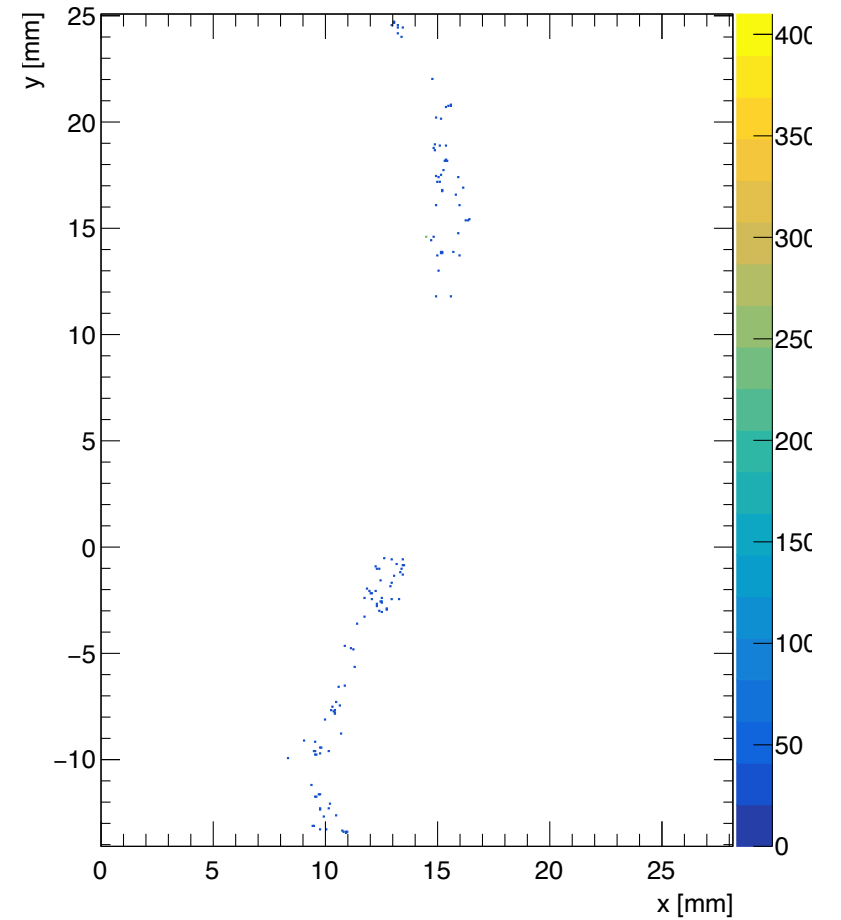
15487385 us



18472550 us

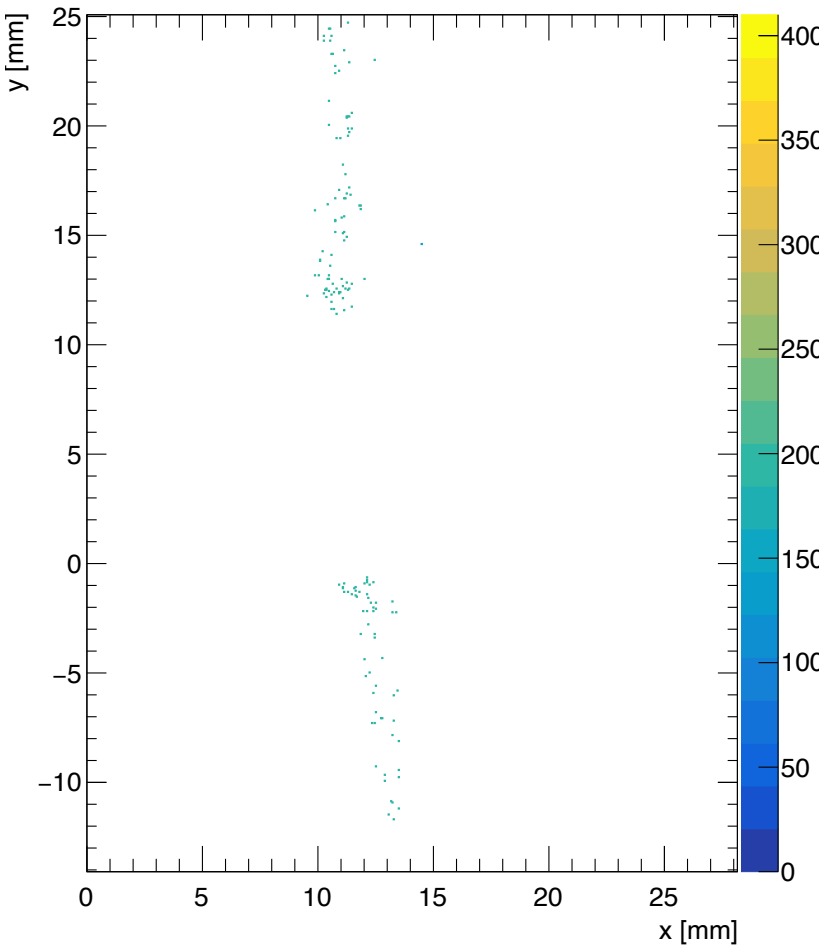


19628441 us

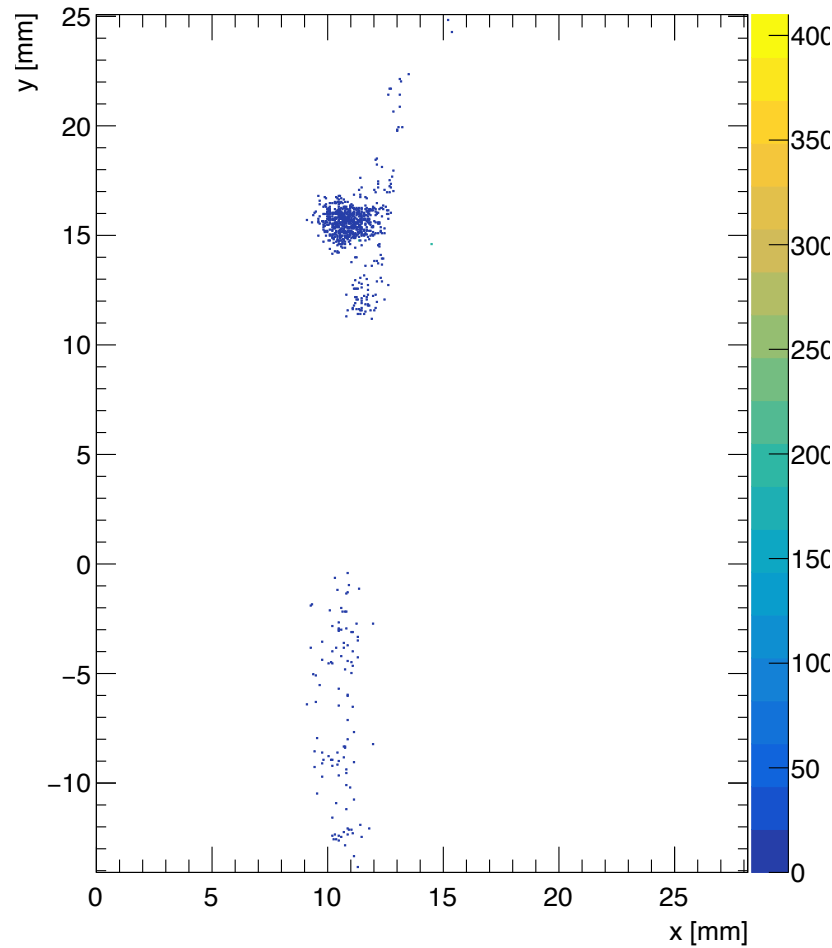


Cosmics cont'd: about equal hits in top and bottom chip

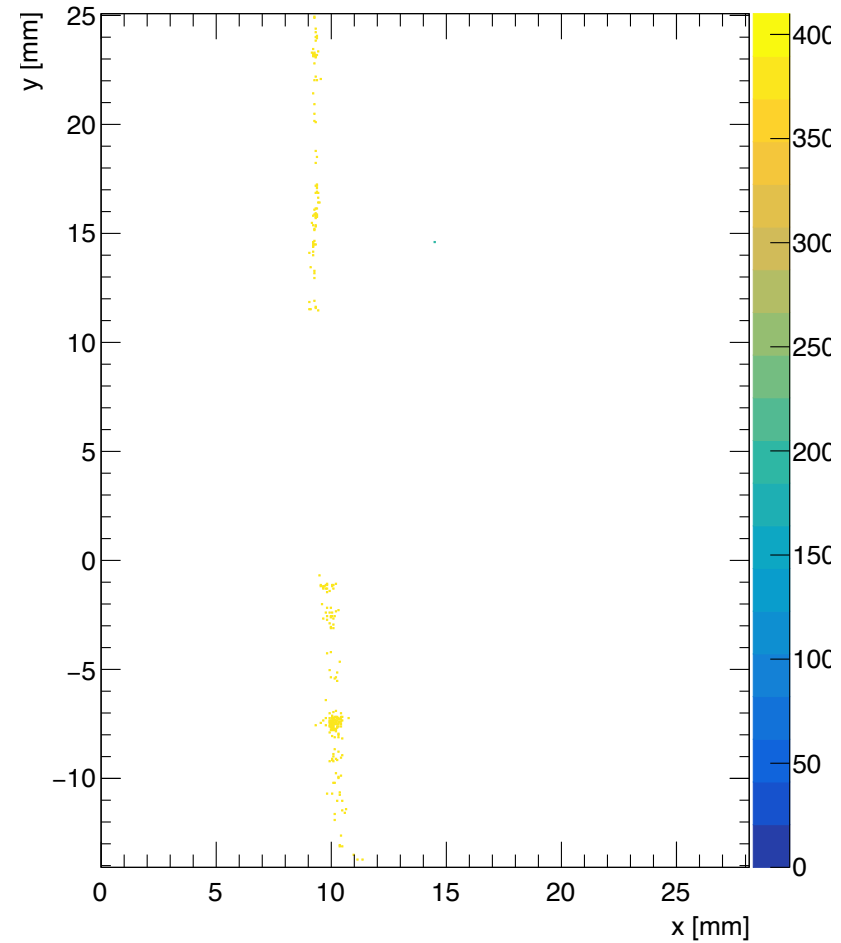
45877248 us



46807449 us

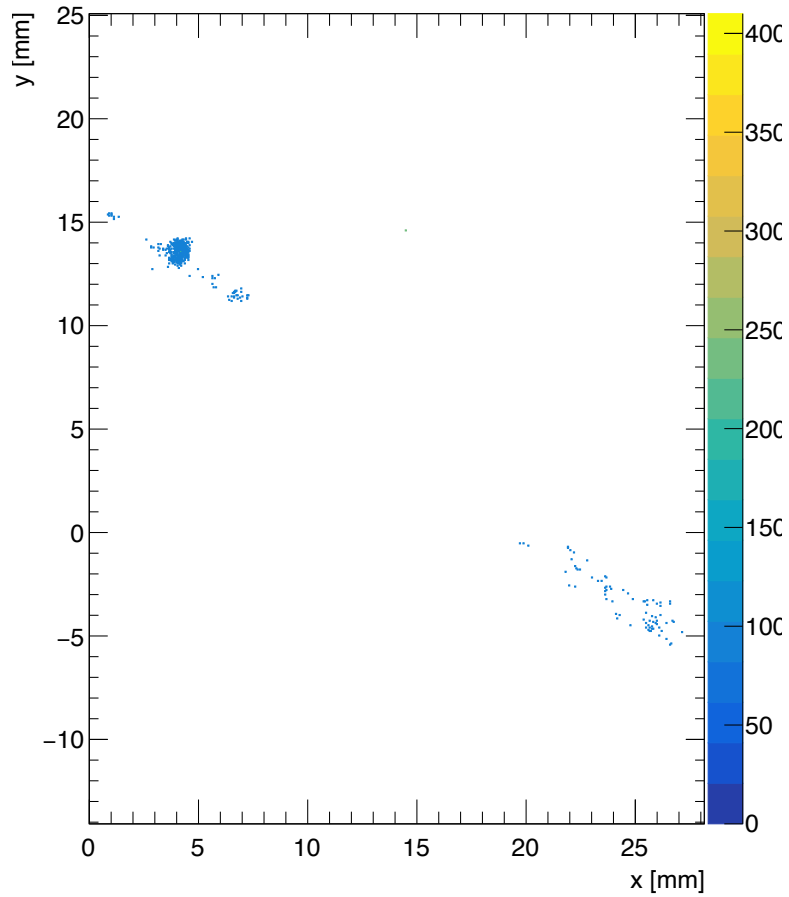


79541862 us



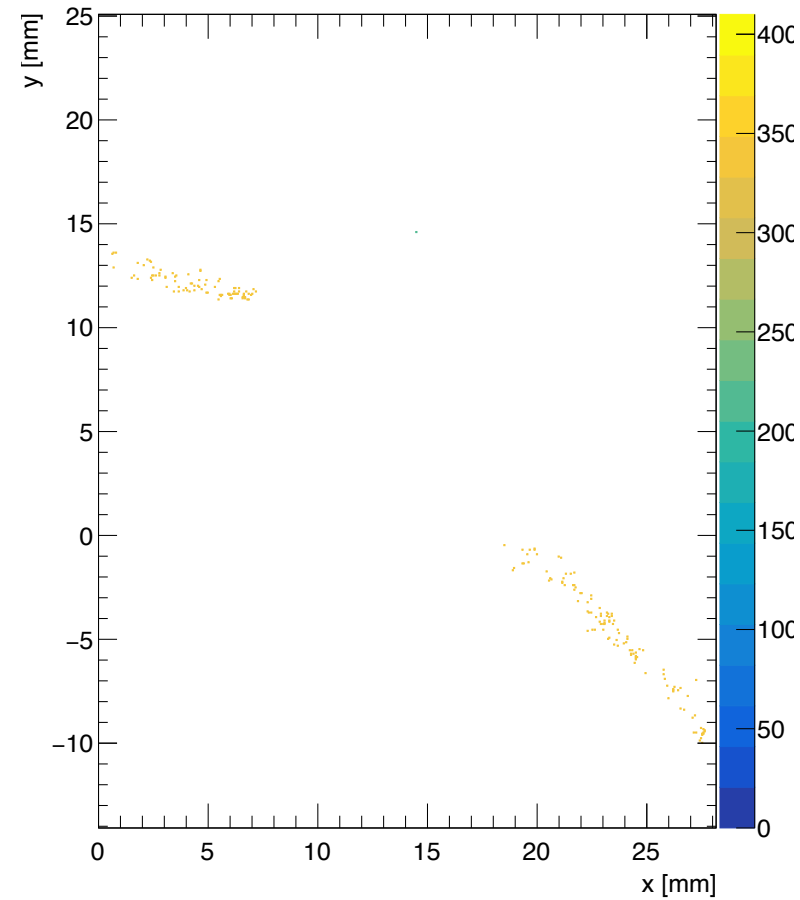
Cosmics cont'd: about equal hits in two diagonal chips

64269516 us



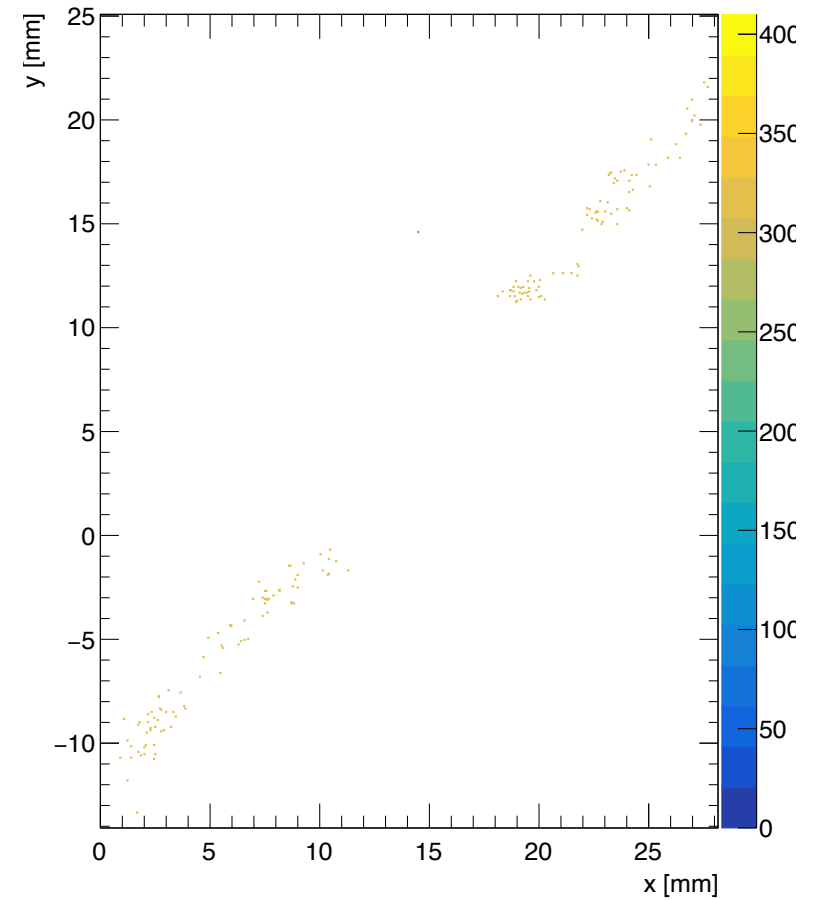
20 April 2020

69732352 us



Jan Immermans - LEPCOL meeting

71083622 us



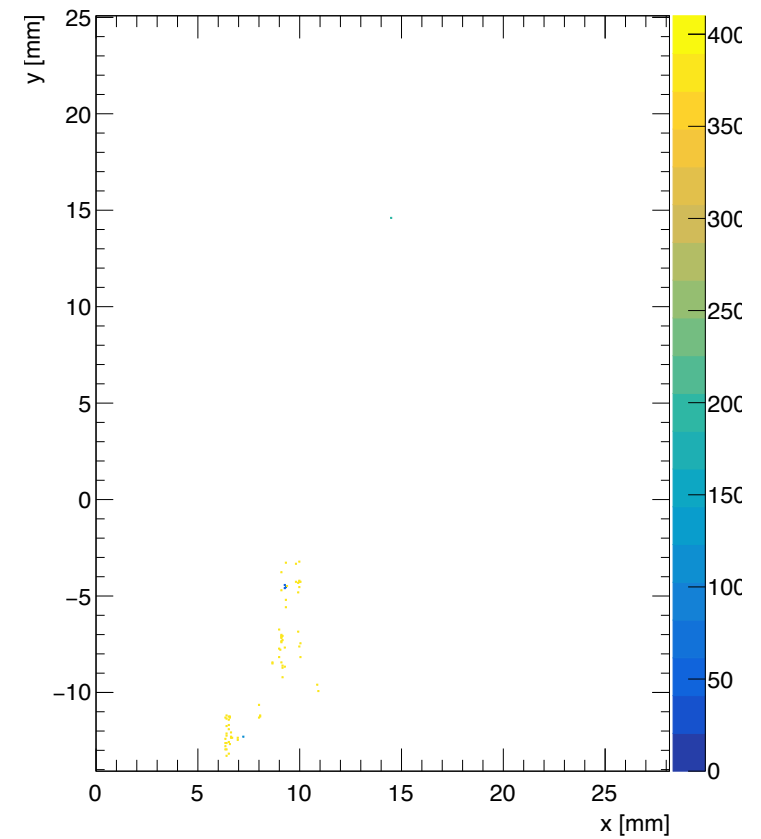
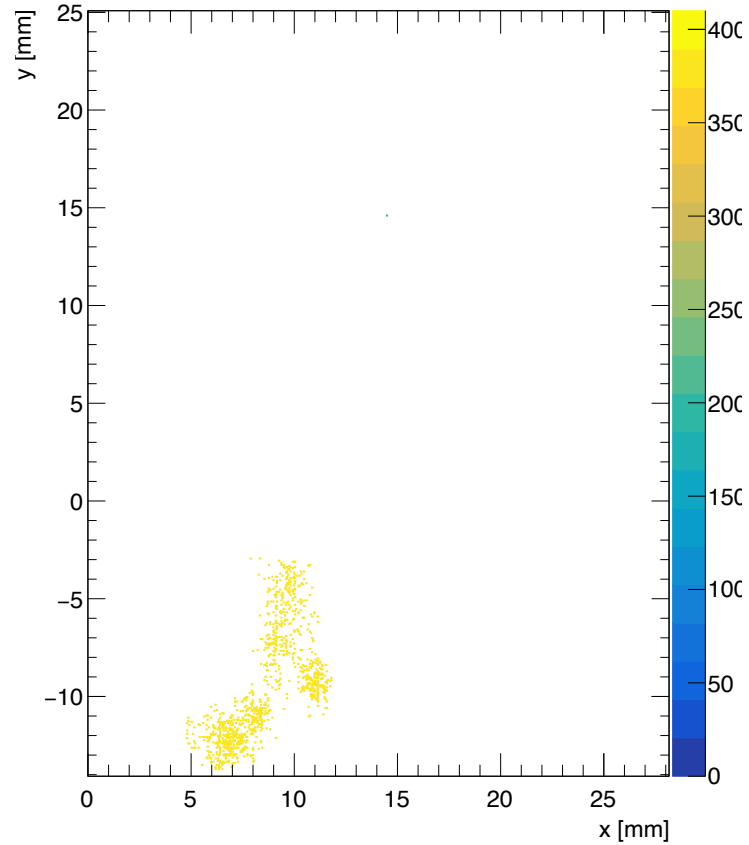
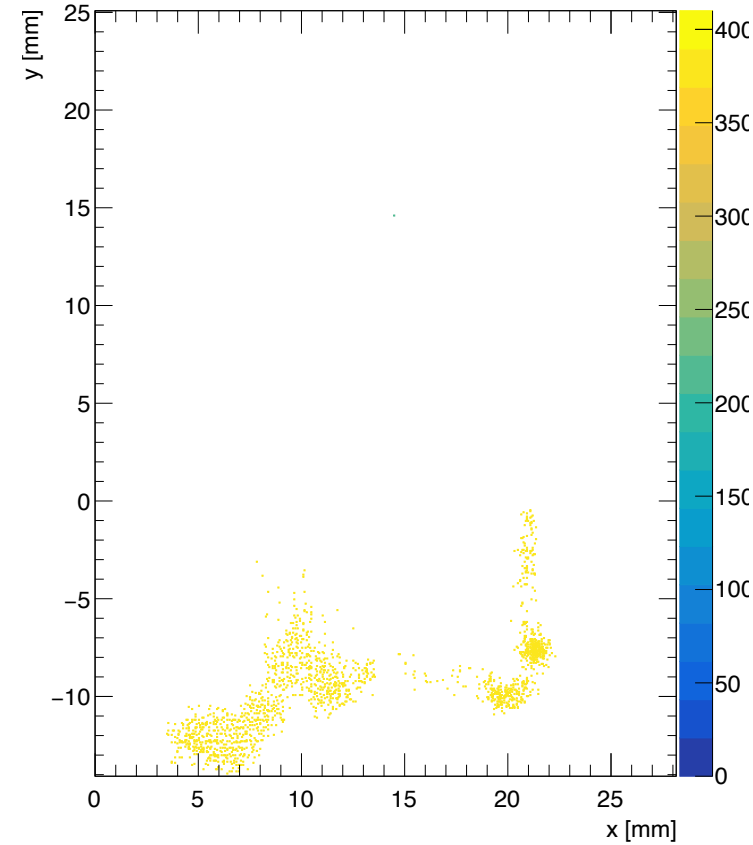
y

Some weird/interesting/strange frames:

6221414 us

6221824 us

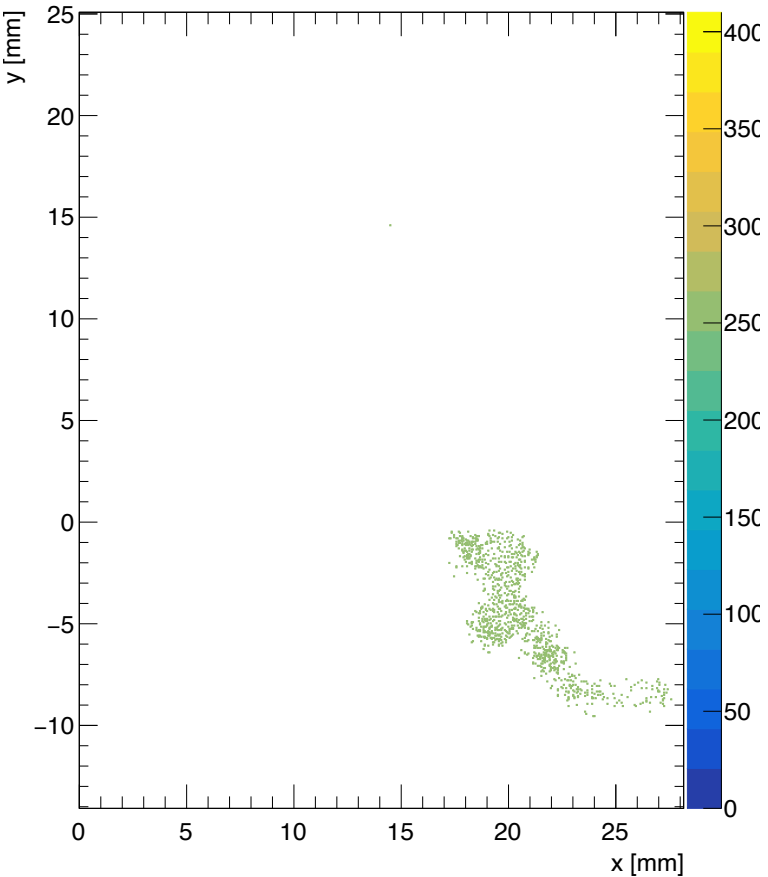
6222233 us



Weird event over THREE frames; no further hits in fourth frame

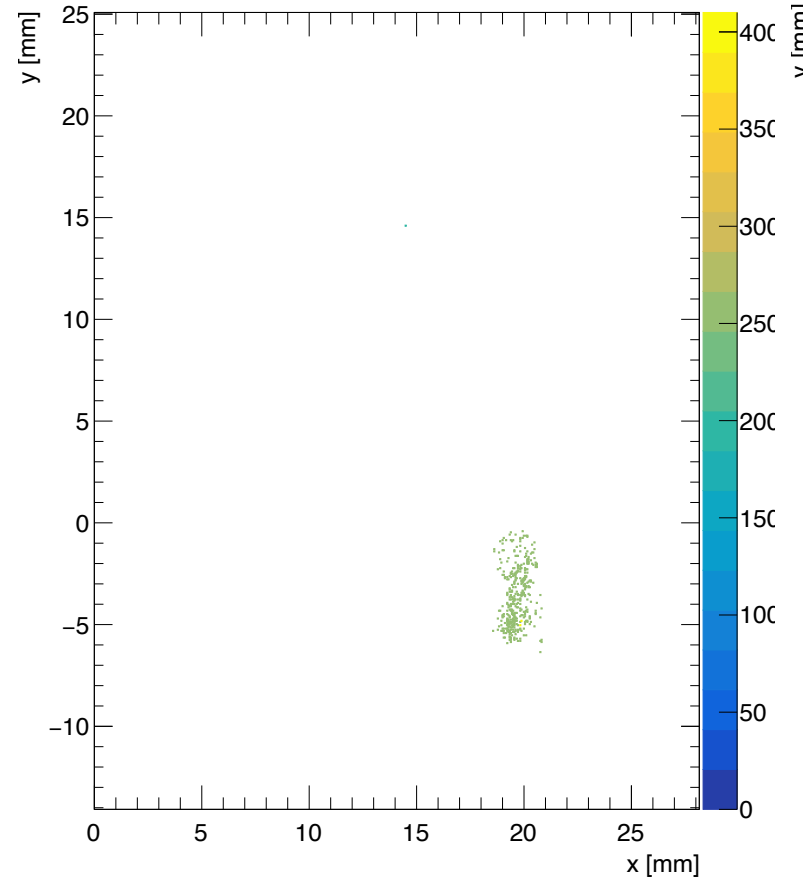
Cont'd: some weird/interesting/strange frames

86642278 us



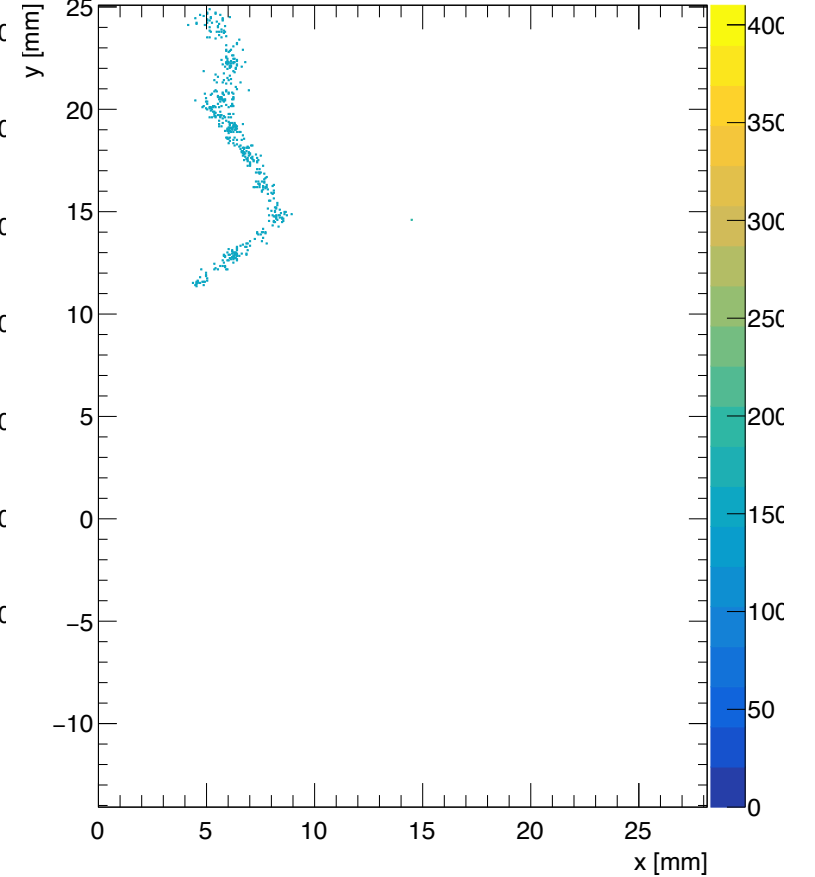
First frame

86642688 us



Second frame

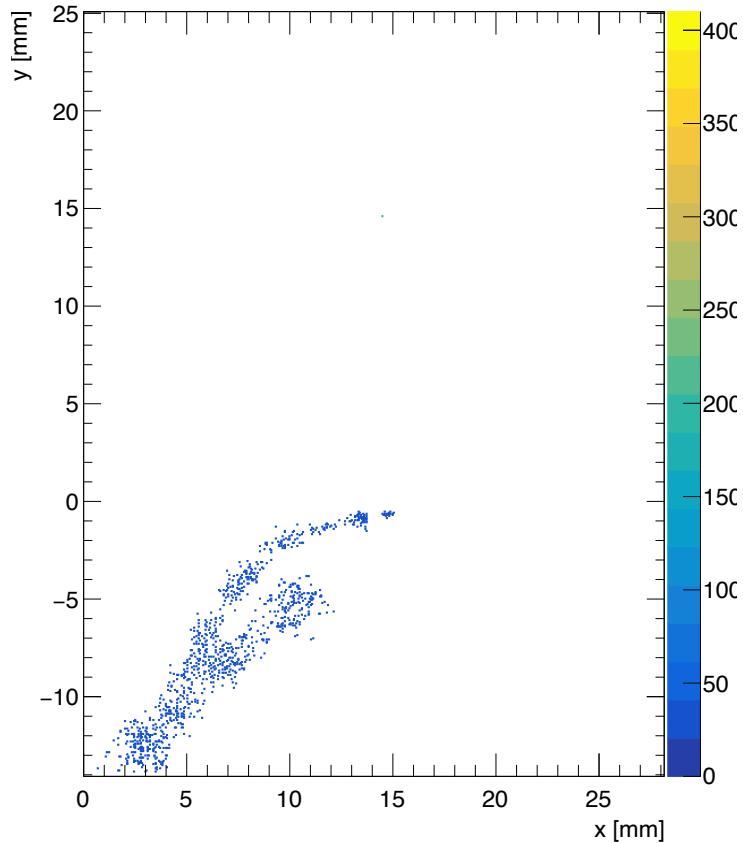
86953984 us



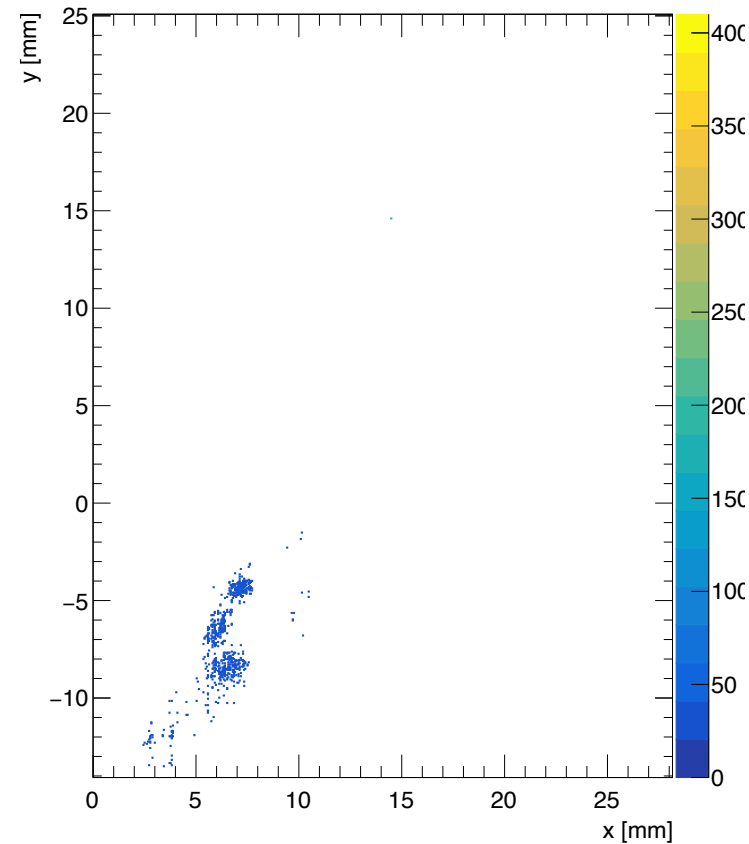
Could this be: $\pi \rightarrow \mu \rightarrow e$?

Last: some weird/interesting/strange frames

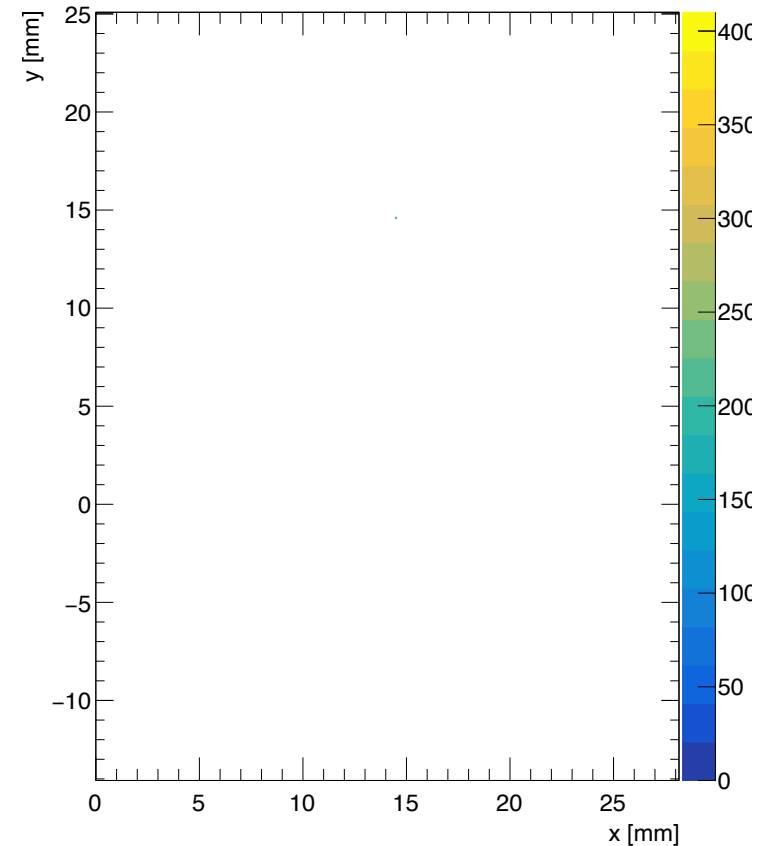
91193344 us



91193753 us



91194163 us



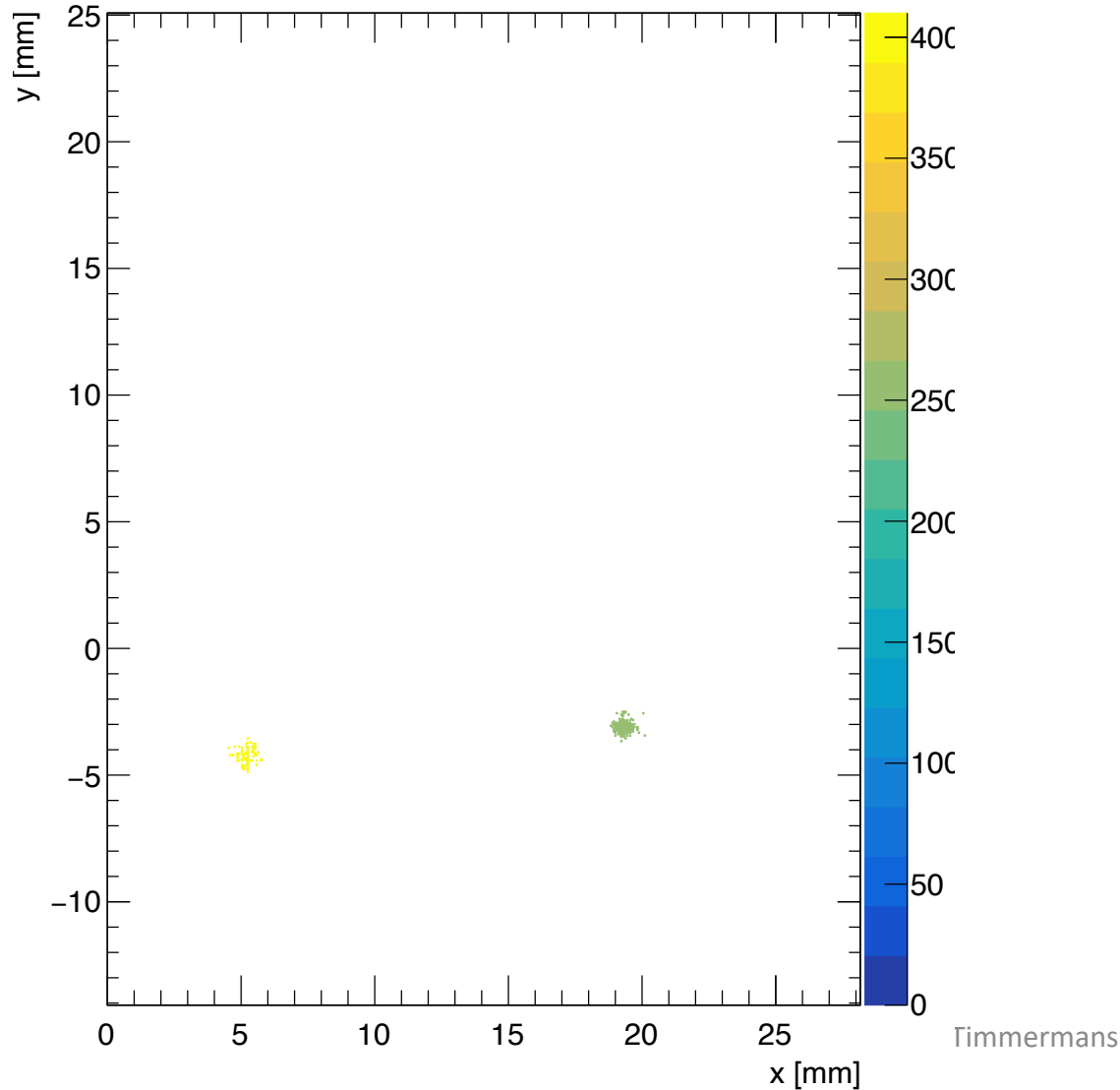
First frame

Second frame

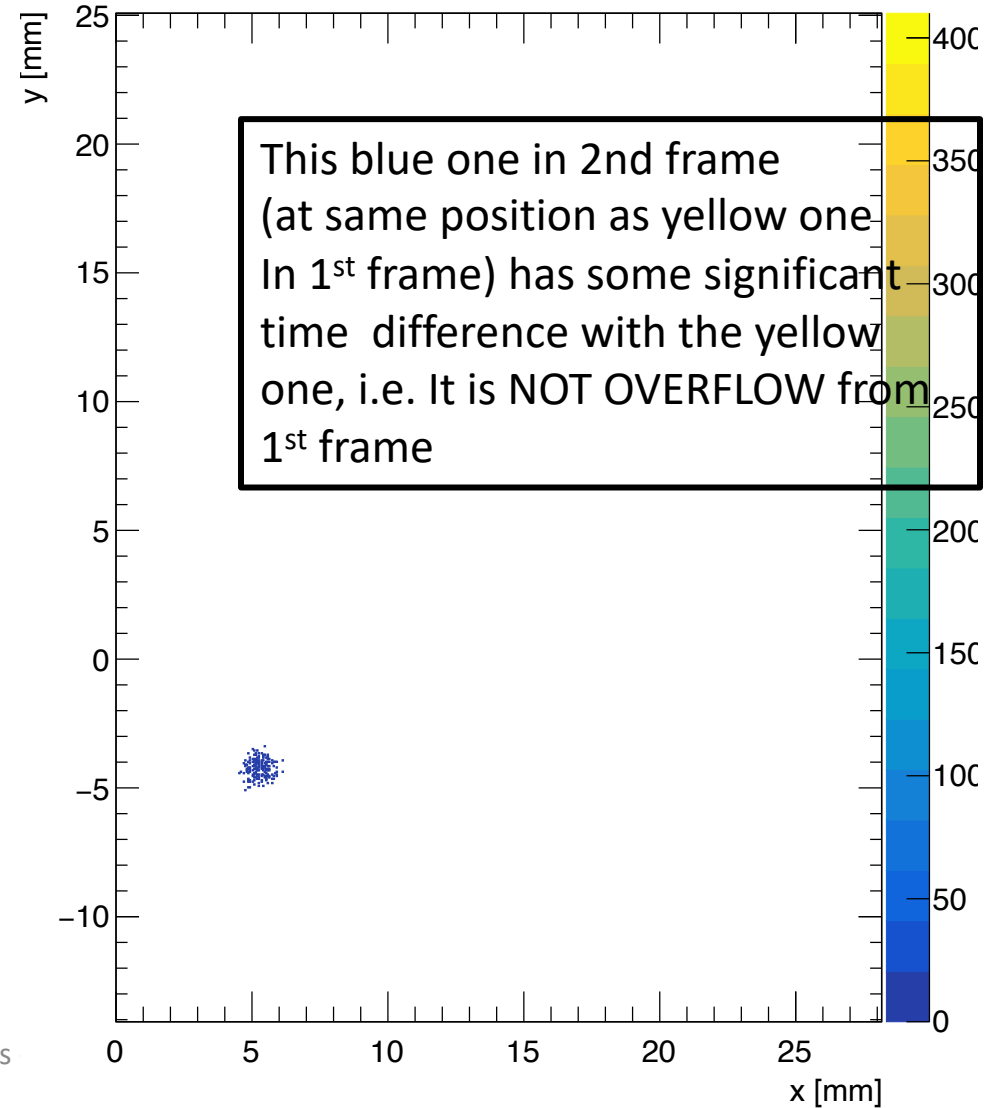
Empty third frame

Finally, few Fe55 displays in T2K gas -- run 775

1699020 us

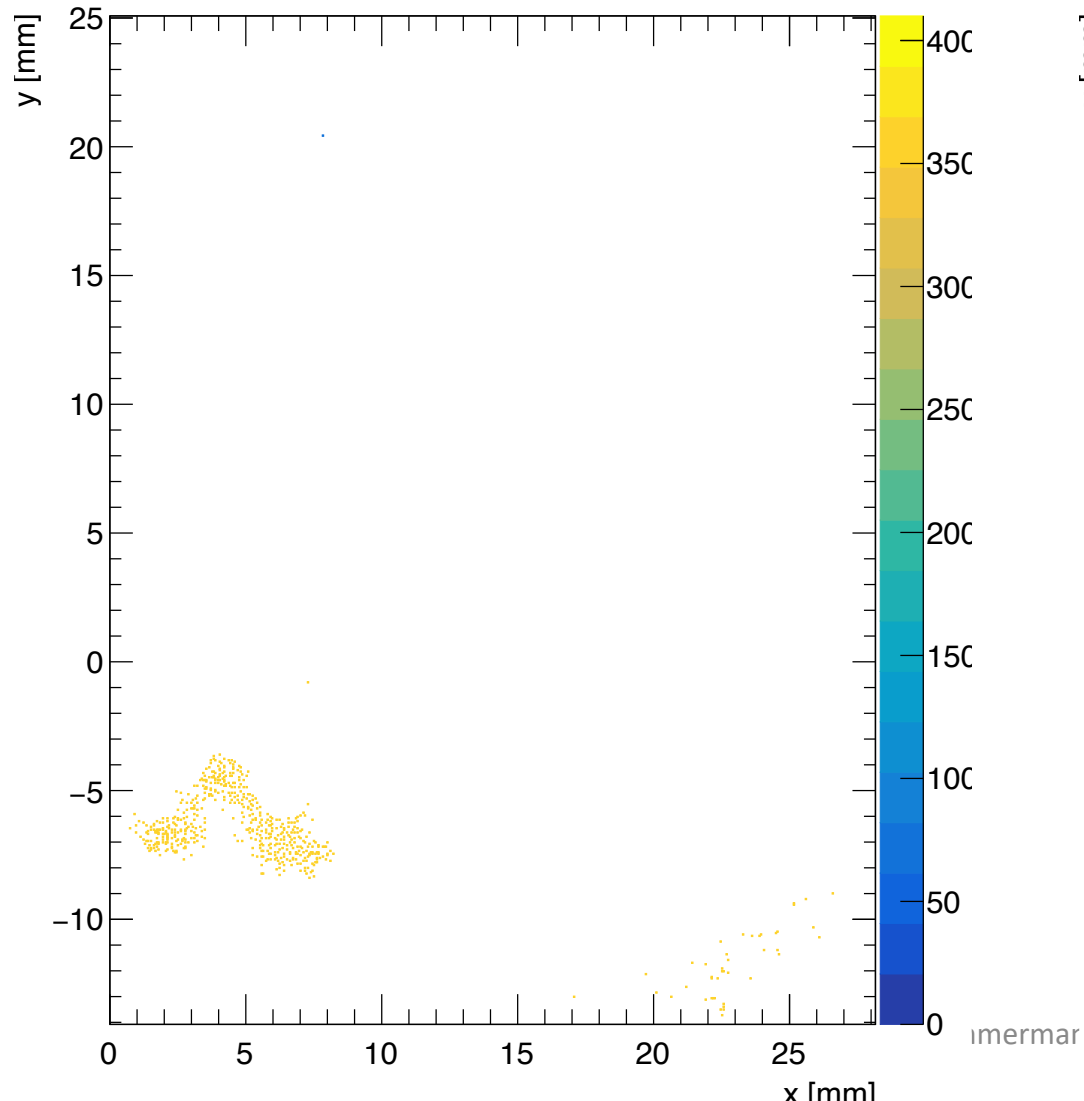


1699430 us

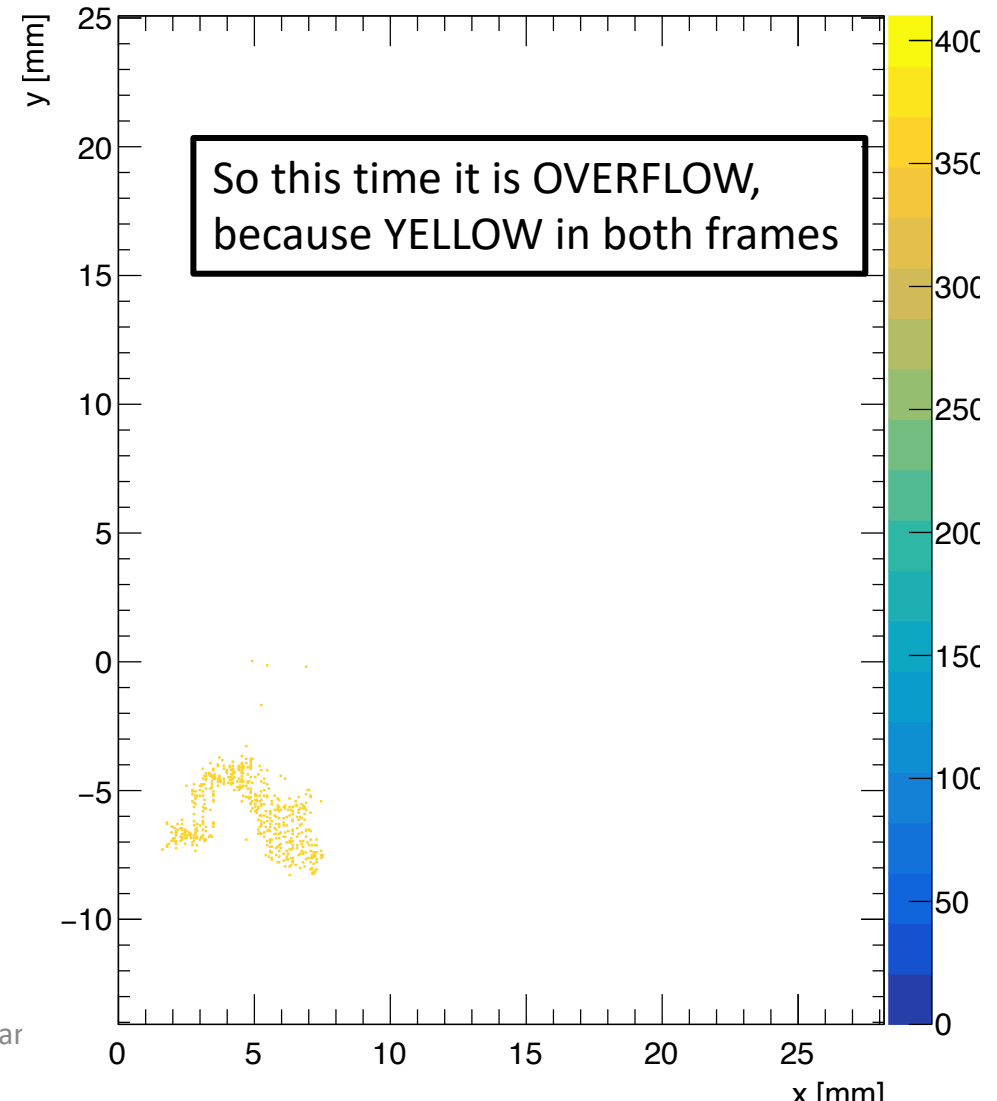


Cont'd: few Fe55 displays in T2K gas -- run 775

3103129 us

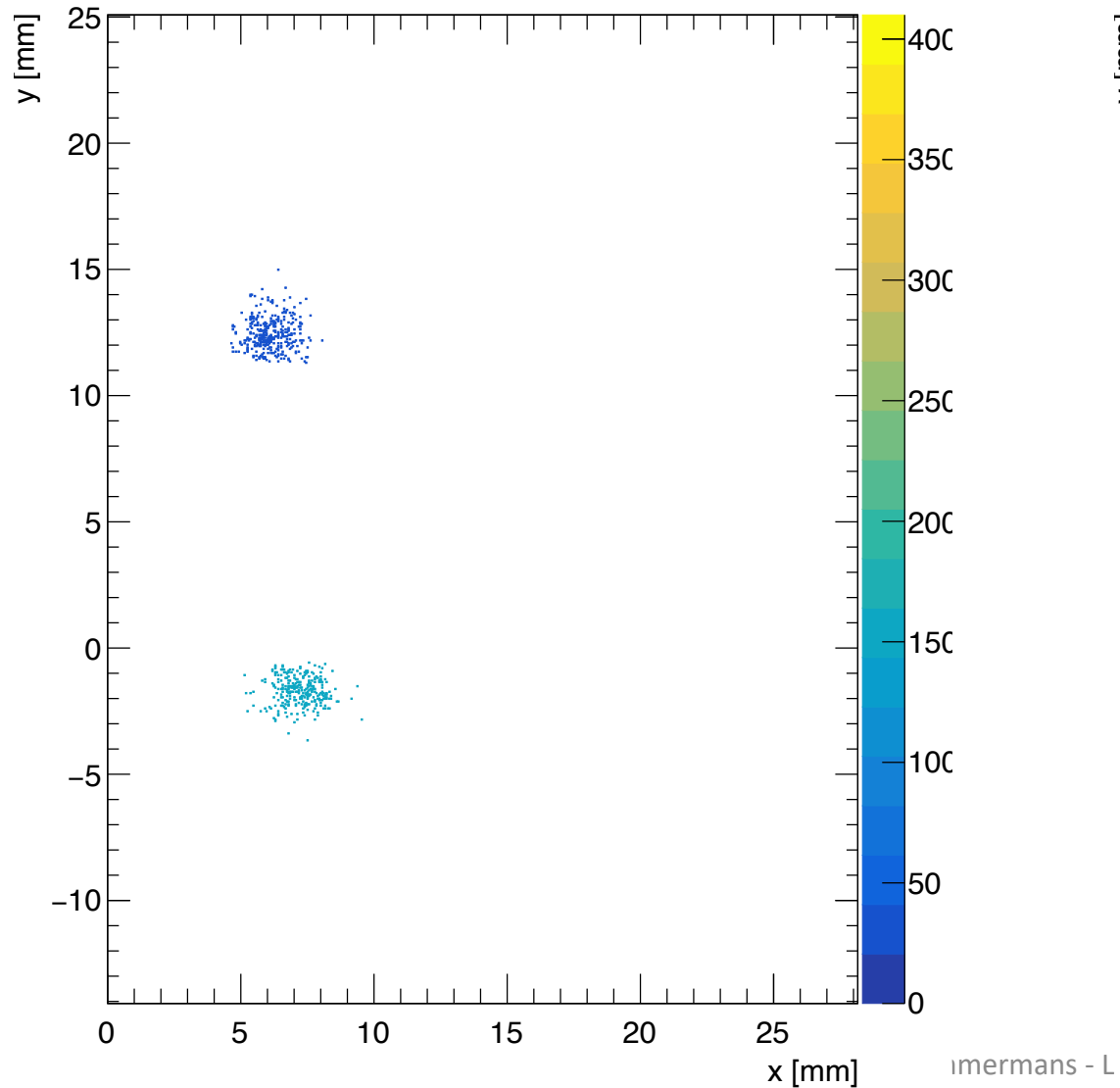


3103539 us

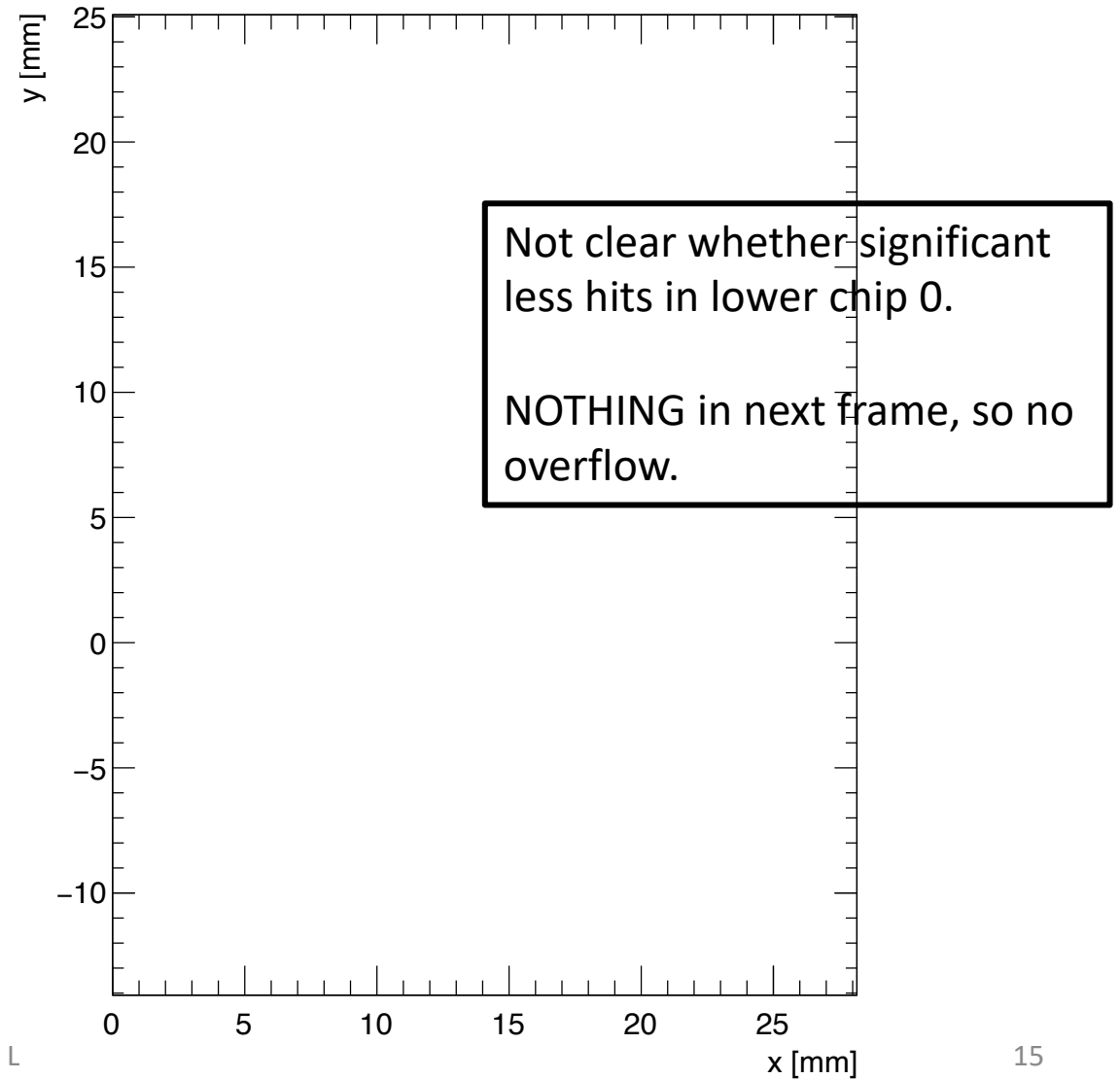


Cont'd: few Fe55 displays in T2K gas -- run 775

6724403 us

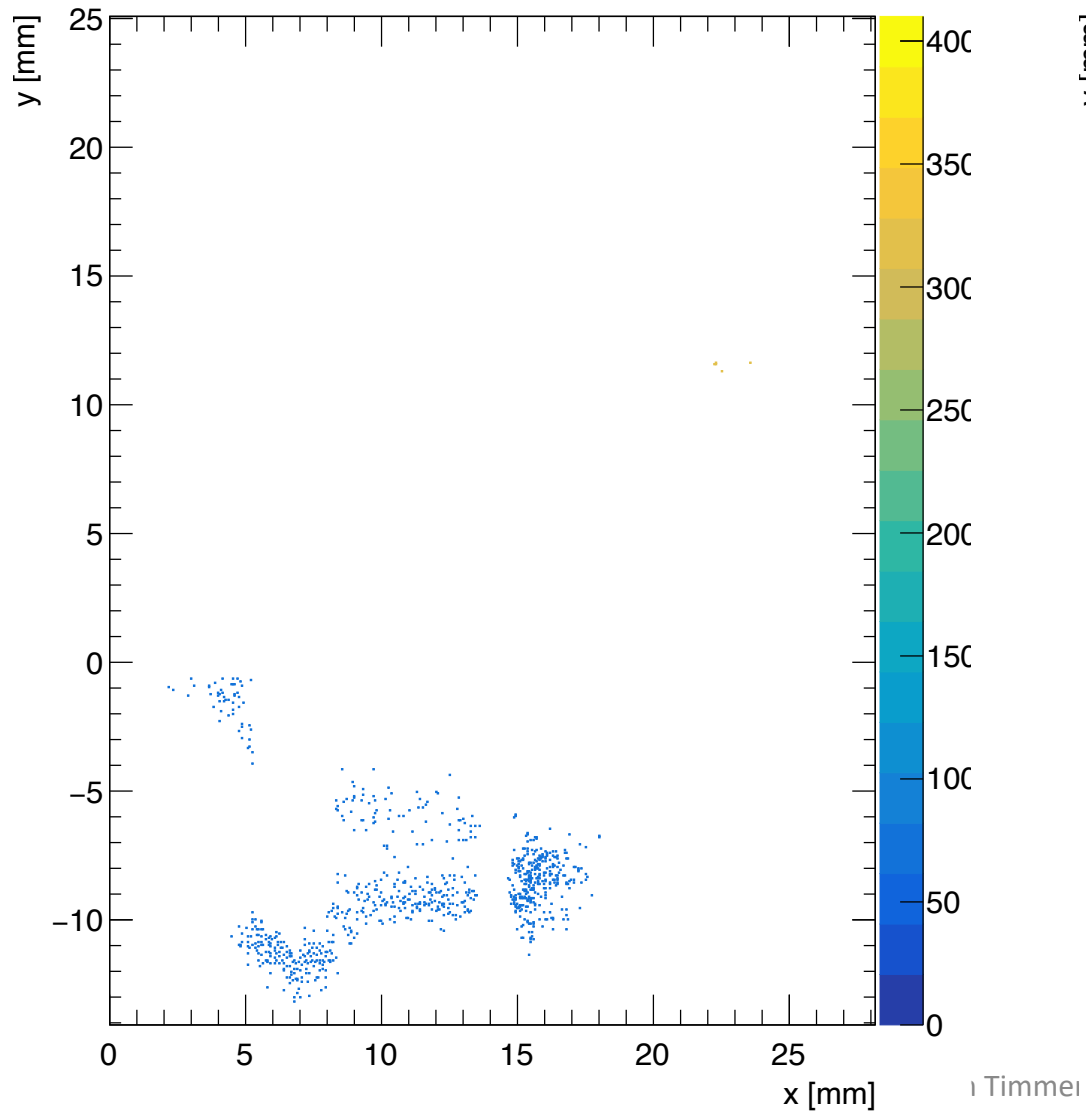


6724812 us

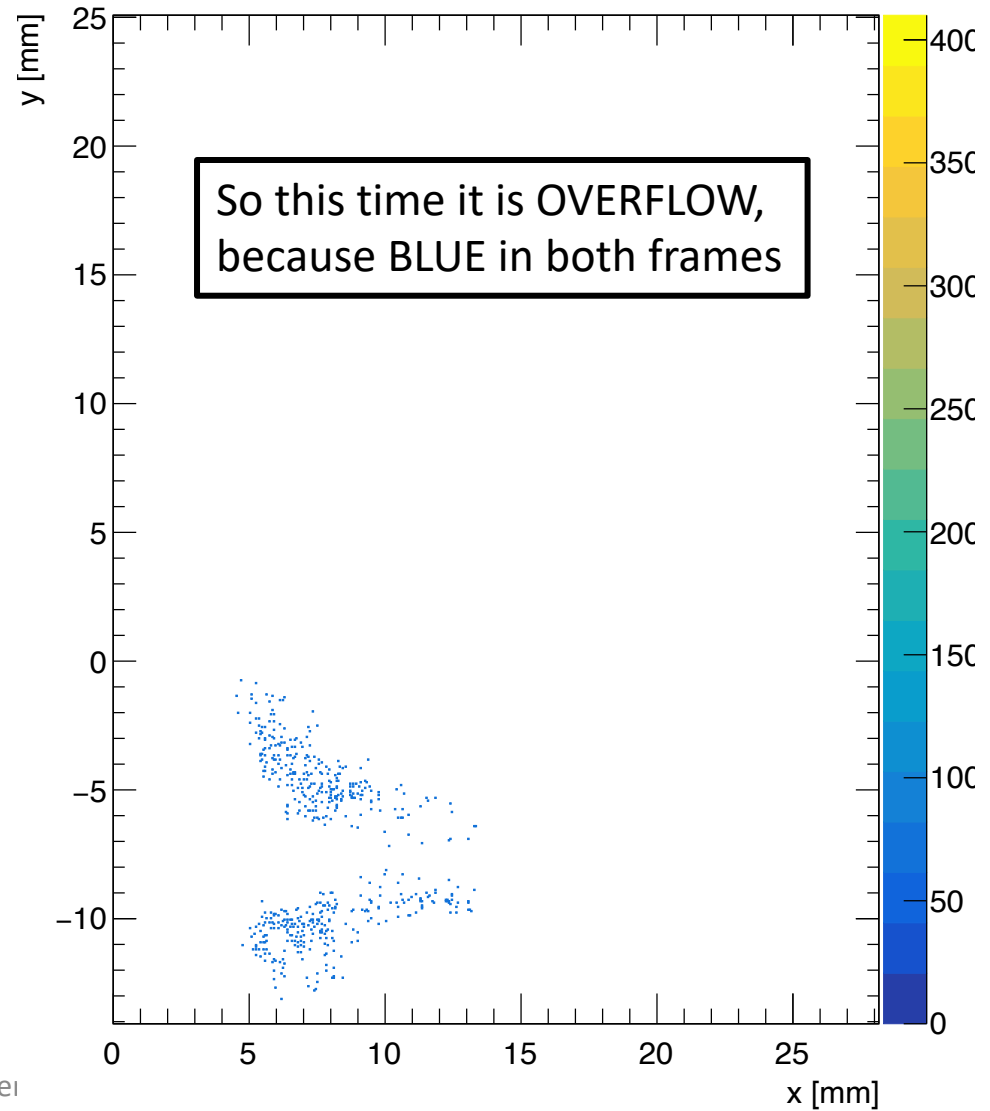


Cont'd: few Fe55 displays in T2K gas -- run 775

8049459 us

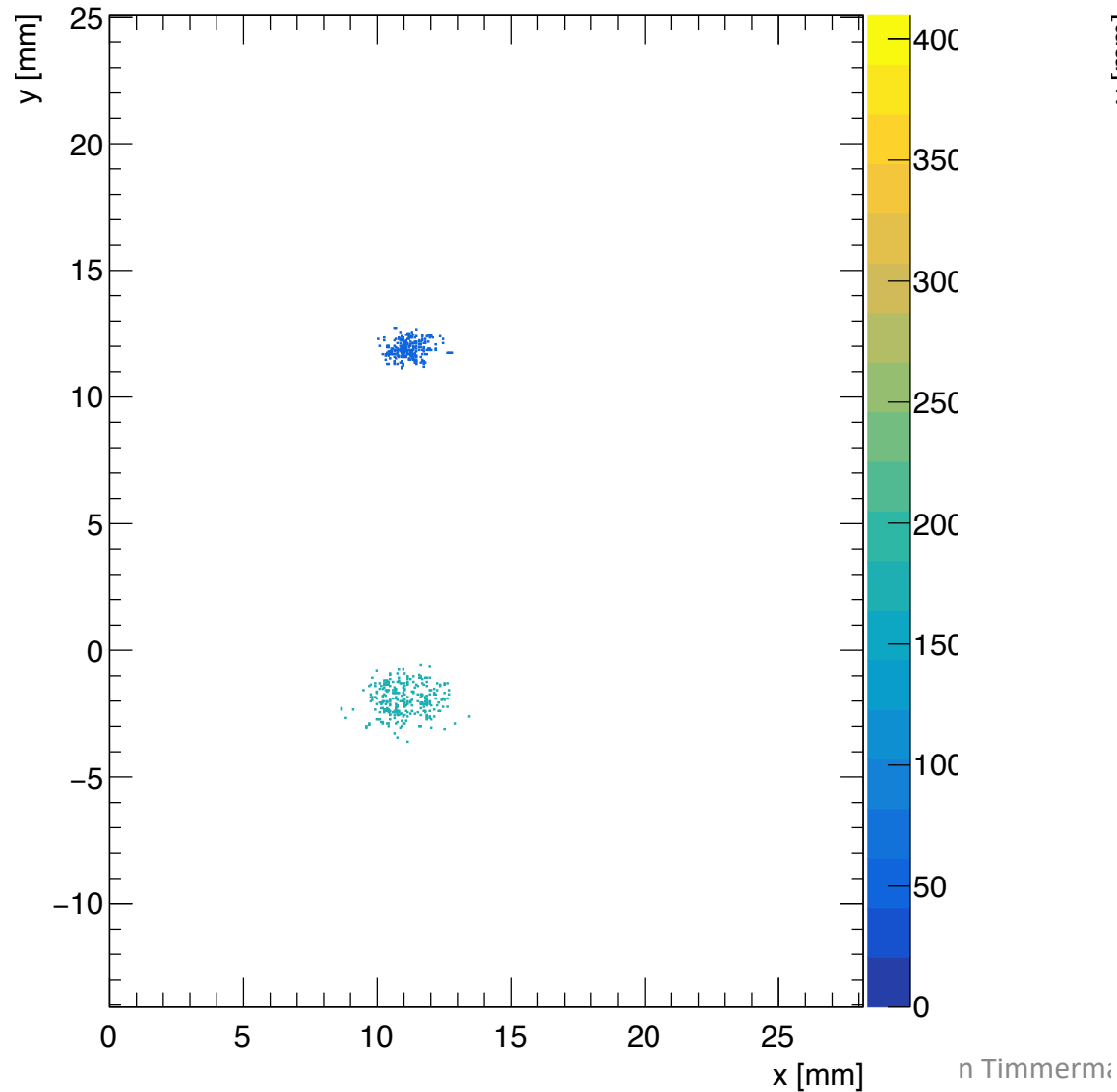


8049868 us

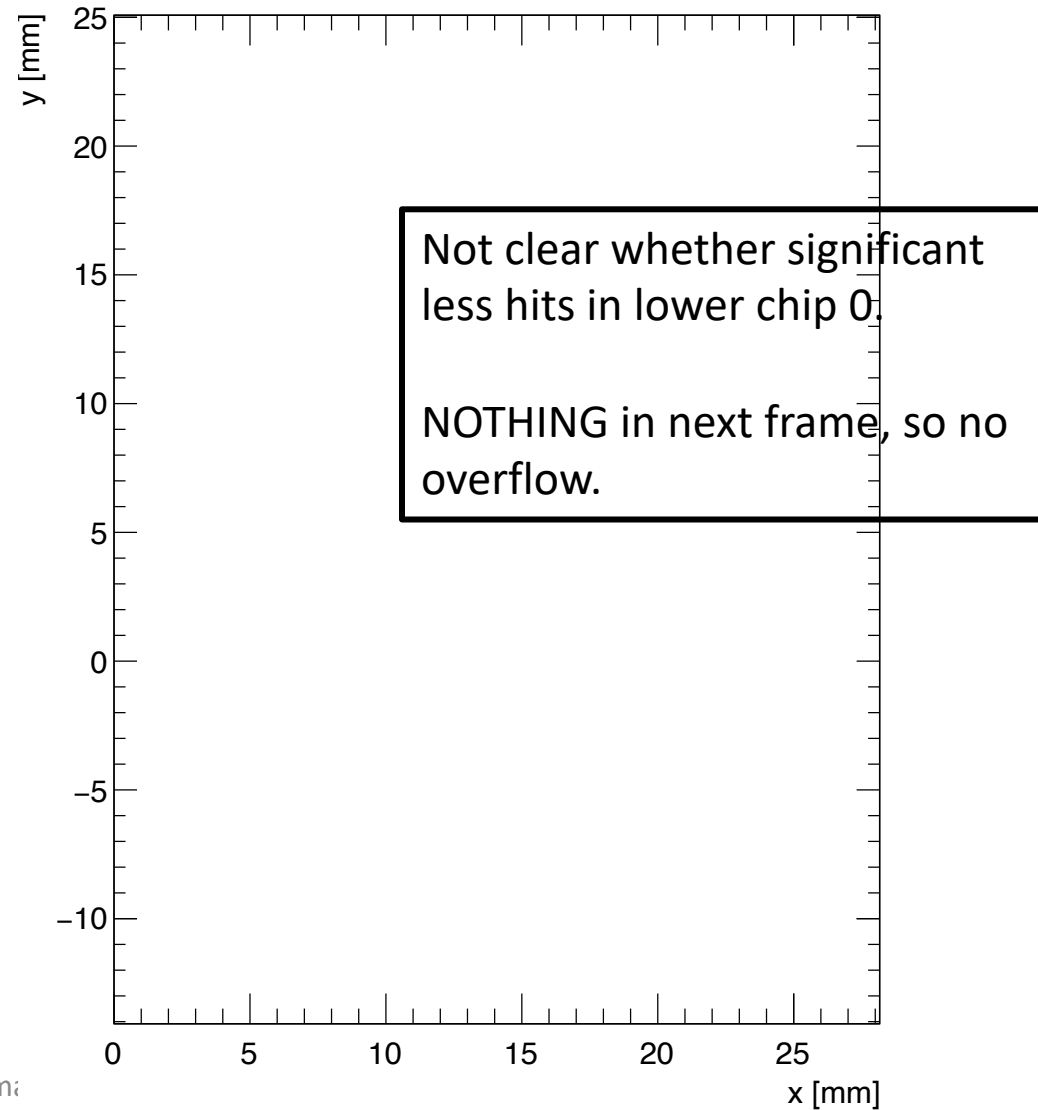


Cont'd: few Fe55 displays in T2K gas -- run 775

8294400 us

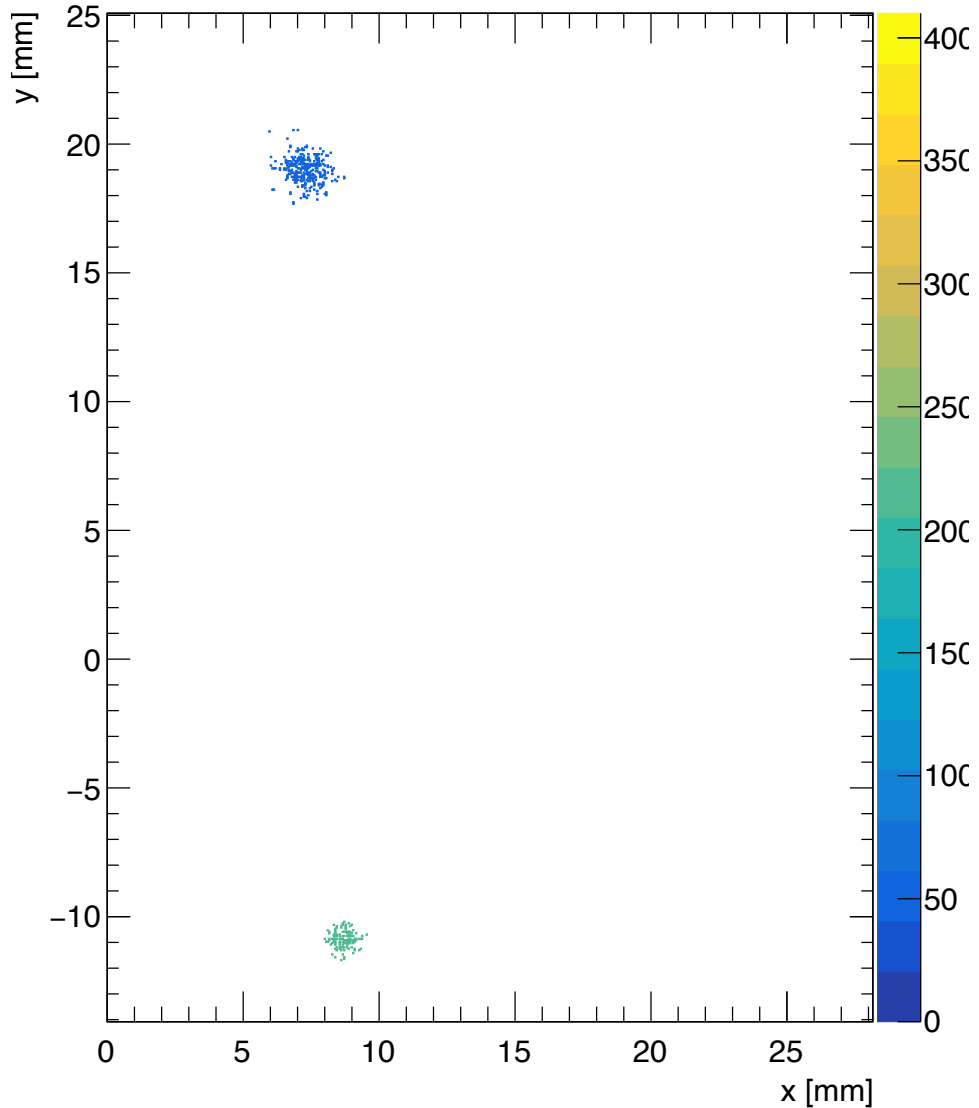


8294809 us

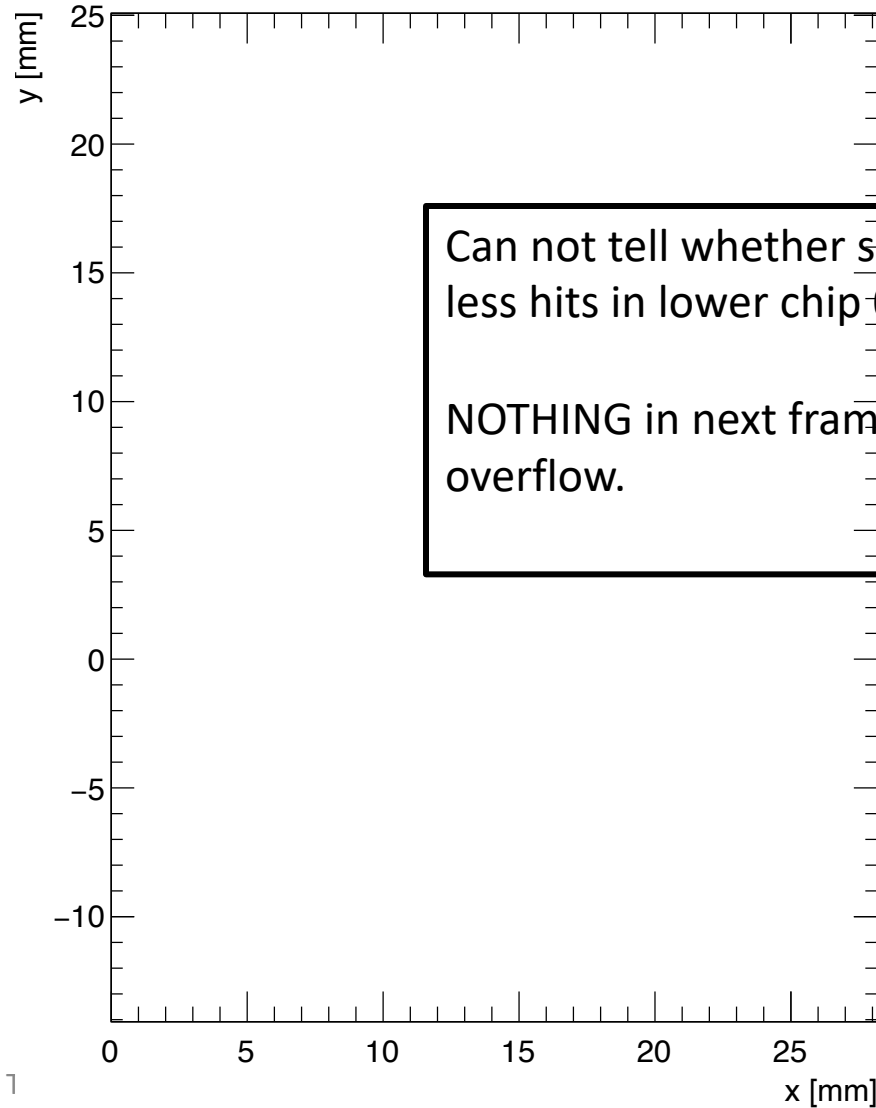


End: few Fe55 displays in T2K gas -- run 775

9185280 us



9185689 us



Jan 7