NOvA Experiment Status
All Experimenter's Meeting

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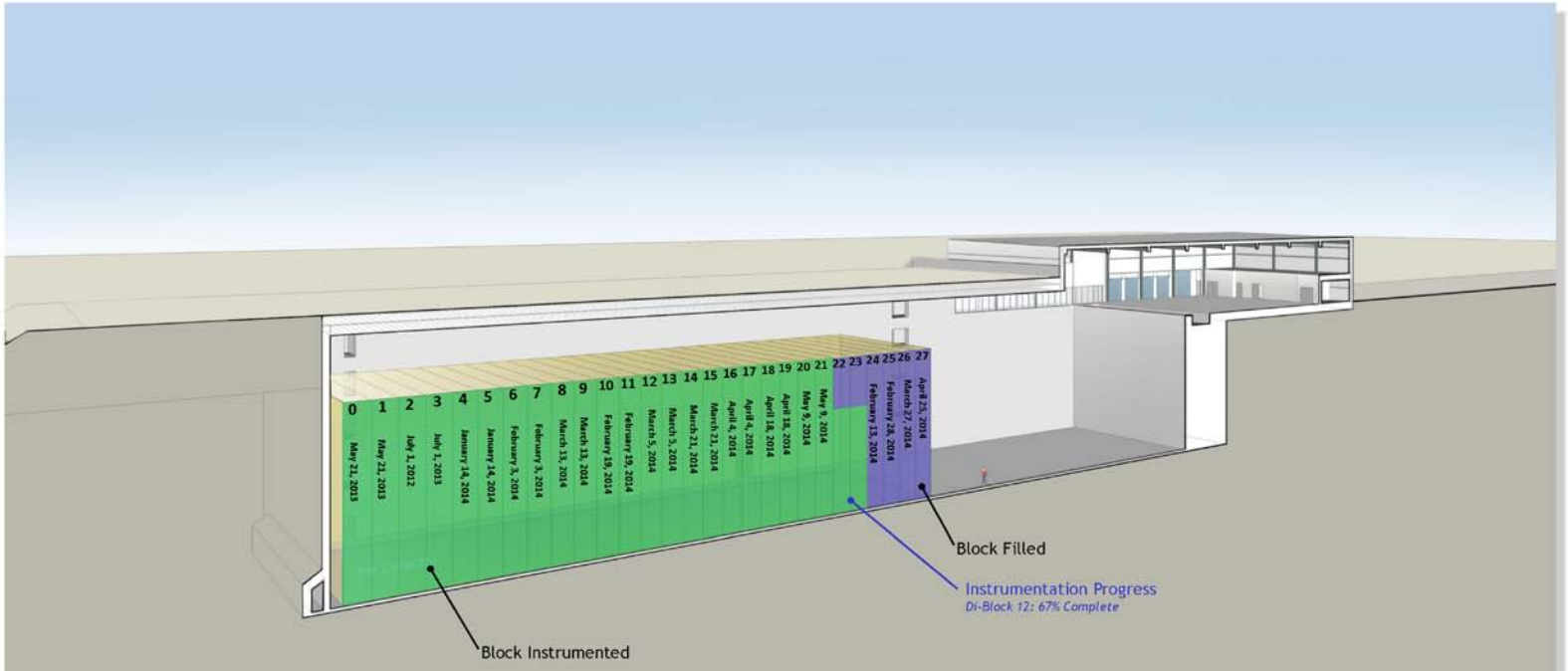
Jun 02, 2014

FD: Detector Assembly Progress

The Intensity Frontier

NOvA Far Detector Assembly Progress

Status Date: 02JUN14



14 kilotons = 28 NOvA Blocks

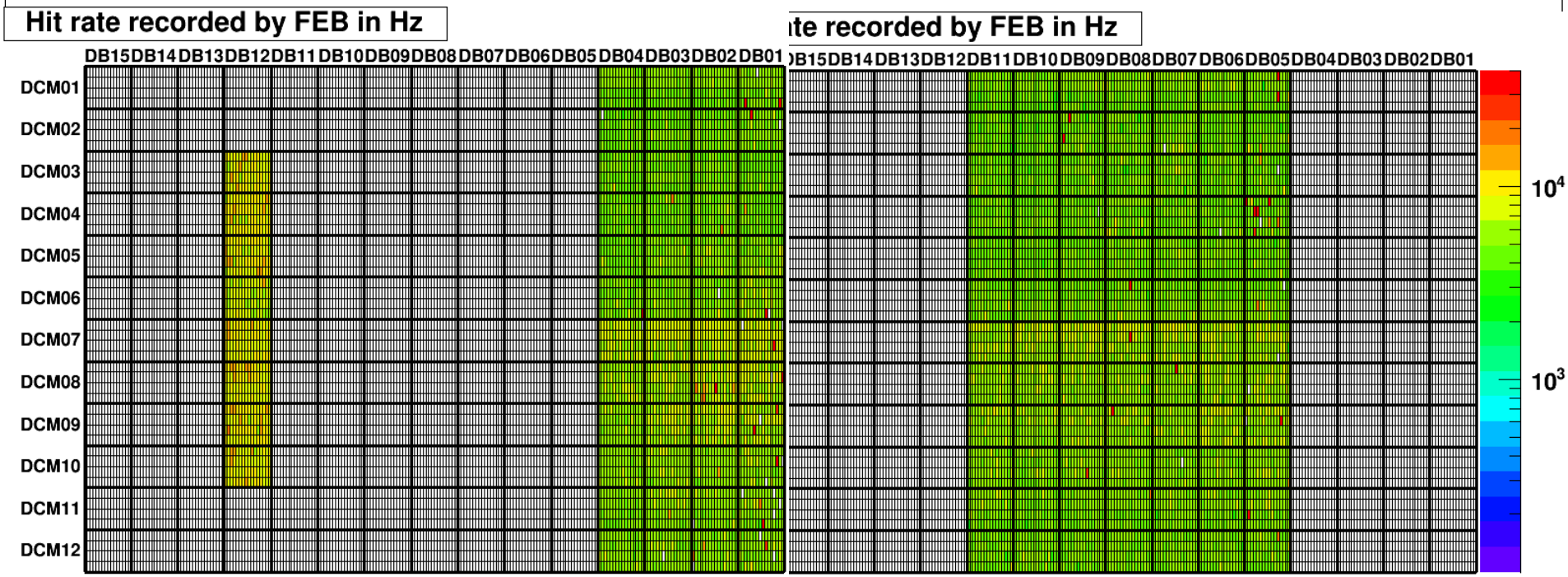
28 blocks of PVC modules are assembled and installed in place

28 blocks are filled with liquid scintillator

23.33 blocks are outfitted with electronics

79% cooled down

FarDet: Data-Taking

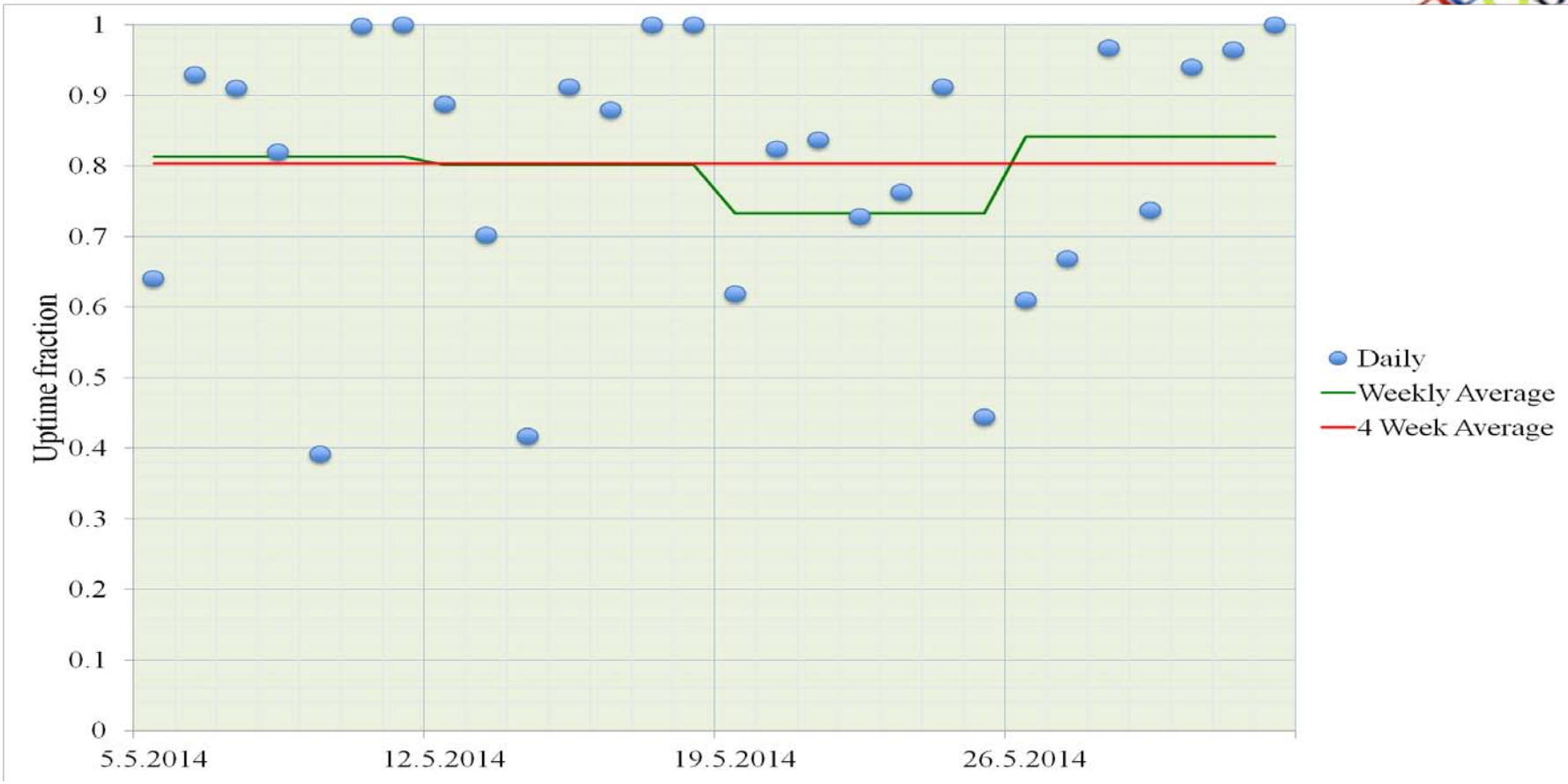


Partition 2 – Diblocks 12 +1,2,3,4
Diblocks 1-4 cooled APDs
2nd –ary oil top-up and reparirs
Installation of new APDs on DB 12

Partition 1 – diblocks 5,6,7,8,9,10, +11
2 (3rd & 4th) superblocks are active.
Running ~99% active, cooled APDs
HV at full gain values

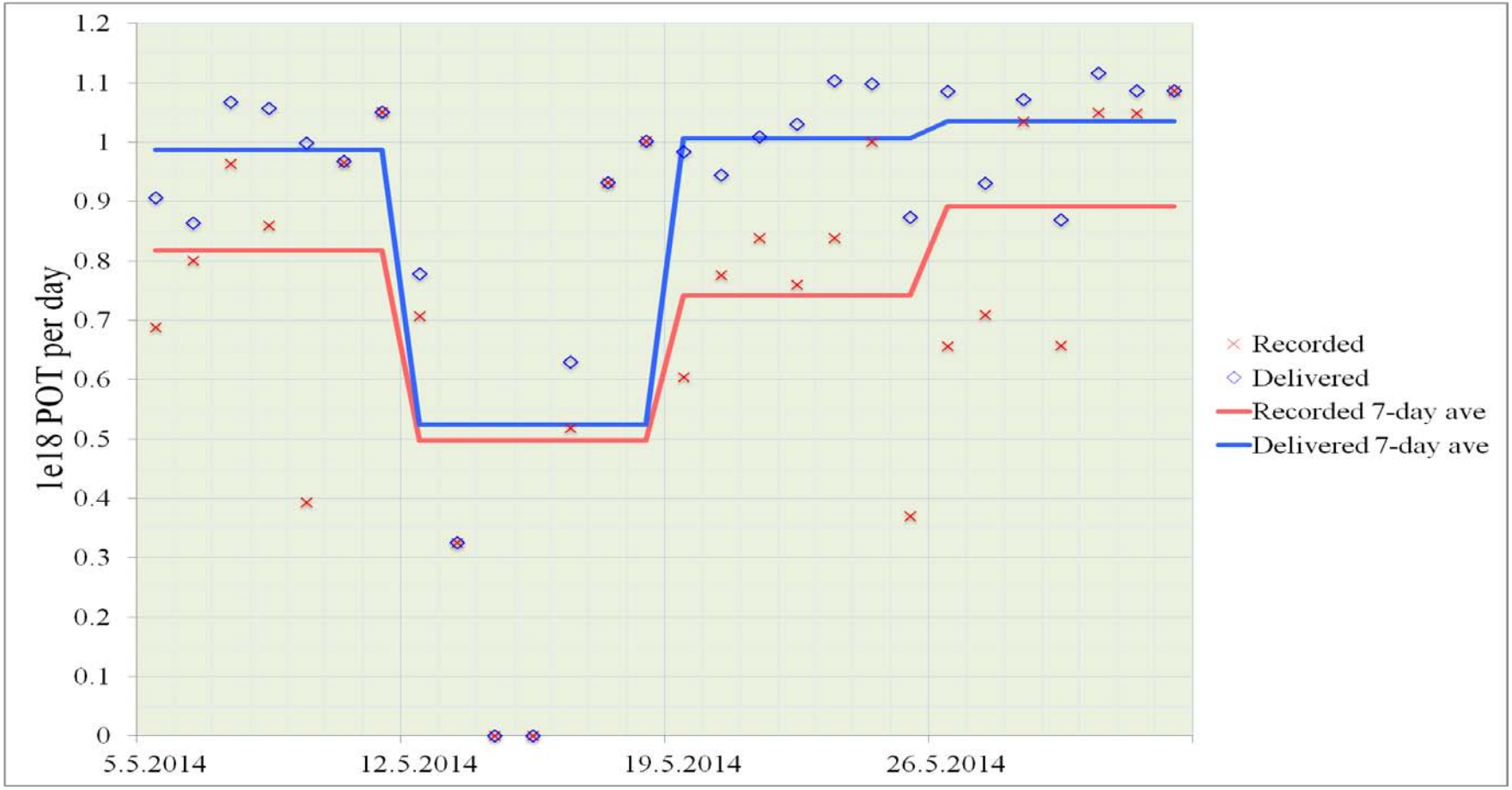
Partition 3 – running diblocks 13, 14 (Front End Boards only)

FD: DAQ Uptime



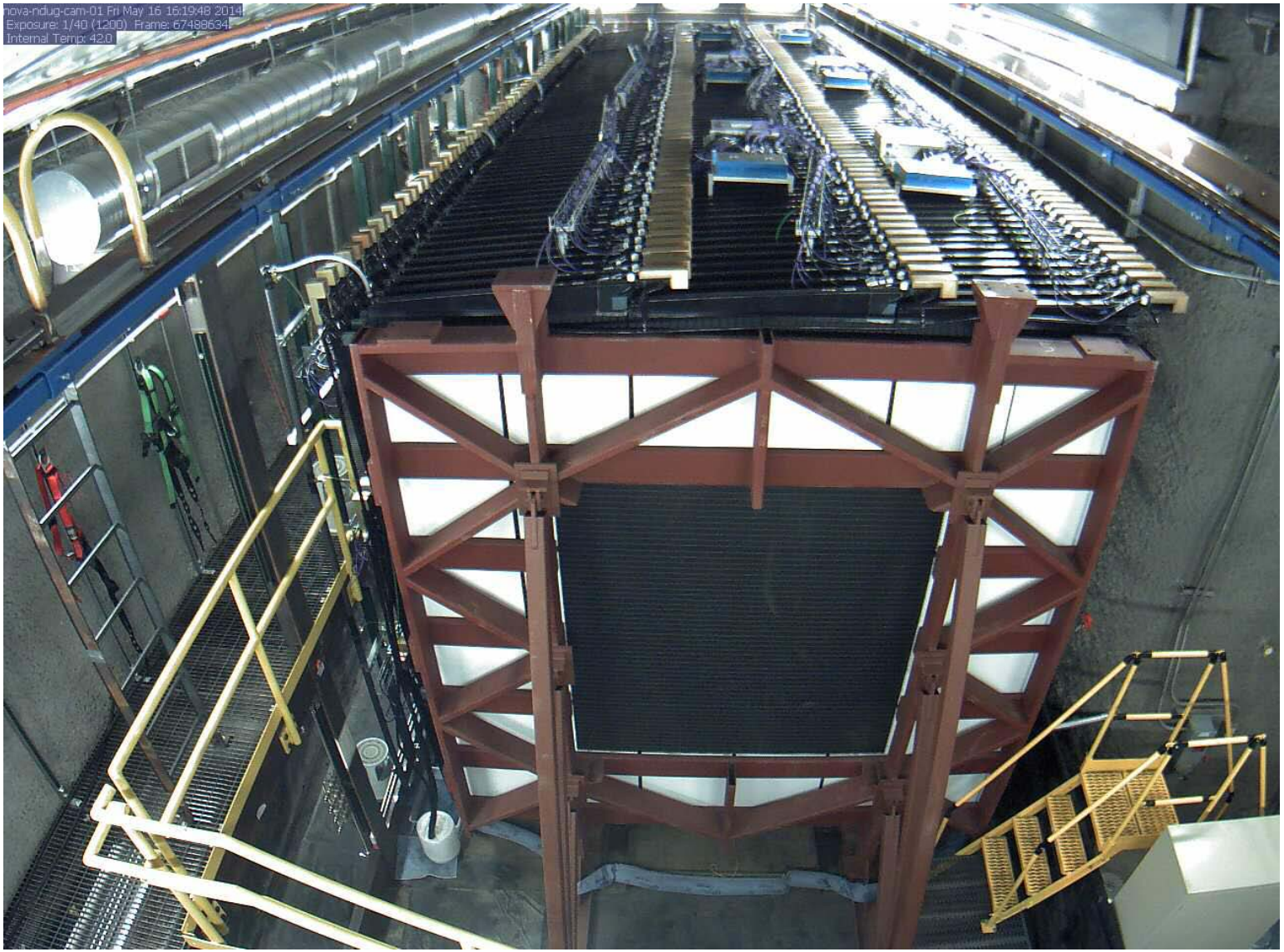
- HVAC failures at Ash River Computer Center over long and very hot weekend (May 24-26), summing 3 days up 22 hours of data taking downtime.
- Another downtime due to Thu's HVAC repair and maintenance.
- Big (on detector side) water leak on May 19, many electronics components damaged.
- Averaging about 80% over 4 weeks and (73%) 84% in (one before) past week.

FD: POTs delivered/recorded

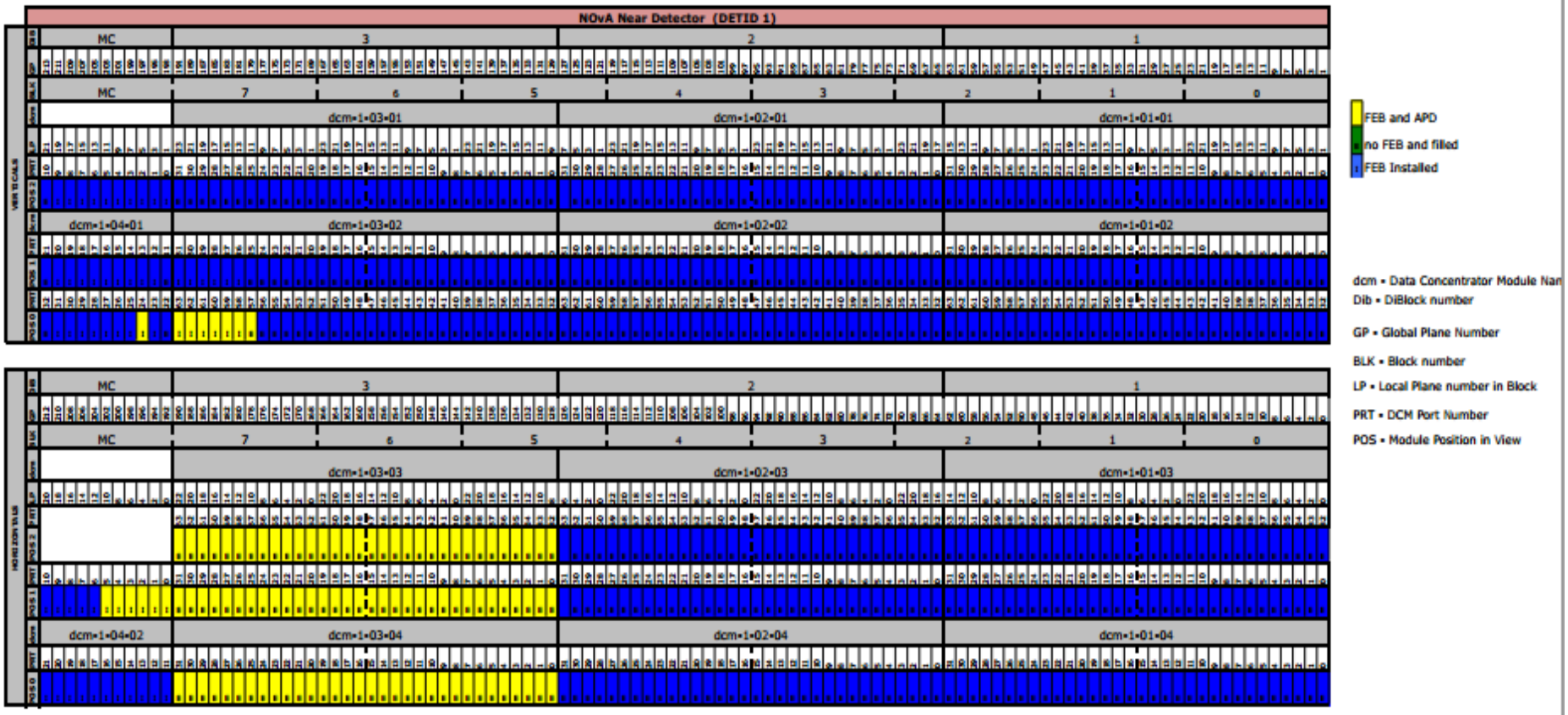


- 3 hot days w/ HVAC failure clearly visible.
- We recorded in average 0.89 e18 (from 1.03) pots/day with 86% efficiency
- Week before only 0.74 e18 of 1.00 with poor 74% efficiency
- Last weekend much better (and colder).

NearDet: Detector Assembly Progress



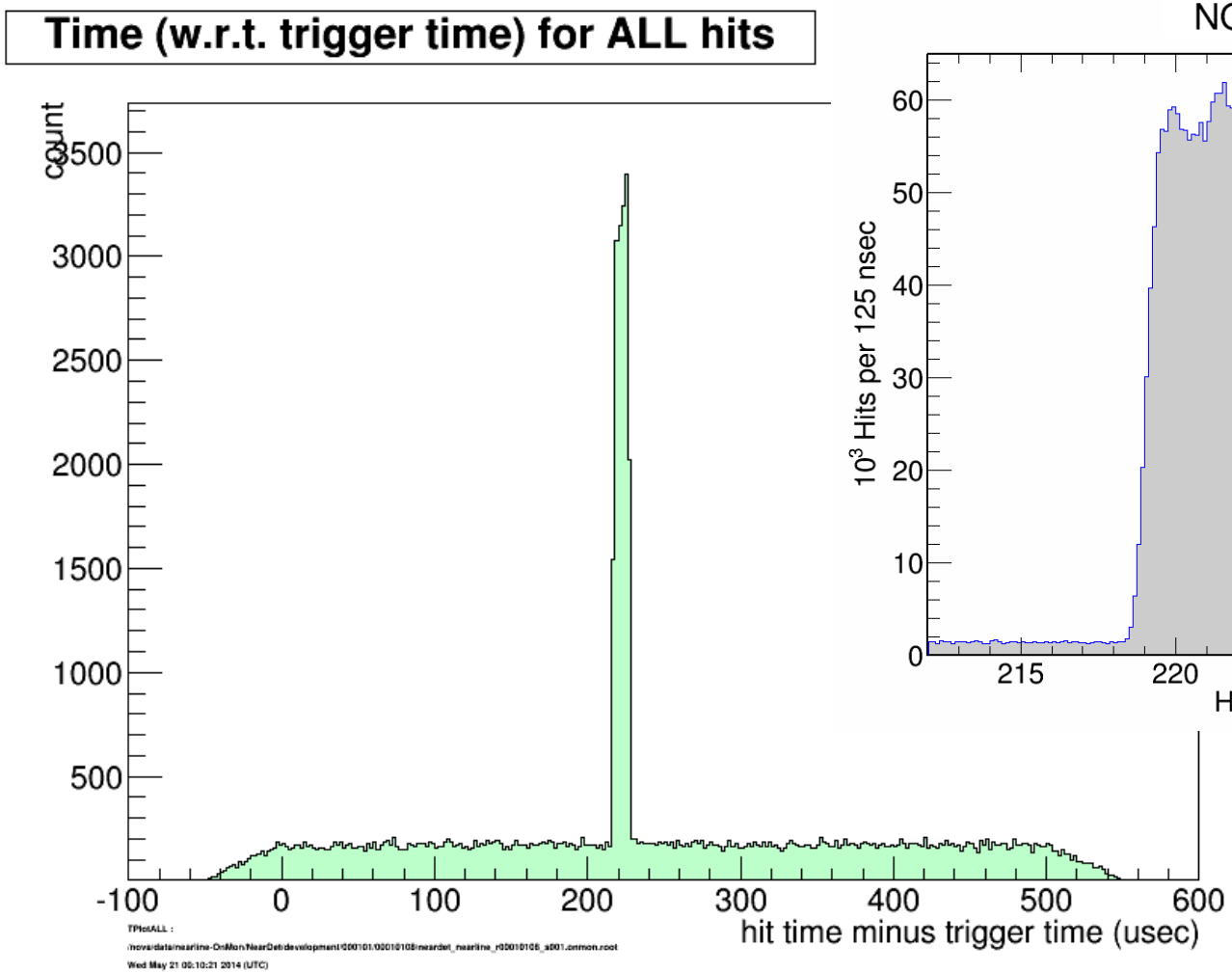
Near Detector status

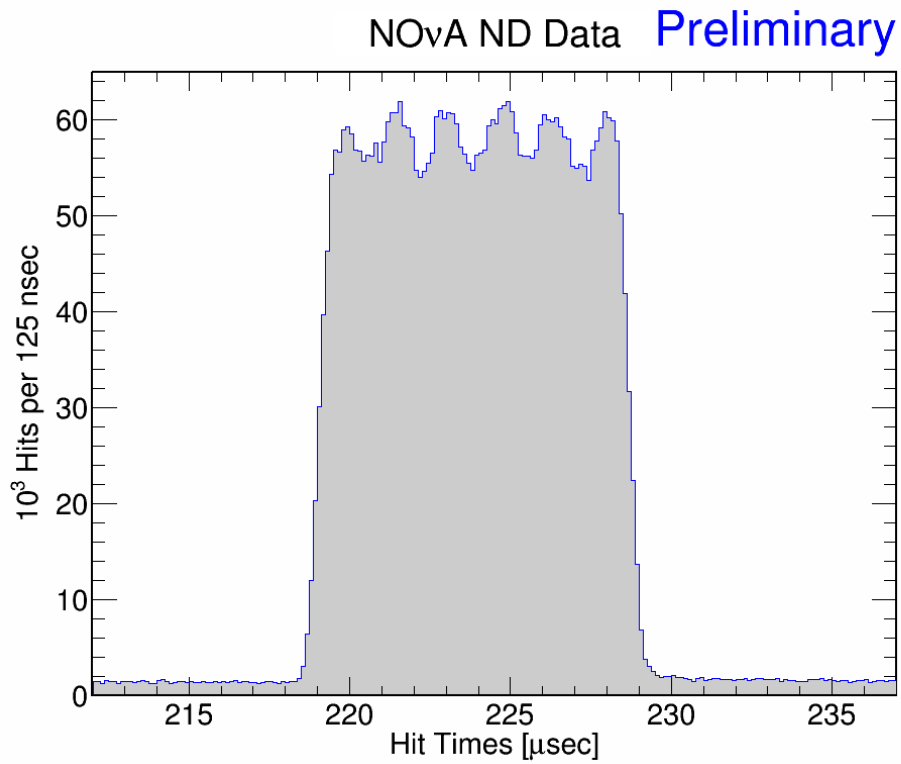


✓ ALL FEBs installed

➢ All APDs installed on Diblock 3 side of detector

Near Detector – timing





✓ Time distribution showing clear neutrino peak in couple of hours of data taking

Summary

FarDet:

- 23,4 of 28 blocks of FarDet fully-instrumented, running with full gain mode.
- 11 of 14 diblocks successfully cooled down.
- The 'Physics' partition is setup to 7 (5-11) diblocks, running with 2 superblocks for neutrino counting.
- We tested 14-Diblocks running over weekend.
- Except water issue we added heat issue.

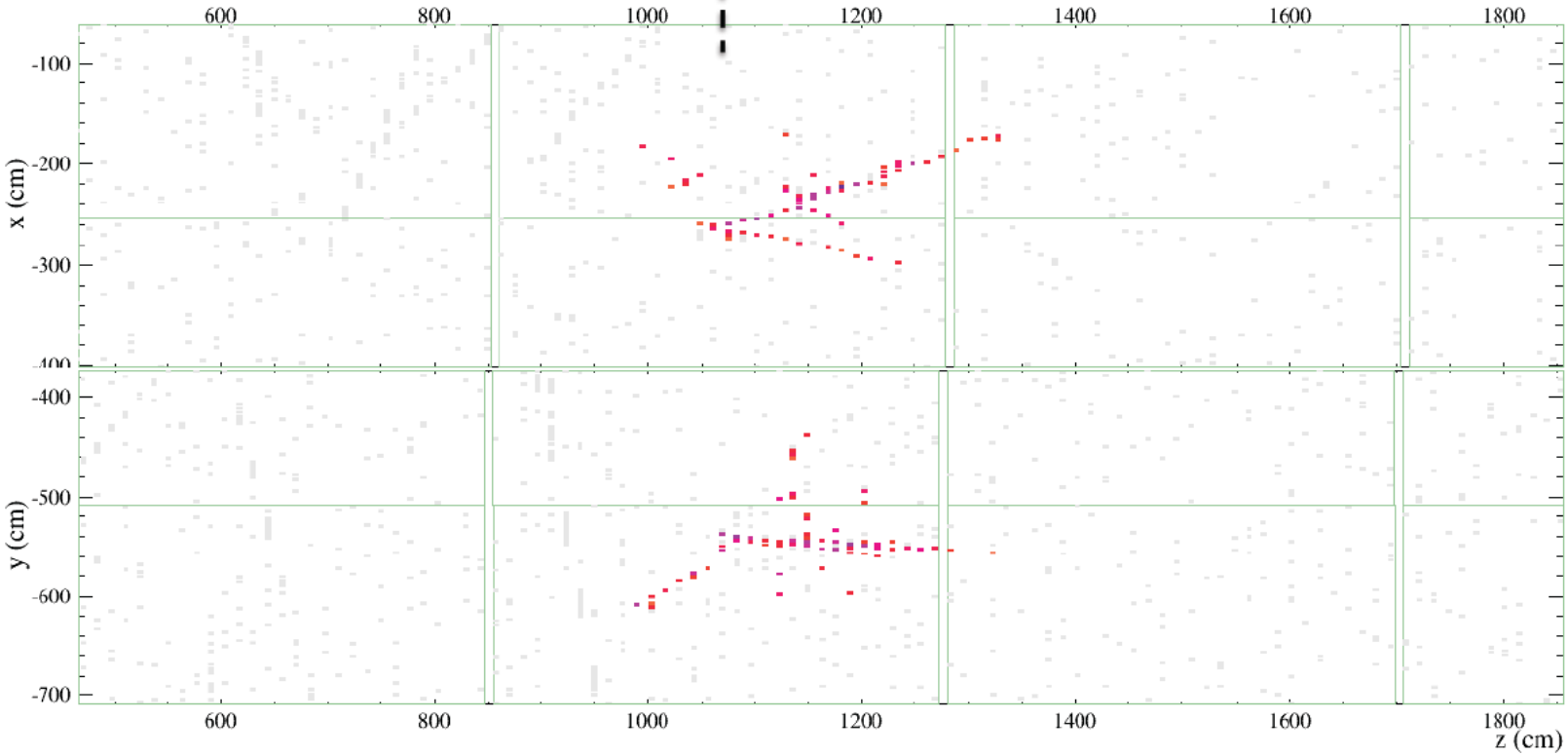
NearDet:

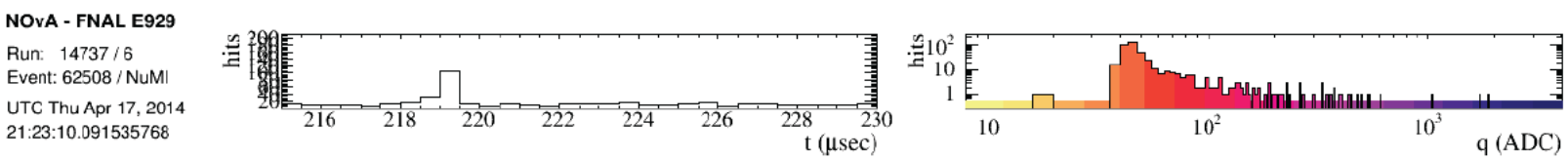
- FEB installation is done!
- APDs installation finished on diblock3 side.
- Nice neutrino timing peak visible when APD commissioned!

FD: Golden neutrino candidate #1/R3

Event Displays:

1st Super-Block (SB 0) | 2nd Super-Block (SB 1)



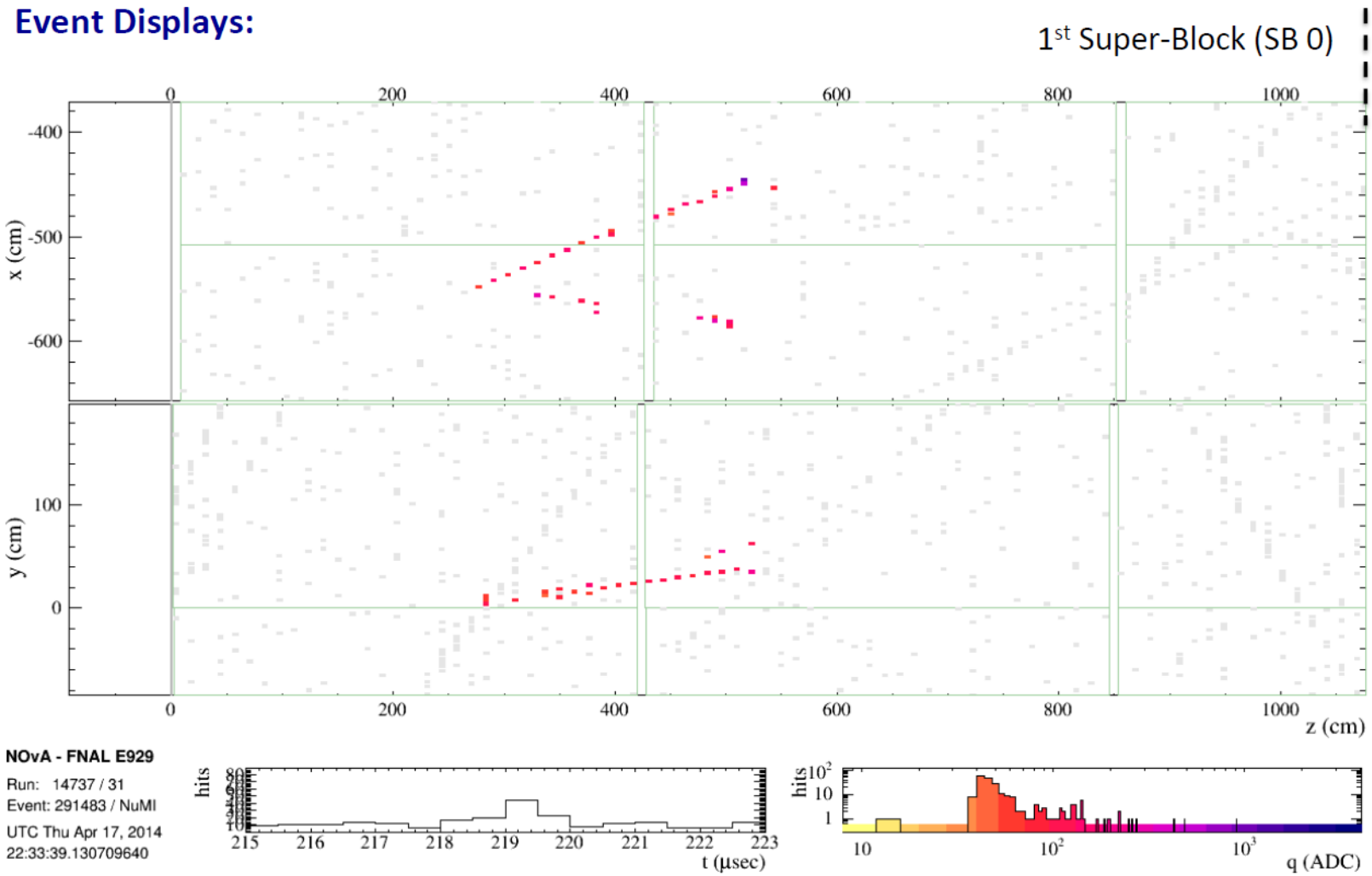


14737 6 62508 (6/0/0) 12

IN Beam Window

FD: Golden neutrino candidate #2/R3

Event Displays:



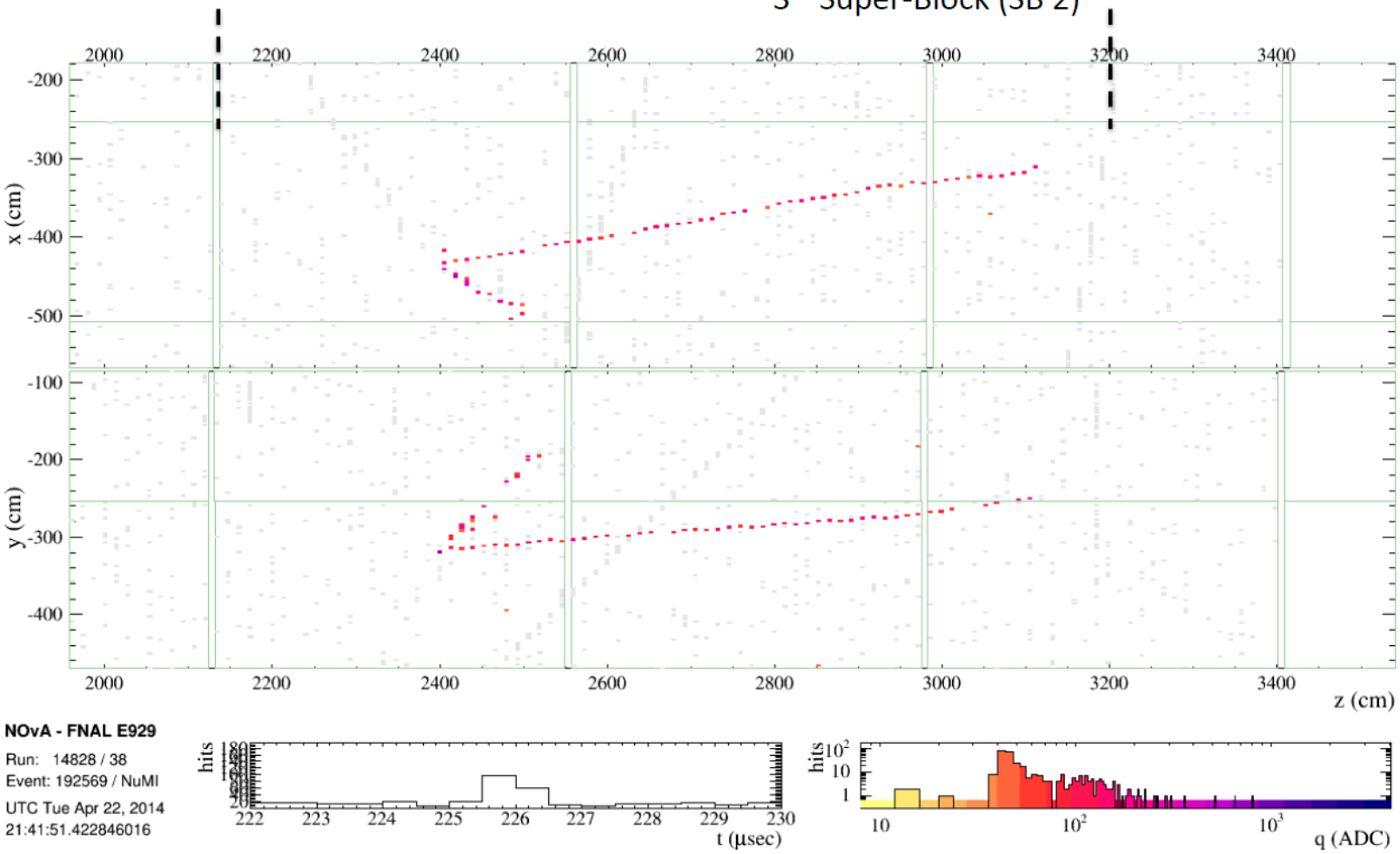
14737 31 291483 (5/1/0) 11

IN Beam Window

NuMI Scan Results - Round 3 17

FD: Golden neutrino candidate #3/R3

Event Displays:



14828 38 192569 (5/0/0) 10

IN Beam Window

NuMI Scan Results - Round 3 18