

NOvA Experiment Status

All Experimenter's Meeting

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Operations – Summary



❑ BEAM:

- Getting 230-260 kW and waiting for higher intensities.

❑ NearDet:

- Running well. Short downtime due to 2 DAQ crashes.
- One bigger downtime needed to test new Data Logger soft.

❑ FarDet: running in high gain mode

- Recovery from the water leak followed another water chiller issue on Tue when tested the repaired compressor.
- Found a bug in the Data Logger software logic had prevented us properly closed up to 10% of data files..
- It seems we need to throttle DDT triggers more for running with higher gain of 150 to make the DAQ more stable.

❑ Control Room(s): Currently used 6 remote control rooms, 2 other on the way for the certification. Vidyo tested.

Operations – Far detector



❑ Chiller water system:

- We had been having problem with one of 2 compressors on chiller system (one is running, second as the backup)
- It was repaired (Condenser coil leak found on header side, covered under warranty). After a day a slow water leak developed on the outlet pipe flange (might be uncorrelated).
- When the expert tested on Tue the repaired compressor, it tripped and tried to switch to the backup one, it failed with “known” error (EPROM card memory capacity, needs new firmware) which had not been properly cleared. It made a low flow alarm tripped. During the recovery one LV PS, even the emergency crew replaced it, the setup failed again, in the morning reset.
- These 2 water chiller incidents cost us the main down time during last two weeks.

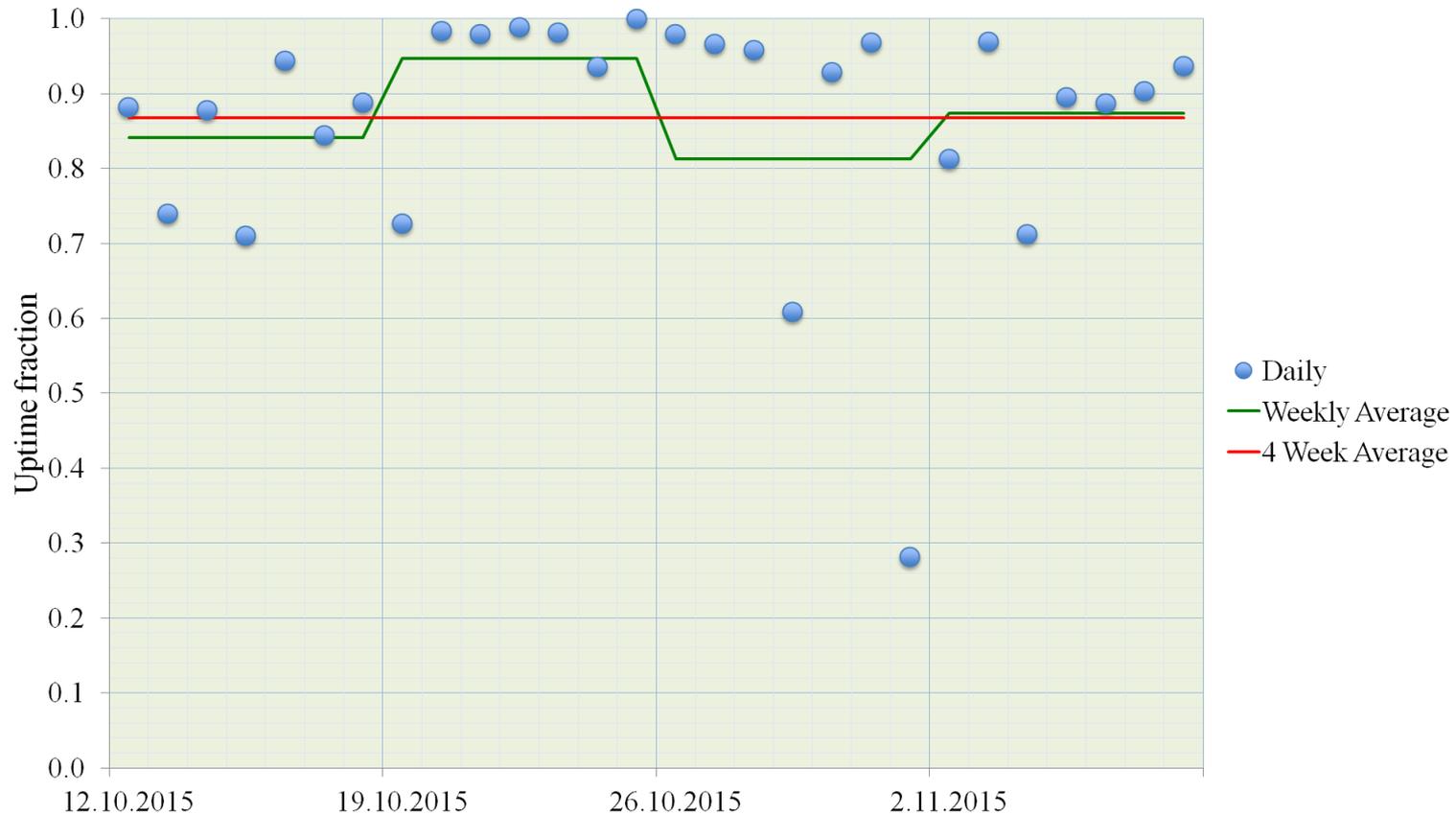
Operations – Far detector



❑ Data Logger software bug:

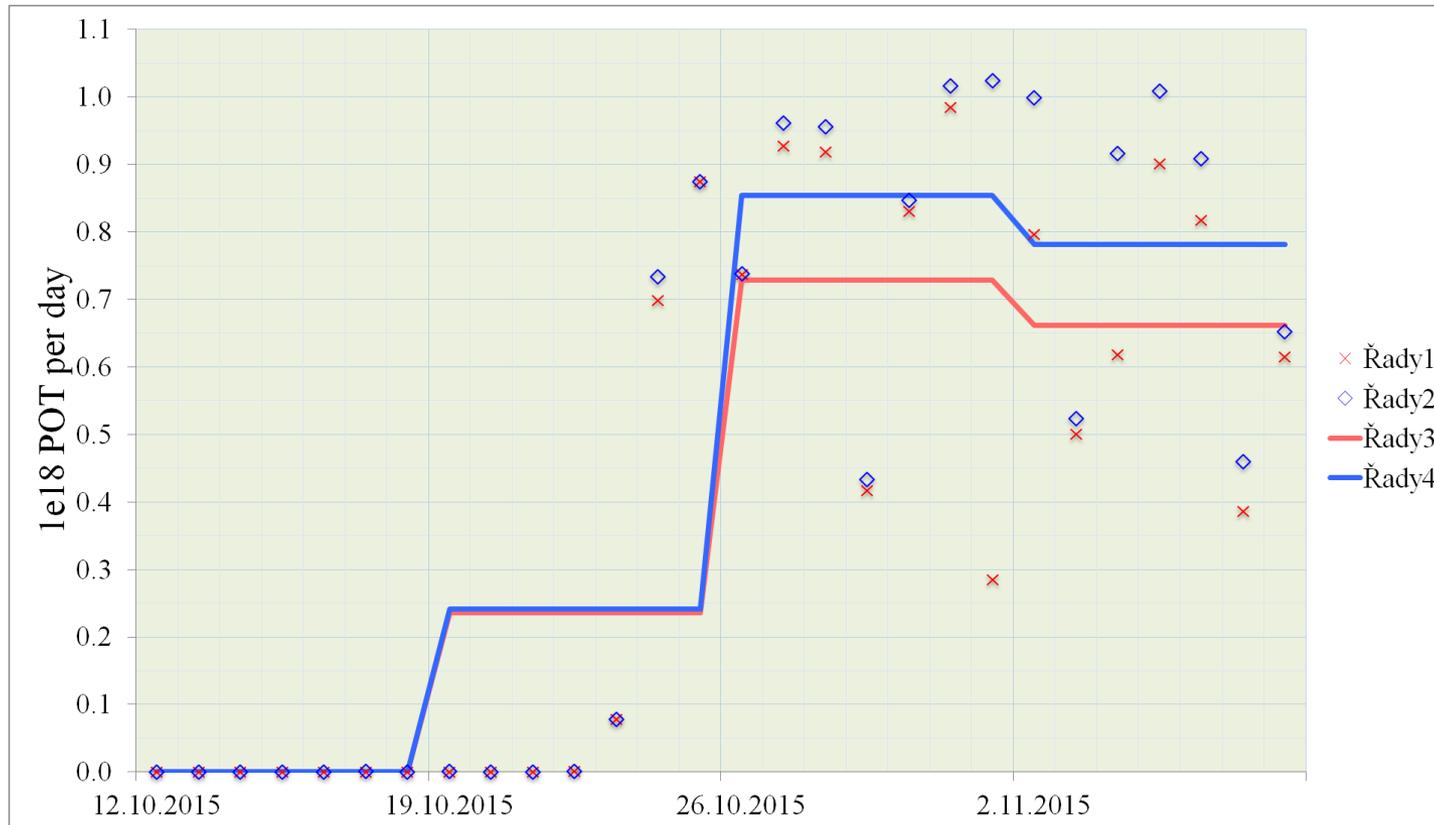
- We (hopefully) found the last week a bug which was a reason that up to 10% of data raw files being written on disk were not correctly closed.
- The updated software tested on NearDet on Tue and deployed on FarDet on Wed (Nov 4), till now have not found any issues.
- This concerns almost to cosmics data during the 3 months beam summer shutdown and 11 days of beam data.
- This issue resulted in many file had been tagged as bad runs because of missing some small part of their metafile information.
- Even we were aware we concluded that events on files are all in and they are not corrupted and may be all recovery for production.
- We decided for now to recover – correct metafiles – on all NuMI beam data stream files (Oct 23 - Nov 4) and probably on cosmics with high gain running since Oct 12.
- On demand (for example some requested DDT streams) will do more

FD: Data taking Uptime



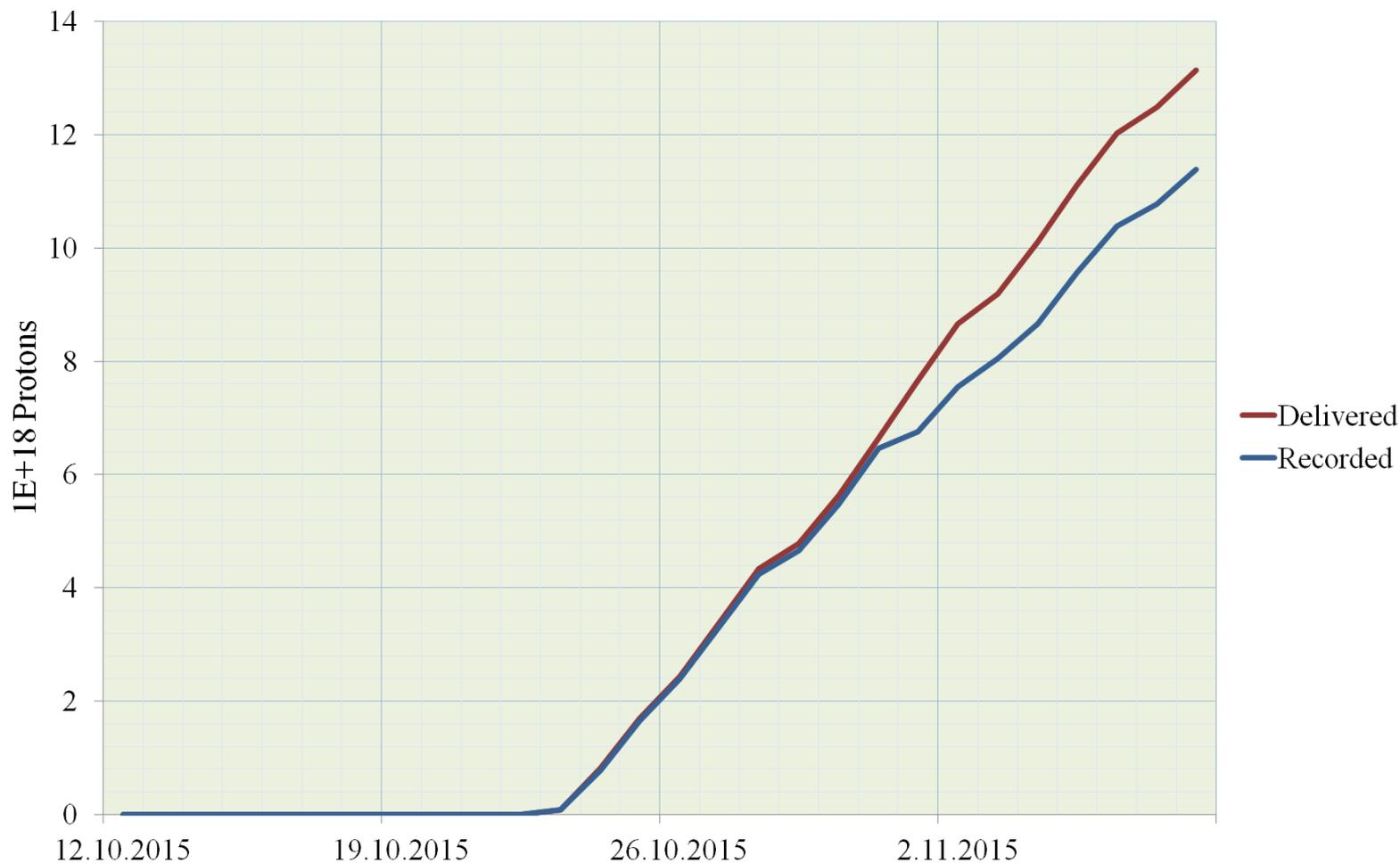
- Last week running uptime efficiency was *only* 87.5%, in total of 20 hours down.
- Most of them was 2 water leaks on Sun and Tue, LV PS replacement and recovery .
- The other are shorter downtimes when DAQ crashed either from Data Logger error or other reasons.

FD: POTs delivered/recorded



- Past week efficiency at only 84.7%, (4.63 of 5.47 e18 POTs).
- Lower absolute values corresponds to beam down times.
- Of course the inefficiency reflect issues with the chiller system and DAQ failures.

FD: Accumulated POTs (4 weeks)



➤ 2015/16: 11.4/13.1 e18 POTs (87%)

FD: Accumulated POTs – all years



➤ 2013/14: 280/326 e18 POTs (86%) + 2014/15: 298.5/312.5* e18 POTs (95.5%) [253days]

➤ 2015/16: 11.4/13.1 e18 POTs (87%)

**) Including 20.8e18 POTs horn-off data and 2.6e18 non-nominal horn current data.*