NOvA Experiment Status
All Experimenter's Meeting

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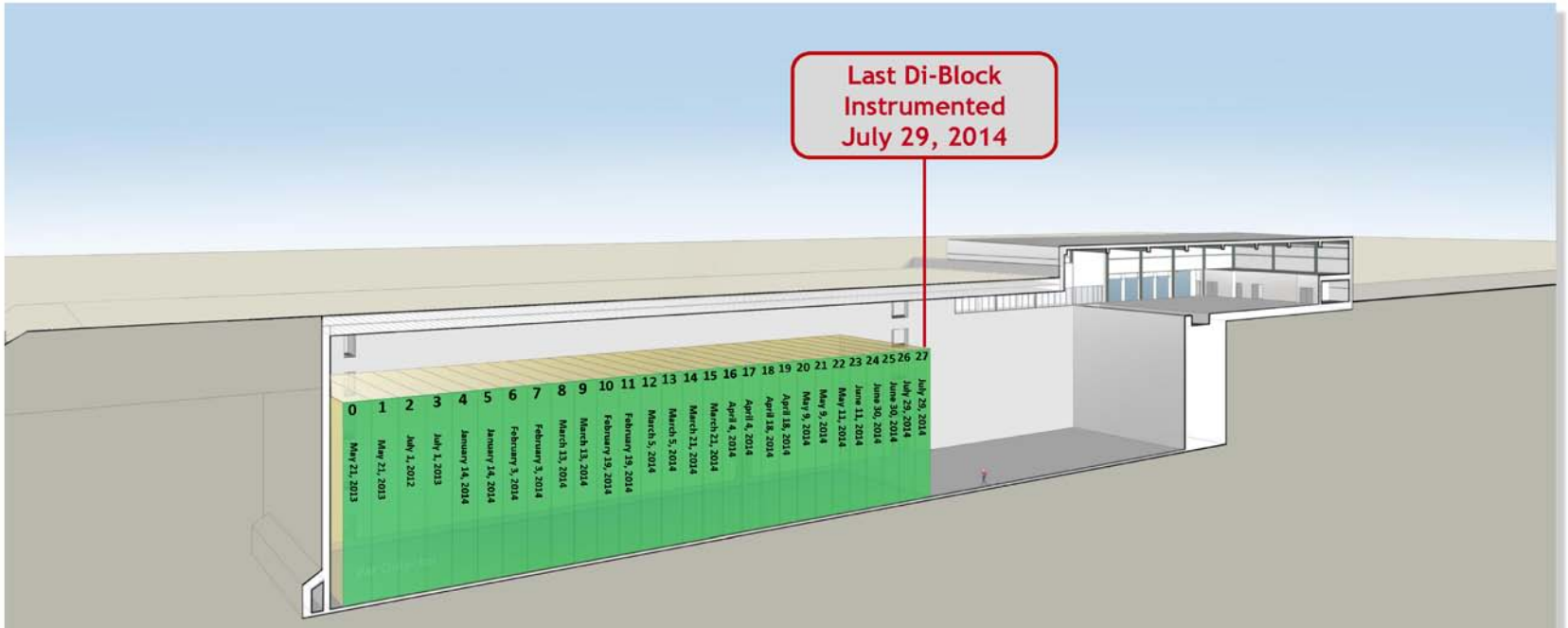
Aug 4, 2014

FD: Detector Assembly Progress

The Intensity Frontier

NOvA Far Detector Assembly Progress

Status Date: 29JUL14



Far Detector Complete

14 kilotons = 28 NOvA Blocks

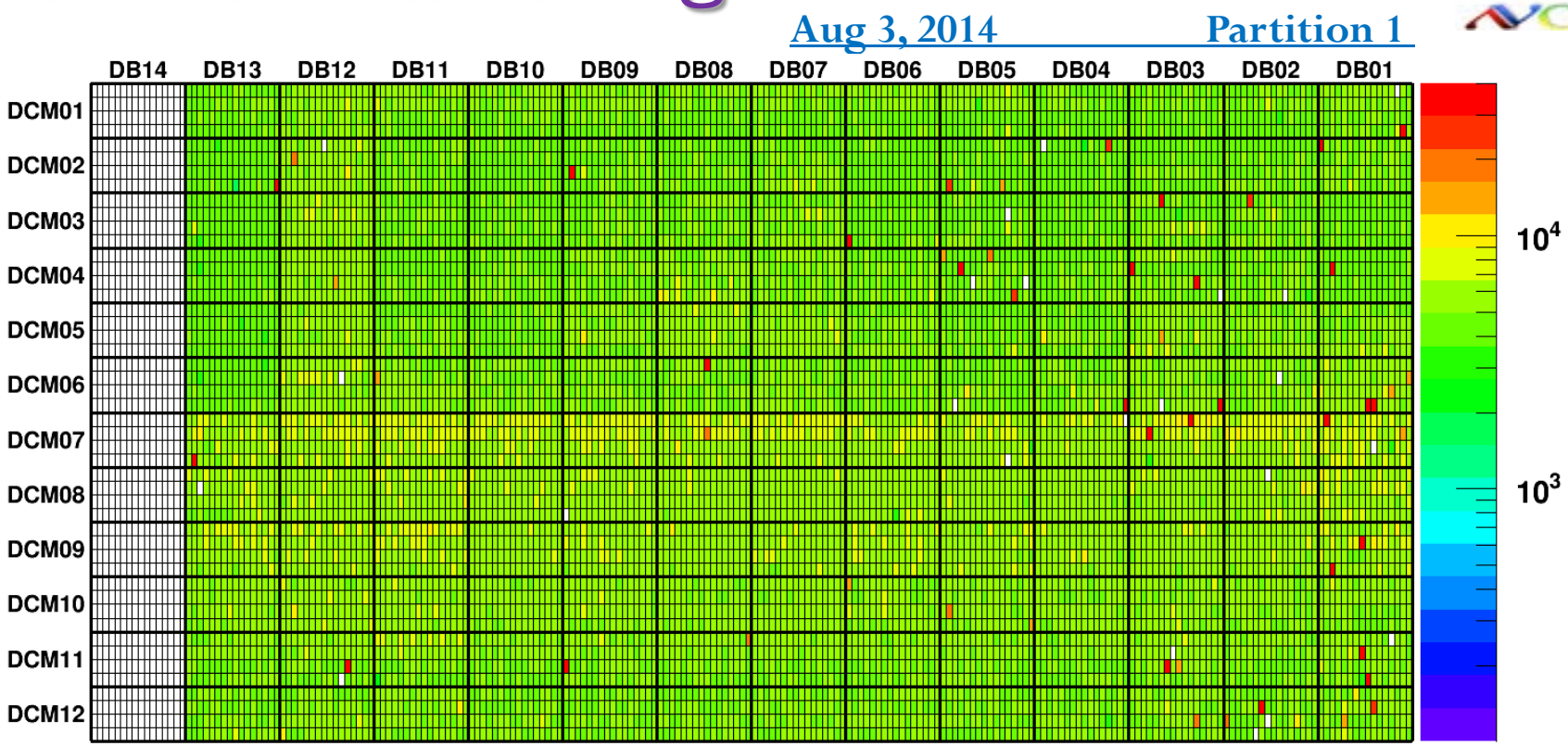
28 blocks of PVC modules are assembled and installed in place

28 blocks are filled with liquid scintillator

28 blocks are outfitted with electronics

96% cooled down

FarDet: Data-Taking



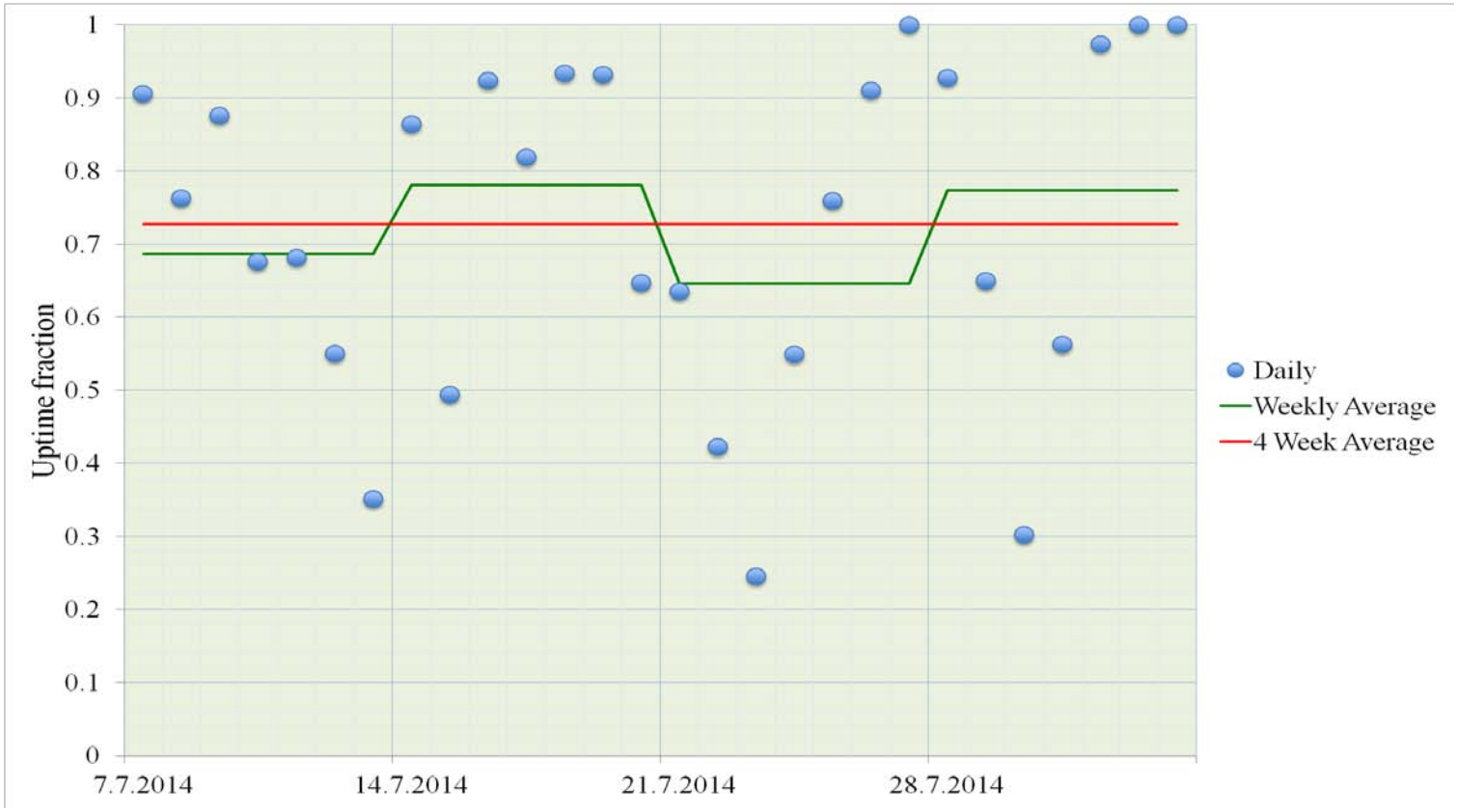
Partition 1

- diblocks 1 – 13 (over weekend)
- Running ~99% active,
- Cooled APDs, HV at full gain values.

Partition 2 – Diblock 14

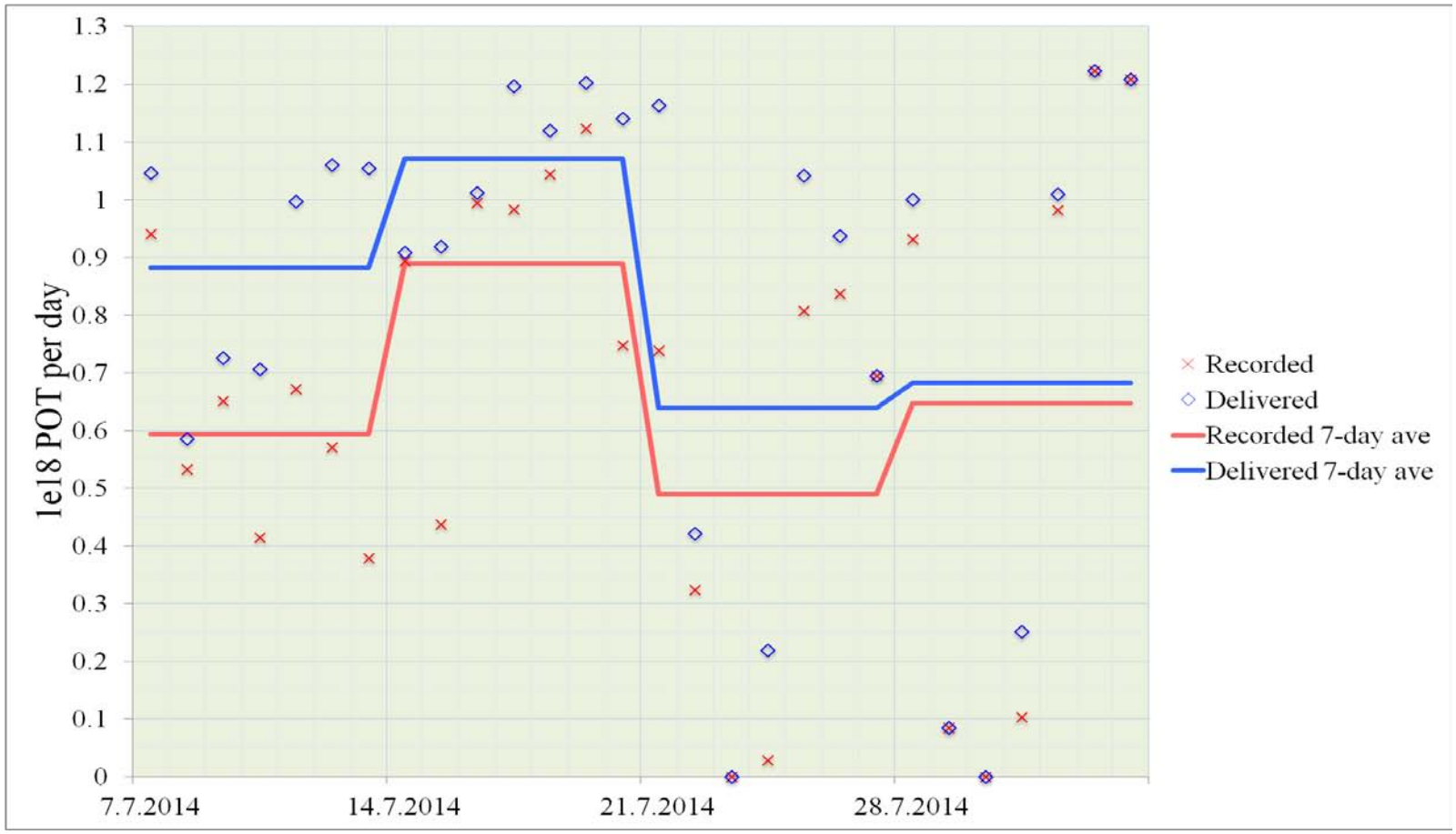
- 2nd –ary oil top-up for DiB 14 side
- ALL APDs has be installed!!
- Nevertheless due to lack of APDs for NearDet we are taking out (baked) APDs on DiB-05 and swapping them with new kind (no primer) APDs.

FD: DAQ Uptime



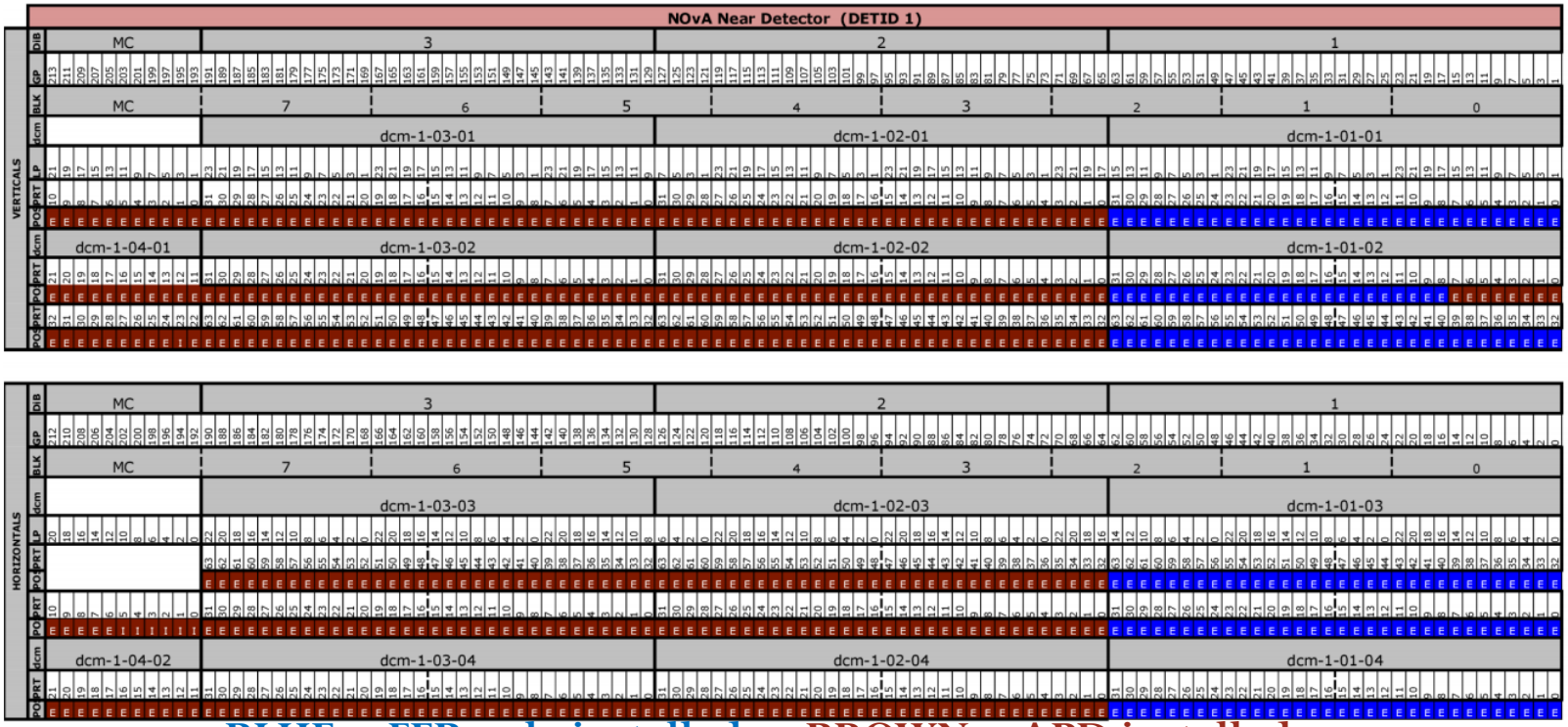
- Last week we better one, 77% of uptime (4 weeks average 73%).
- Tue morning the water leak on the side of detector occurred.
- Recovery from water leak, starting taking out APDs for NearDet, power glitch, moving oil top-up, other repairs made and other test on software (beam was not present!)
- On Thu interlock test for DiB-14 and applying new HV settings for repair work.
- We were very efficient over weekend, out run took 66 hours without any dead time.

FD: POTs delivered/recorded



- Beam was down for more than a couple of days.
- We used this beam down period very effectively for repairs and other tests.
- We recorded in average 0.65e18 (from 0.68) pots/day with very good 95% efficiency.

NearDet: Detector Assembly Progress



BLUE = FEB only installed BROWN = APD installed

- ✓ 439/631 APD installed – 70% completed, DiB 02-04 completed, started installing APDs on the last diblock plus repairing some.
- ✓ We are taking data on 2 partitions: FEB-only, with APDs installed.
- ✓ Partition 2 with APDs is running as cold!

Summary

FarDet:

- 28 of 28 blocks (100%) of FarDet fully-instrumented.
- 27 of 28 (96%) blocks successfully cooled down.
- Effectively used the beam down time to enhance FarDet.

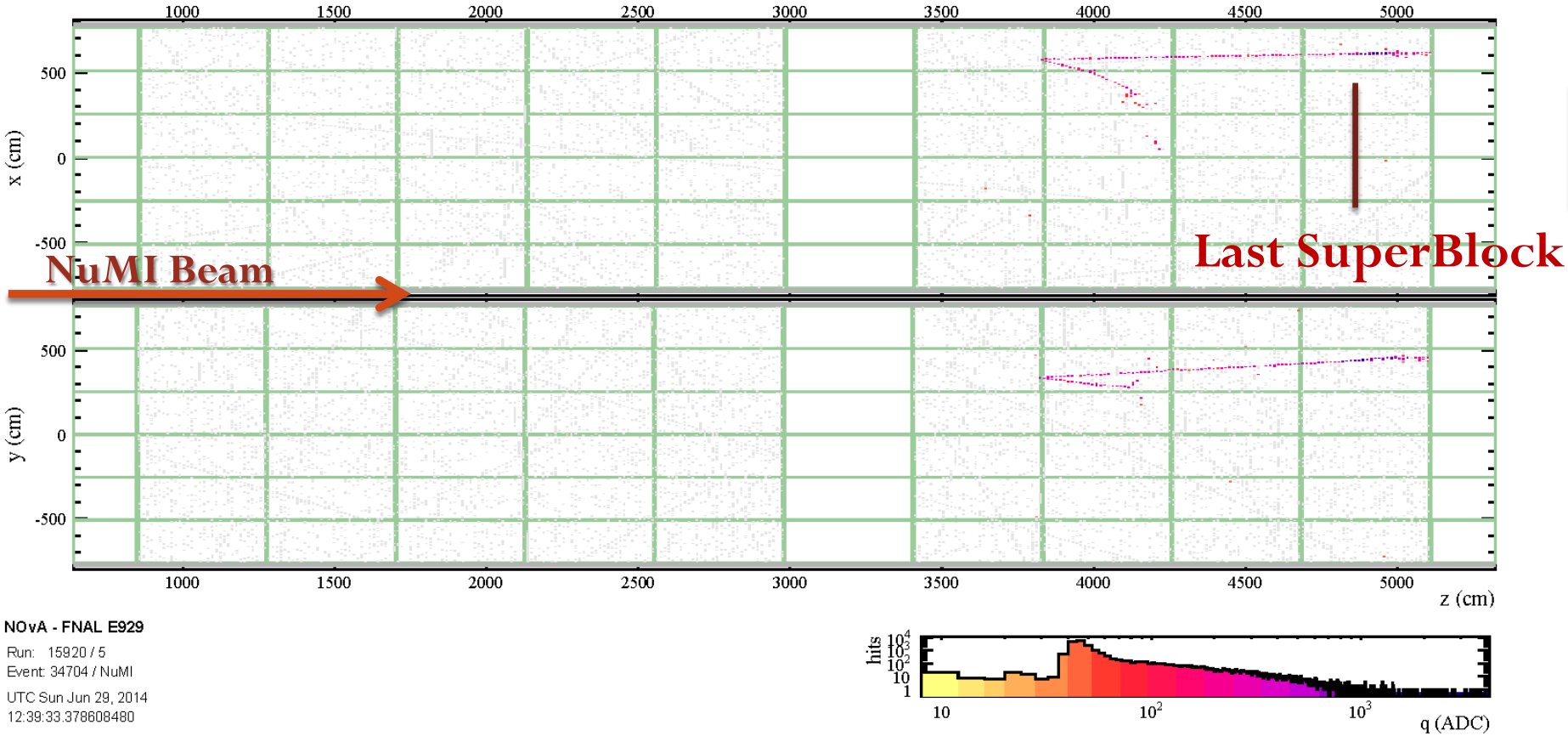
✓ We found neutrino candidates in all superblocks!

✓ Last diblock instrumented Jul 29, 2014!

NearDet:

- APD installation continue on DiB-01, total of 70% already.
- We started to run all partitions in 24/7 shifter mode.
- We run detector in cooled mode since last week.

News: The neutrino Candidate in last SB



- ✓ We can see the CC neutrino candidates in all superblocks!
- ✓ Satisfies KPP and reached another milestone of the project.