NOvA Experiment Status
All Experimenter's Meeting

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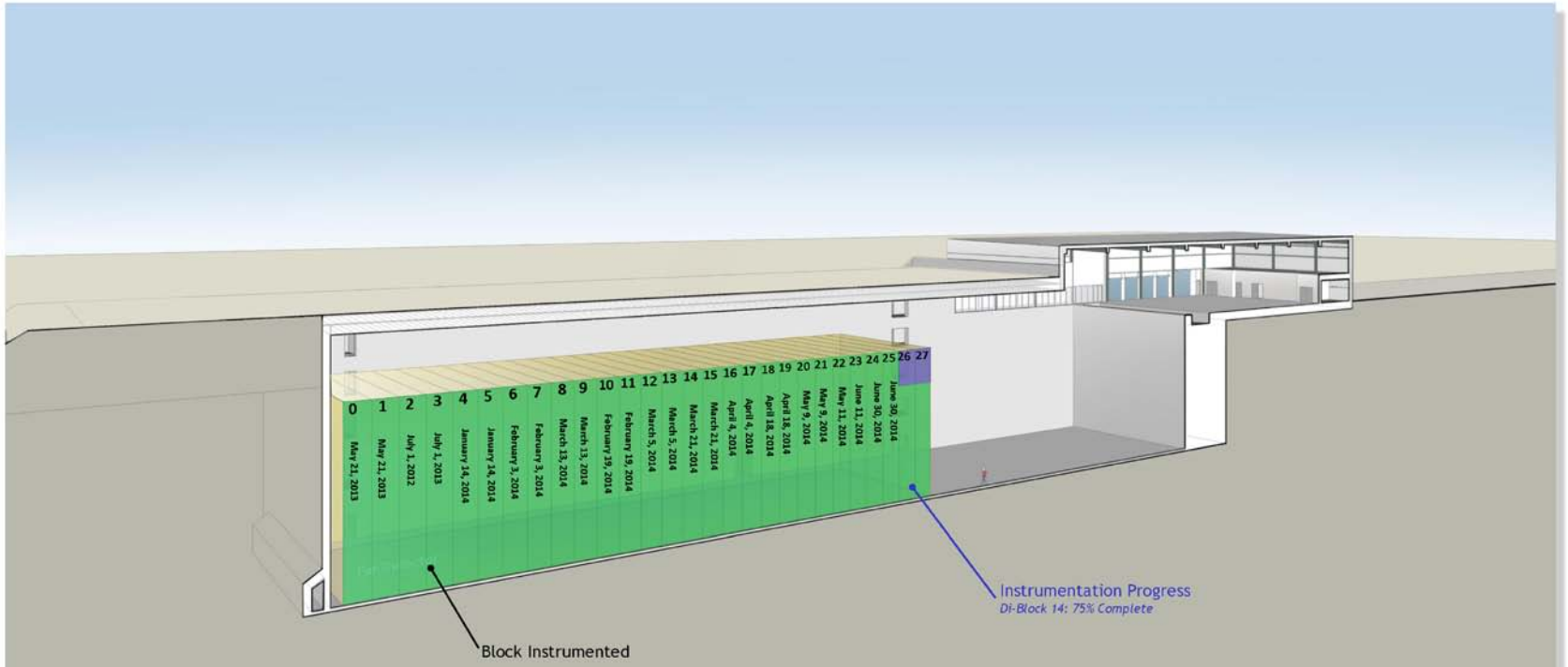
Jul 28, 2014

FD: Detector Assembly Progress

The Intensity Frontier

NOvA Far Detector Assembly Progress

Status Date: 28JUL14



14 kilotons = 28 NOvA Blocks

28 blocks of PVC modules are assembled and installed in place

28 blocks are filled with liquid scintillator

27.50 blocks are outfitted with electronics

93% cooled down

FarDet: Data-Taking

Jul 28 at 11am Partition 1

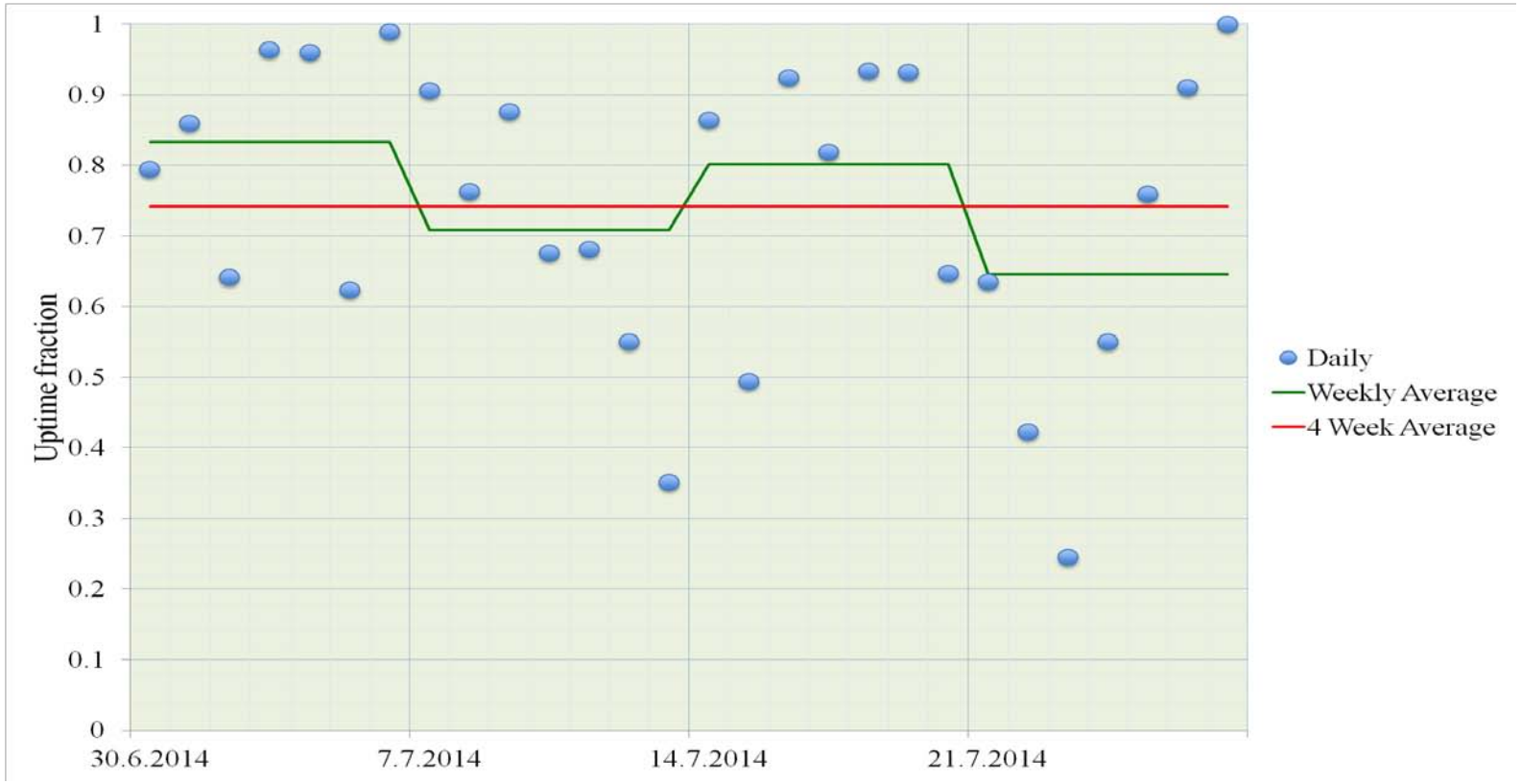
Partition 1

- diblocks 1 – 11, 12top, 13
- Running ~99% active,
- Cooled APDs, HV at full gain values.

Partition 2 – Diblocks 14

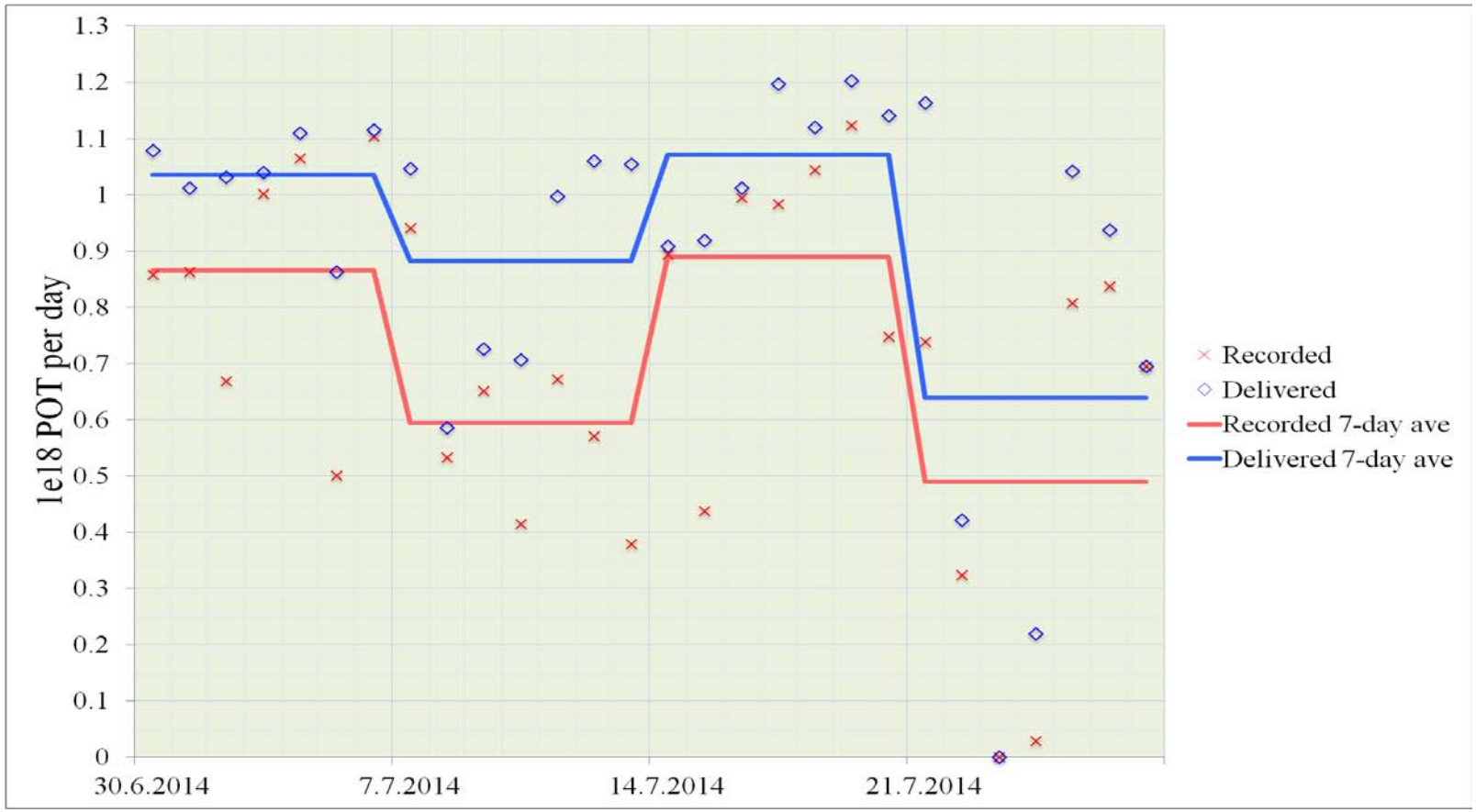
- 2nd –ary oil top-up for DiB 12 side
- We expect tomorrow ALL APDs will be installed!!

FD: DAQ Uptime



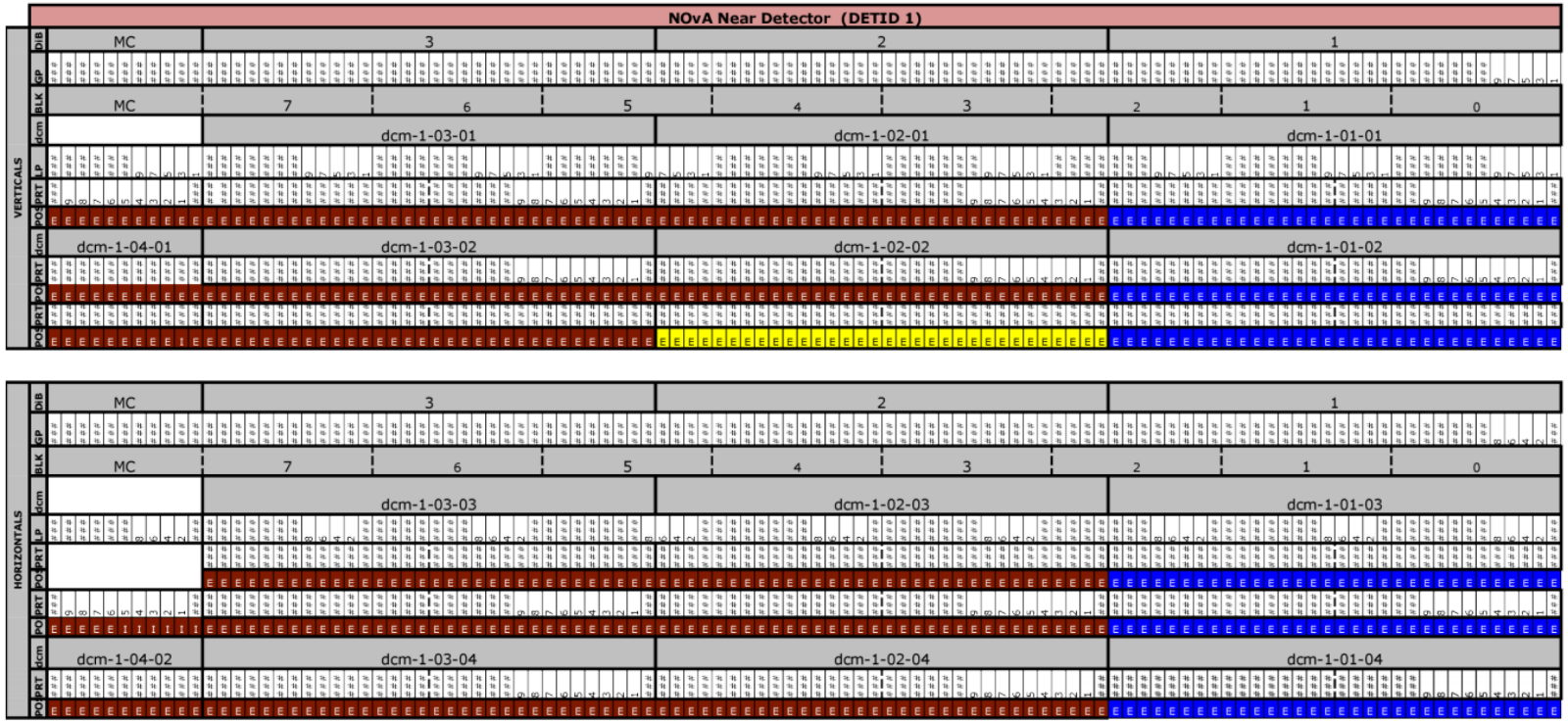
- Last week we reached only 65% of uptime.
- Main reason was Far Detector power outage planned for electrical work with some problems during recovery form that action.
- We used also beam shutdown time for other repairs and updates.
- Due to high temperature at Ash River and the HVAC failure we were down on Mon.
- On Wed during the Ash River Collaboration Tour we had two water leaks.

FD: POTs delivered/recorded



- Of course due to 2.5 day of beam shutdown the number of POTs recorded was low.
- Also On Sun there was the power glitch at the accelerator site.
- We recorded in average 0.49 e18 (from 0.64) pots/day with poor 77% efficiency.

NearDet: Detector Assembly Progress



BLUE = FEB only installed BROWN = APD installed

- ✓ 439/631 APD installed – 70% completed, DiB 03, 04 (MC) and DiB-02 side and partially DiB-02 top.
- ✓ We are taking data on 2 partitions: FEB-only, with APDs installed.
- ✓ Both are now part of the common shifter procedure.
- ✓ Still need adopt cooling and apply full HV settings (this week!)

Summary

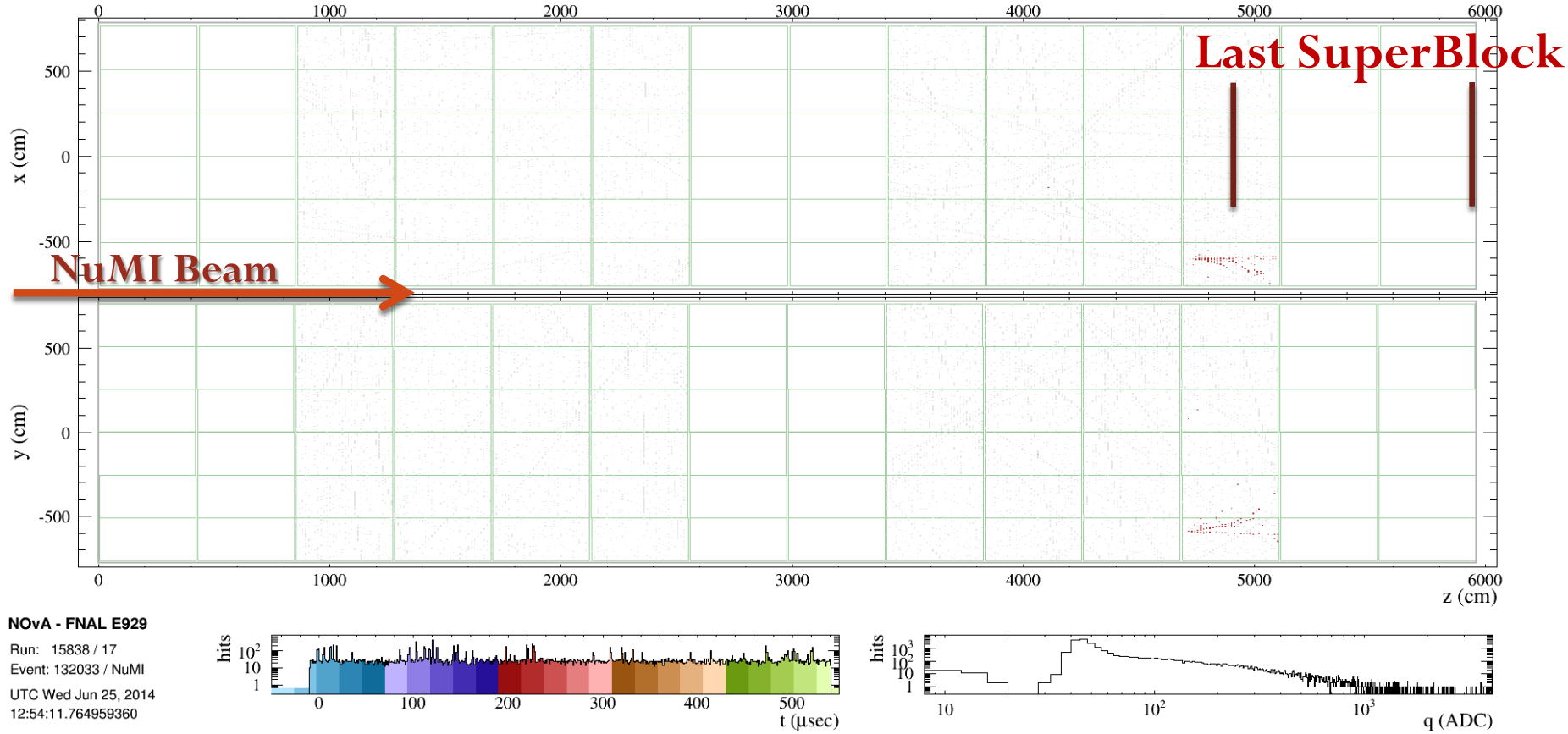
FarDet:

- 27.5 of 28 blocks (98%) of FarDet fully-instrumented, running with full gain mode.
- 26 of 28 (93%) blocks successfully cooled down.
- We tried to run the Physics partition efficiently as possible to find the neutrino candidate in the last Superblock.
- Due to the planned power outage and other issue we had big downtimes, and in parallel there was the beam shutdown.
- We are about to finish the assembly of the Far Detector this week, of course still some repairs needed.

NearDet:

- APD installation continue on DiB-02, total of 70% already.
- We started to run all partitions in 24/7 shifter mode.
- We are about to run detector in cooled mode.

News: A neutrino Candidate in last SB



✓ We can see a neutrino candidate in the event which is overlapping the last Super-block.