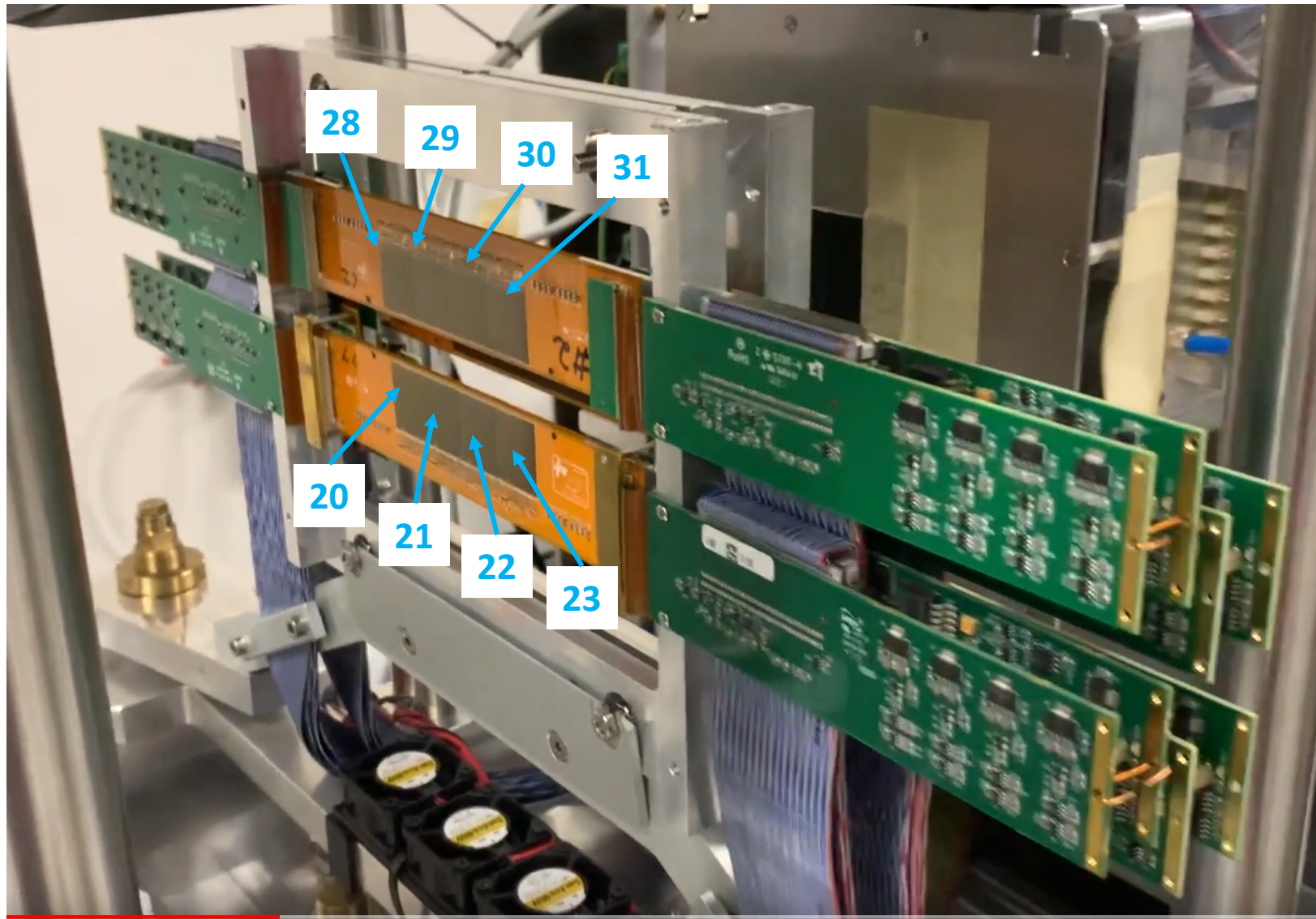


CNAO2024

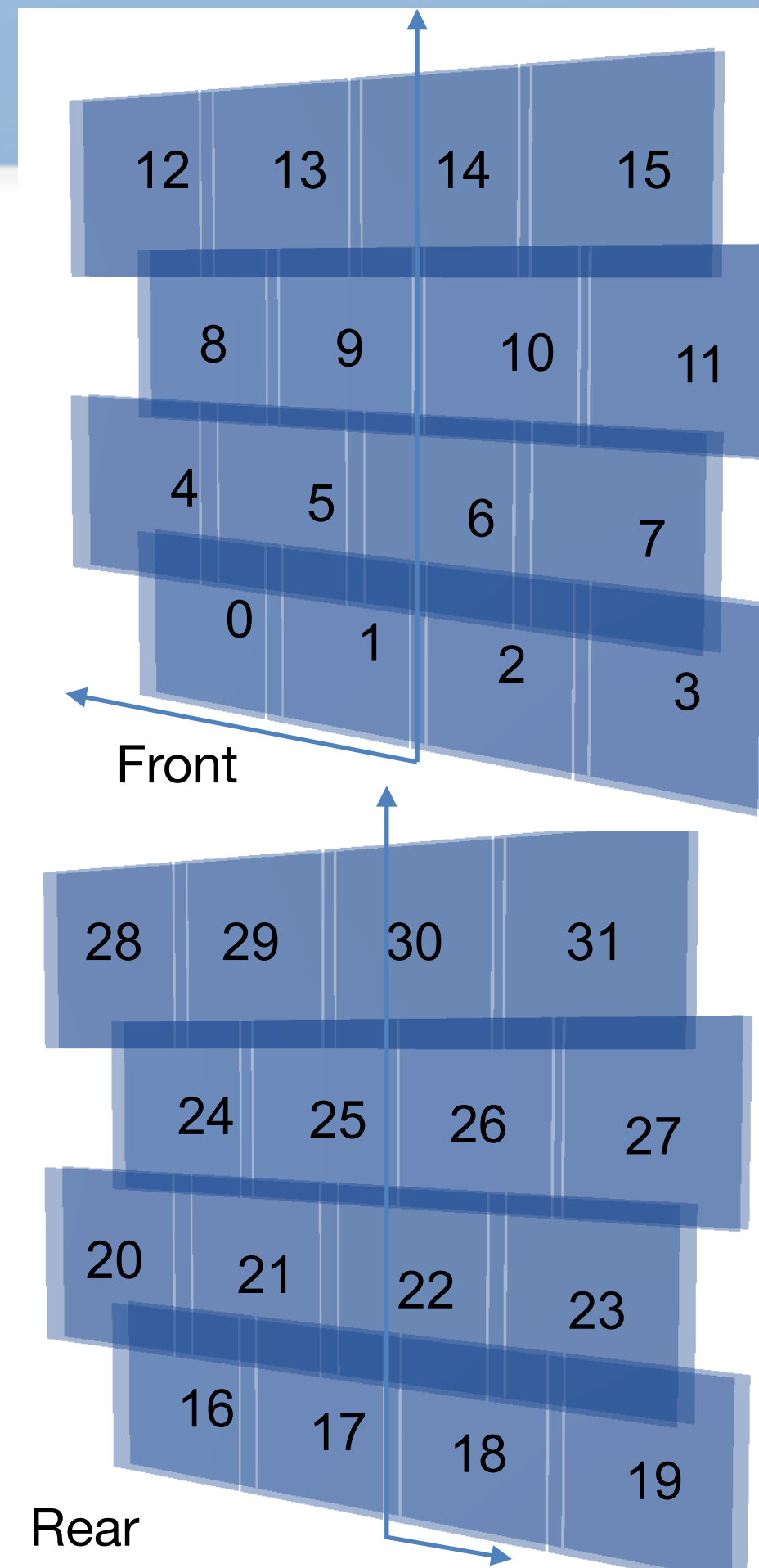
Updates

Numbering (i)

- Numbering from MC simulation (Giuseppe)

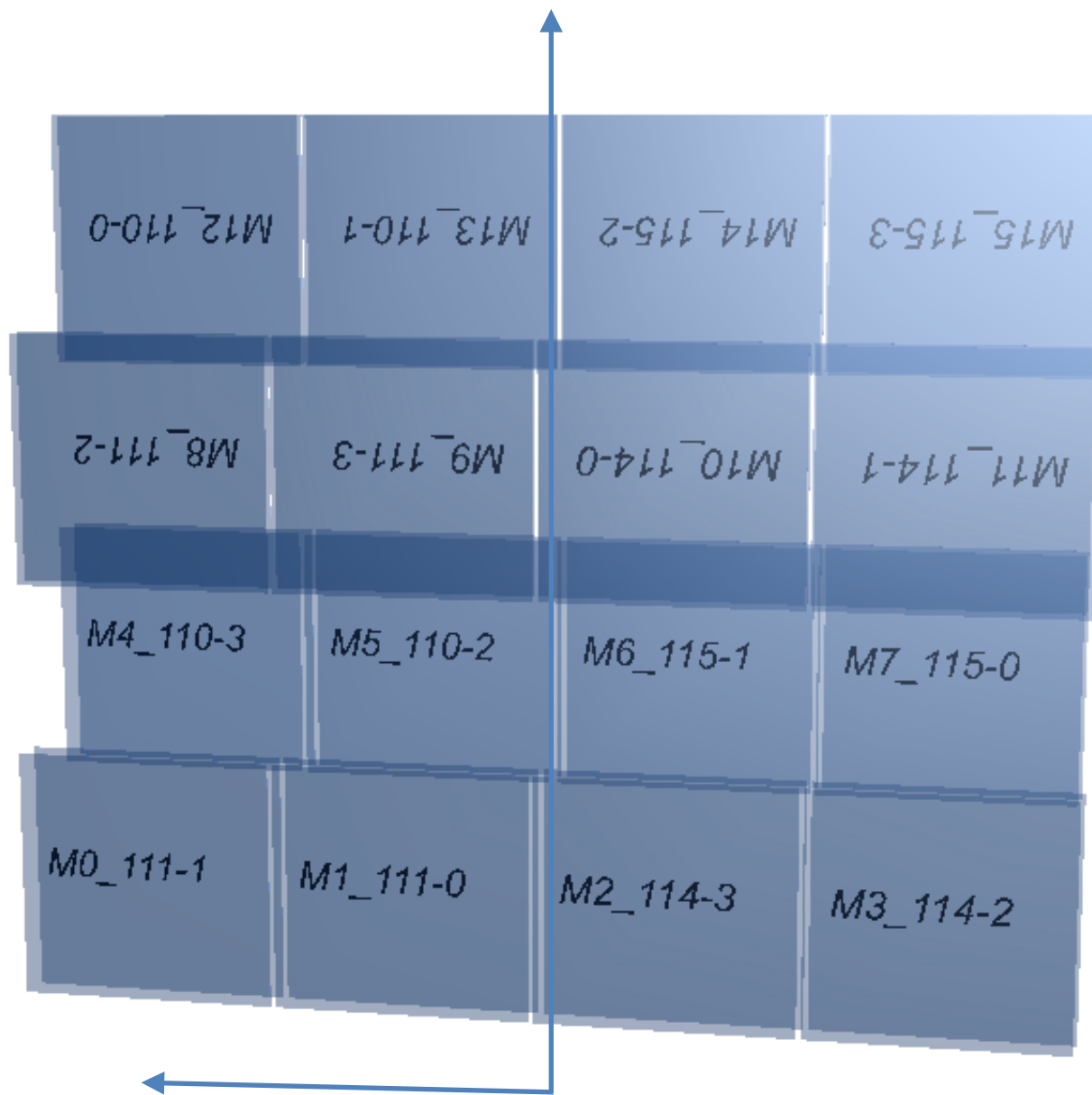


➡ Seems now coherent



Numbering (ii)

Mapping in raw data



Front

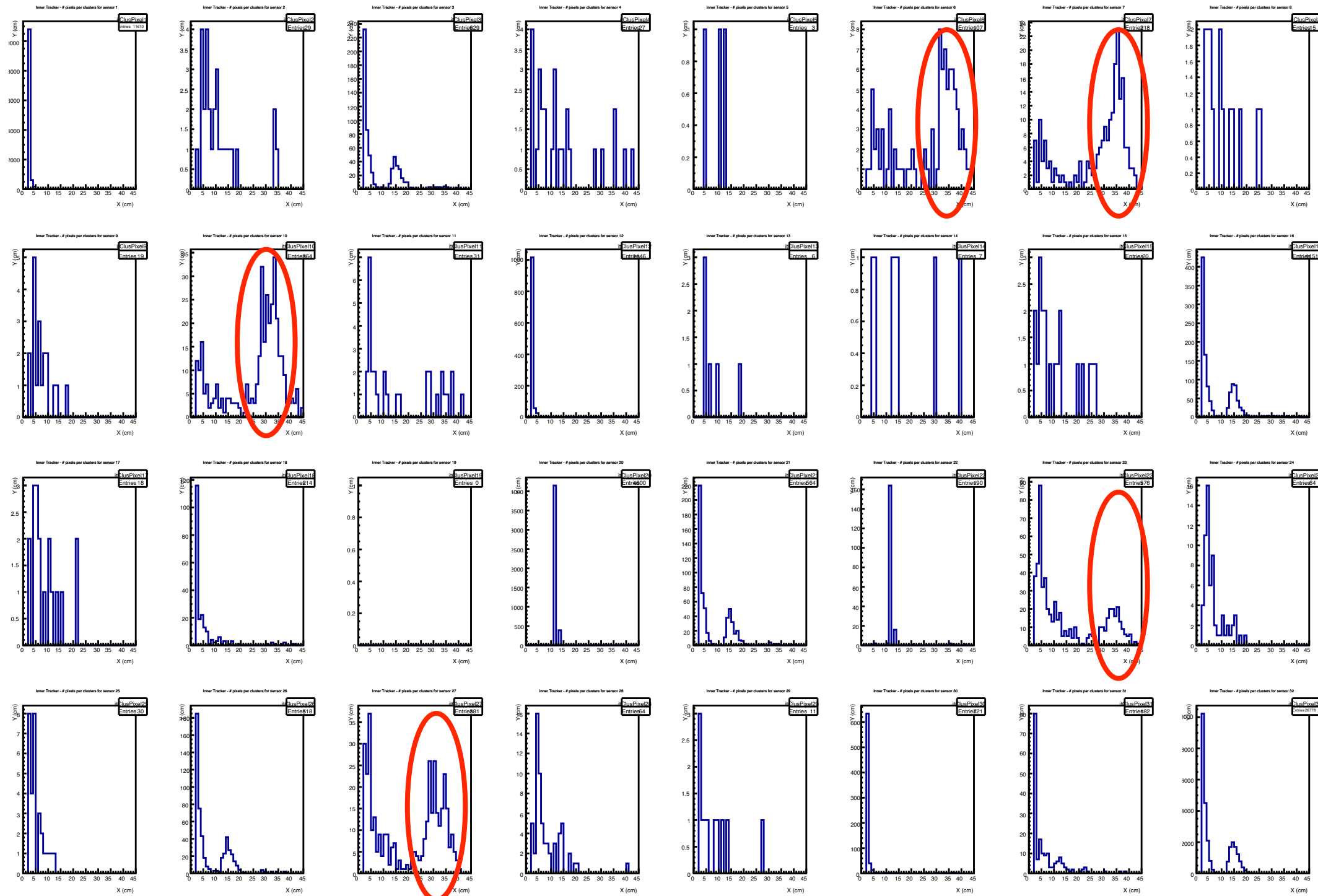


Rear

Mapping debugged with Frascati beam time

Cluster size

Run 7074 (threshold: $10 \times \sigma$)



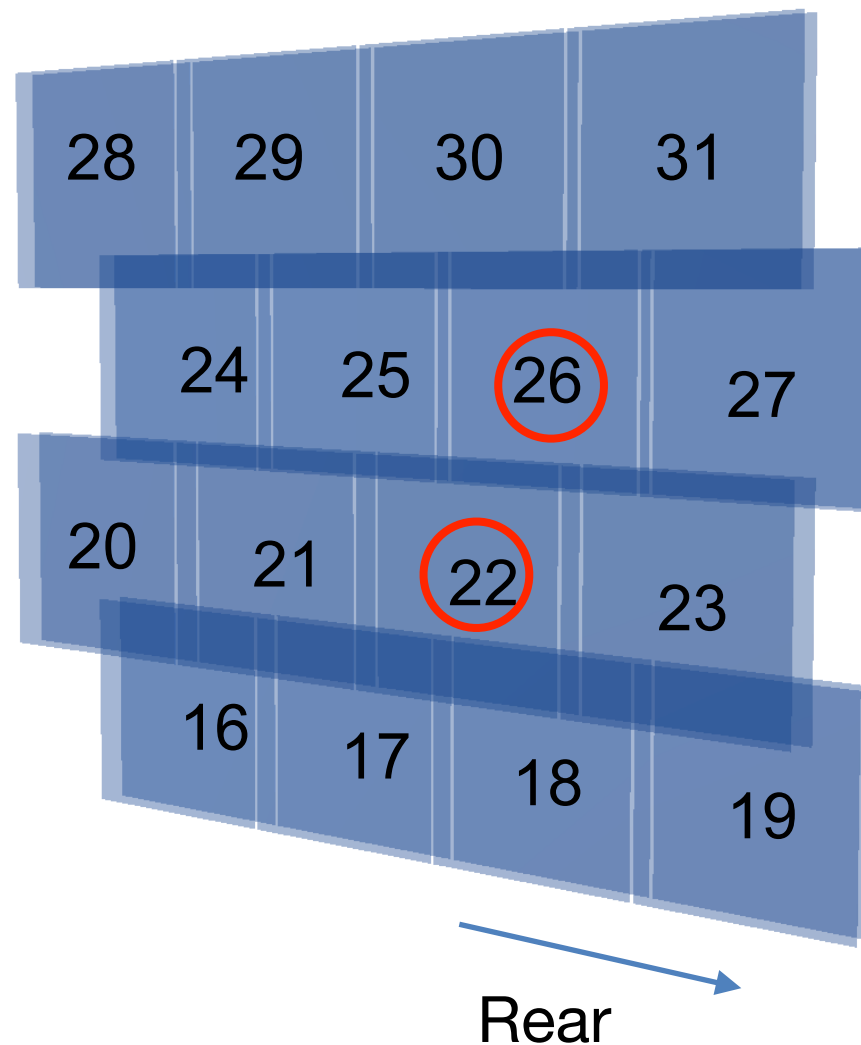
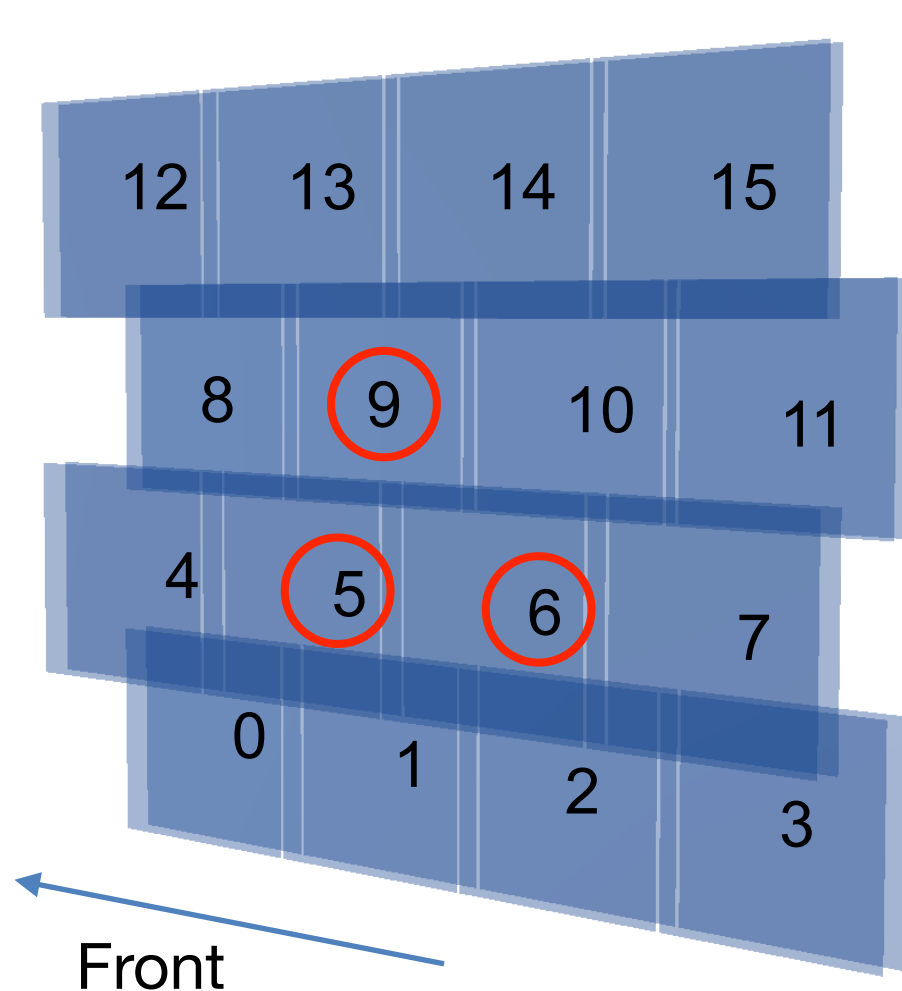
Beam: (start @ 1)

6, 7 & 10

23 & 27

Beam spot

Run 7074 (threshold: $10 \times \sigma$)



Beam: (start @ 0)

5, 6 & 9

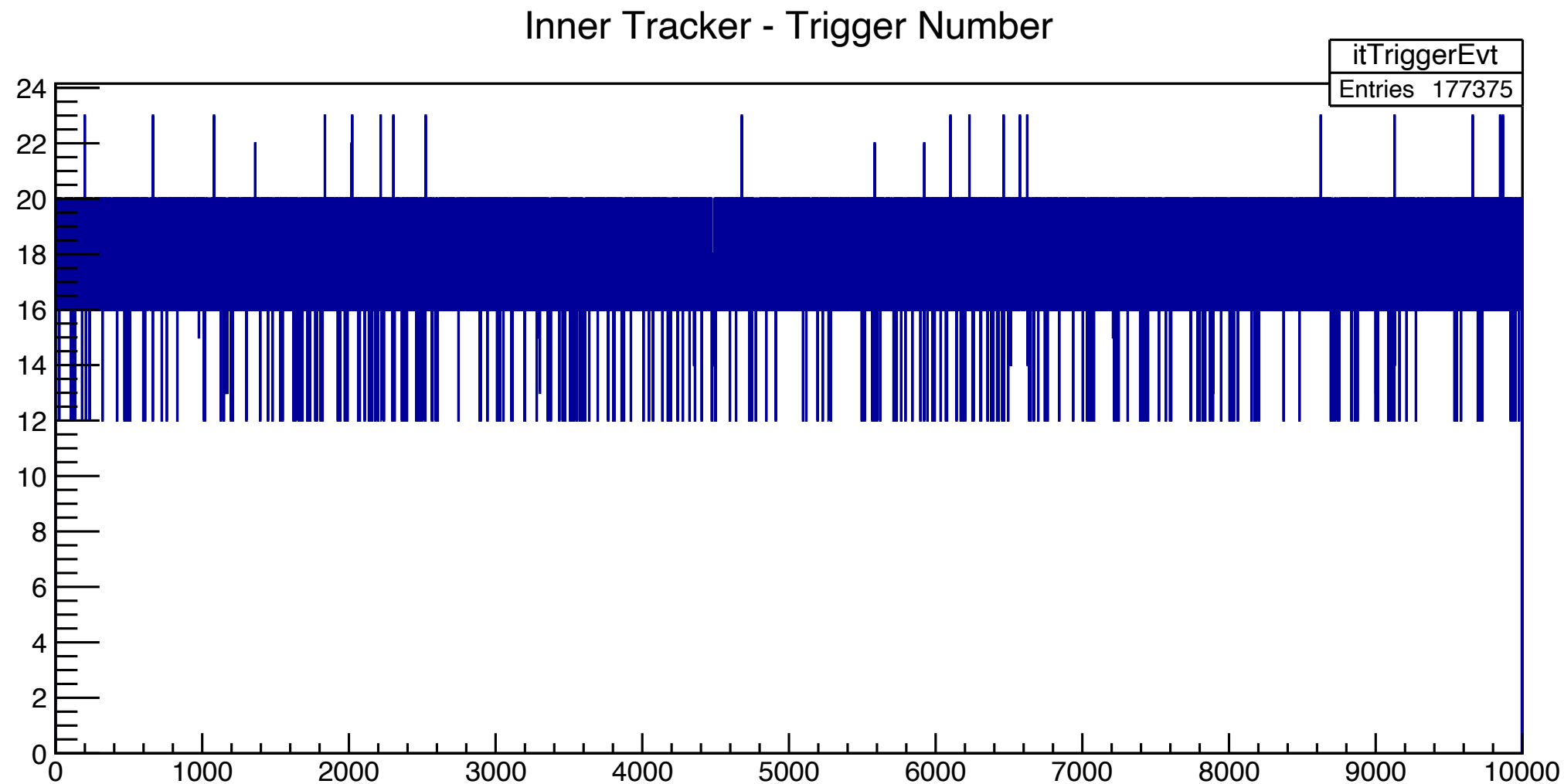
22 & 26

→ Hard to explain (or front/rear displaced)

→ Readout pb ?? chip excluded ?

Trigger number

Run 7074: over 10kEvs

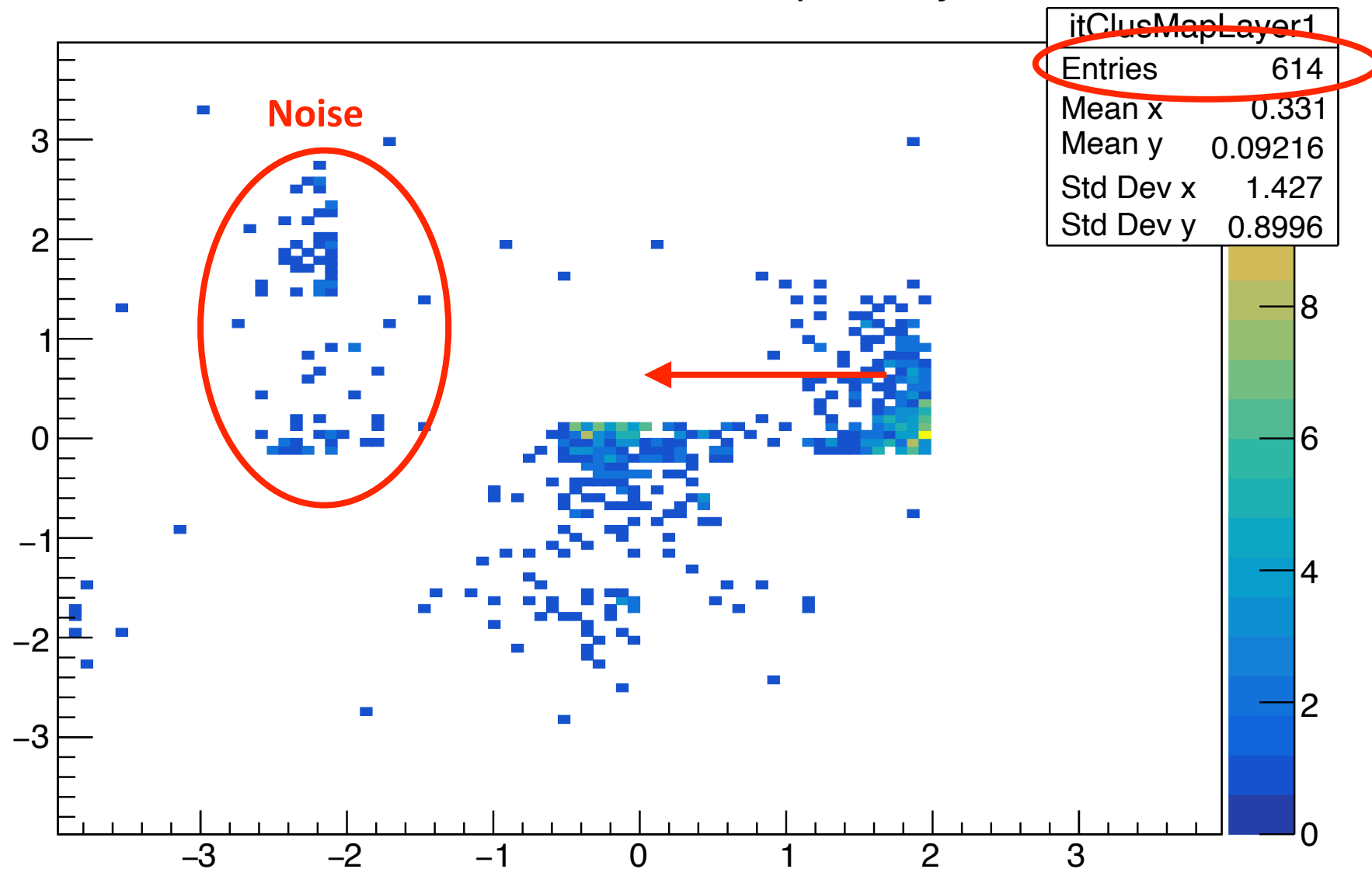


➡ Seems to be ok, do not loose any trigger

Cluster Map (i)

Run 7074: layer1 over 10kEvs

Inner Tracker - clusters map for layer 1



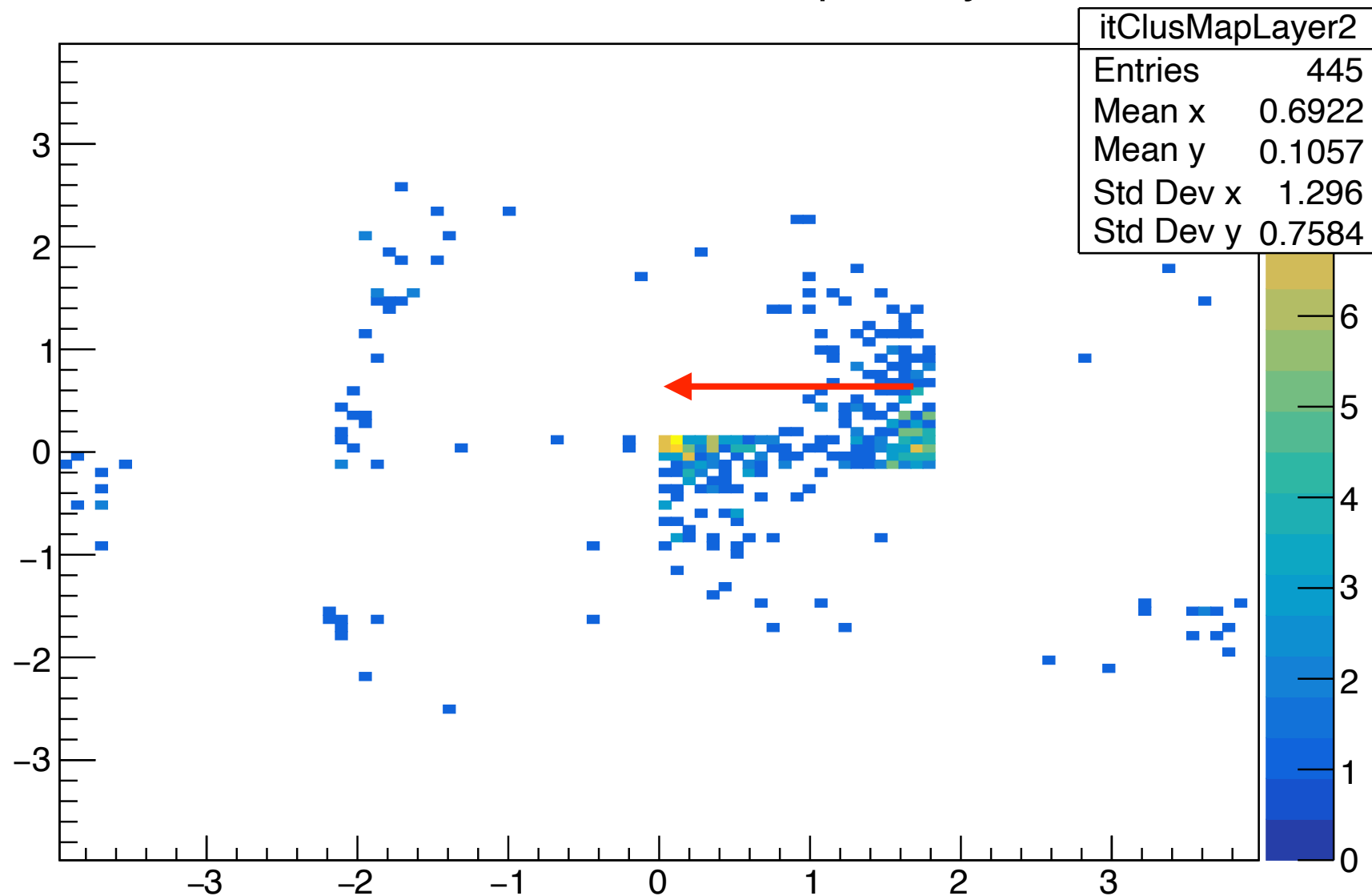
- 10% of hits !

➡ Mapping 9 and 10 inverted !

Cluster Map (ii)

Run 7074: layer 2

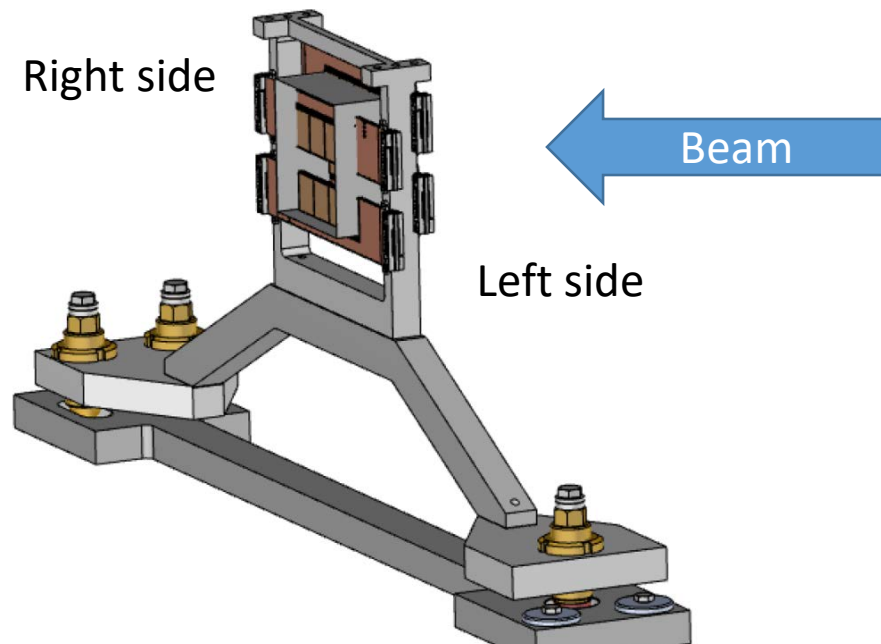
Inner Tracker - clusters map for layer 2



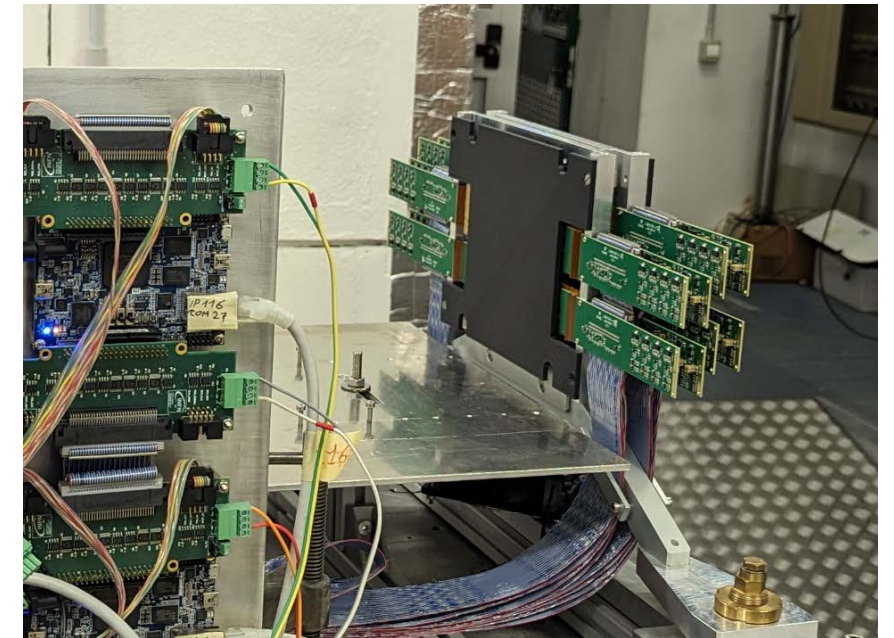
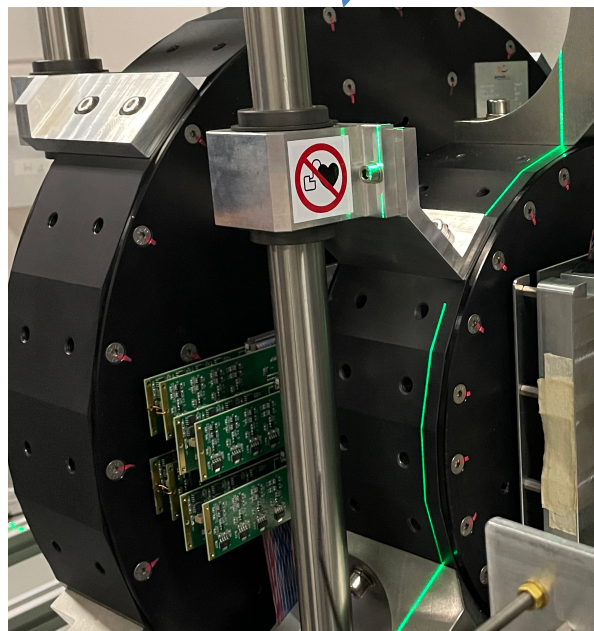
➡ Mapping 25 and 26 inverted !

Mapping

□ Frascati beam test



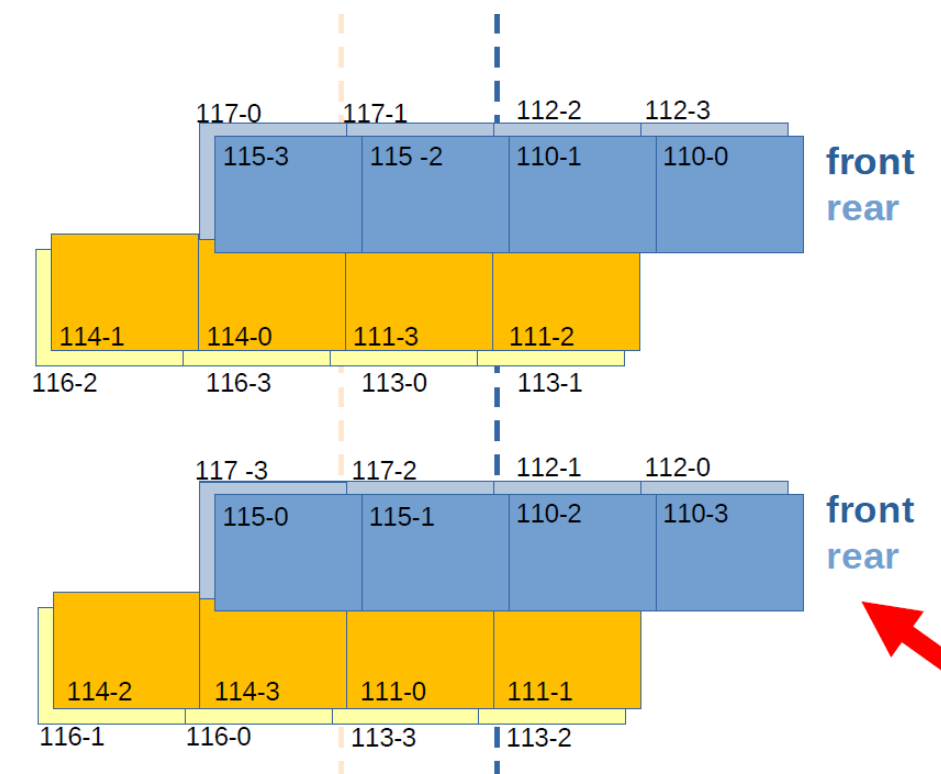
□ CNAO



- Clearly inverted
- Board connection inverted ??

front
rear

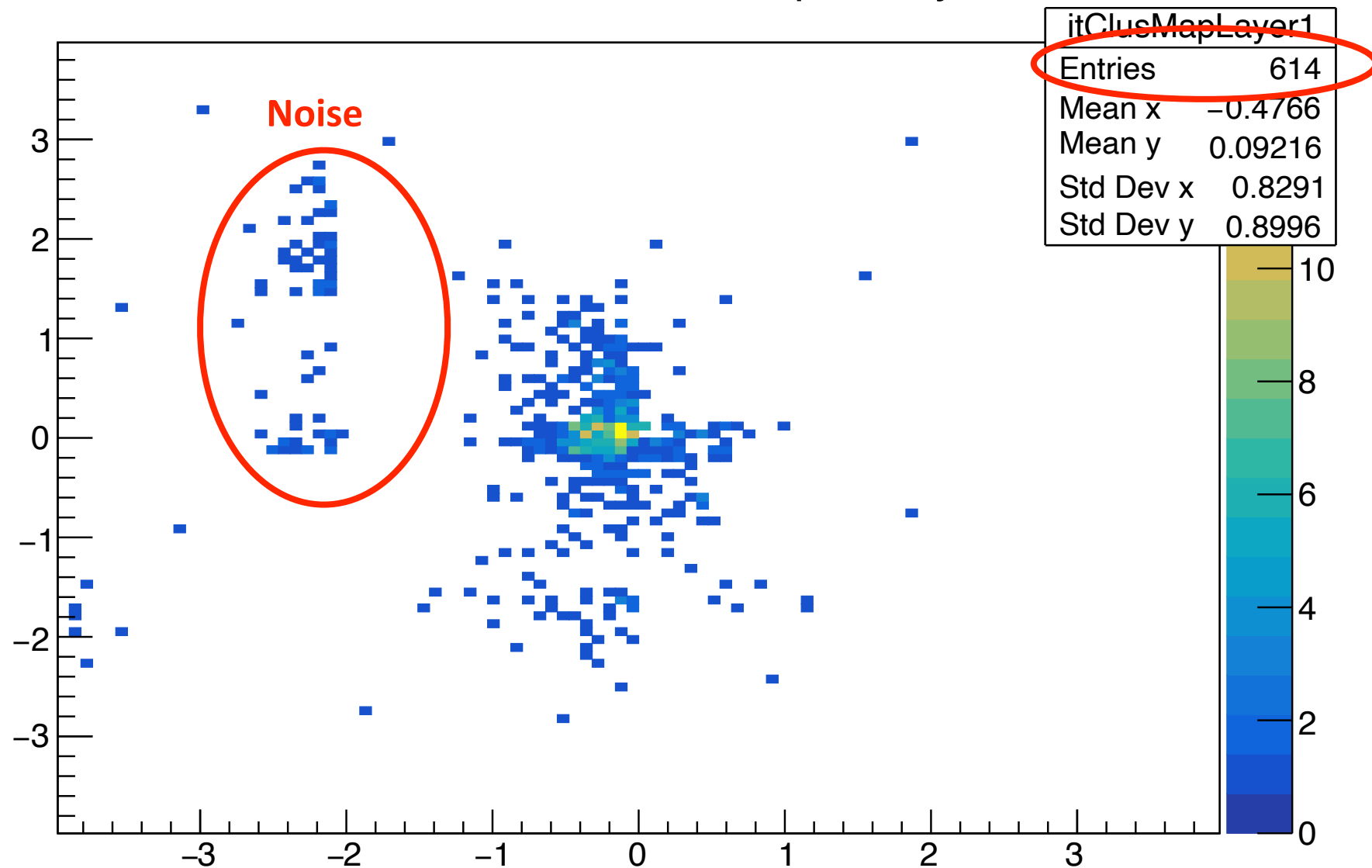
front
rear



Cluster Map (iv)

Run 7074: layer1 (9 and 10 inverted)

Inner Tracker - clusters map for layer 1



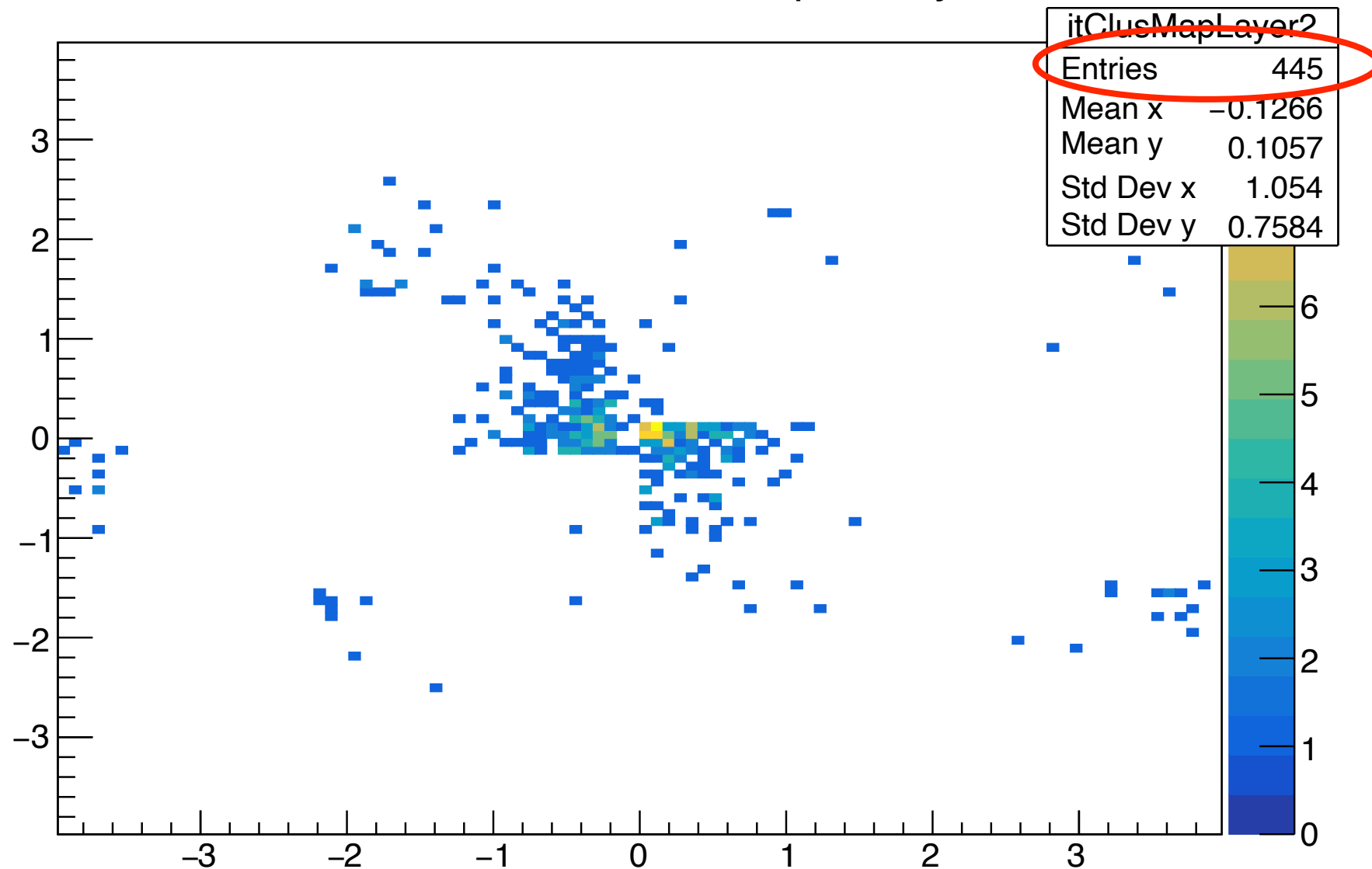
• 10% of hits !

➡ See the beam

Cluster Map (v)

Run 7074: layer1 (25 and 26 inverted)

Inner Tracker - clusters map for layer 2



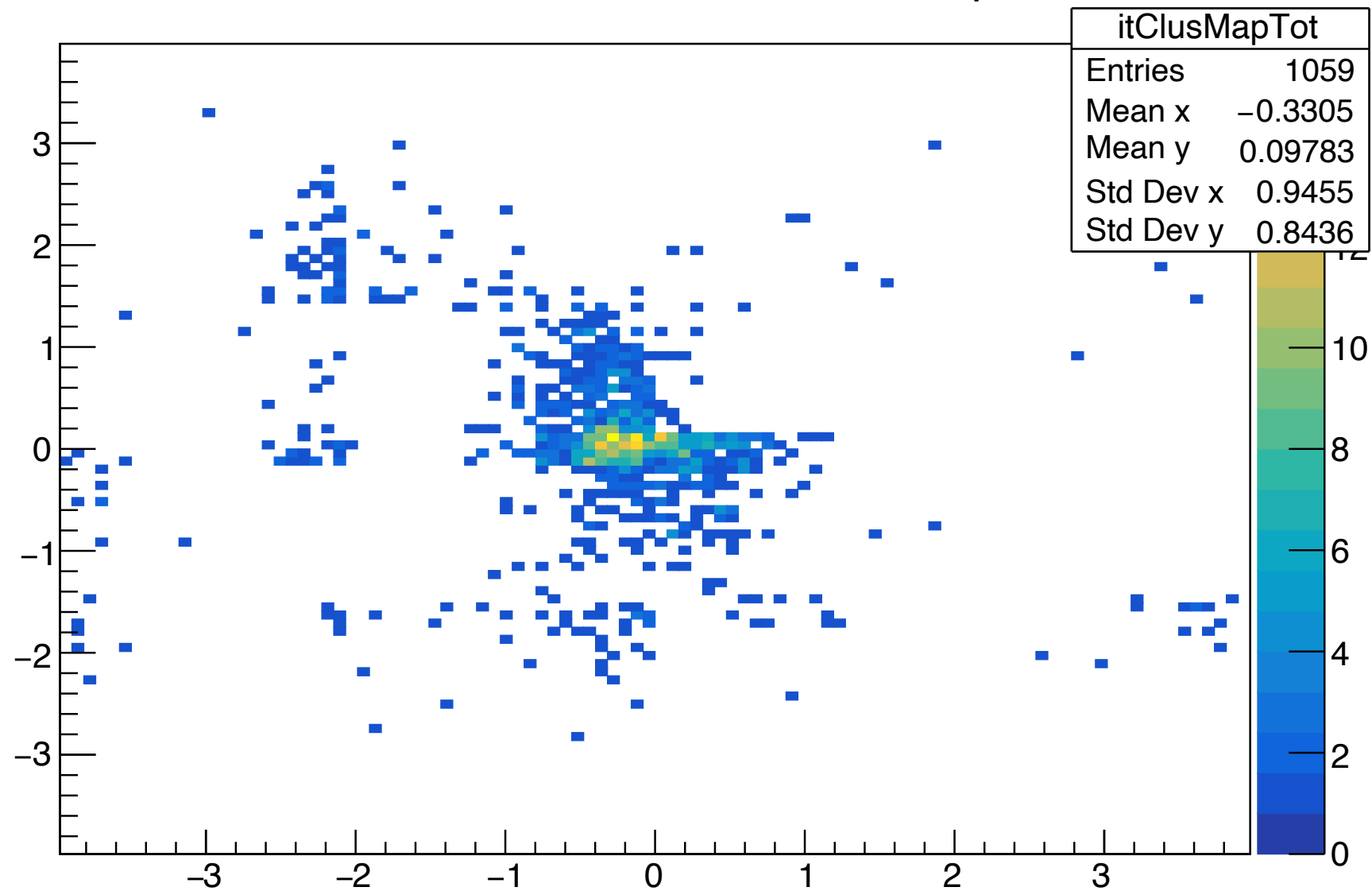
• 10% of hits !

➡ See the beam

Cluster Map (vi)

Run 7074: total (chips inverted)

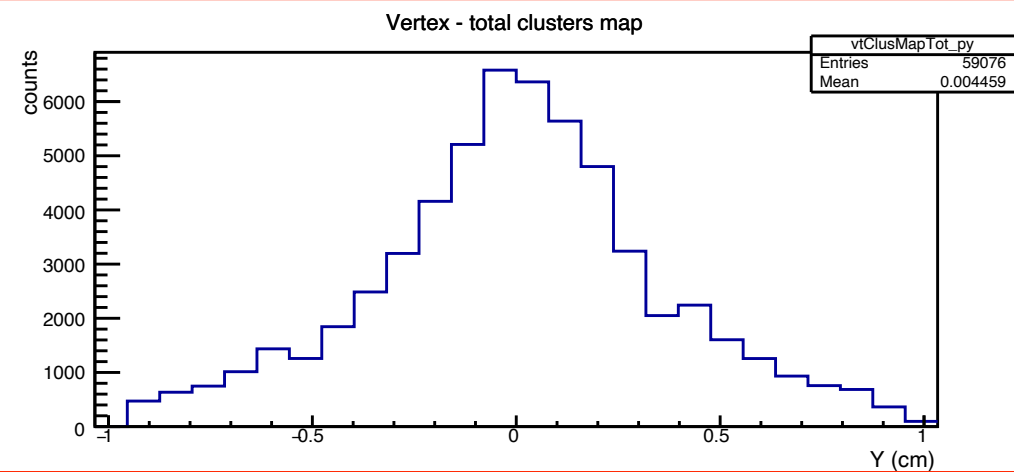
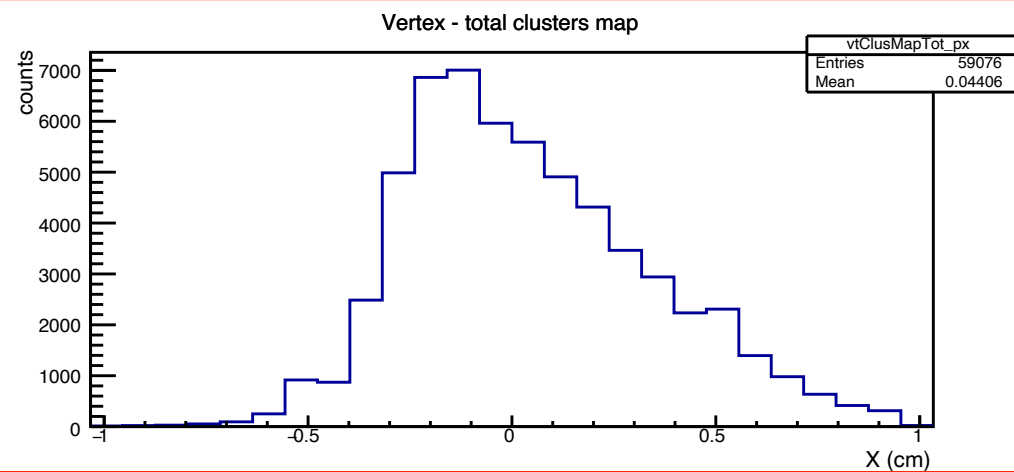
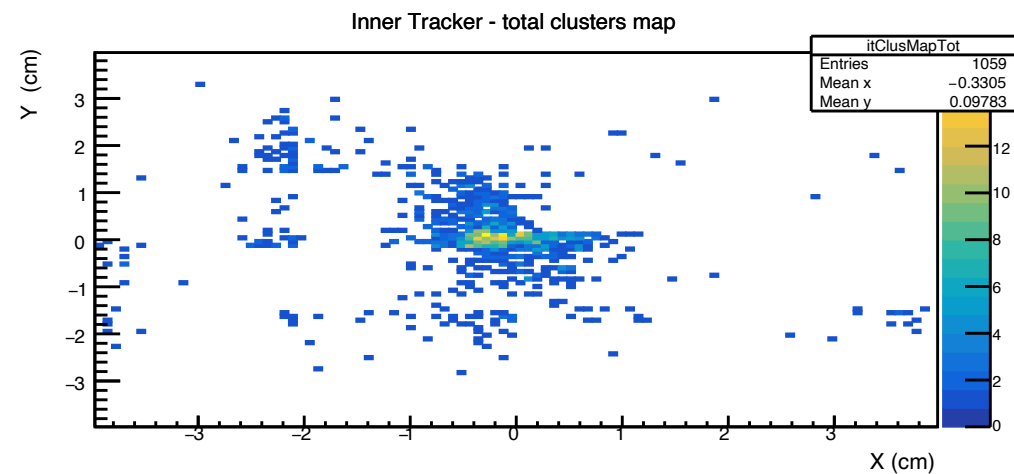
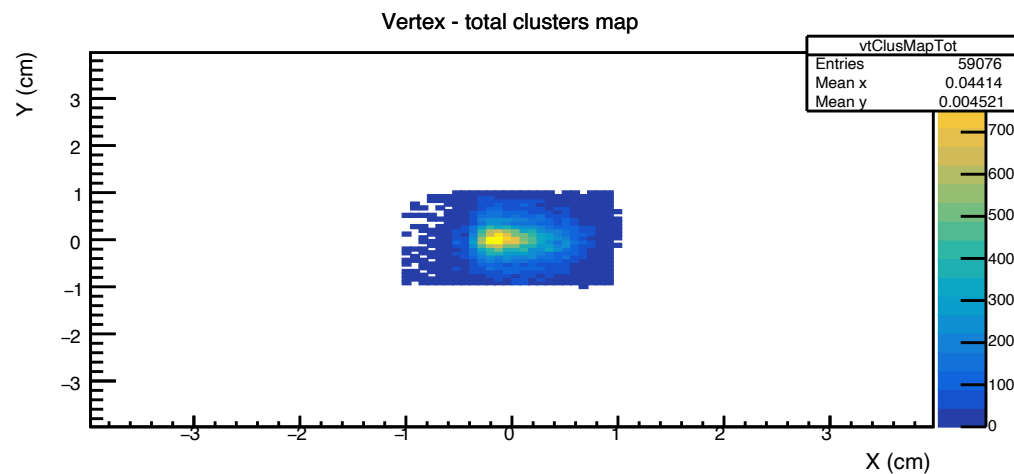
Inner Tracker - total clusters map



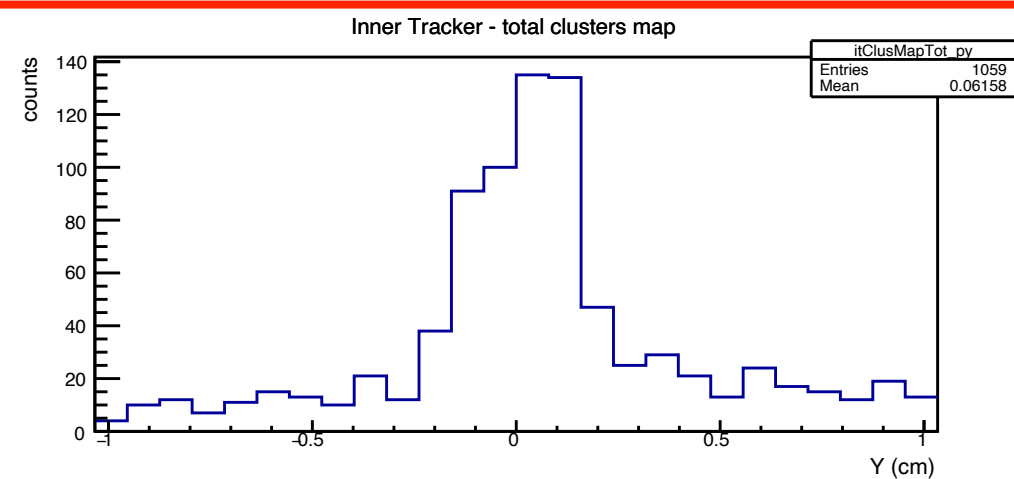
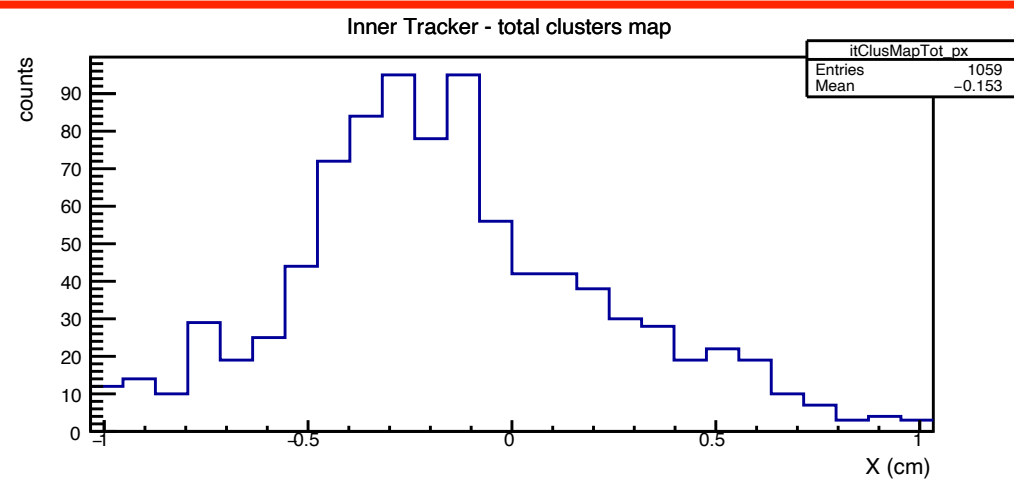
➡ Better but....

Cluster Map (vii)

Run 7074:



Vertex



Inner Tracker

Conclusions

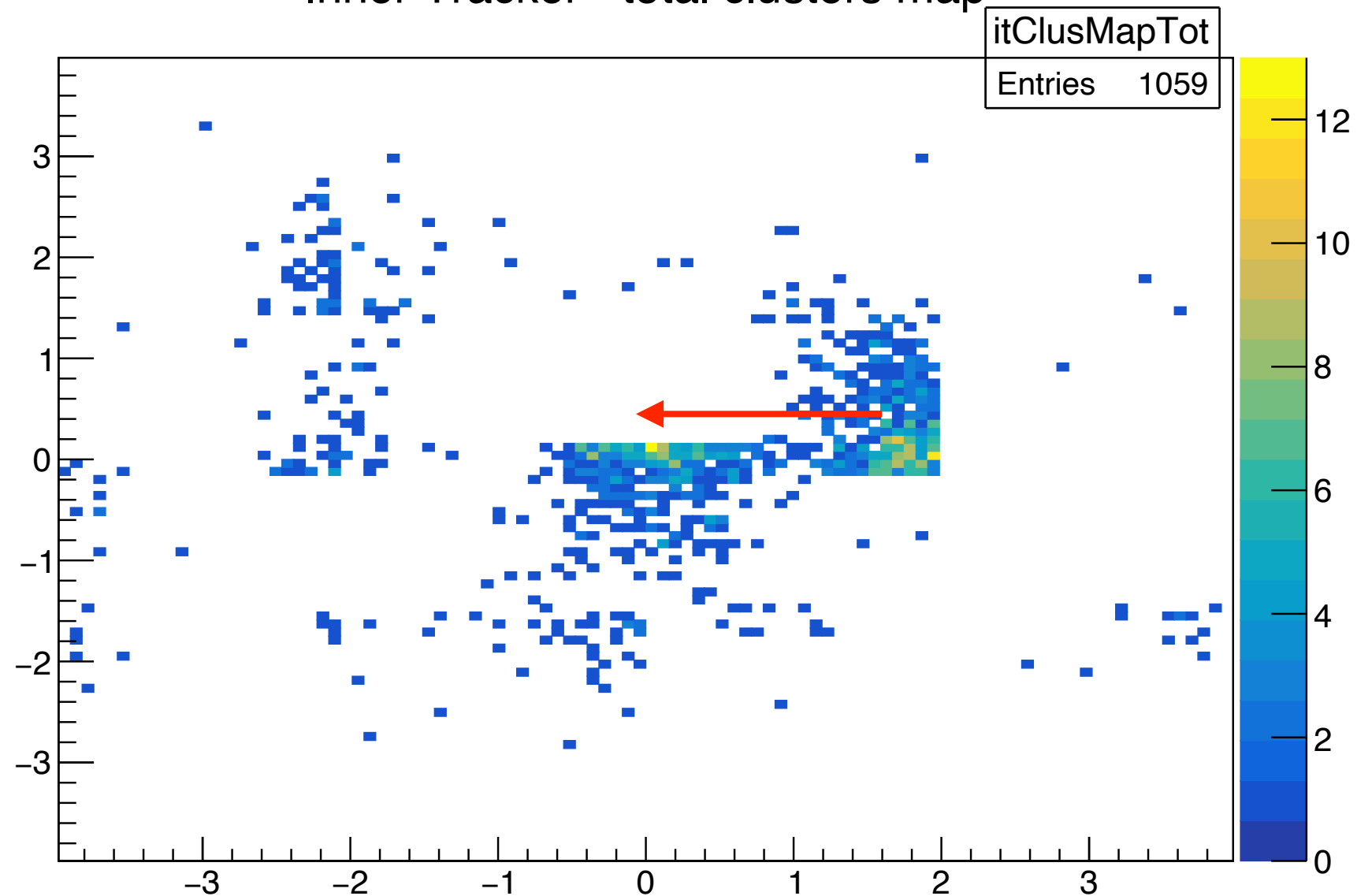
❑ Geometry/mapping

- Pb with mapping, surprising since mapping was checked before
 - ➡ Detector was flipped by 180° and most probably cabling was flipped also
- Start debugging geometry with CAD file
- Pb with efficiency
 - ➡ Mapping and geometry could be fixed but it will take time
 - ➡ No clue about efficiency issue

Cluster Map (iii)

Run 7074: total

Inner Tracker - total clusters map



→ Pb of mapping