

NOvA Experiment Status

All Experimenter's Meeting

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Operations – Summary



□ BEAM:

- Being ready and waiting for.

□ NearDet:

- Maintenance ongoing, otherwise good running.

□ FarDet:

- Detector is stabilized and in very good condition.
- Last call maintenance in progress.
- New base DAQ software release is about to deploy.
- Expect the repair work on one of two chiller system compressors.
- Kind of interference in two available timing links under special configuration seen (not used in the common data taking)

Operations – Far detector



❑ Power glitch:

- On Fri the short power bump occurred at Ash River site.
- During the summer shutdown the significant part of the important computers moved to the UPS, still one remaining.
- Still big impact on data taking (huge amount of electronics can not be on UPS), no absolute way to avoid these incidents.
- Nevertheless much work made to simplify a recovery from this kind of events (UPS, booting software, recovery procedures).

❑ Chiller and water system:

- Two weeks ago we observed bad behavior one of 2 (one serving as the backup) compressors for the water/chiller system.
- Running with one for 2 weeks satisfied, in case of emergency we could still use the failure one.
- Last week the tech authorized the failure (under warranty) and new components are on the site now, expecting the repair work later this week.

Operations – Far & Near detector



□ Timing chain links:

- On the request by the analysis group what is a probability that a restoring of the timing chains may cause a shift (by 64 μ s) in data wrt beam clock we performed a special test on the timing links.
- The test – scrubbing of the timing chain – revealed two unexpected or unknown effects.
 - Running this test in parallel with the common data taking showed an inner interference between 2 timing links (not expected). On both detectors we saw the data taking crashed during less one hour of running.
 - Unplugged cables of one chain from the second one between master and slave TDUs and dcms caused causal crashes of the dcm hardware configuration (clock links).
 - After the week the tests stopped and backed up the timing system to the default, no issues seen since that time.

□ New DAQ base release:

- After many partial tests of the on-line software we wrapped test releases into one, new base release.
- Should be deployed and tested this week, serving for the next run.

Operations – Near detector



❑ PLC communication lost:

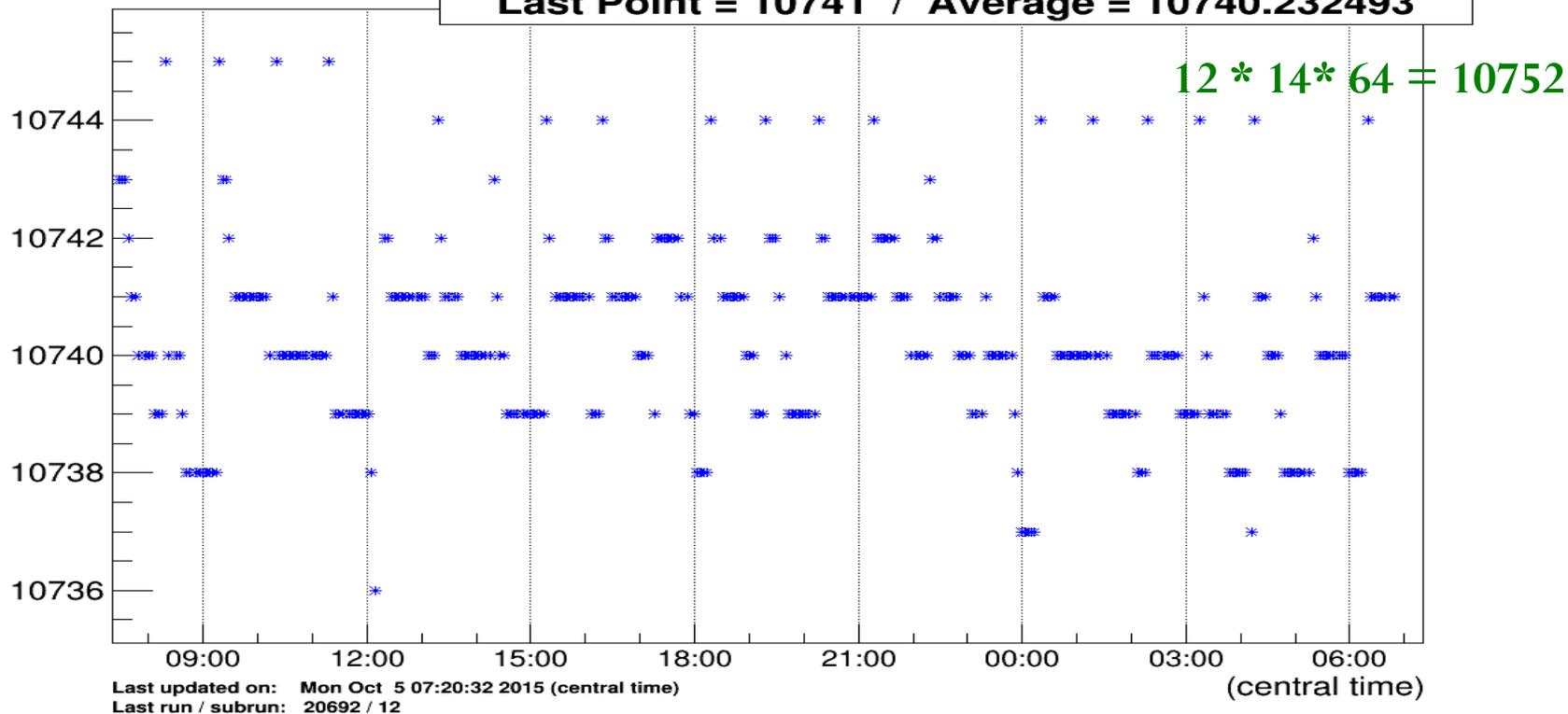
- PLC communication failure occurred last week in the underground caused by a damaged network card.
- A way of alarming when the detector is in trouble.
- Nonetheless the detector safety (interlocks) did not disrupt.
- The faulty card replaced, anyway the issue with the communication caused with a new lab firewall setup (ACNET).

FarDet maintenance



Number of Active FEBs per Subrun - partition 1

Last Point = 10741 / Average = 10740.232493

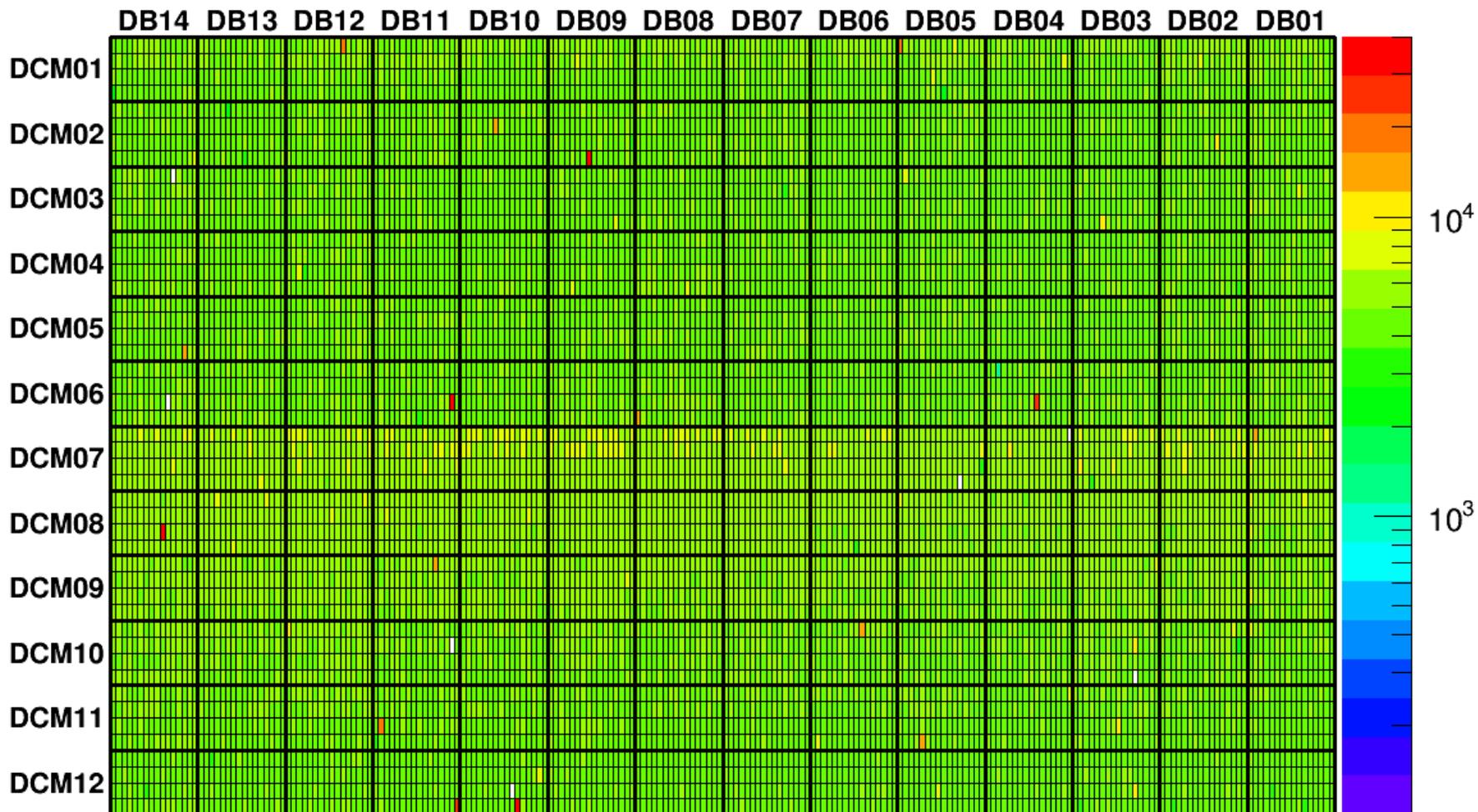


- ❑ We maintained the detector several times during the summer beam shutdown.
- ❑ This work was highly coordinated with expert tests on-site.
- ❑ Not massive electronics replacing, each channel studied individually.
- ❑ The effort results in less than one pre mile of non-responsive or bad channels.

FarDet maintenance



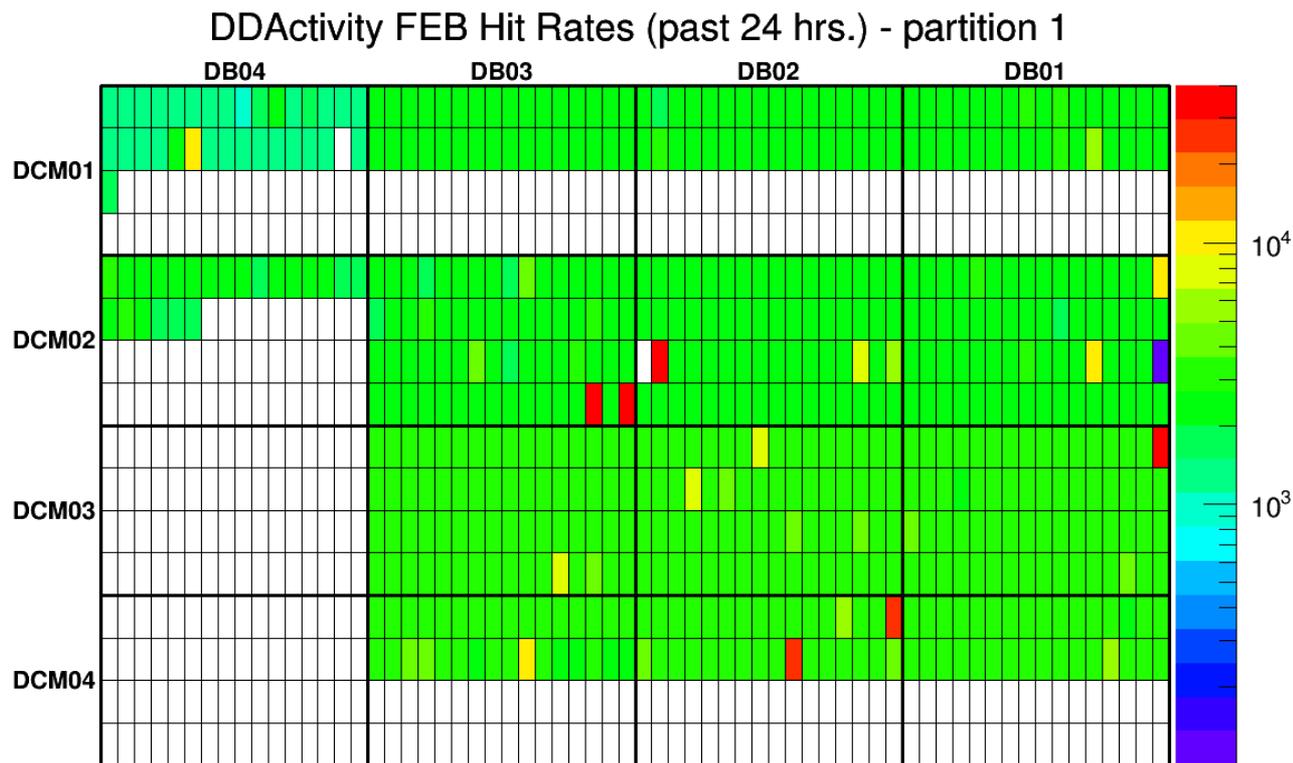
FEB Hit Rates (past 24 hrs.) - partition 1



Last updated on: Mon Oct 5 07:20:32 2015 (central time)

Last run / subrun: 20692 / 12

NearDet maintenance



Last updated on: Mon Oct 5 07:16:06 2015 (central time)
Last run / subrun: 11213 / 14

- Significant improvement for the data quality reached.
- Many channels treated by swapping APDs and FEBs, recheck all bad tightening, dry gas and water chiller lines.
- A couple of bad channels ($<1\%$) under investigation.