13 - 20 July

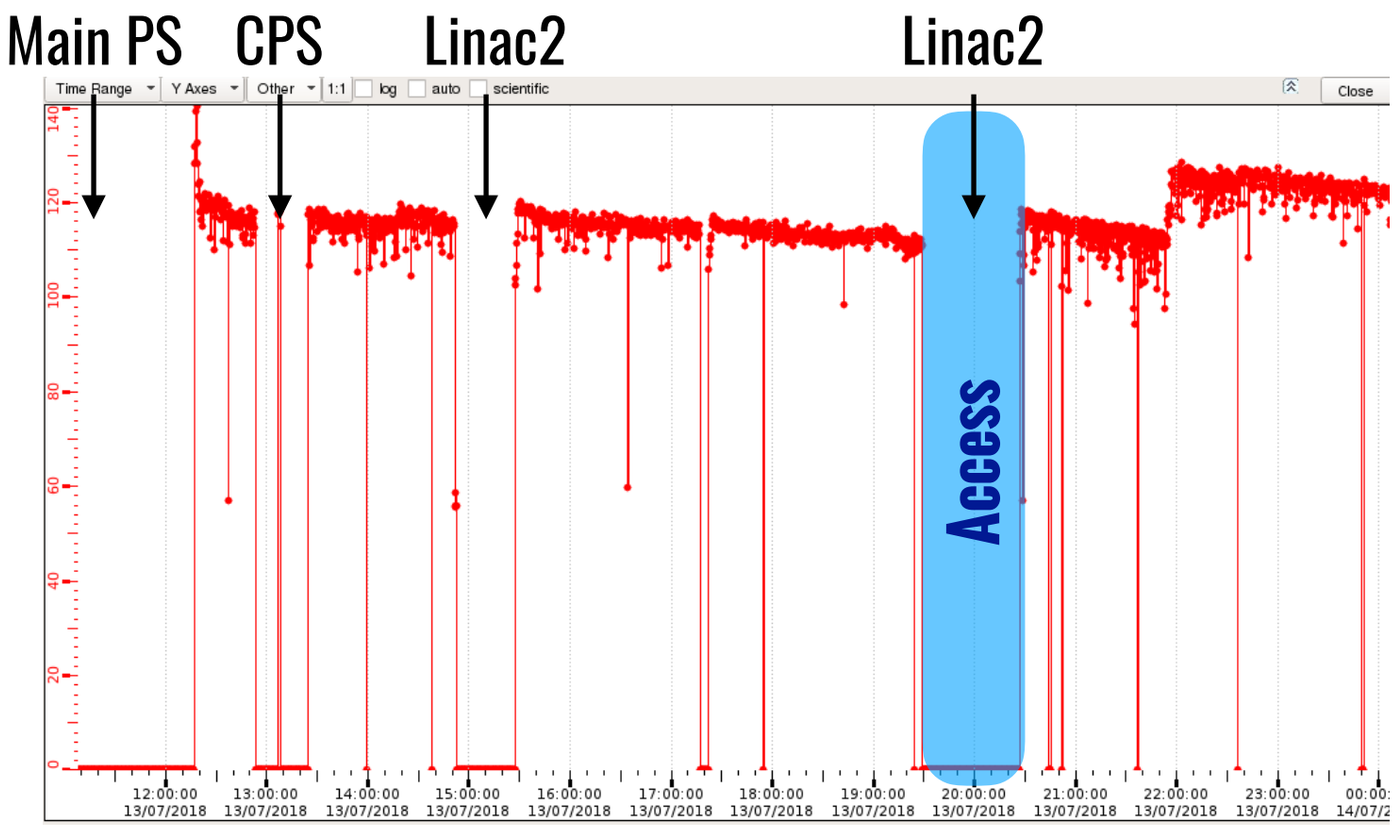
Weekly Report

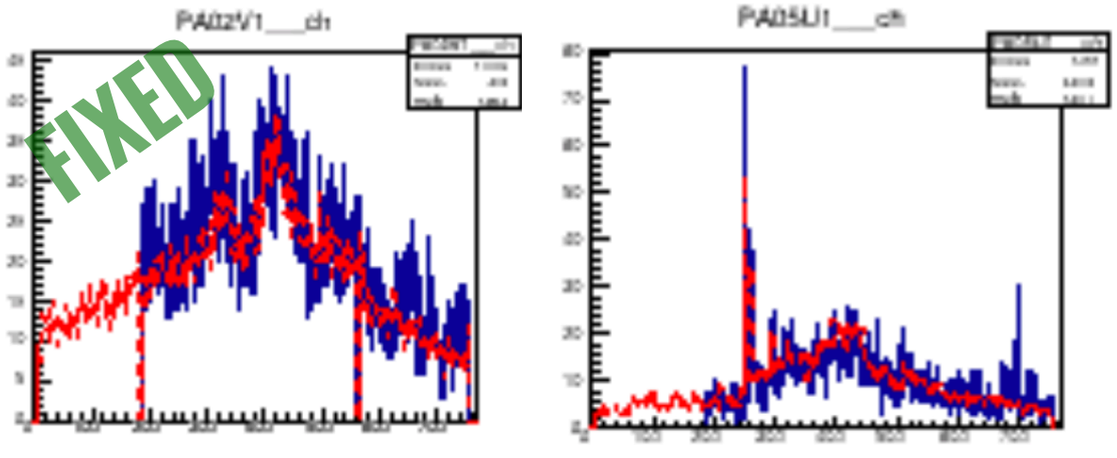
ILLINOIS

Riccardo Longo
20/07/2018
Weekly Meeting

Friday 13

- Beam: problem at each stage of the extraction in different times, luckily all can be solved relatively fast.



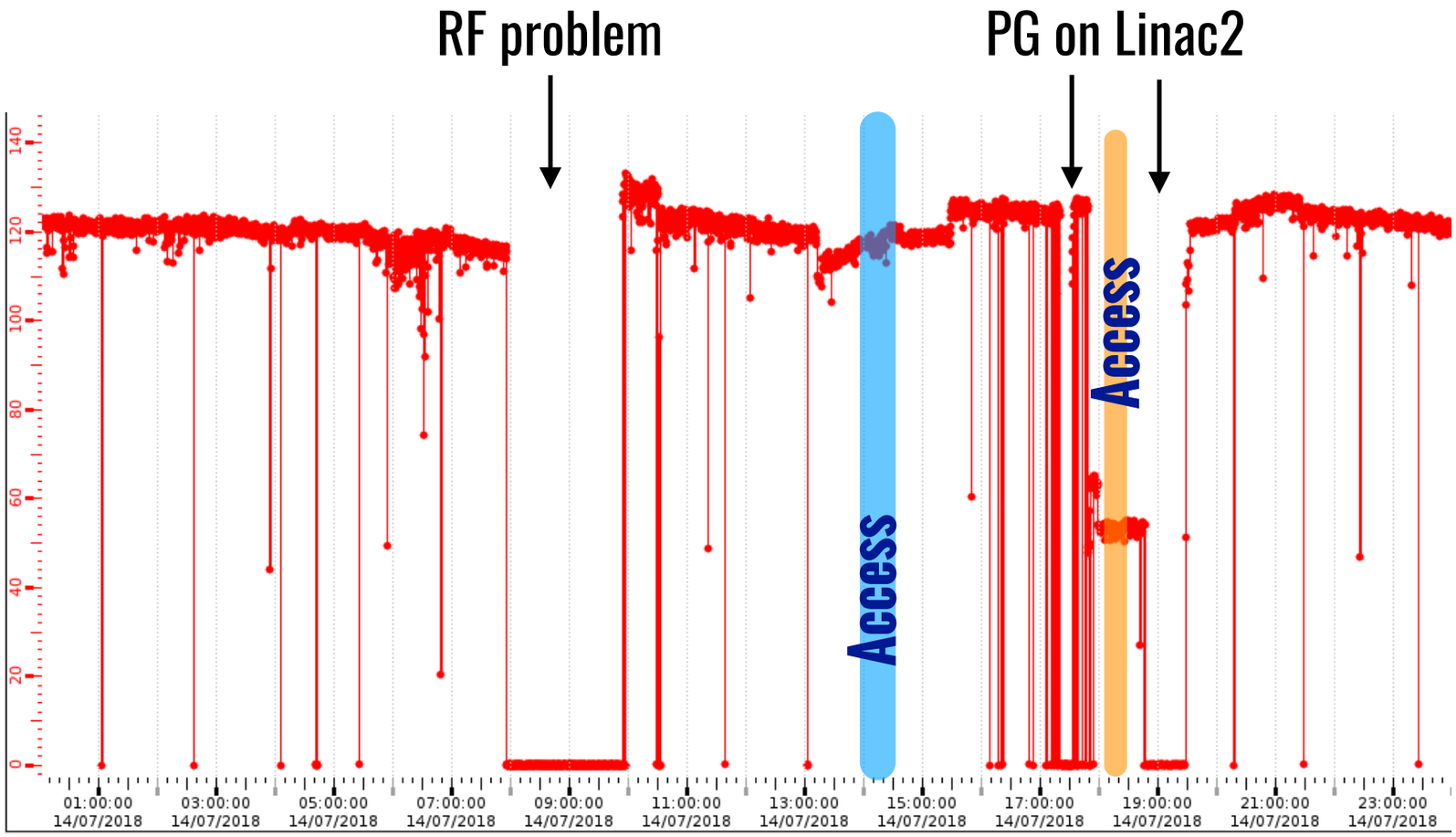


- ~4 h no beam in total;
- High intensity (~130 10^{11} on T6) starting from 9:30 PM;
- 1 **access**, profiting of no-beam;

- Problems on:
  - PA02V (patch panel connection, **fixed** with **access** after 2h)
  - PA05U (Most probably due to the cable, to be replaced). Port excluded from DAQ.
  - ECAL (SID 627, **fixed** during **access** power cycling the crate with corresponding ADC);
  - Problem with CDR, most probably due to CASTOR, **fixed** restarting CDR;

Saturday 14

- No beam for 2 hours in the morning + 1 h of no beam in the afternoon + 1 h of low intensity beam (~ 55 10^{11} on T6)



- Problems on:
  - RICH HV failure. ~ 20 spills affected.
  - Pccore12, not reachable. Vladimir went to reboot it manually in the DAQ barrack (**fixed**);
  - NMR probe of SM2 not working, but SM2 looks fine; The NMR teslameter lost the signal. Christophe locked it again (**fixed**);

Access, 30'

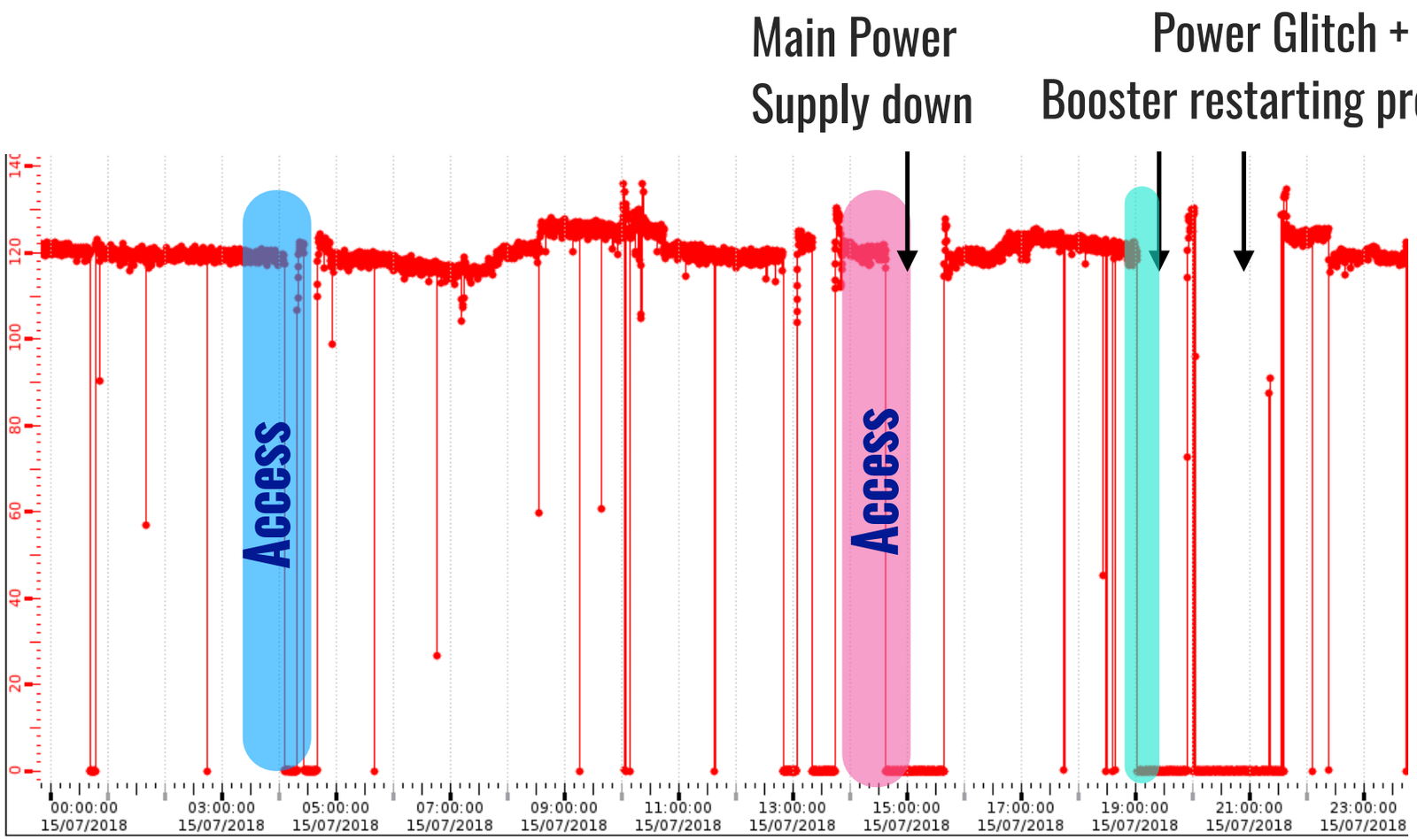
- To reboot the crate with GEM HV - LV, RichWall HV, PS01 HV
- First attempt not successful, re-plugging 2 modules of GEM HV the problem was **fixed**

Access, 20'

- ECAL1 problem. Reload did not help. Quick **access** during bad beam condition to fix it.

Sunday 15

- Beam: ~ 4 h of no beam in total



- Issue on GEM1-2 SID.
- 100% errors on MurphyTV **Fixed** with a power cycle of LV and APV;

Access ~ 1h

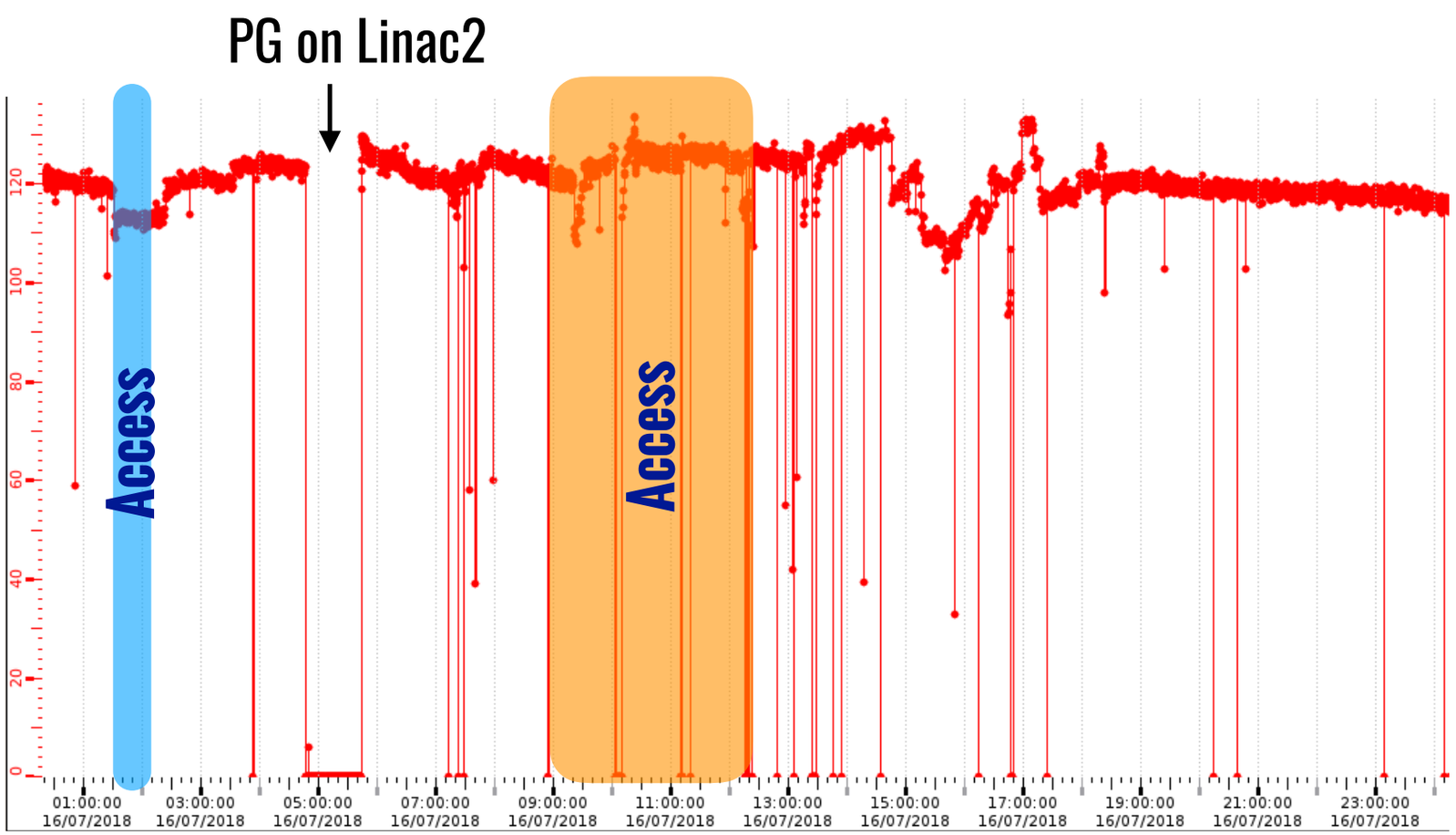
- To fix problems on DC05 and GEMs
  - DC05 **fixed**
  - GEM partially fixed, we lost **GM04V**

Access ~40 min

- To fix problems on ST03
  - Pccofe13 was stuck, no possibility to reload 323 and 324. Access to reboot it manually. Problem **fixed**

Monday 16

- Beam: ~ 1 h of no beam



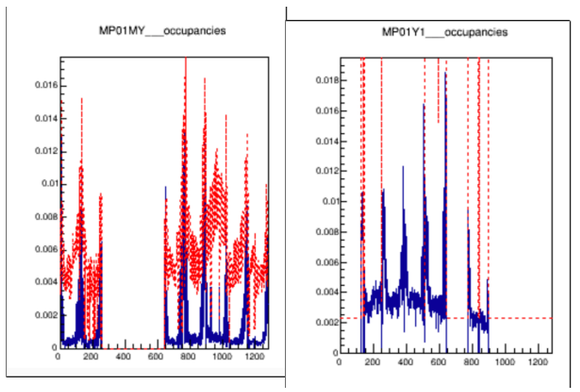
- NMR teslameter for SM2 broke up around 9:00. At the moment, no NMR reading.

Access, ~ 3h 45 min

- Short in the morning (around 9:00) on the entire DC01/MM rack (DC threshold, DC/MM HV and also DC LV;
- Problem identified on the CAEN Mainframe SY 2527 (owned by Marcin);
- Even removing the HV modules from the mainframe and the system was still in failure;
- Replacement found at the e-pool, but it was the last one and they requested from us to start a repair procedure to CAEN (asap);
- System put back in operation;

Access ~30 min

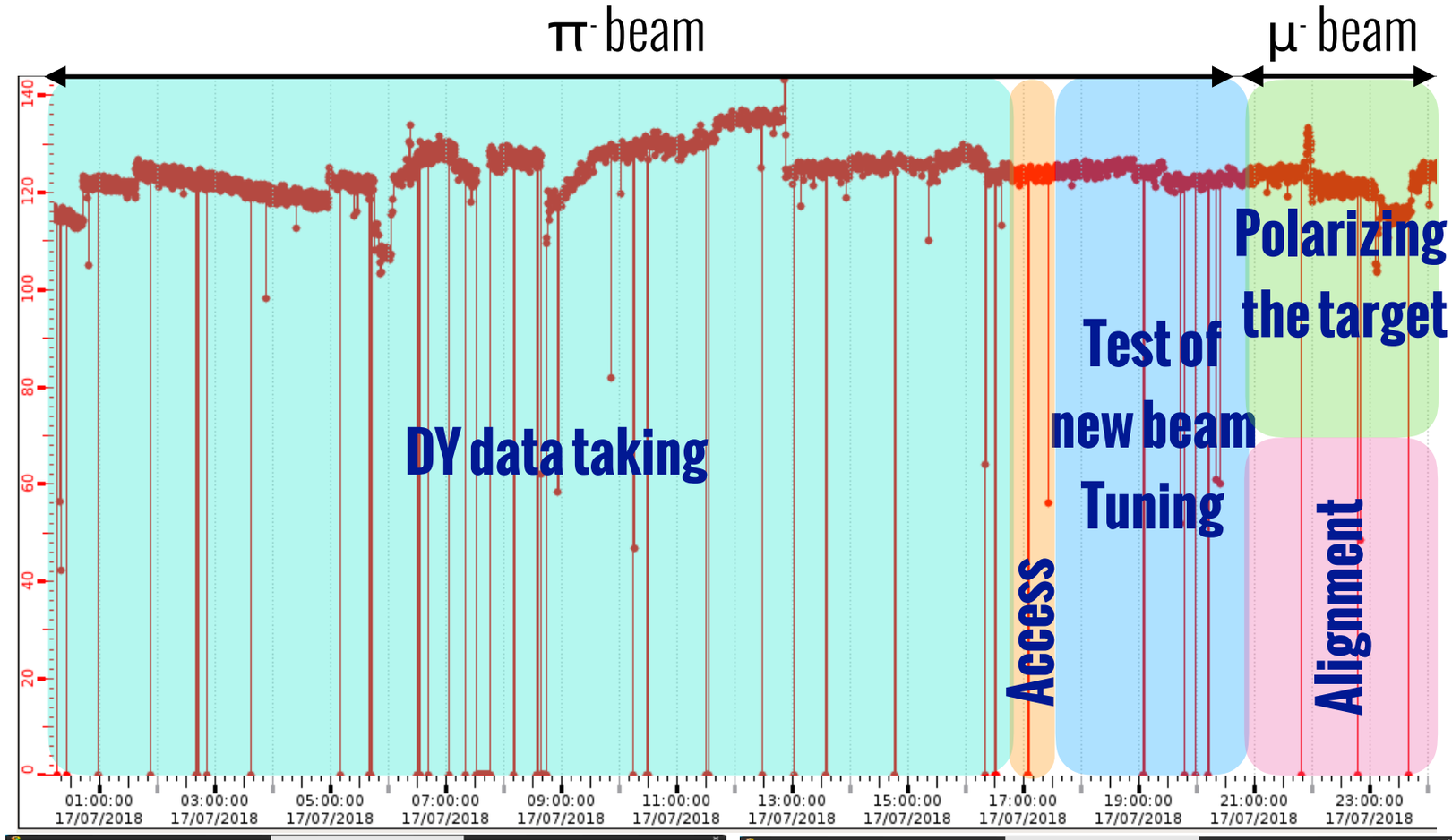
- Timeout on MUX12;
- Vincent tried a reboot the hosting VXS but pccofe52 did not boot properly. System failure of the crate.
- Access needed to unplug and replug pccofe52. In this way, problem **fixed**;

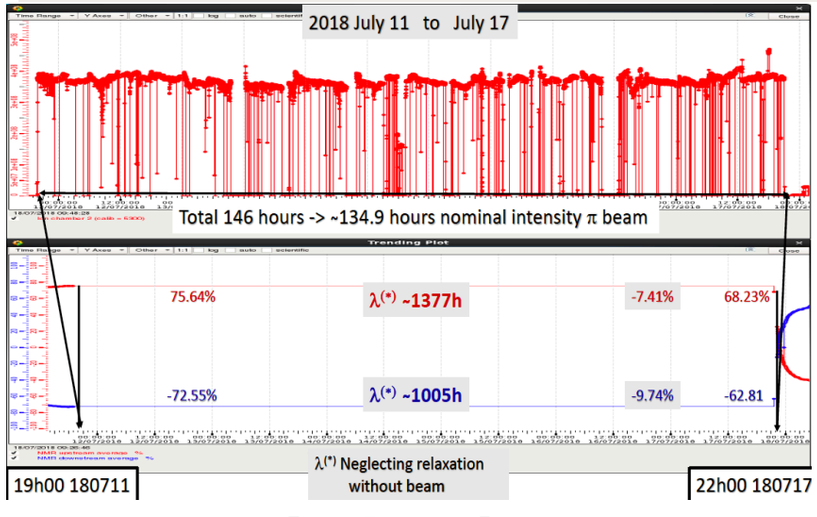


- After resuming the data taking, problem on **MP01Y1** (w/o MTV errors).
- HV issue at the level of the crate (a ring on one of the HV module unplugged during the change was not properly locked).
- MP01Y1 is practically not working starting from here (but it was already affected by issues related to the broken fuse).

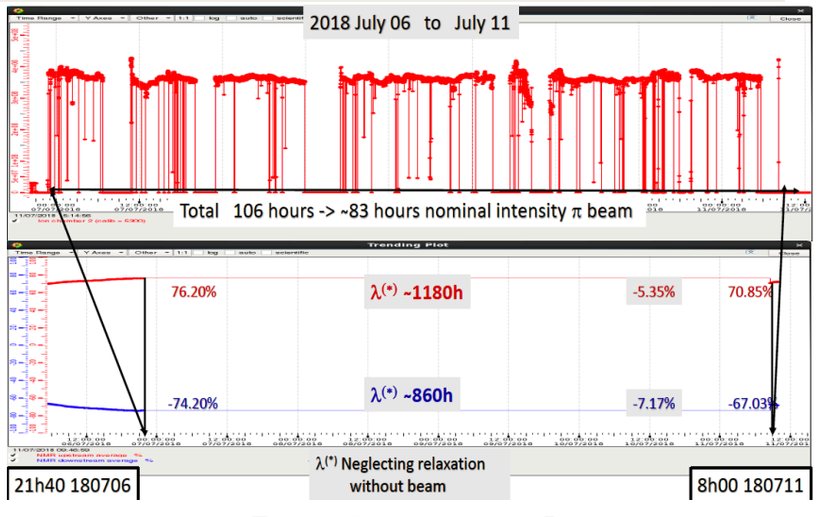
Tuesday 17

- Rather stable beam, practically no interruption during the day





Last week

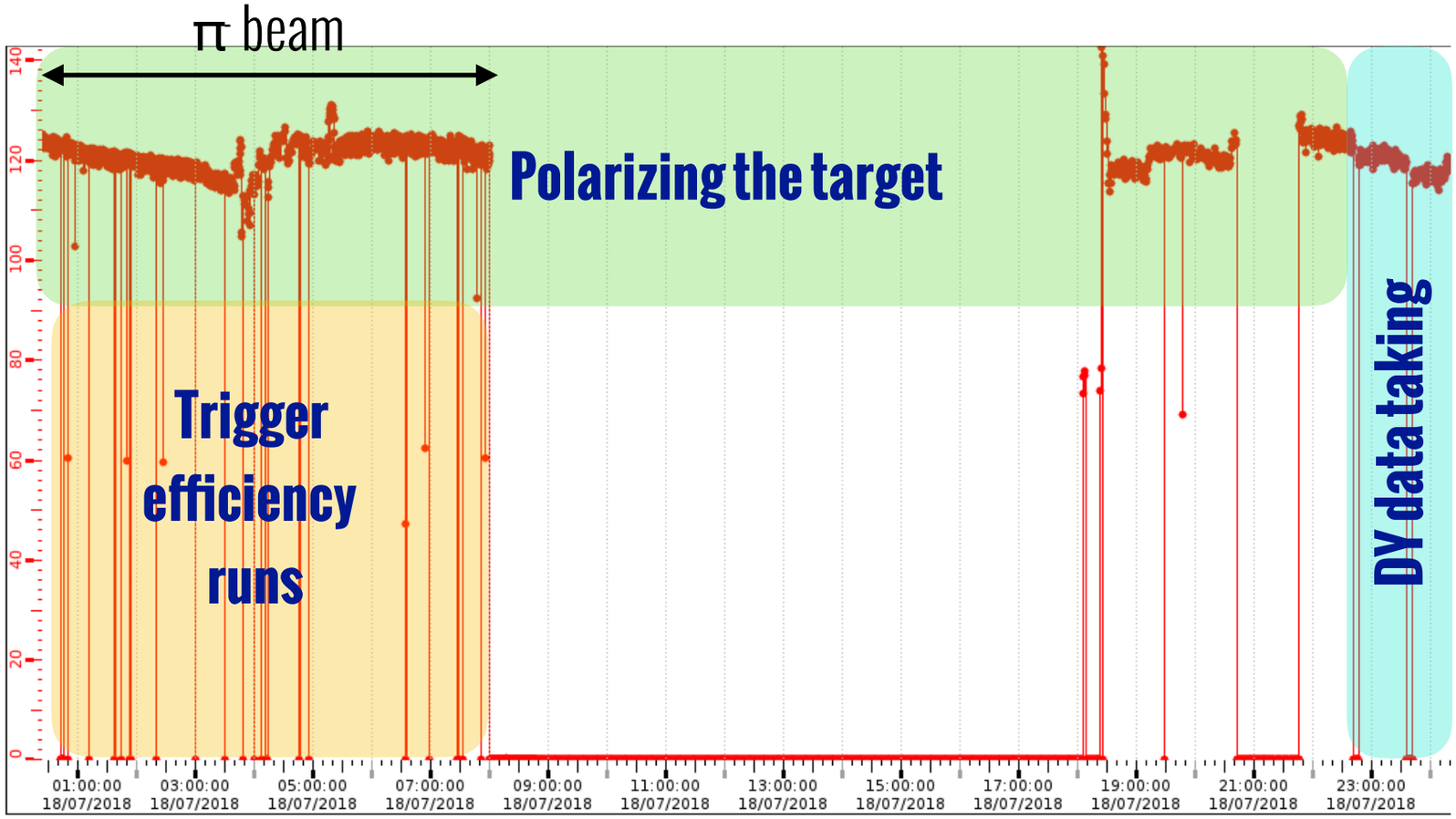


Previous week

- New Metrolab NMR Teslameter installed in 888. Monitoring back.
- Access to recover **MP01Y1** and fix and issue on DC00;
- Around 5:30 PM Johannes loaded a new beam tuning and we collected ~ 250 spills to study the changes. See talk by **Andrei Gridin** in the following.
- After it, we flipped the polarization and we started polarizing. In //, alignment runs.
- Target polarization measured before the flip:
  - **Upstream: 68.23%**
  - **Downstream: -62.81%**
- Relaxation time studies by **Alain Magnon**

Wednesday 18

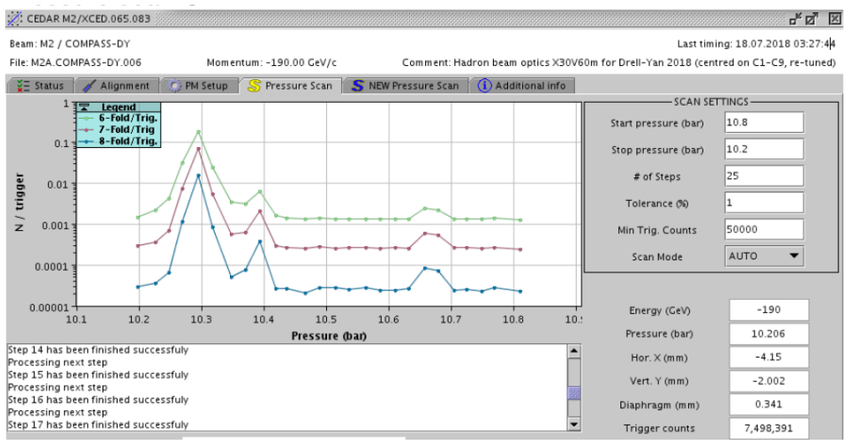
- Rather stable beam until the beginning of the MD and after 10 PM (as expected).



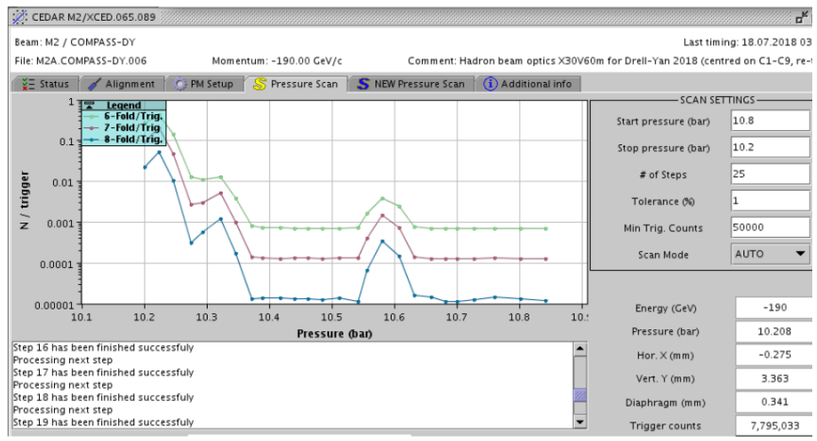
- In the morning we went to free access w/o any communication. After, Annika found that the main door of the zone 221 was forced.
- Moritz, Vincent, Christophe, Marco: Installation of ePowerSwitch for Inxpool25 (DC00-01 thresholds).
- Now can be restarted remotely:
- When we went to dipole:
  - **Upstream: -70%**
  - **Downstream: 75.4%**

- CEDARs-related activities by Vincent: HV tuning, alignment, pressure scan.
- In the morning we went to free access w/o any communication.
- **GM04V** intervention by Matthias. ADC exchanged. Plane back in operation.

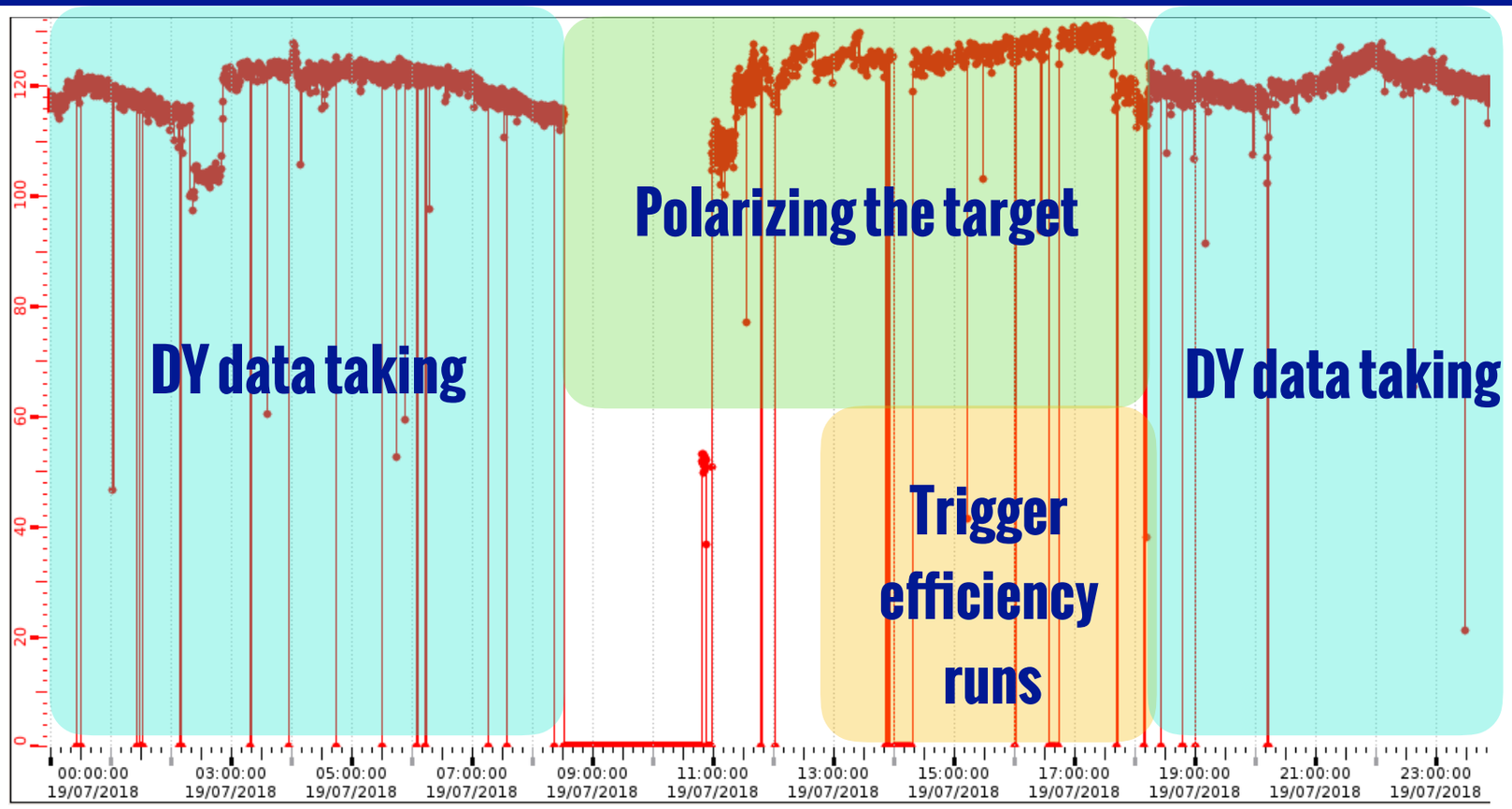
- CEDAR 1

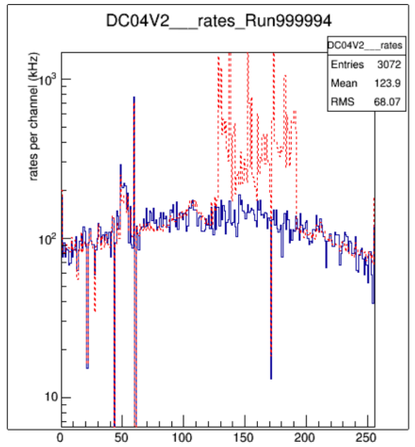


- CEDAR 2



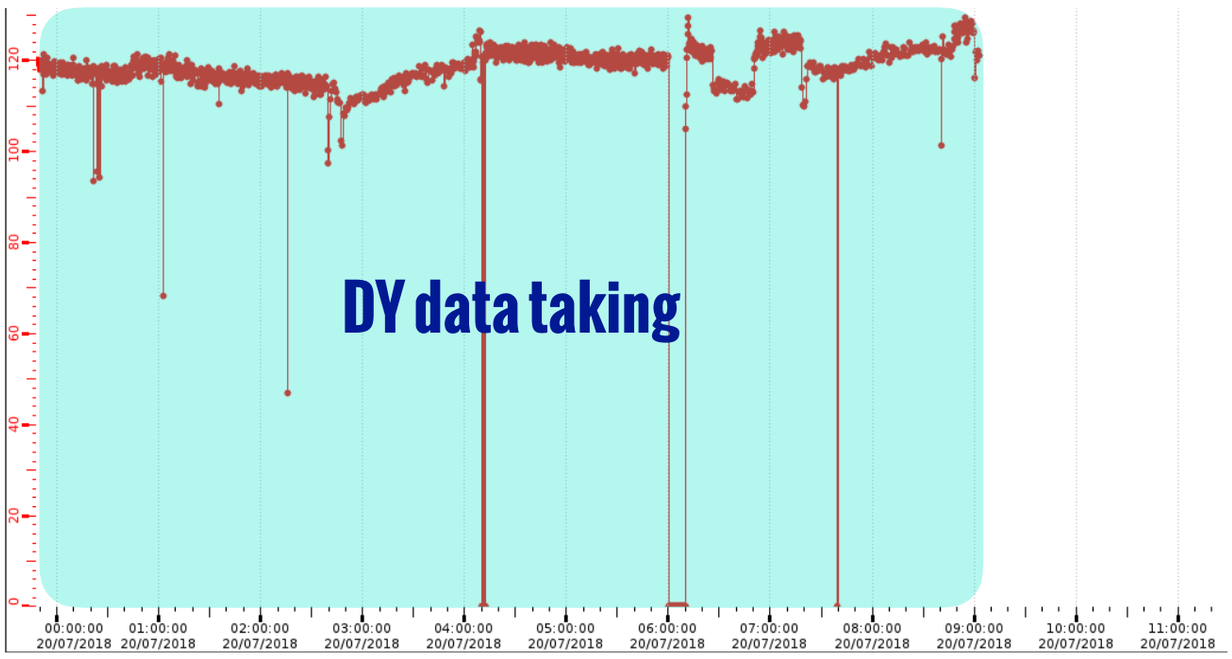
Thursday 19 - Now



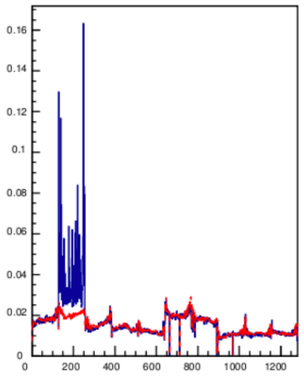


Thursday

- Noise on DC04V2 disappeared after power cycling pccofe20
- Knowing that there will be an intervention of RF cavity and then we would get a bad supercycle until 6 PM, we decided to restart polarizing from 9 AM to 6 PM;
- When we switched to dipole:
  - **Upstream: -72.3%**
  - **Downstream: 77.1%**



Friday



- New noise on MP03U1

Spills counter

	Friday	Saturday	Sunday	Monday	Tuesday
Good DY spills Recorded (SP1)	3218	3062	2900	2713	2562
				250 spills for beam test + 150 spills for alignment +	

In the sub-period 1 (05/07/2018 - 18/07/2018) we collected ~ 29600 good DY spills

	Wednesday	Thursday	Friday	Tot.
Good DY spills Recorded (SP2)	37	2177	~1850	~4050
	+~1700 spills for trigger test			

Summary

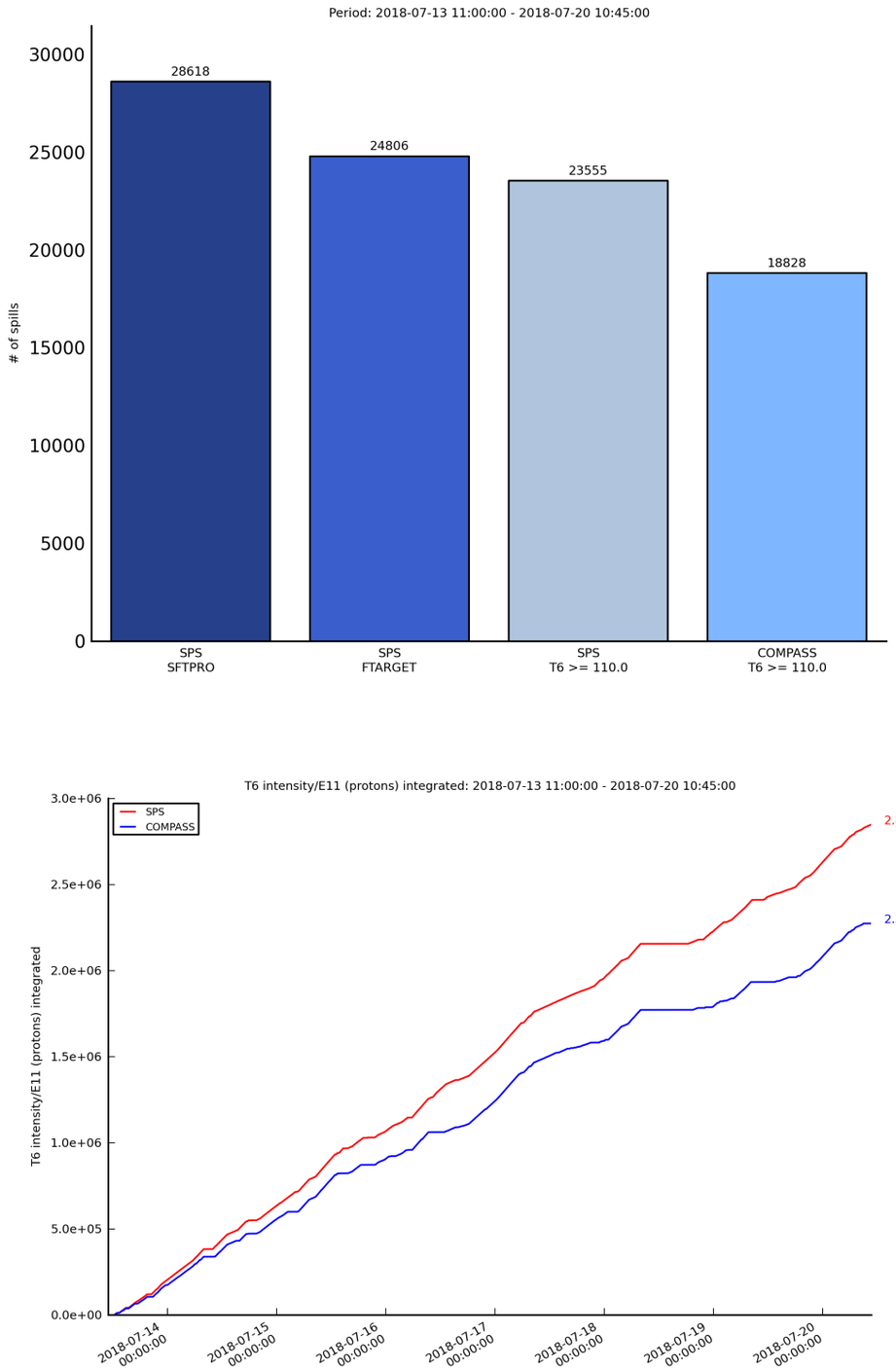
- Rather stable week of data taking;
- At the moment, we are operating w/o one port on PA05U (bad cable) and some sectors on MP01X1 and MP01Y1 (broken fuse).
- From COMPASS side, few hours (~6-7h) of no-DY data taking when beam was available because of major issues that required access/interventions. We collected ~90% of the spills that have been delivered to us in the last week!
- Since Monday, rather stable beam conditions. Practically no unexpected beam interruption.
- We are on good track, let's hope the run will continue in these conditions!

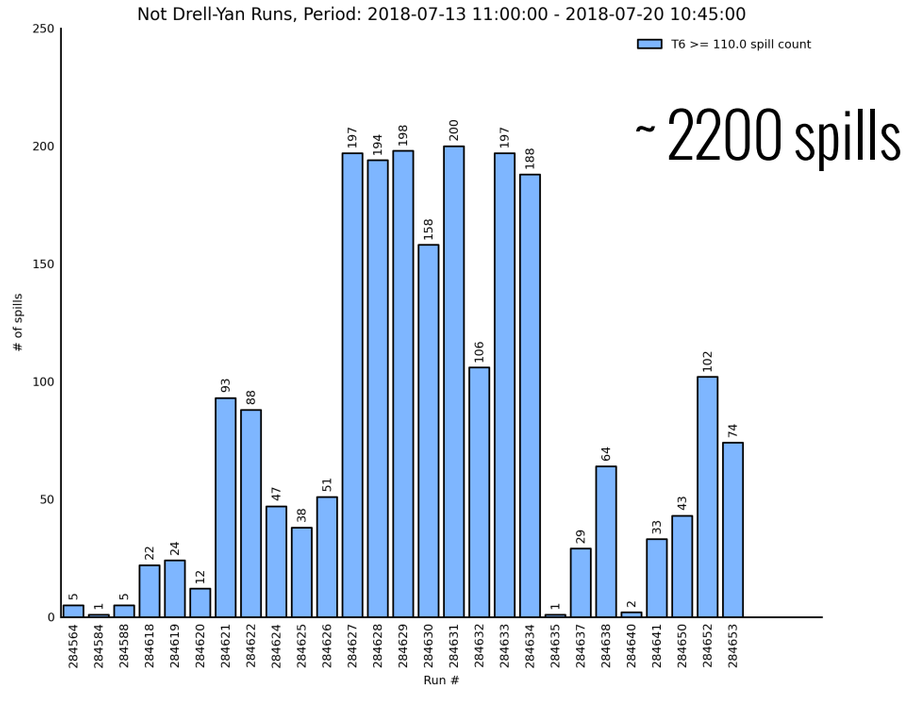
Thanks to all the shifters and the detector experts for their commitment!

Good luck to Marketa !

Backup

Some more number . . .





~ 2200 spills

Spills delivered to COMPASS used for:

- DY-data taking: 80%
- Other types of data taking: 9.5 %

SPS efficiency (T6 > 110): 82.5%