NOvA Experiment Status
All Experimenter's Meeting

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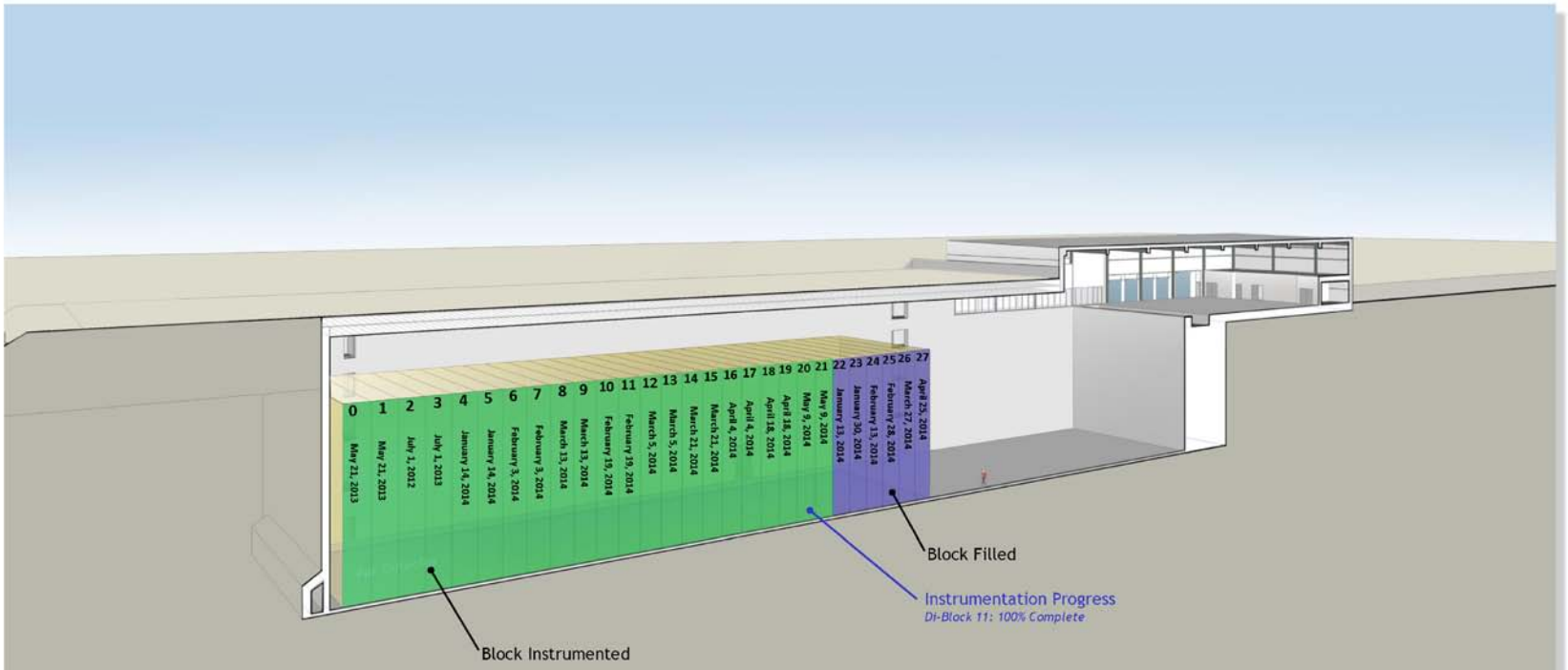
May 12, 2014

FD: Detector Assembly Progress

The Intensity Frontier

NOvA Far Detector Assembly Progress

Status Date: 12MAY14



14 kilotons = 28 NOvA Blocks

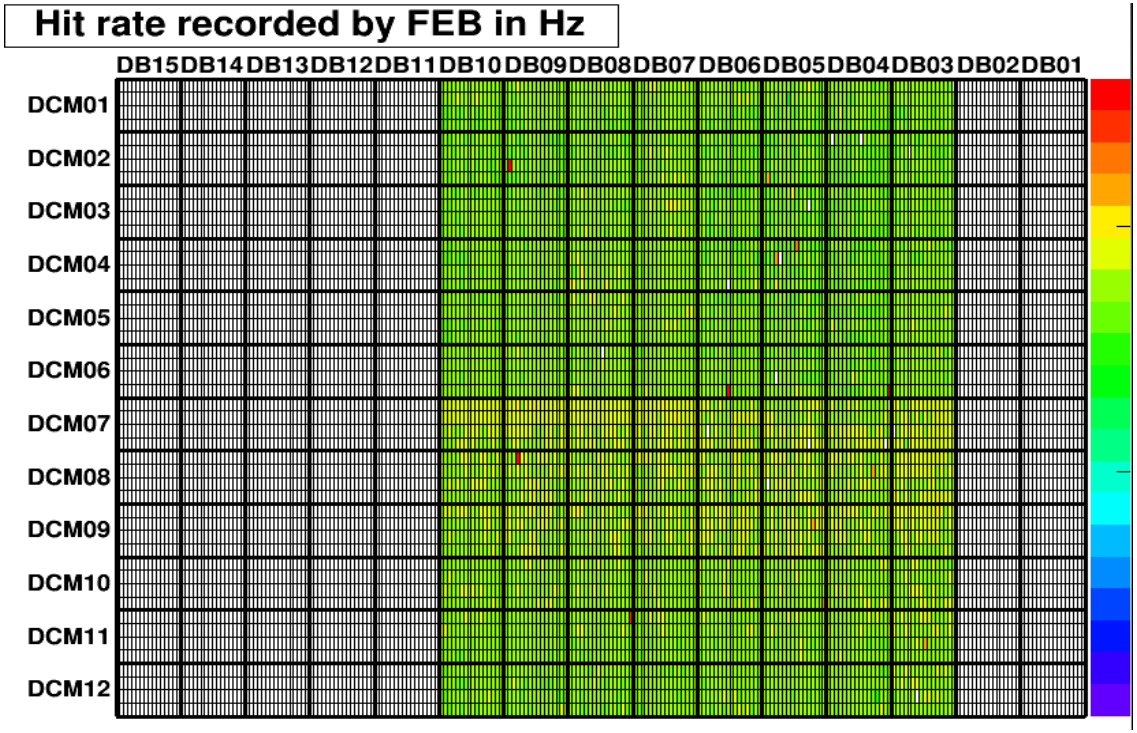
28 blocks of PVC modules are assembled and installed in place

28 blocks are filled with liquid scintillator

22.0 blocks are outfitted with electronics

71% cooled down

FarDet: Data-Taking

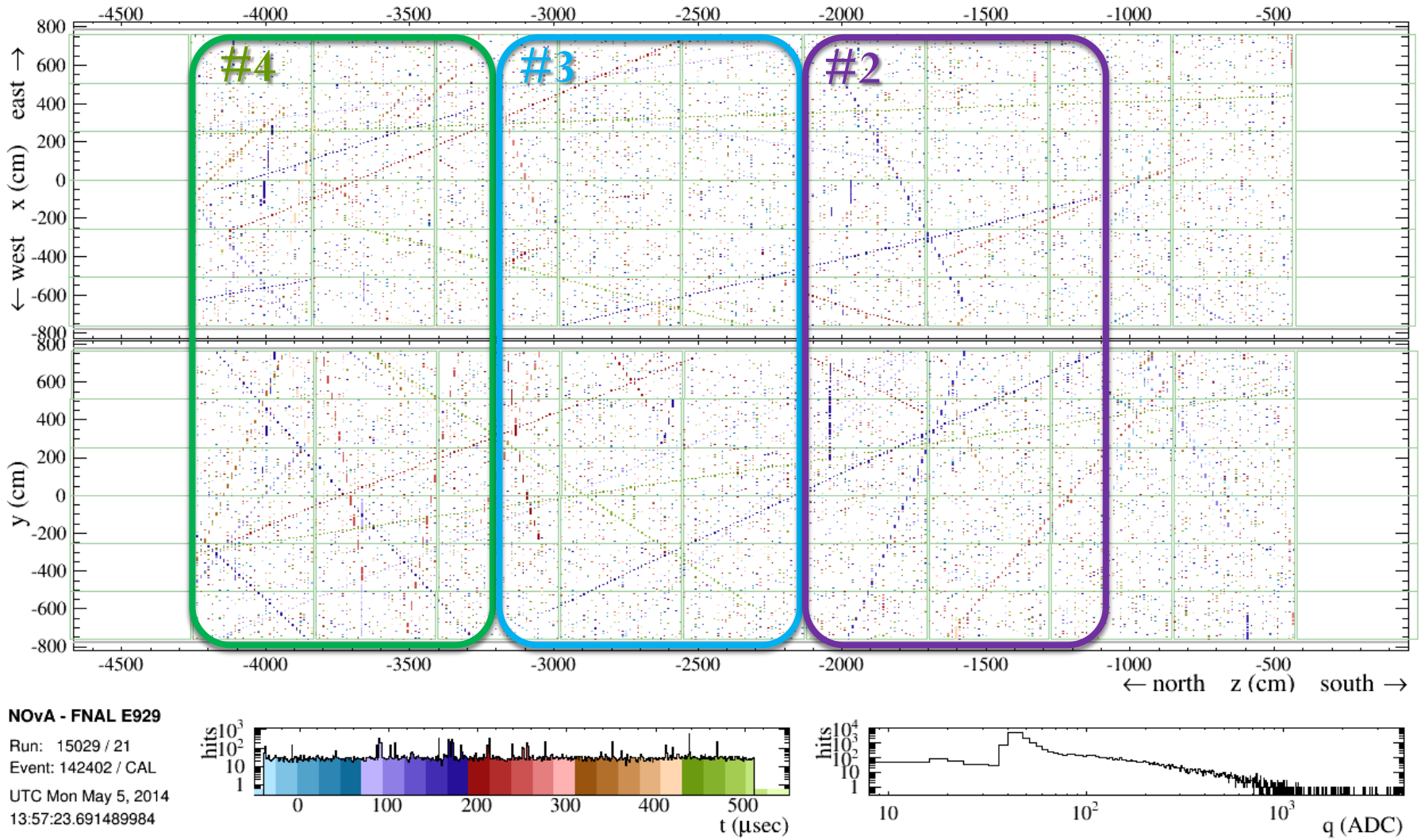


Partition 2 – Diblocks 11 +1,2
Diblocks 1,2 cooled APDs
Installation of new APDs on DB 12

Partition 1 – diblocks 3,4,5,6,7,8,9,10
3 superblocks are active.
Running ~99% active, cooled APDs
HV at full gain values

Partition 3 – running diblocks 12,13, 14 (Front End Boards only)

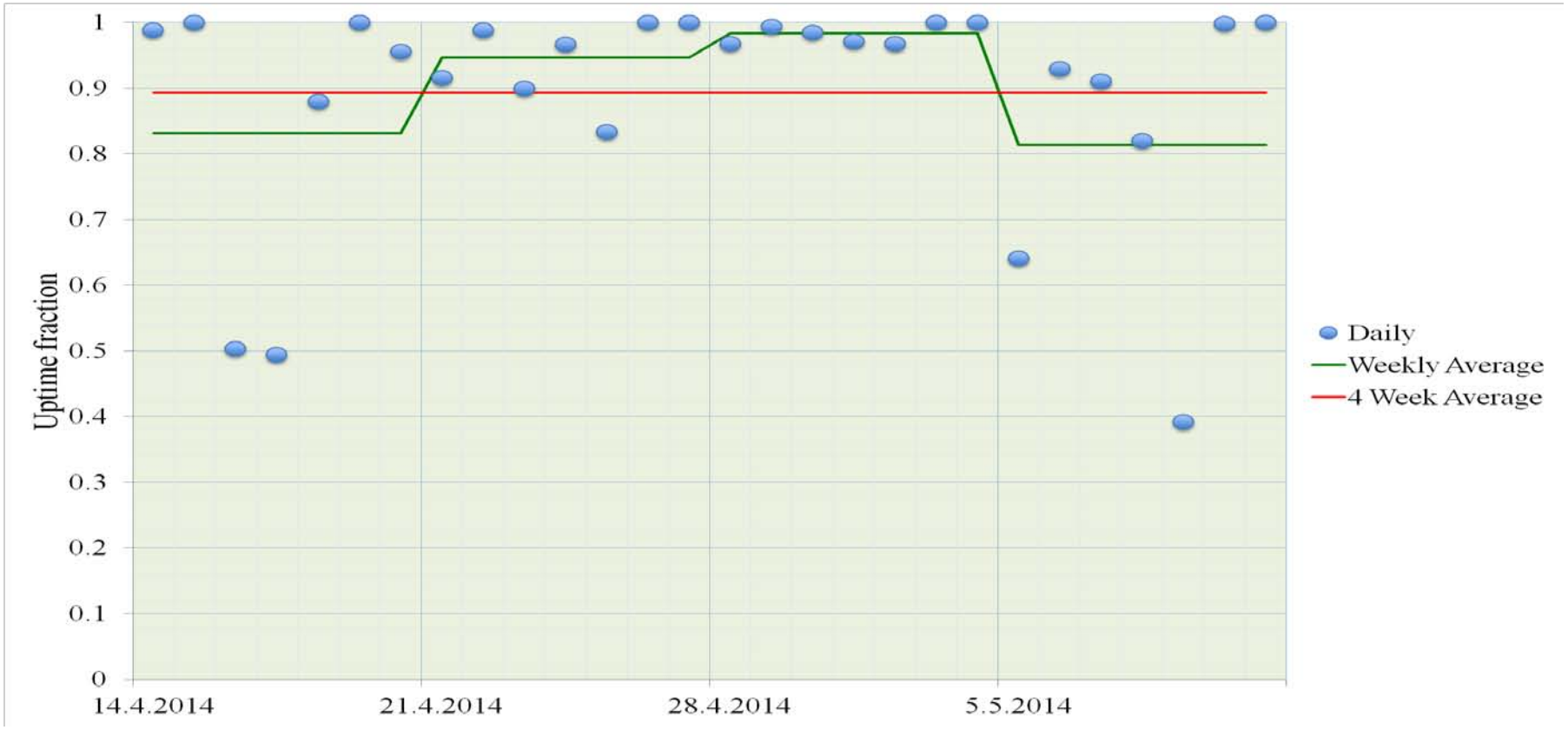
FarDet: Data-Taking



Partition 1 – diblocks 3,4,5,6,7,8,9,10

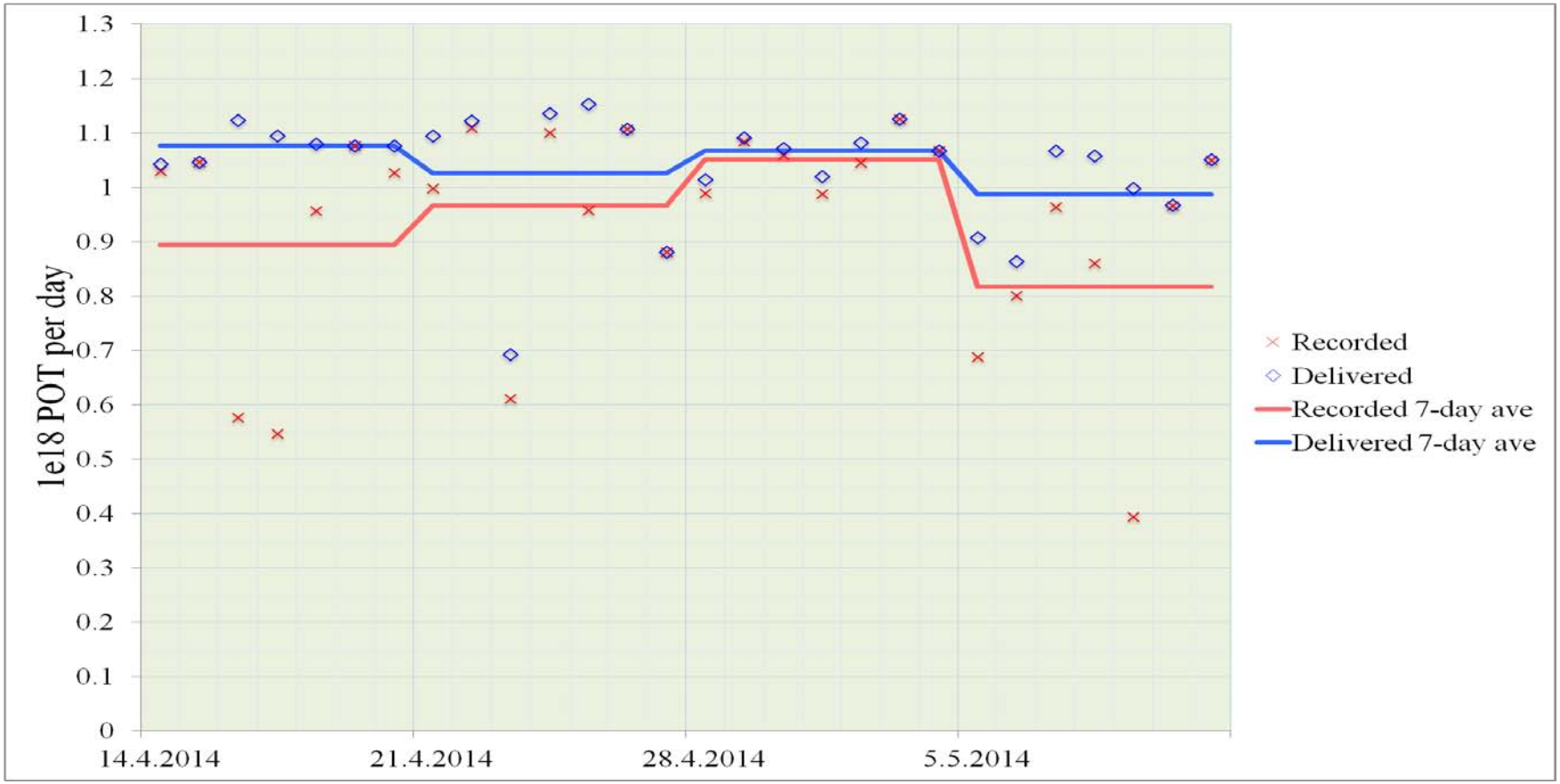
3 superblocks are active, where we are looking for neutrinos

FD: DAQ Uptime



- After the best week we had a bad one.
- Averaging about 89% and only poor 81.3% in past week.
- Majority of down time was underlying by 7 water leak we faced to during week.
- We were keeping the Physics partition almost unattached, nevertheless a water leak shut down whole detector and recovery takes a lot of time.
- On Sun, in the late evening (not here, UTC) we faced to a water leak.

FD: POTs delivered/recorded



- Poor efficiency of recording POTs last week.
- We recorded in average 0.82 e18 (from 0.98) pots/day with 82.8% efficiency.
- The low efficiency reflects the number of water leaks in last week.

Summary

FarDet:

- 22 of 28 blocks of FarDet fully-instrumented, running with full gain mode.
- 10 of 14 diblocks successfully cooled down.
- The 'Physics' partition was setup to 8 diblocks to keep running with 3 superblocks (2-4) for neutrino counting.
- Low efficiency of beam recording correlated with DAQ down times as we suffered too many water leaks last week.
- We found several new neutrino candidates in 3 diblocks.

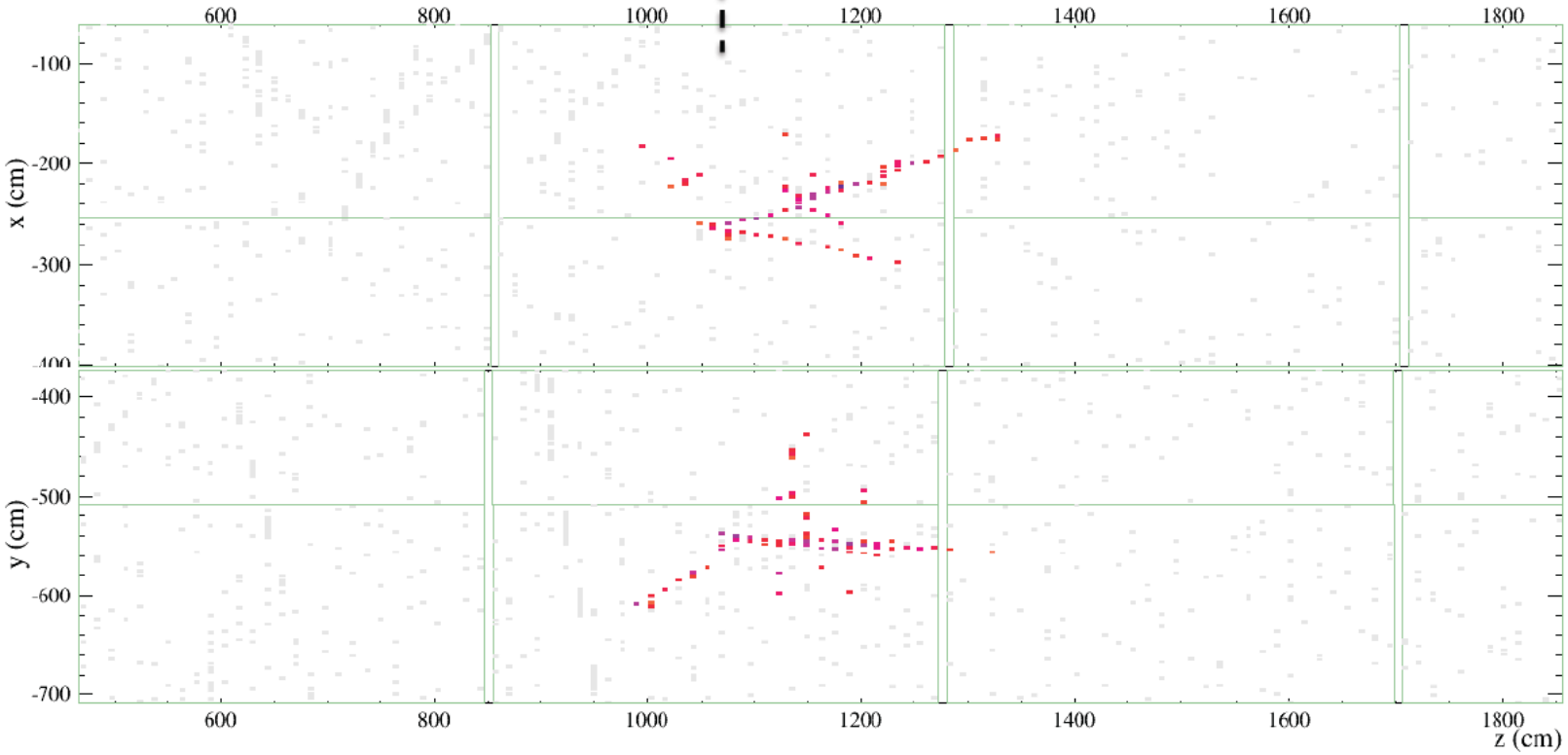
NearDet:

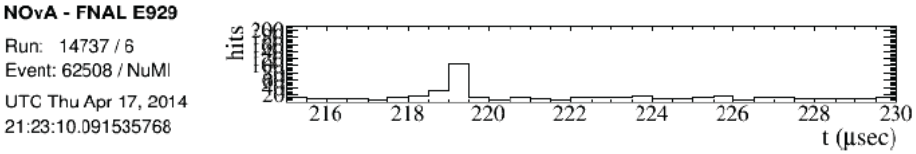
- We could see first DCS run with FEB install there.
- 1st batch of 34 APDs installed on diblock3 (+8 on MC)
- Plan to install another batch of APDs this week.

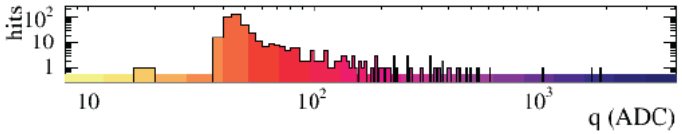
FD: Golden neutrino candidate #1/R3

Event Displays:

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





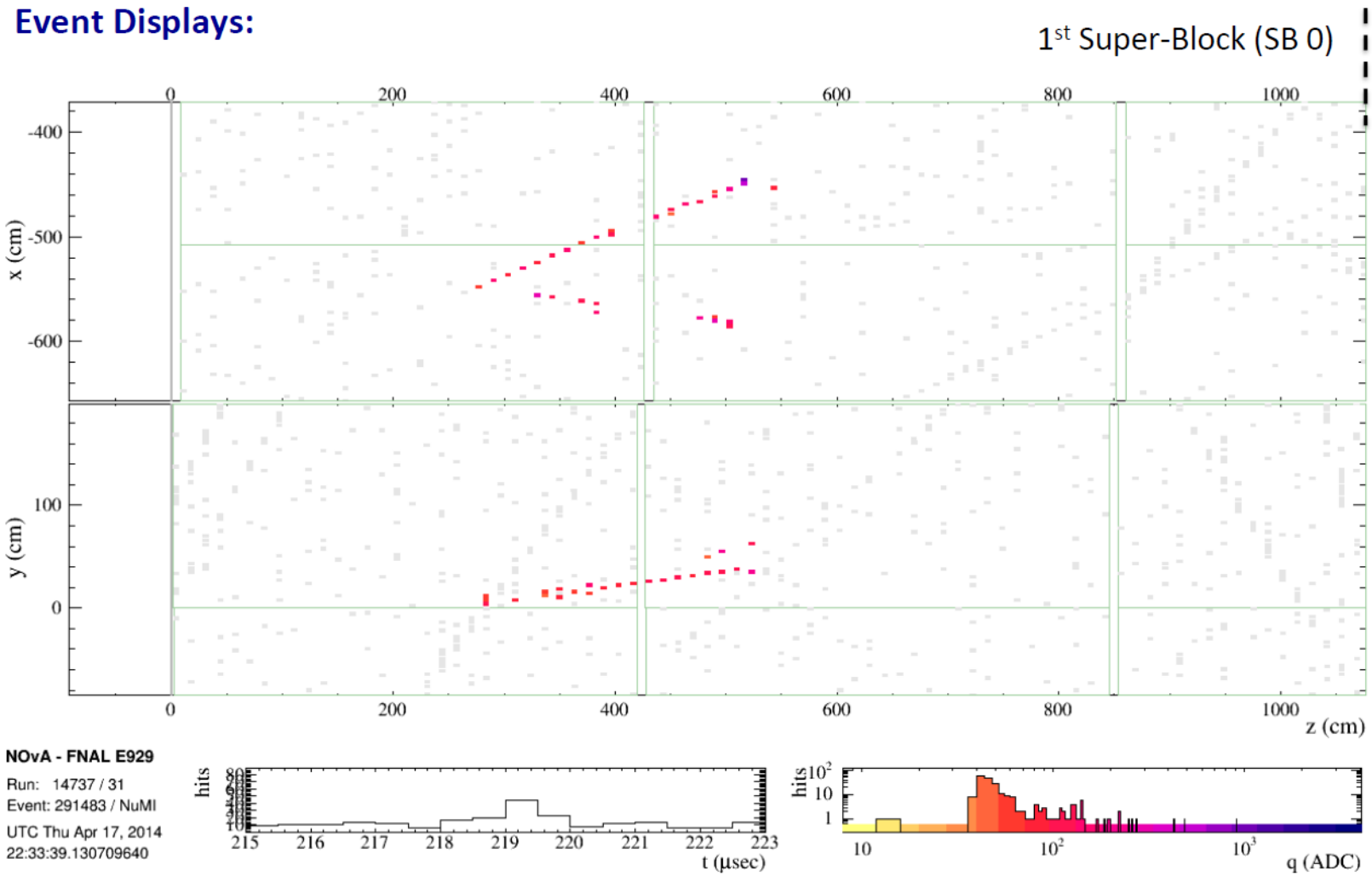


14737 6 62508 (6/0/0) 12

IN Beam Window

FD: Golden neutrino candidate #2/R3

Event Displays:



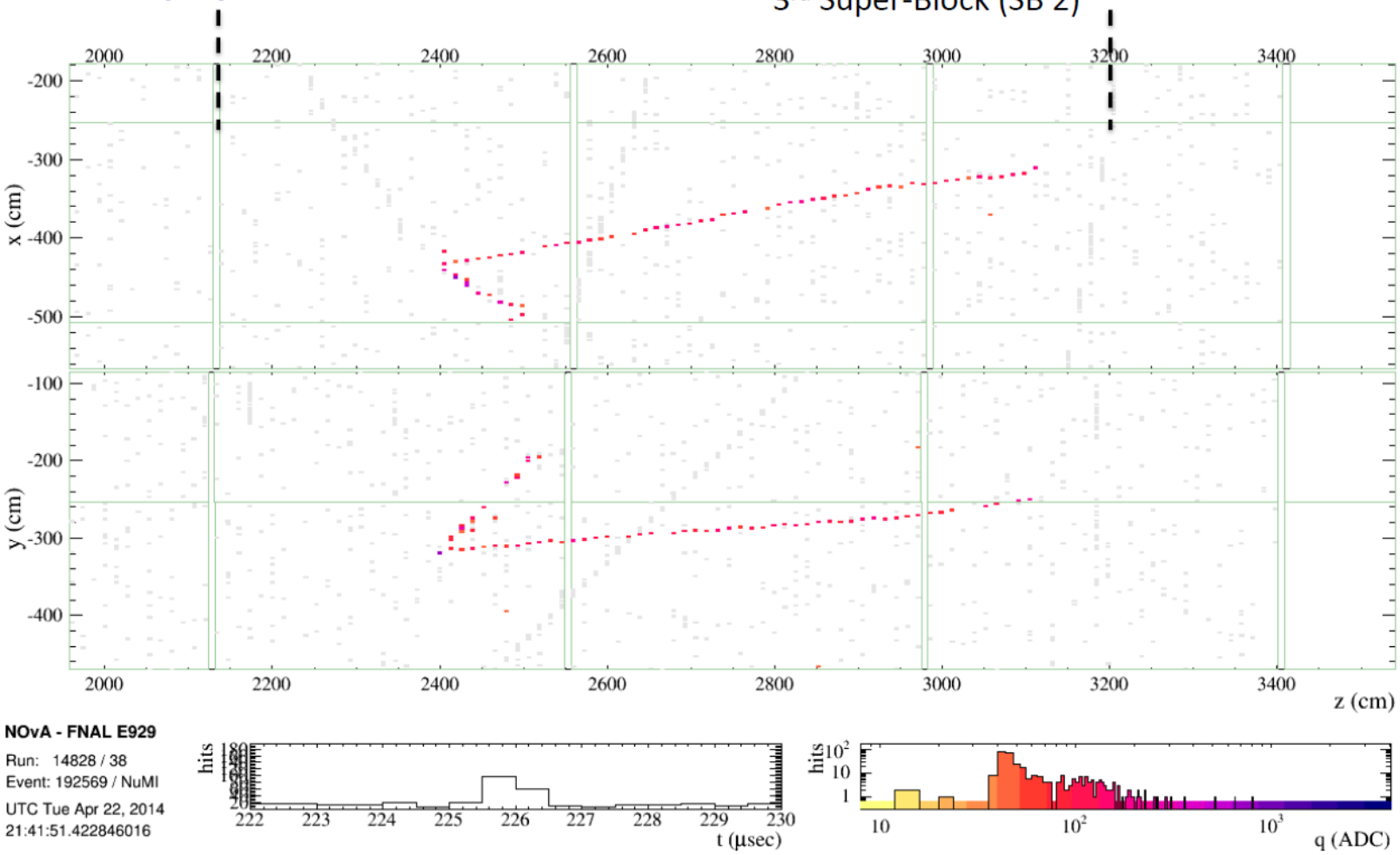
14737 31 291483 (5/1/0) 11

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