

NOvA Experiment Status

All Experimenter's Meeting

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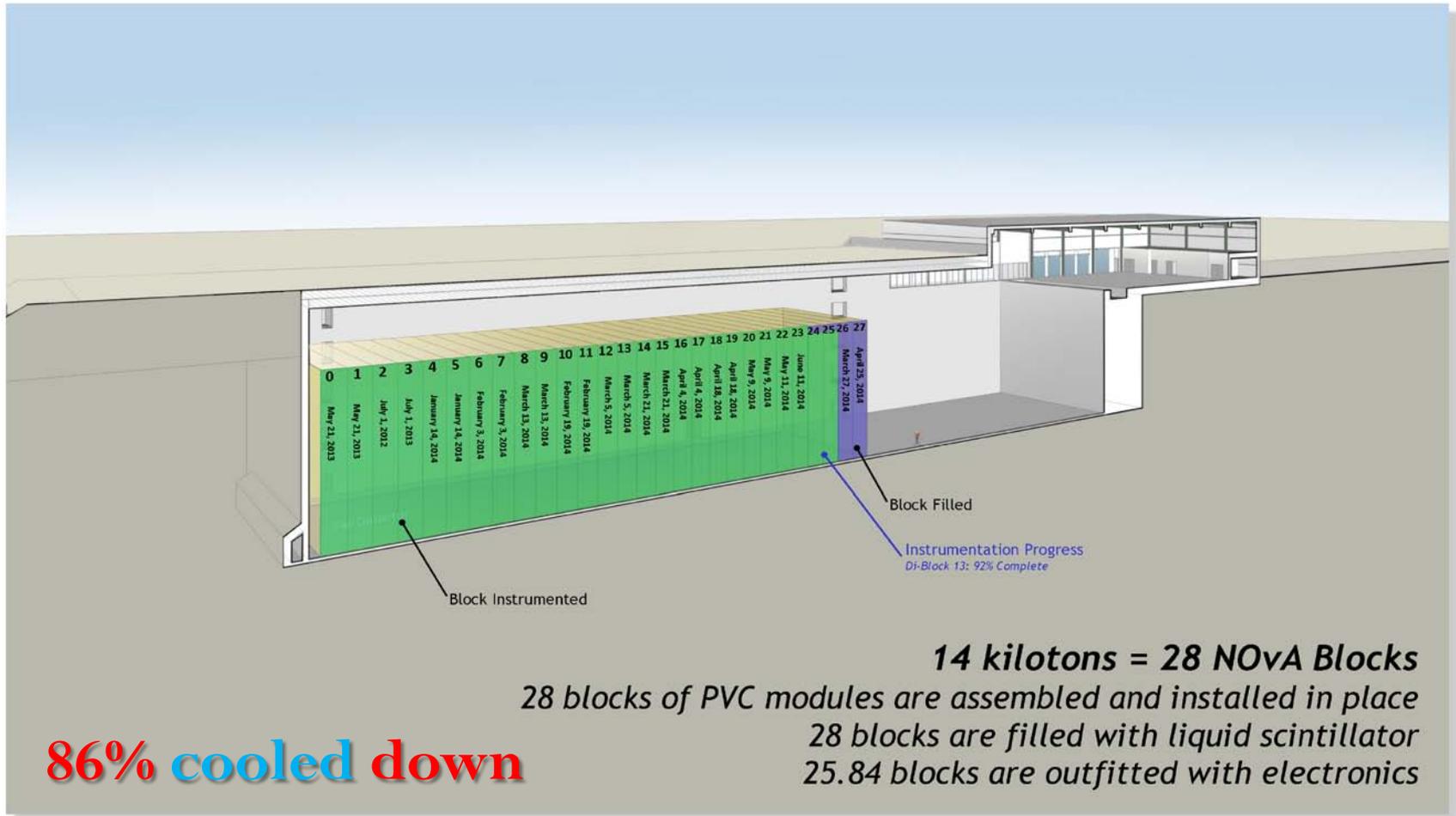
Jun 30, 2014

FD: Detector Assembly Progress



NOvA Far Detector Assembly Progress

Status Date: 30JUN14



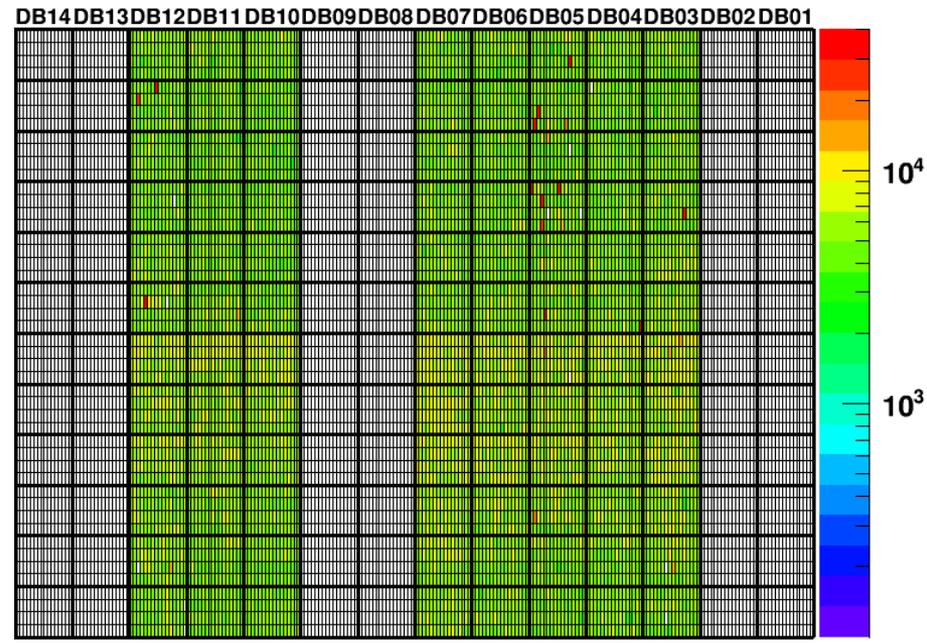
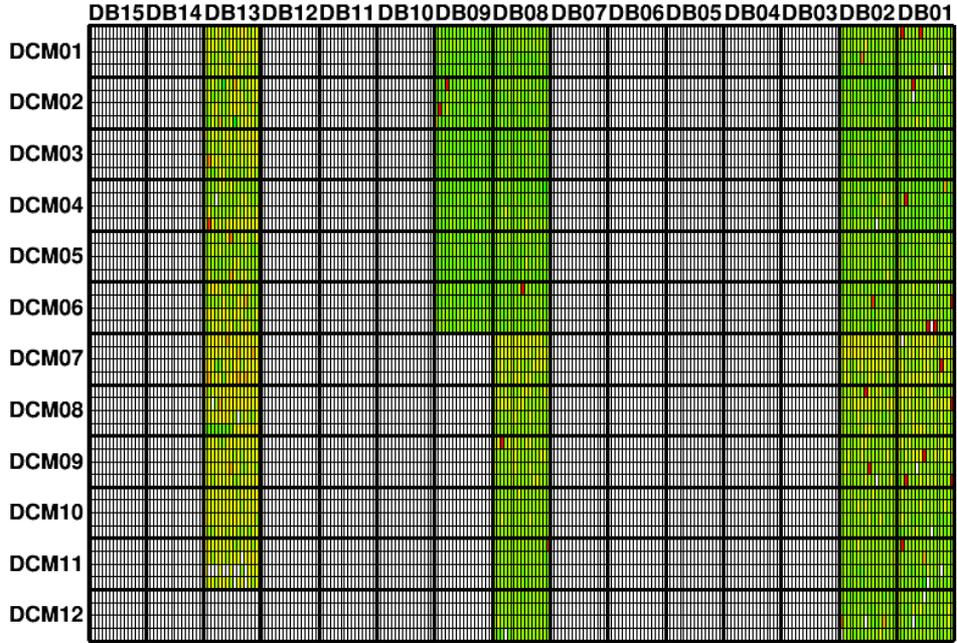
FarDet: Data-Taking



Partition 2

Jun 30 at 1pm

Partition 1

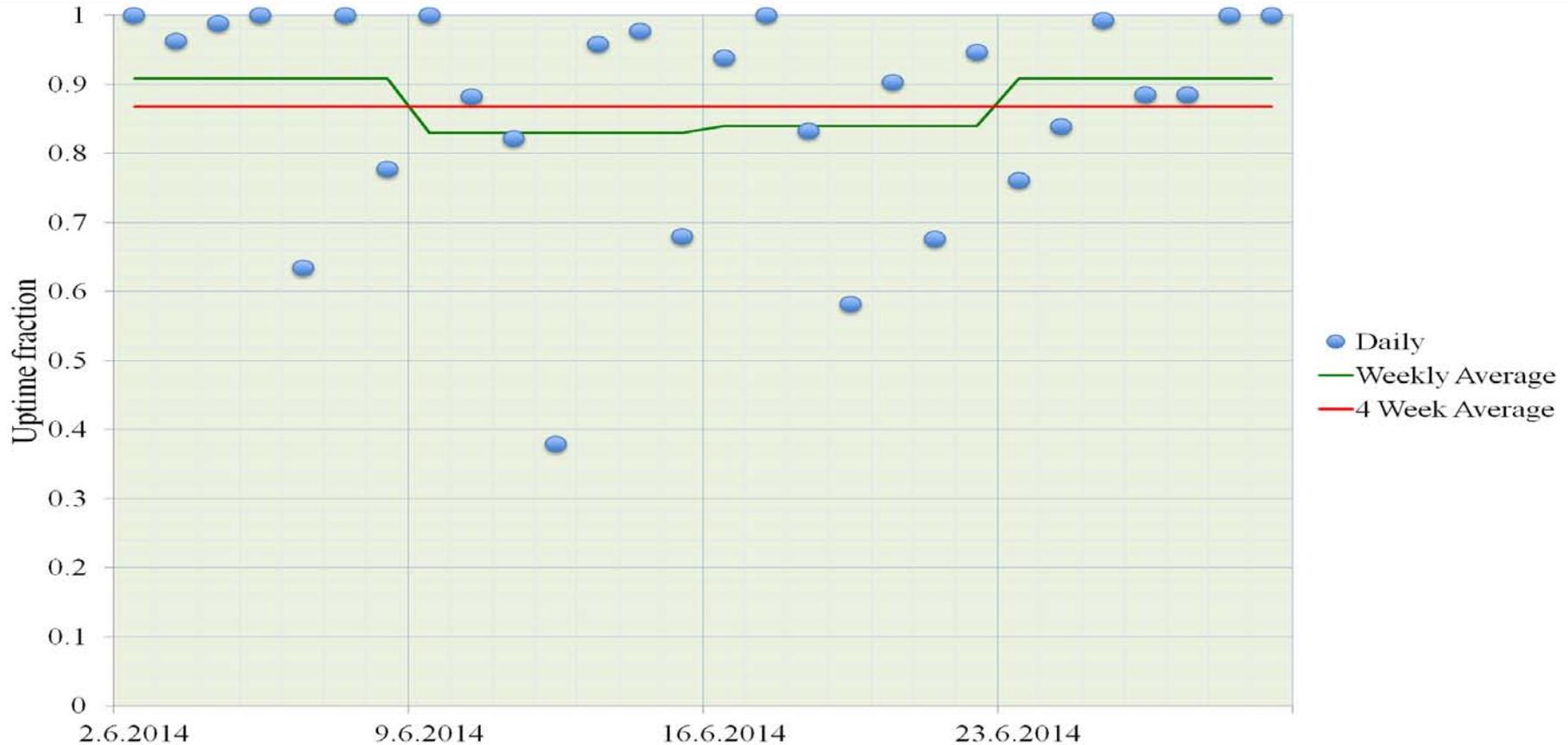


Partition 2 – Diblocks 1,2,8,9*, 13
 Diblocks 1-12 cooled APDs
 2nd –ary oil top-up for DiB 9
 Installation of new APDs on DB 13, and
 starting on DB 14 later this weak

Partition 1 – diblocks 3,4,5,6,7,10,11,12
 DB-08 about to move back to P1.
 Running ~99% active, cooled APDs
 HV at full gain values.

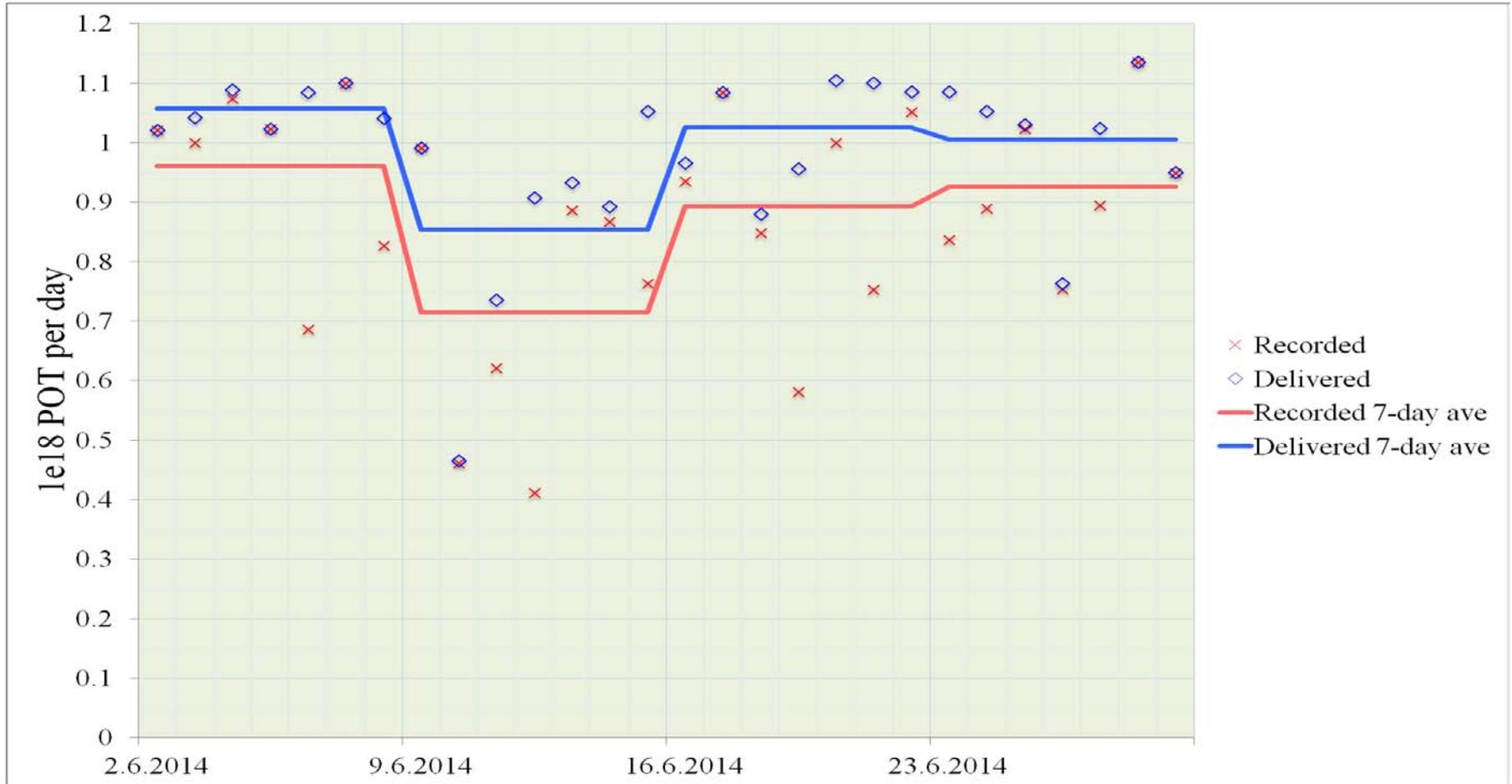
Partition 3 – running diblocks only 14 (Front End Boards only) – last week!

FD: DAQ Uptime



- Averaging about 87% over 4 weeks and better 91% in past week.
- Mon: tests of new DCM firmware on big partitions showed us issues with big data volume read-out, we needed to roll back; a lot of shorter downtimes.
- Tue: Interlock alarms due to high dew point occurred, this shut down power supplies.
- Fri: After new HV settings updated & DSO taken problems with cooling detector.

FD: POTs delivered/recorded



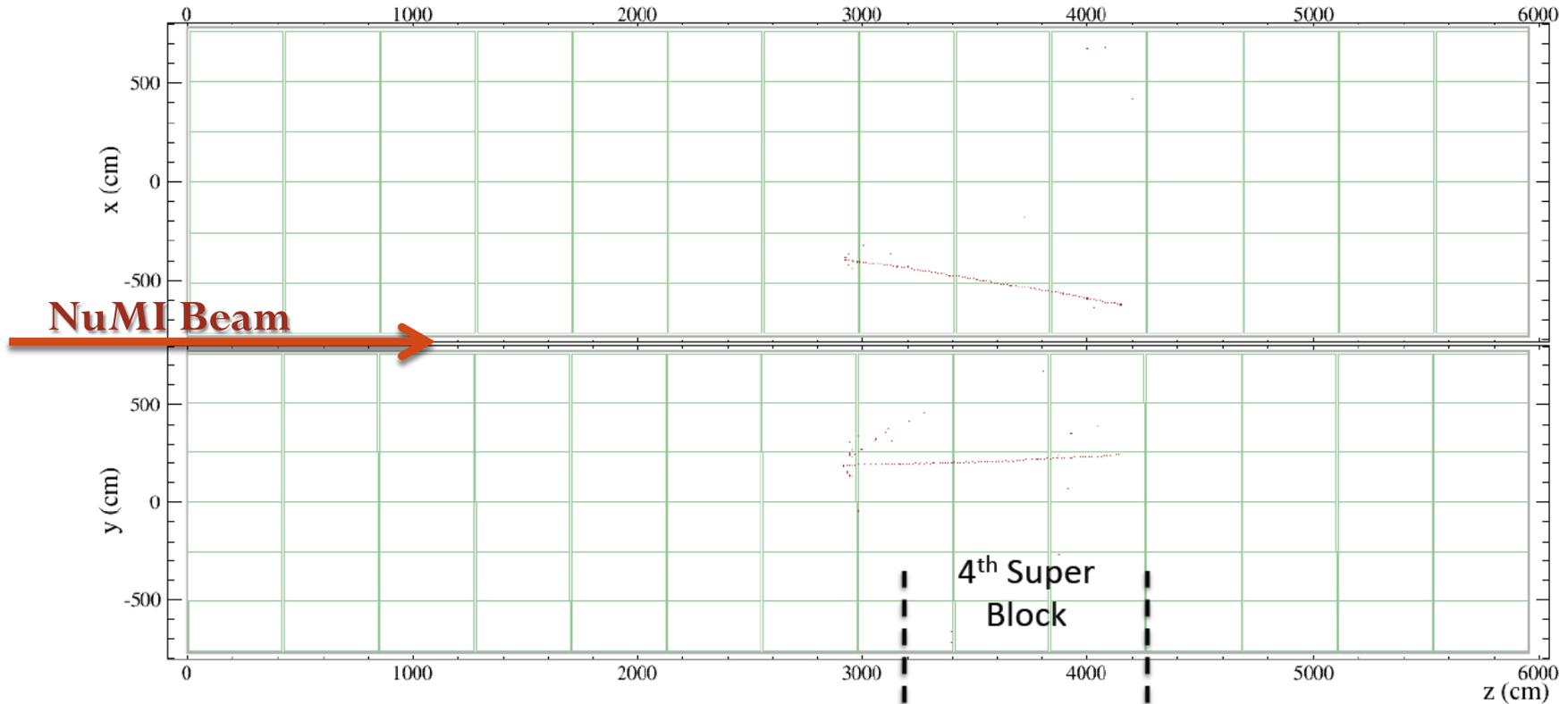
- Good week, at beginning we had problem with DAQ firmware and interlock alarm.
- We recorded in average 0.93 e18 (from low 1.01) pots/day with good 93% efficiency.

Event Scanning Results (Round 4)



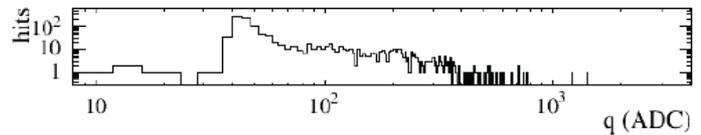
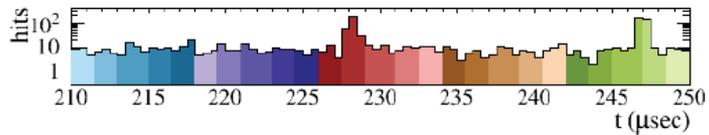
- The 4th Super Block = ✓
- The 5th Super Block = ✓
- Timing peak = ✓

Neutrino events in FarDet



NOvA - FNAL E929

Run: 15085 / 0
 Event: 1746 / NuMI
 UTC Fri May 9, 2014
 00:30:37.332491904



15085

0

1746

(7/0/0)

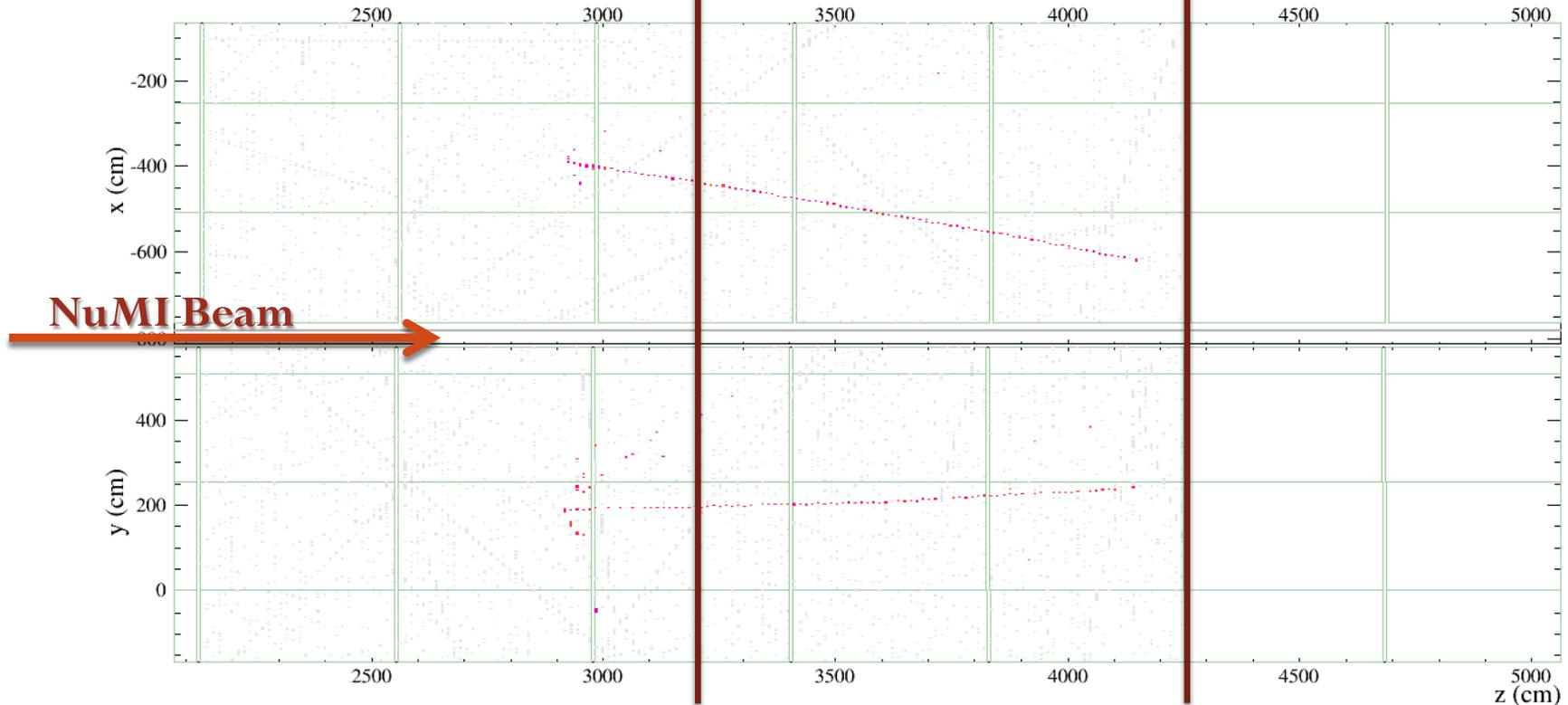
14

IN Beam Window

Neutrino events in FarDet

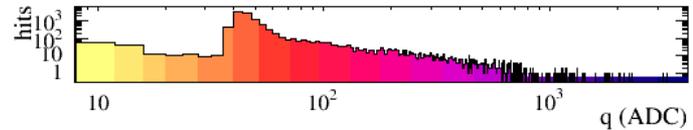
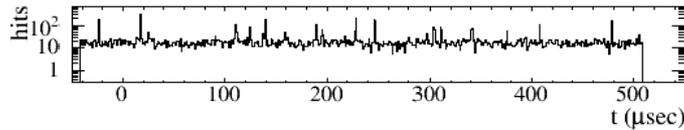


4th SuperBlock



NOvA - FNAL E929

Run: 15085 / 0
Event: 1746 / NuMI
UTC Fri May 9, 2014
00:30:37.332491904



15085

0

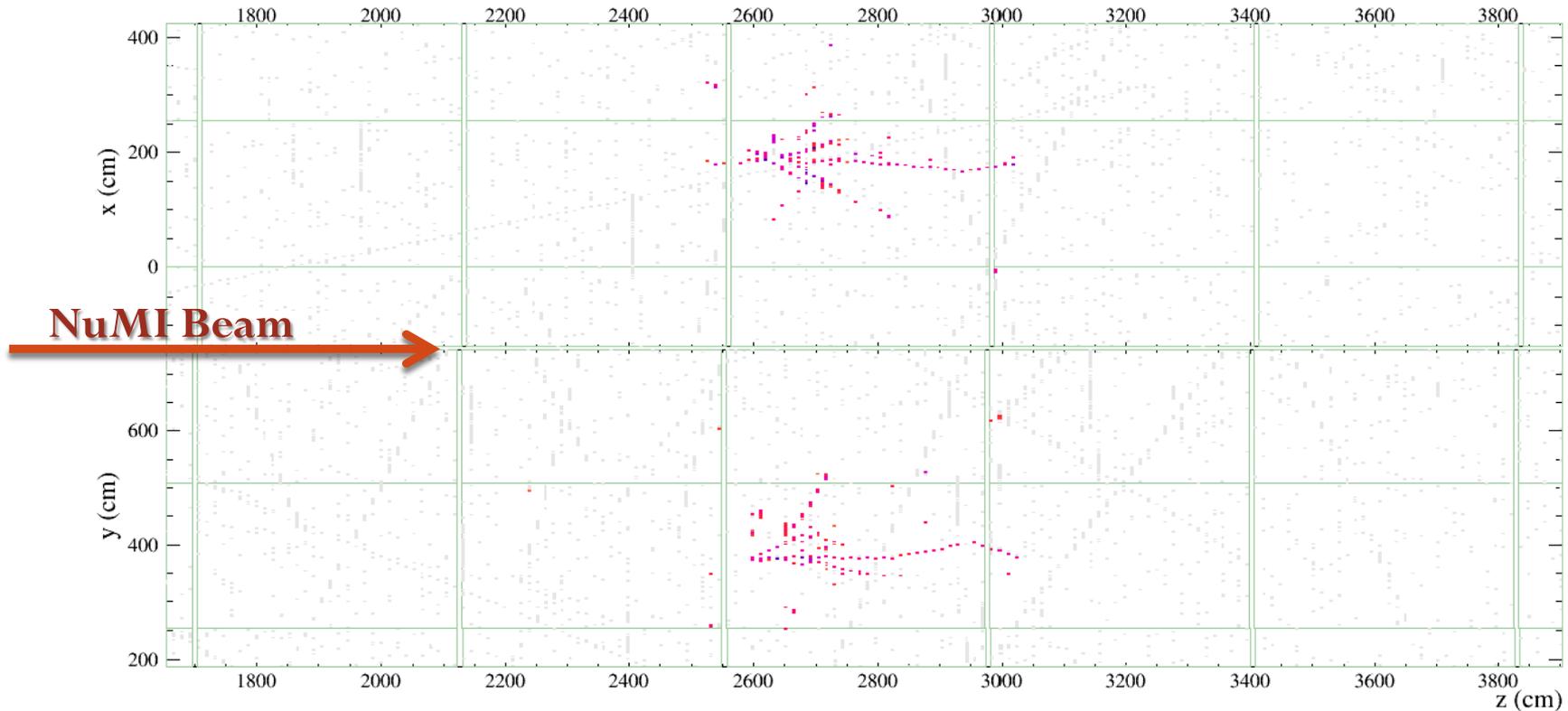
1746

(7/0/0)

14

IN Beam Window

Neutrino events in FarDet



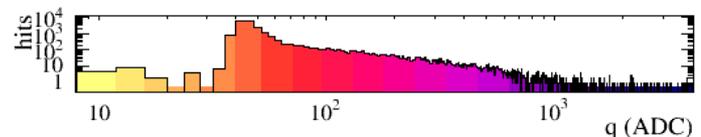
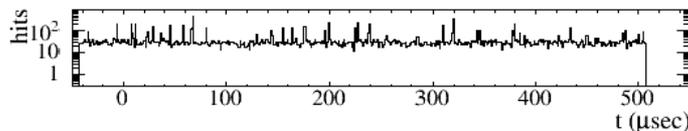
NOVA - FNAL E929

Run: 15007 / 5

Event: 40276 / NuMI

UTC Sat May 3, 2014

23:54:59.313493248



15007

5

40276

(7/0/0)

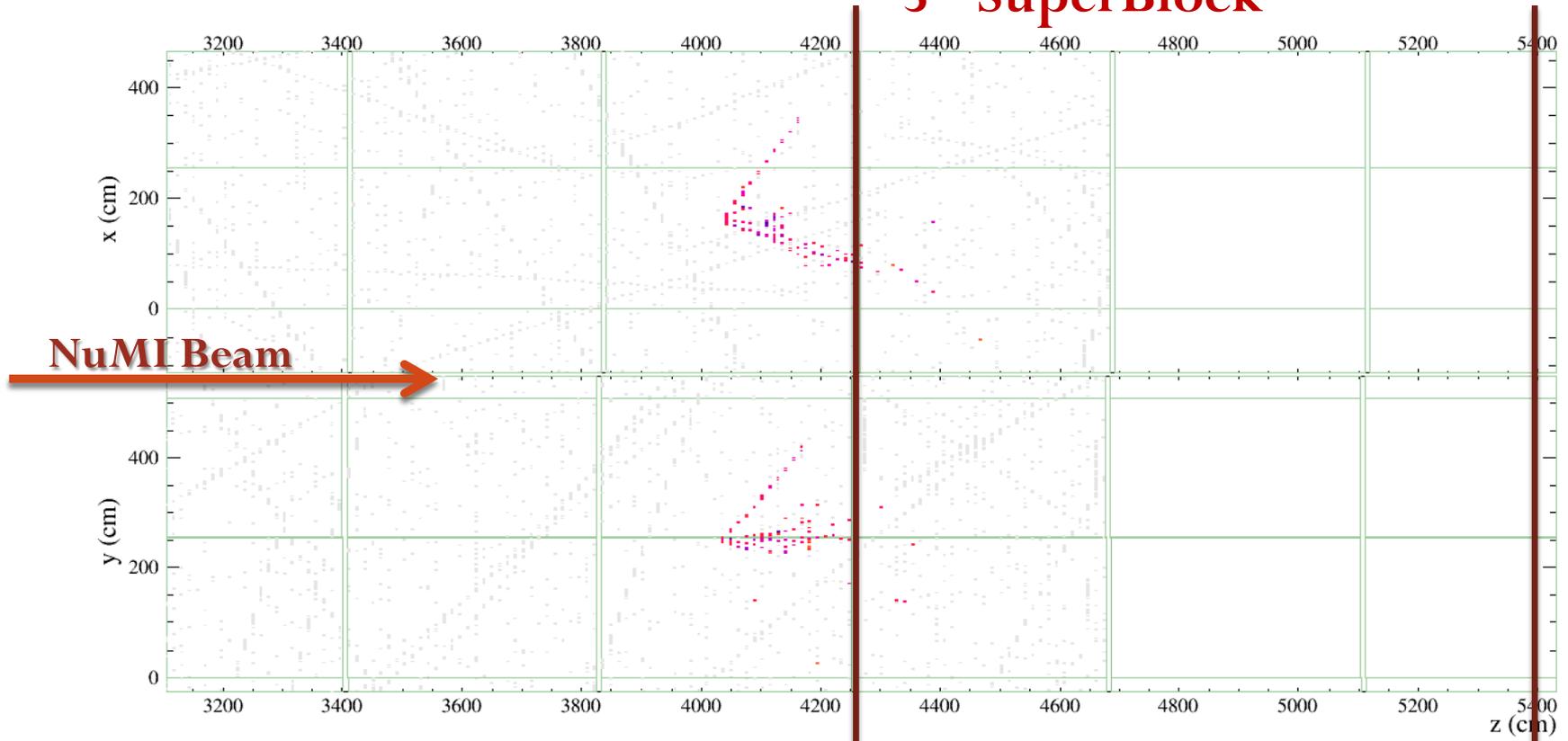
14

IN Beam Window

Neutrino events in FarDet

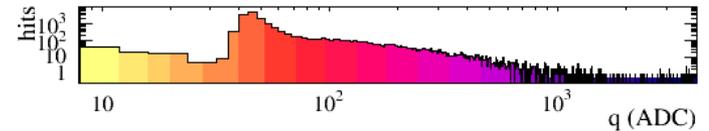
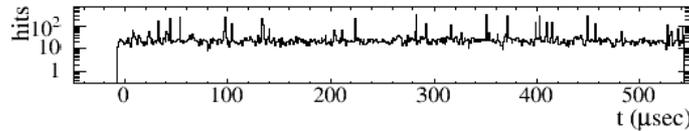


5th SuperBlock



NOVA - FNAL E929

Run: 15470 / 49
 Event: 124284 / NuMI
 UTC Mon Jun 2, 2014
 23:29:55.741007680



15470 49 124284 (7/0/0) 14

IN Beam Window

NearDet: Detector Assembly Progress



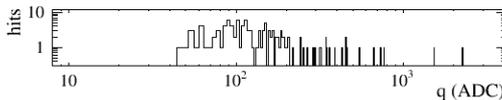
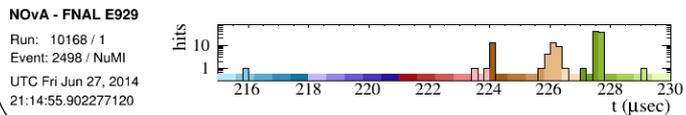
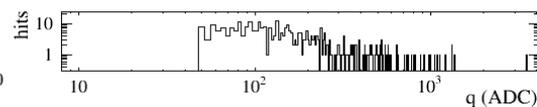
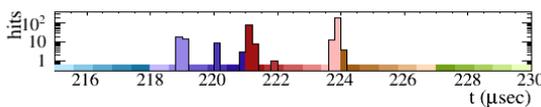
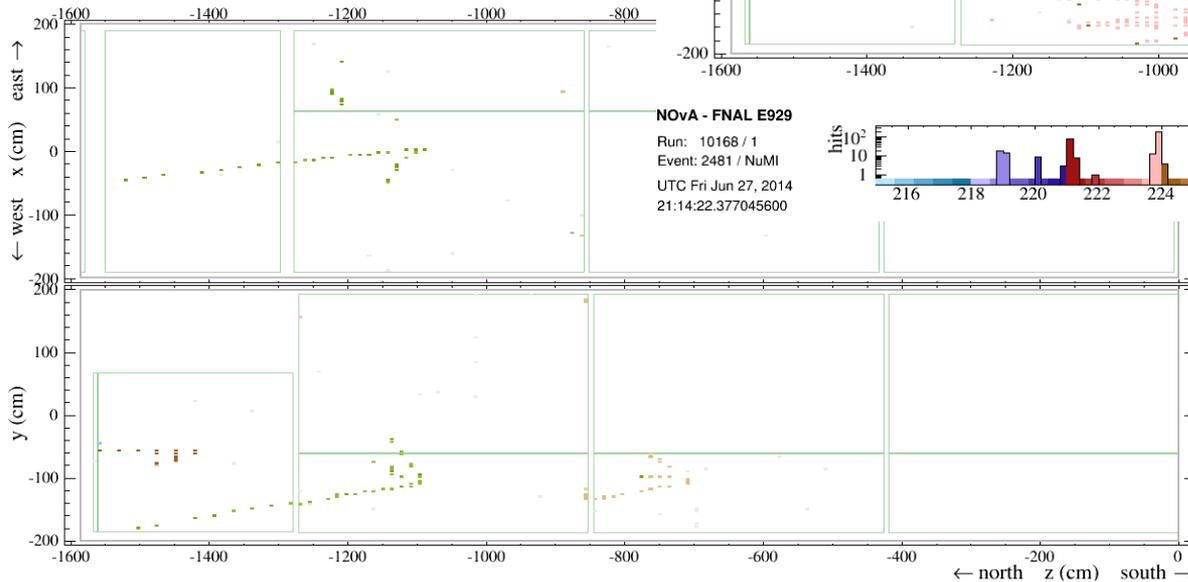
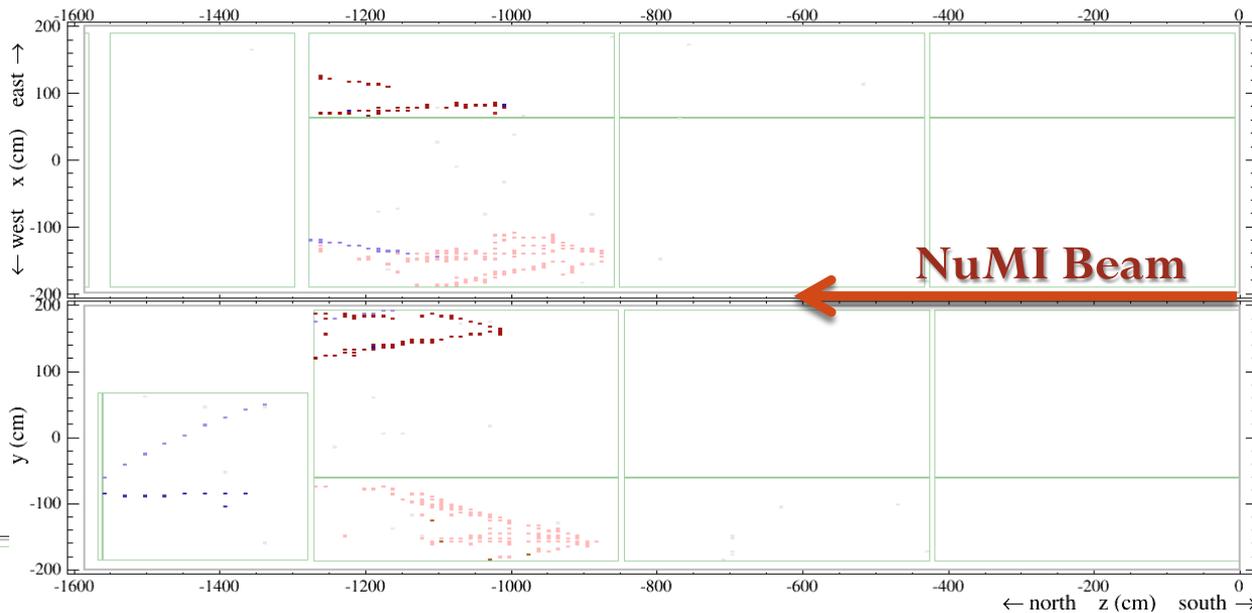
nova-ndug-cam-01 Fri May 16 16:19:48 2014
Exposure: 1/40 (1200) Frame: 67488634
Internal Temp: 42.0



Neutrino events in NearDet



- As we have installed APDs on whole diblock, we could see 3D tracks going through detector.
- They lay in beam timing window



- APDs run at full HV.
- We use multi-point read-out (several timing points for one hit) for better timing resolution.

NOvA - FNAL E929
Run: 10168 / 1
Event: 2498 / NuMI
UTC Fri Jun 27, 2014
21:14:55.902277120

Summary



FarDet:

- **25.8** of 28 blocks (92%) of FarDet fully-instrumented, running with full gain mode.
- **24** of 28 blocks successfully cooled down.
- The 'Physics' partition is not contiguous due to oil top-up, since today we are running with 8 diblocks now.
- Efficiency of data taking last week was better than long term average.
- **We could see neutrino candidates in 5 Superblocks (only 1 missing.)!**

NearDet:

- APDs installed on the whole DiB-3, total about 50%.
- We run NearDet over day with full HV on to see clear 3D tracks of NuMI events through detector.