

Status of Barrels Assembly and Testing

INTT Meeting

Sep/1/2022

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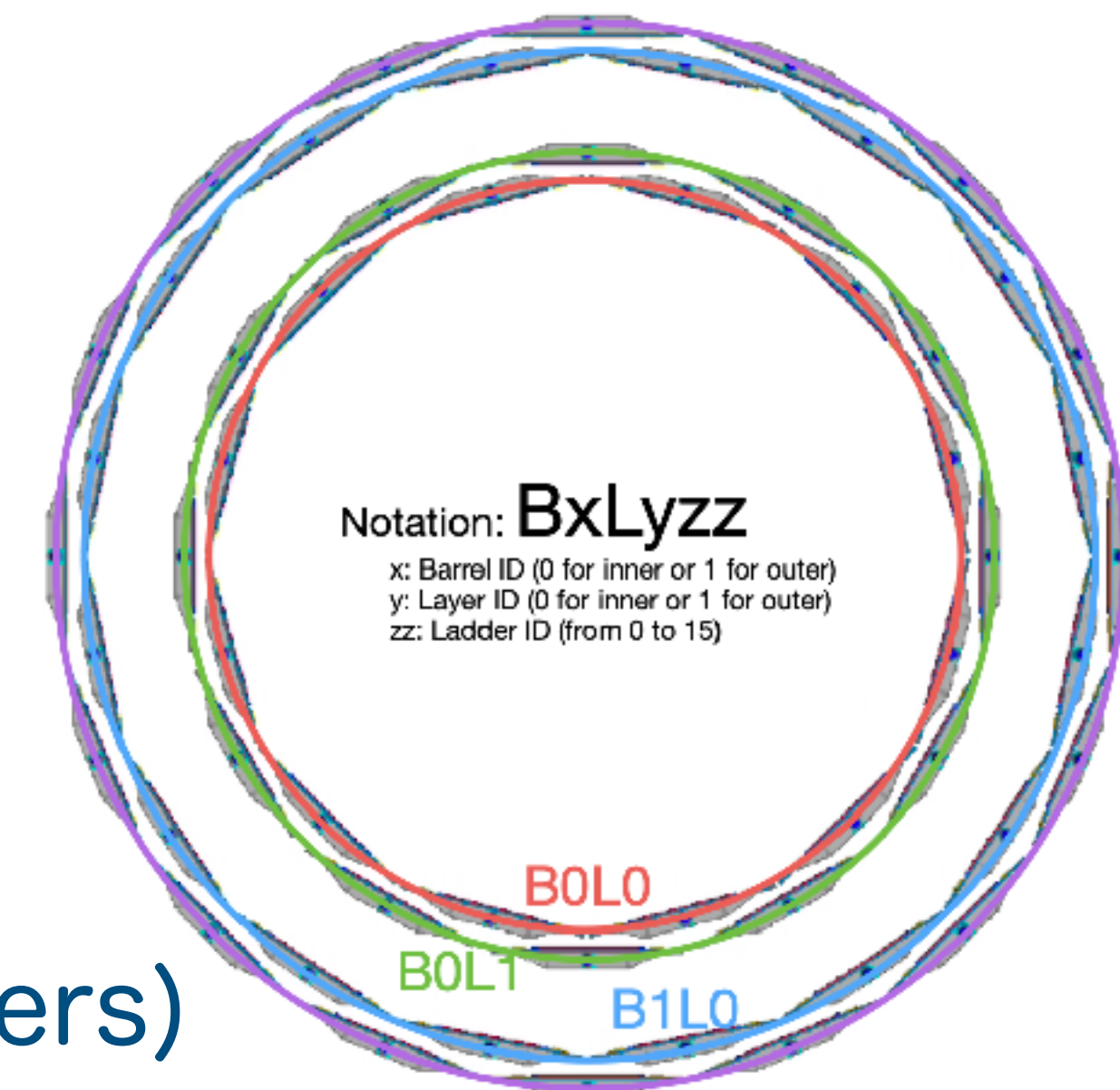
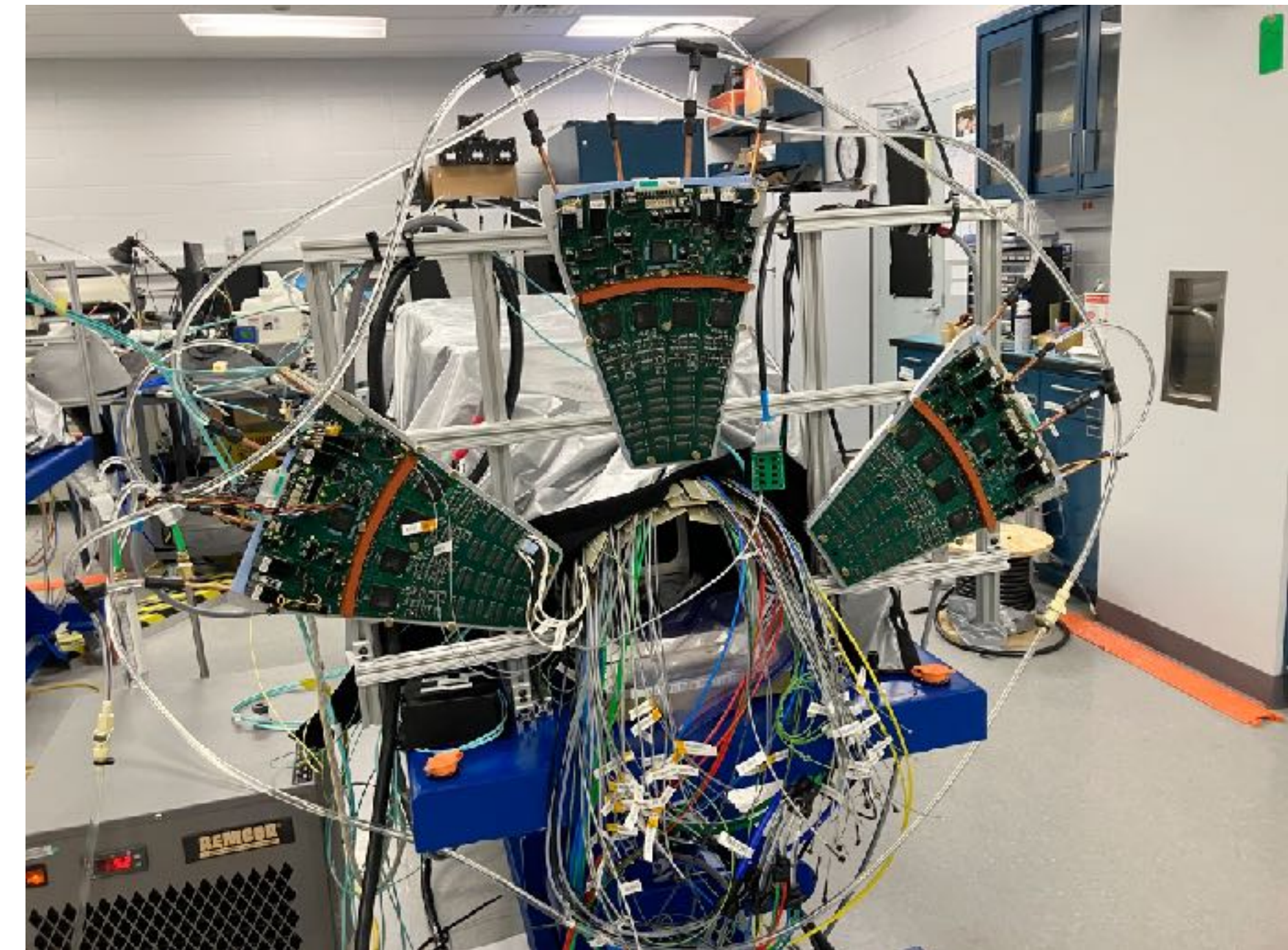
C.Shih(NCU), W.Tang(NCU)

The setup

- 3 ROCs
- The FEM/FEM-IB system
- The Low Voltage system
- The temperature monitor system
- The ladder cooling and the ROC cooling
- The μ -coaxial conversion cable
- The High Voltage system

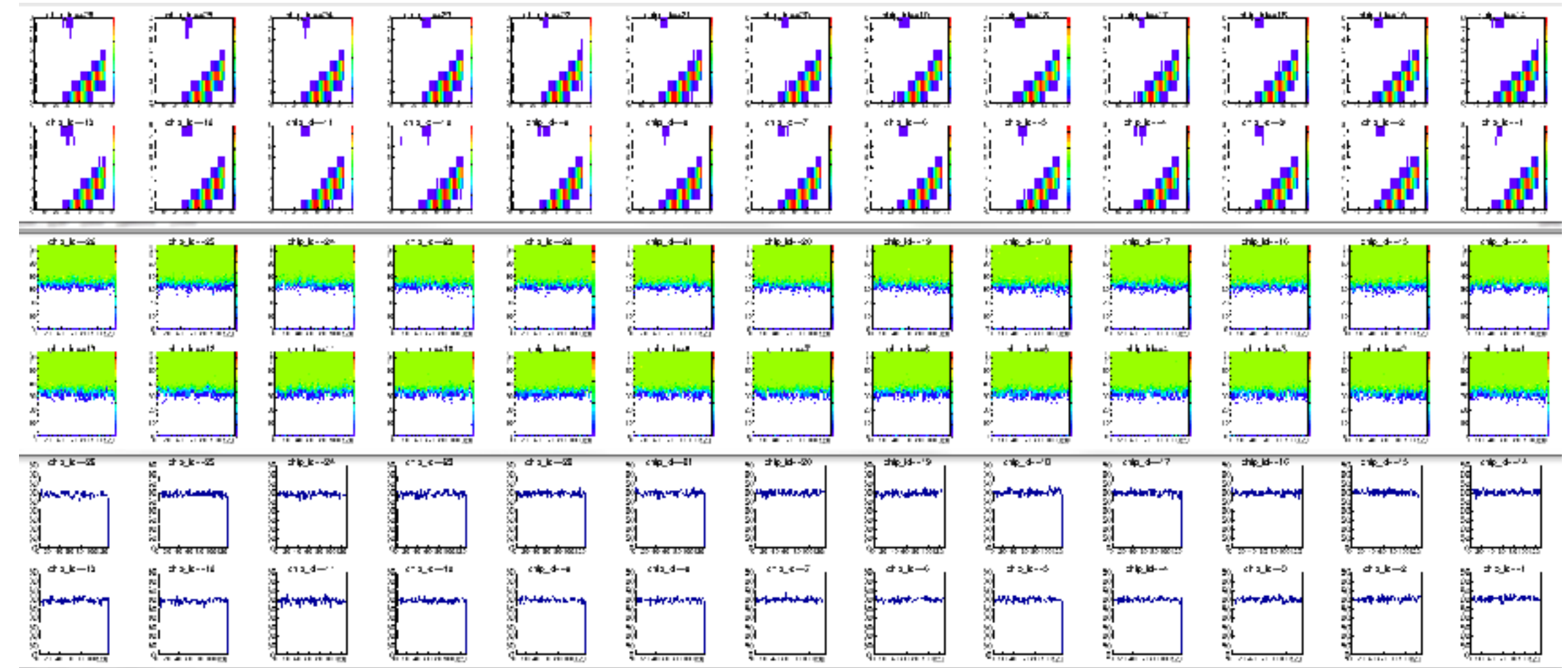
✂red : the setup was changed between 2nd and 3rd tests

The tested ladders: B0L0, B0L1, B1L0 and west of B1L1 (48 ladders)



Results

- Good results: 80/96 half ladders
-better results than those in the 2nd test



Example of good result: B0L011N

- There is a single noisy channel: 15/96 half ladders

• B0L000S	• B0L101N	• B0L102N	• B0L104N
• B0L109S	• B0L110N	• B1L002N	• B1L003S
• B1L005N	• B1L006S	• B1L008S	• B1L013N
• B1L013S	• B1L110N	• B1L111N	

- Note: one chip of half ladder (position B1L000) couldn't get signal well, so we replaced the ladder with another ladder, and tested it. → We got a good result.

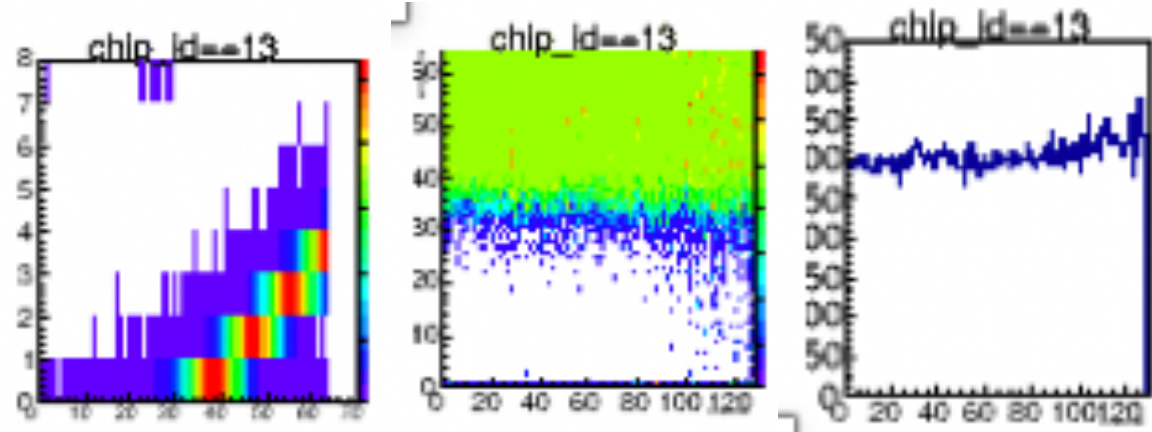
Results:

Comparison between 2nd and 3rd test

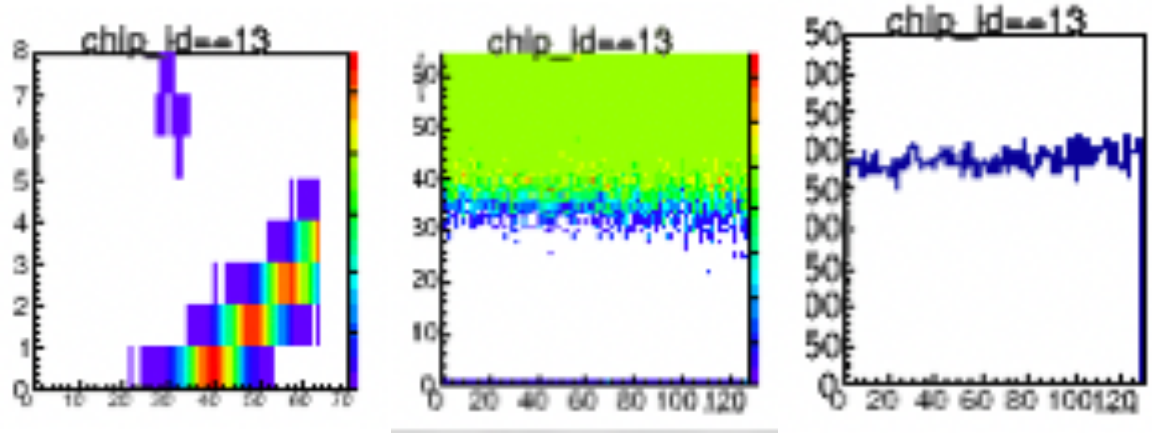
Ladder: B0L105S

- Results in the 3rd test have less noise than those in the 2nd test.

→3rd test has a better result than 2nd test.

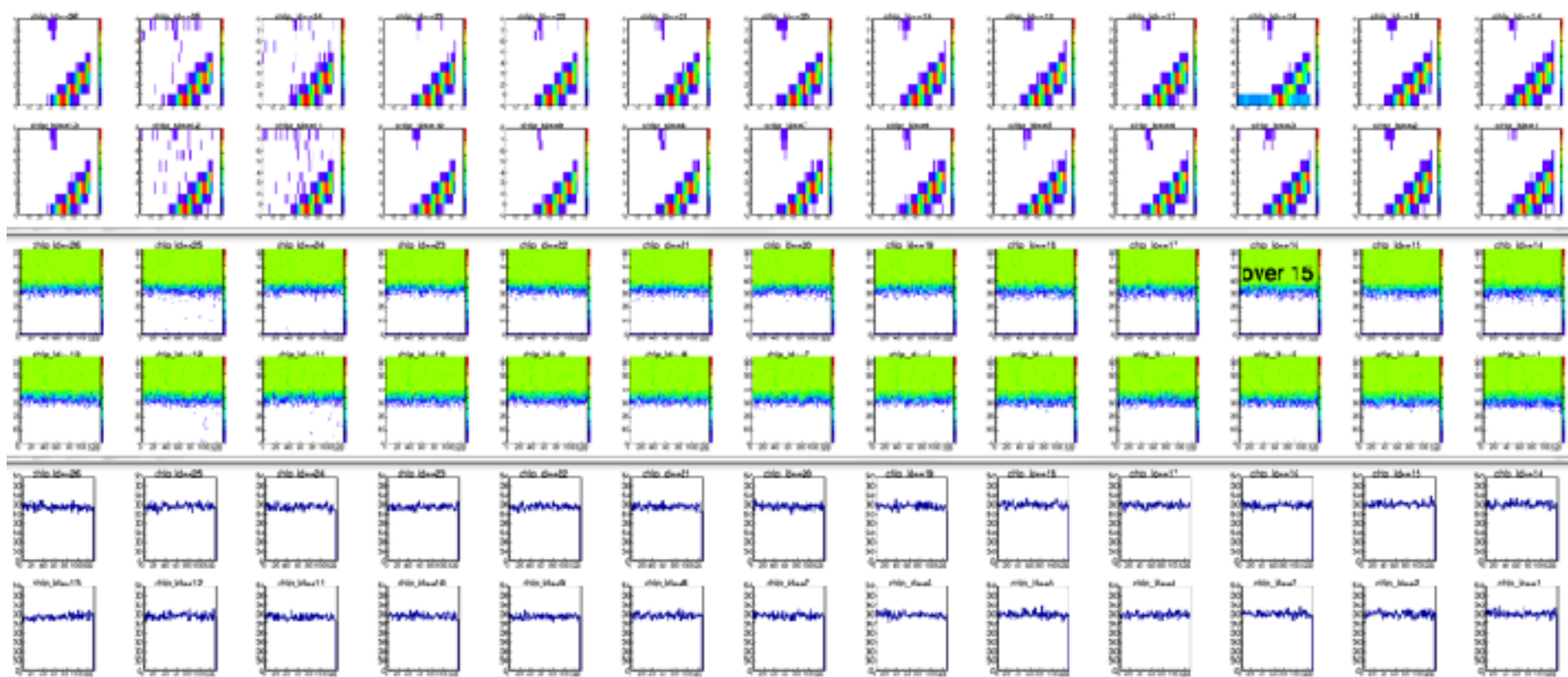


2nd tests

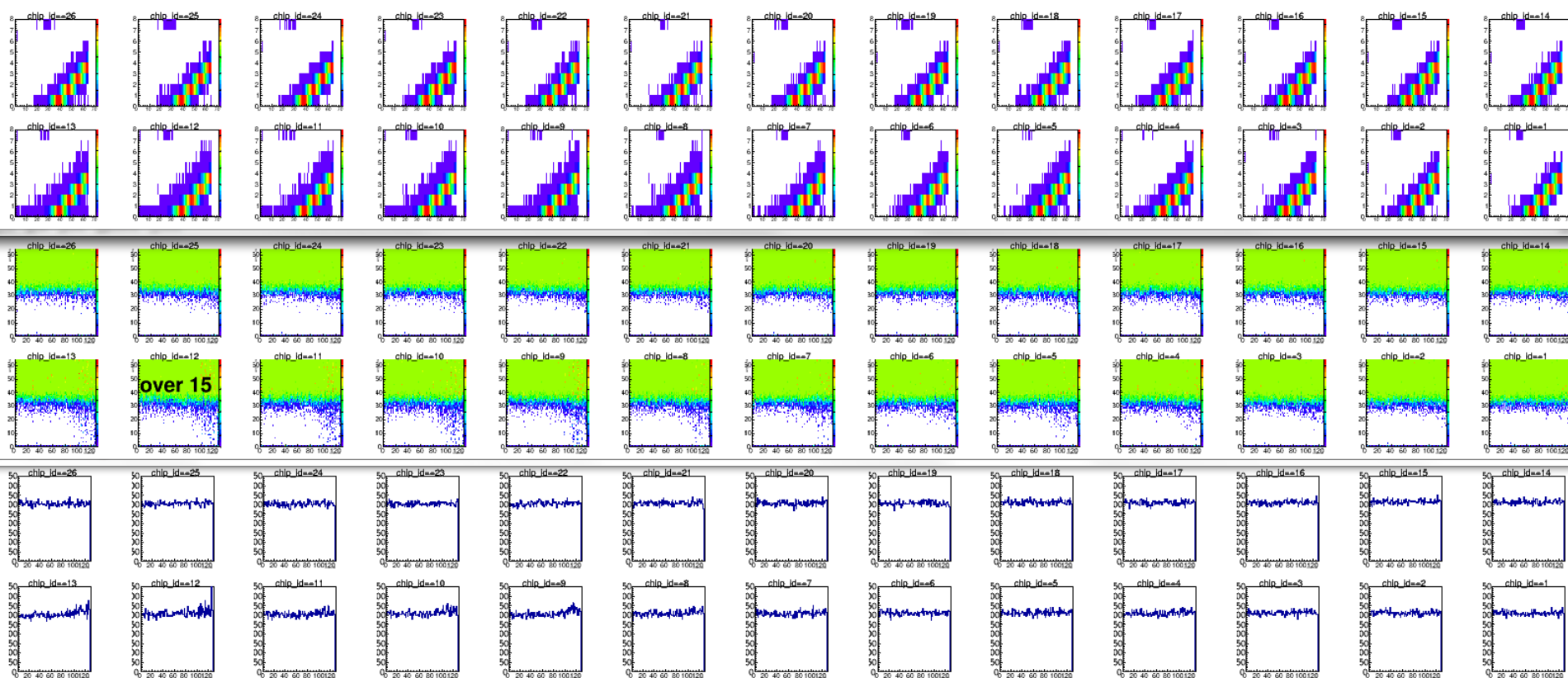


3rd tests

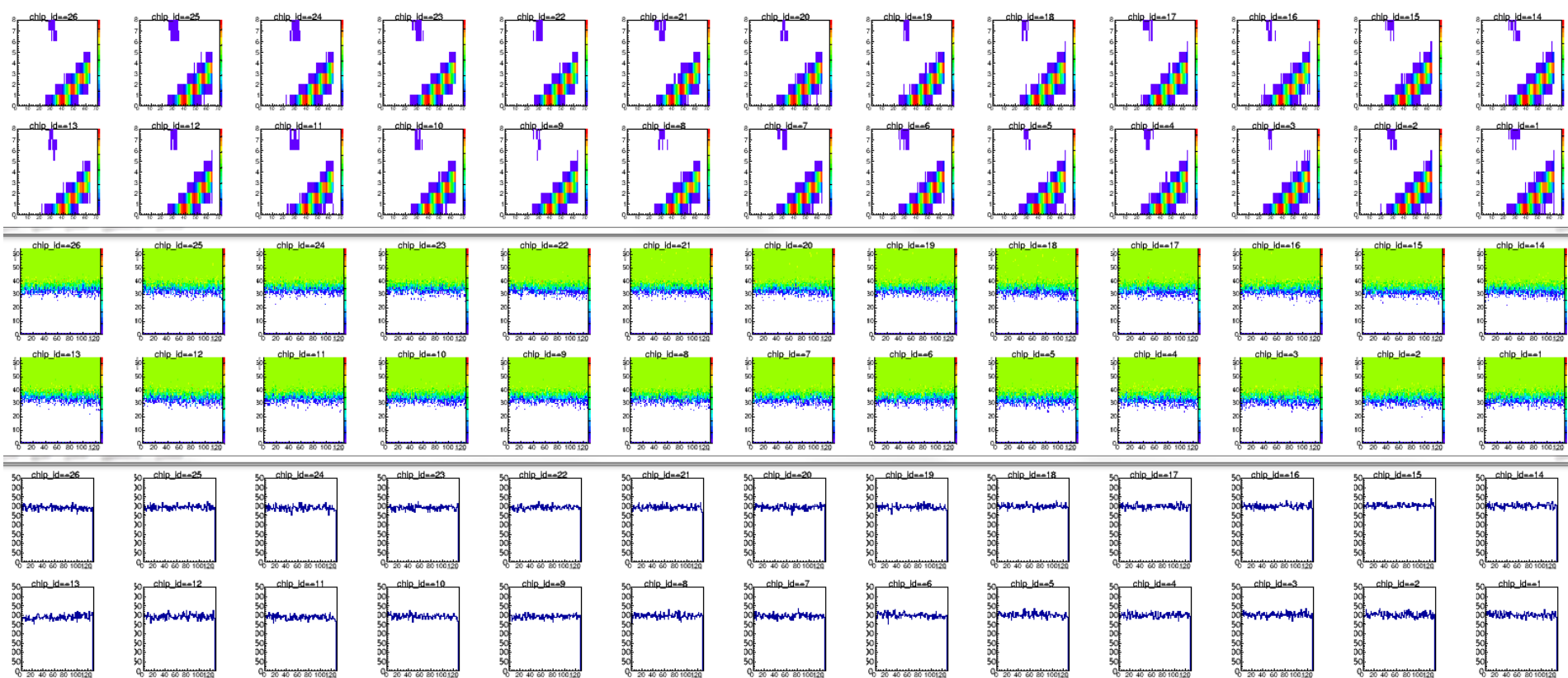
Test bench



2nd tests



3rd tests

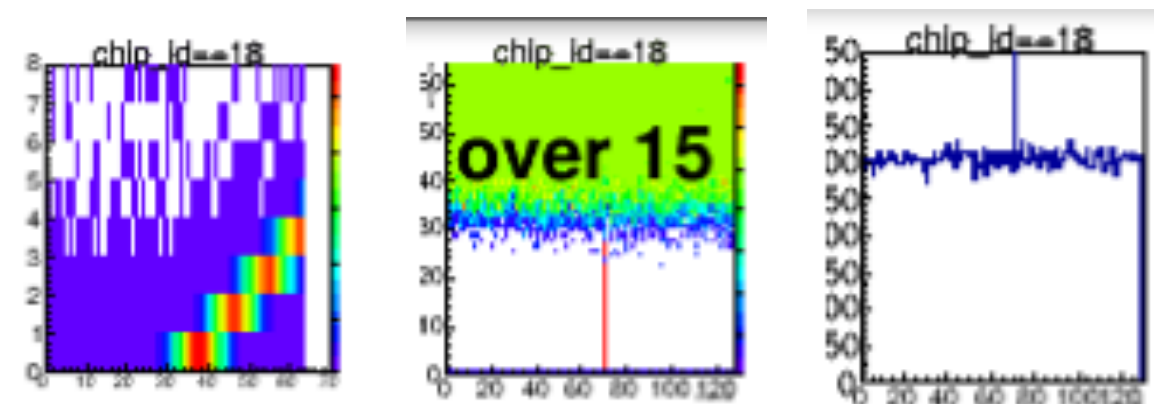


Results: a noisy channel

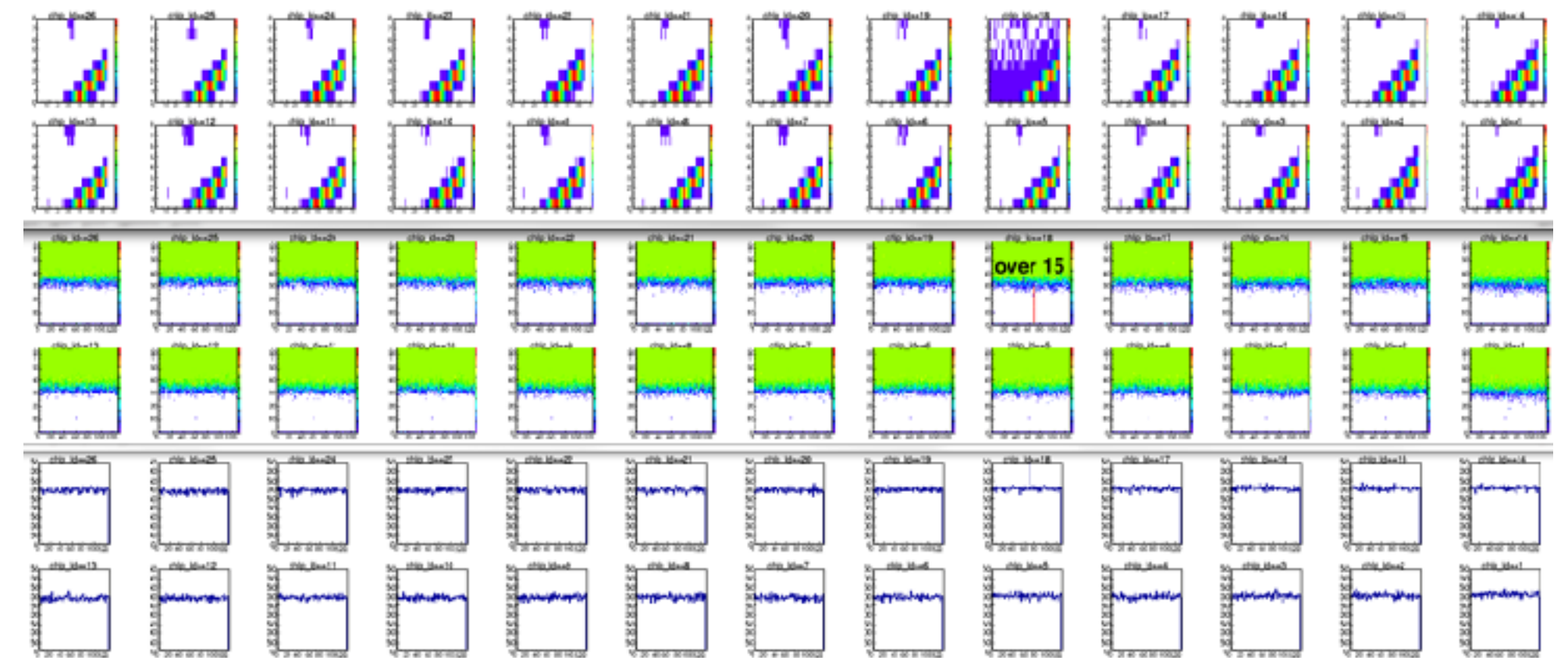
Ladder: B0L104N

- Results in test bench, 2nd test and 3rd test always had one noisy channel in chip 18. (Consistent measurement).

Test bench

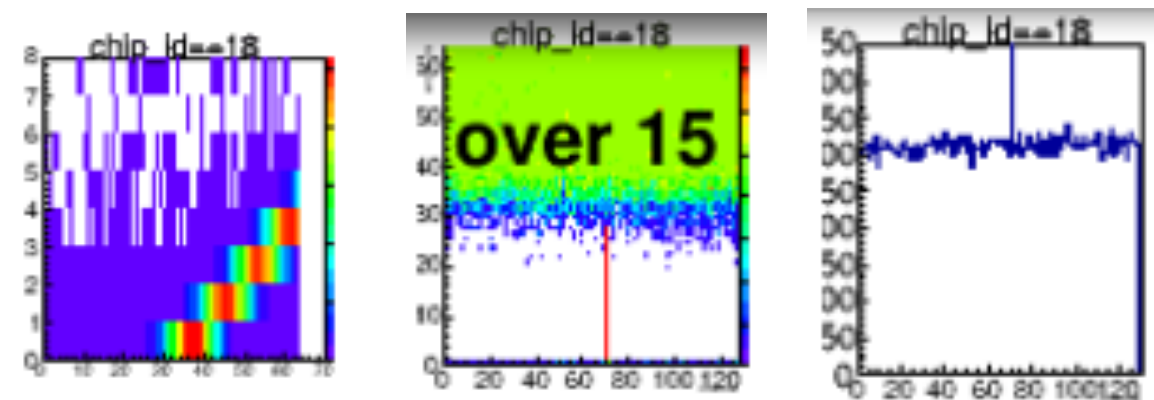


Test bench



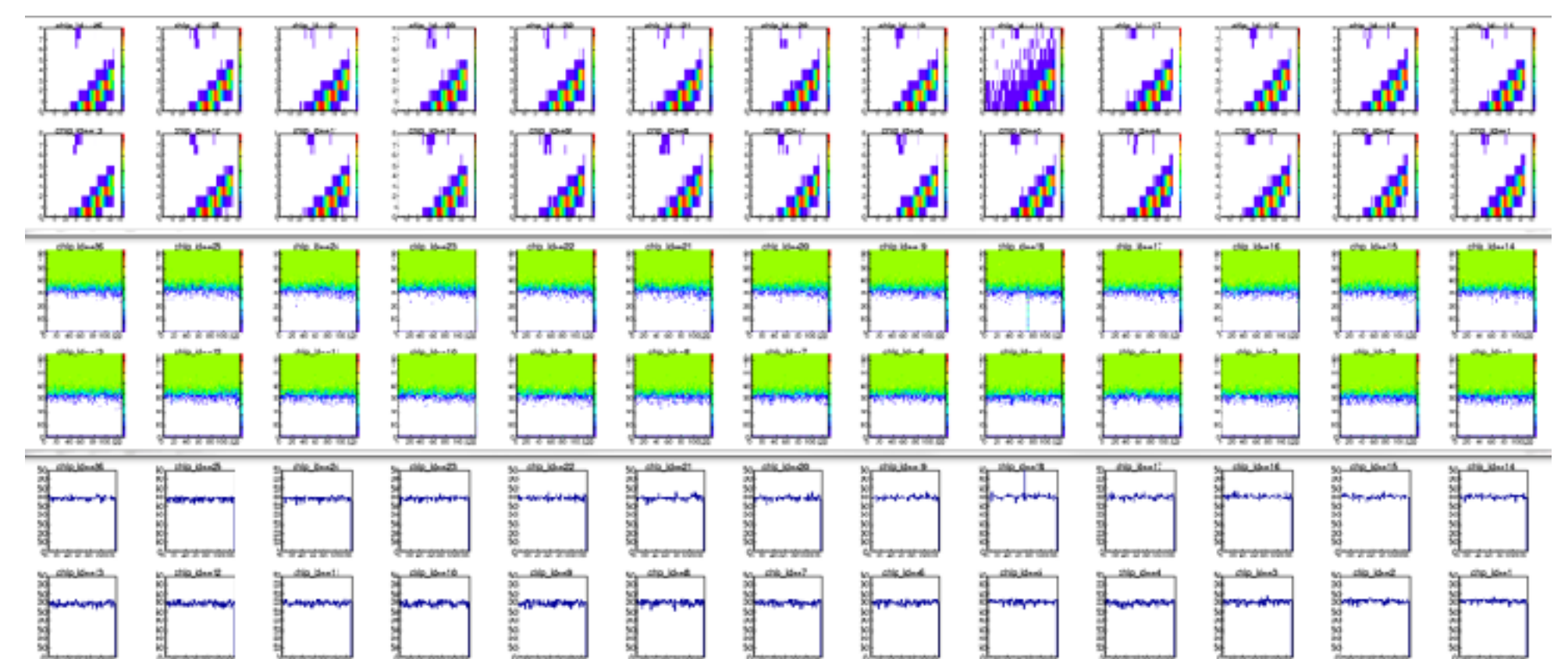
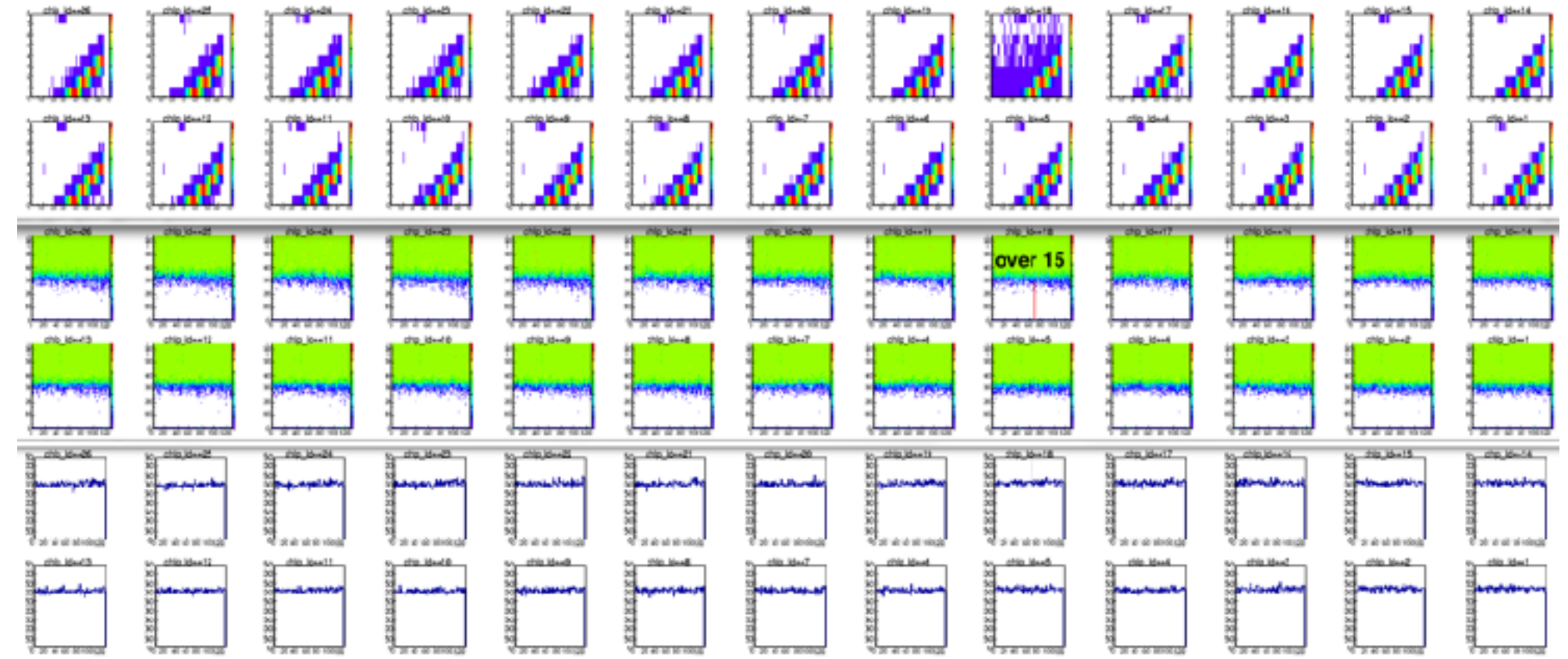
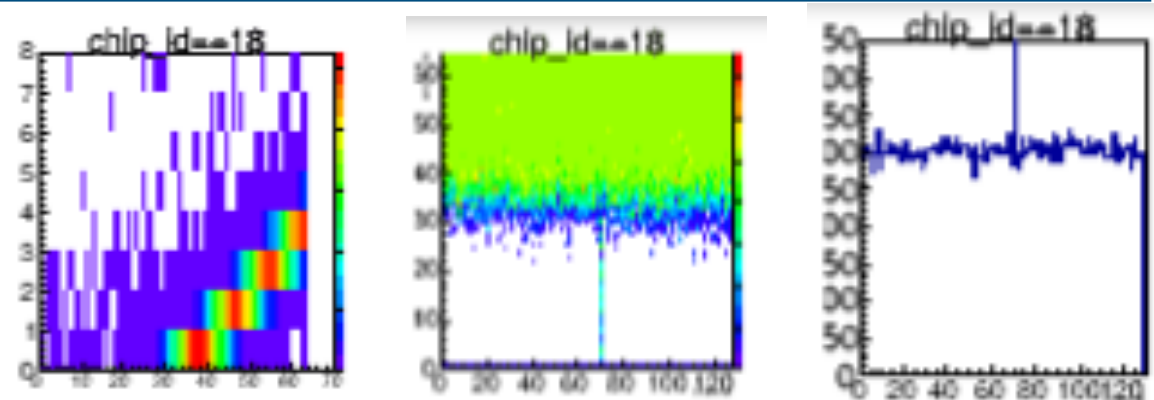
2nd test

2nd tests



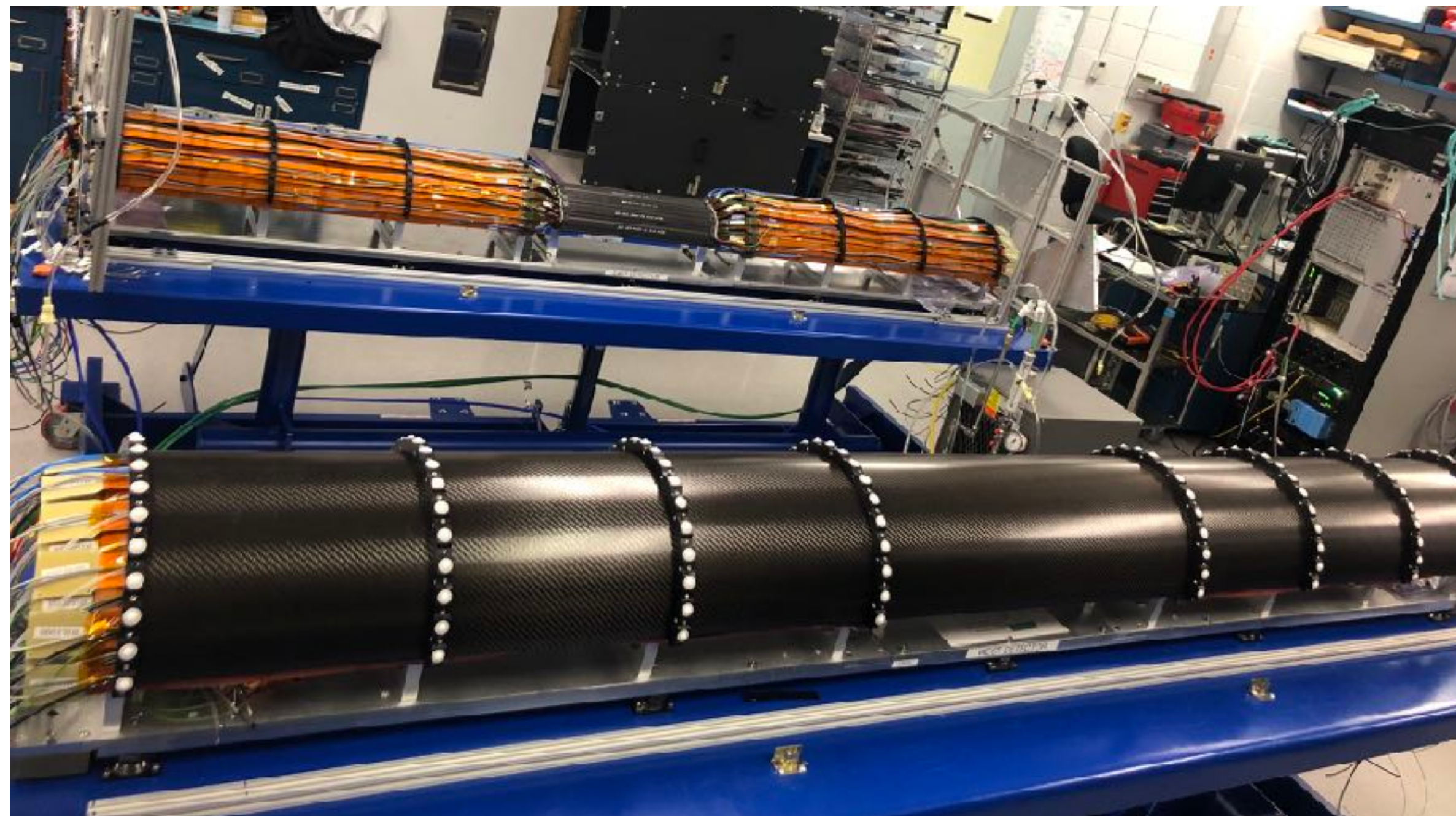
3rd test

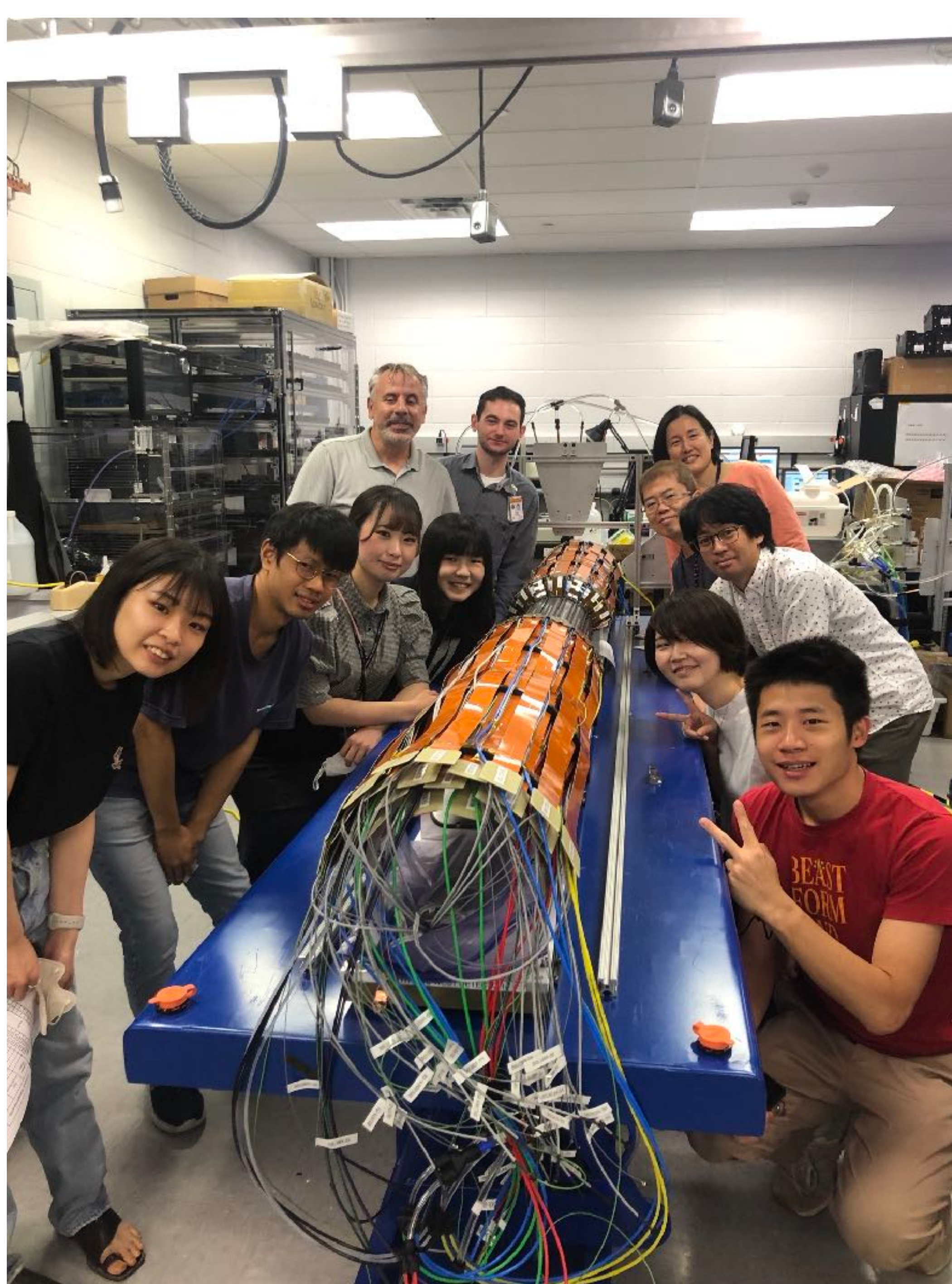
3rd tests



Summary

- INTT west: we finished testing all west side ladders: assembly, testing and survey: done
- INTT east: ladders were installed to the outermost layer of the east side in Aug/31. They will be tested soon.





Thank you for your attention!

