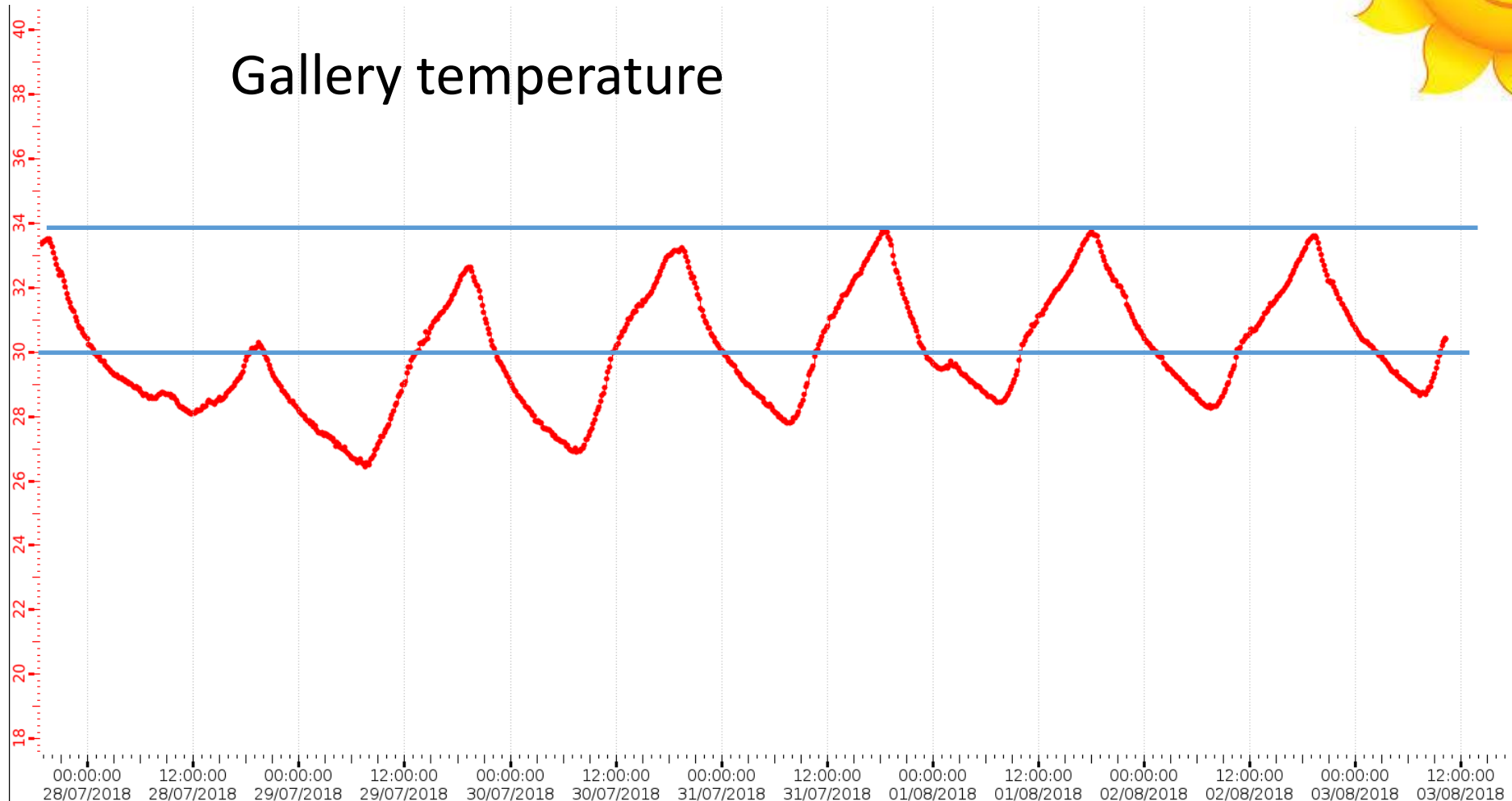


Weekly report W30/31

27 July – 3 August (2018-W08/W09)



Gallery temperature



34 degree

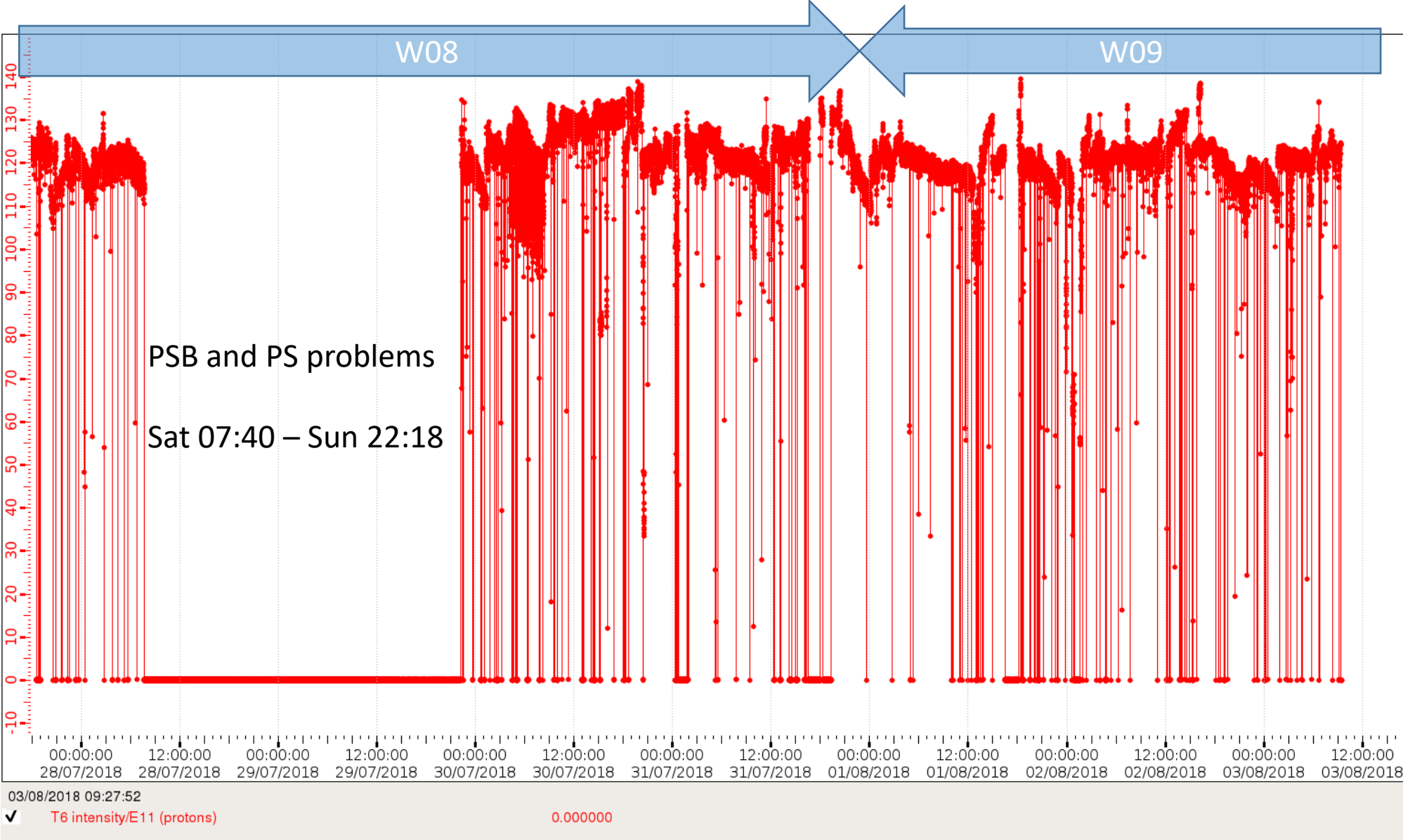
30 degree

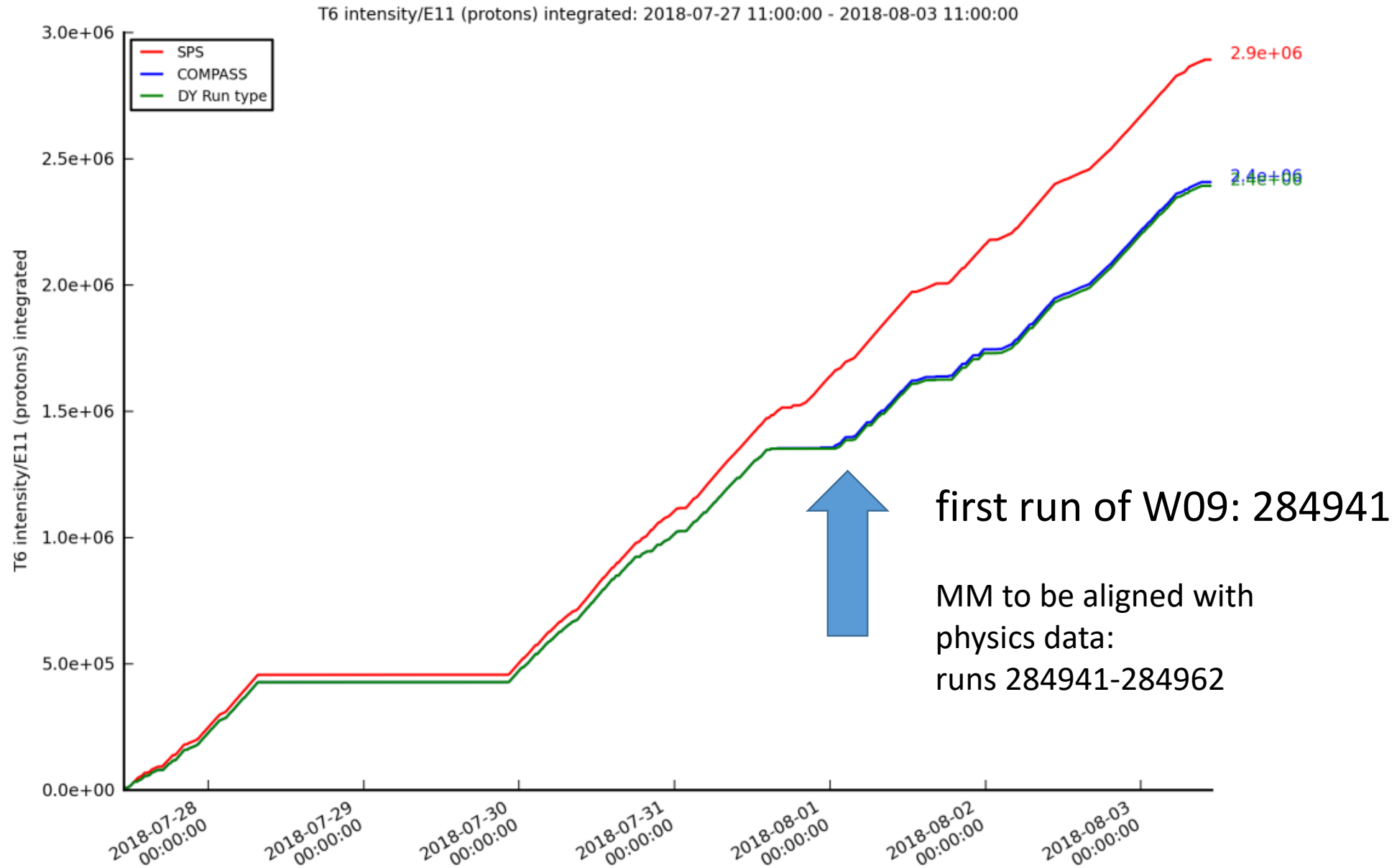
03/08/2018 10:12:40

✓ T_Gallery Temperature °C

30.38

Beam on T6



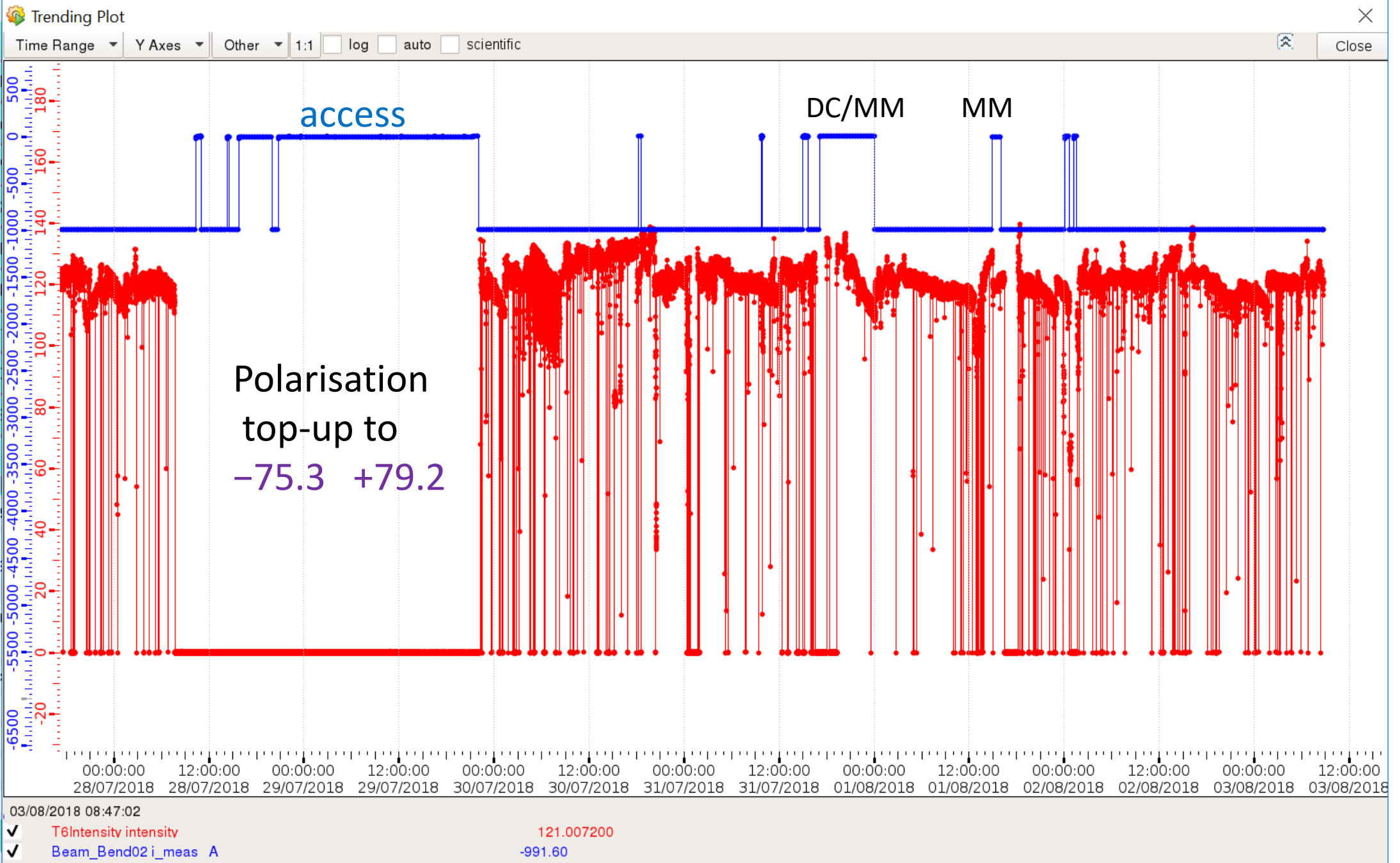


Beam & some statistics

- In general quite good beam
- No beam Sat 28.07 07:40 – Sun 29.07 22:18, PSB MPS, pol. top up
- Average time between spills (excluding 28/29 July): 19 s
- SPS efficiency 71%

- Access: Tue 31.07 16:45 – 24:00, no MD on Wednesday
- COMPASS efficiency 83%

- 20966 DY spills, good 19751 (10am)
- good DY: W08: 8368
W09: 11387



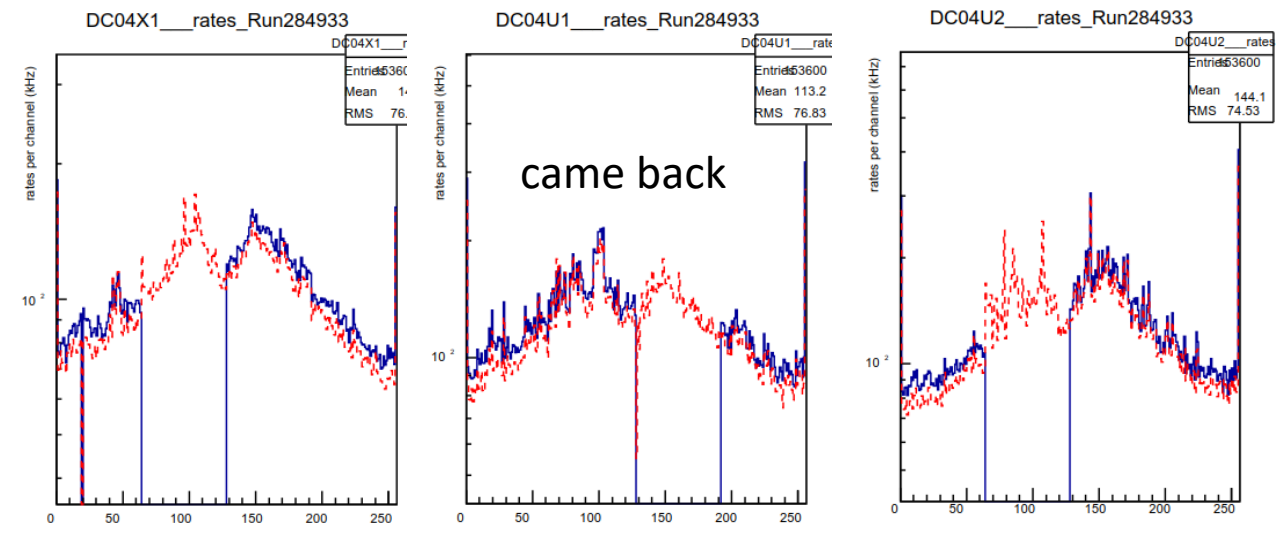
Detector problems (see day-by-day slides)

- Major
 - DC04 three missing section in central region until 01.08. 00:00, now one problem left in DC04U1
 - Pixel MM, all stations missing sectors, varying until 01.08. 16:00,
 - CEDARs: **no kaon data yet!**
- Less important
 - PMM noise problems, 03.08
 - DC01V2 missing port in centre, intermittent
 - Straws srcID 322 01.08.
 - PA05 all planes have noise, full period
 - RW reduced efficiency, improvements with higher gas flow
 - W45 DW04Y2 noise, inefficiency 31.07 16:00 until 01.08 16:00
 - ECAL1 LV/fan tray; Mainz part off until Sat 28.07. 11:00; now missing sectors srcID 360
 - He-4 pumps went off on 01.08

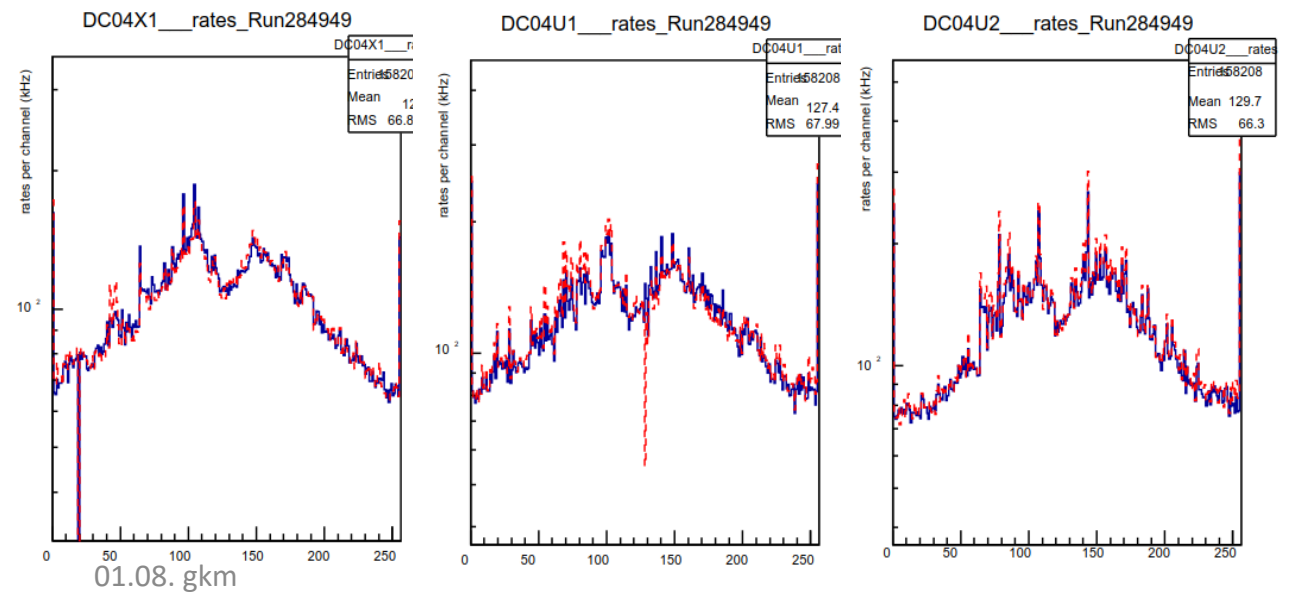
Other Activities

- No alignment in this week
- Dead time measurements and timing check performed for trigger
- GEM spare ADC prepared; pedestals taken 01.08
- Straws new thresholds 01.08
- RW higher gas flow

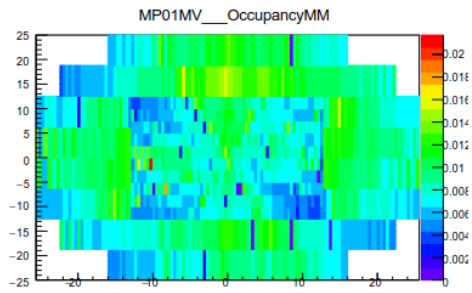
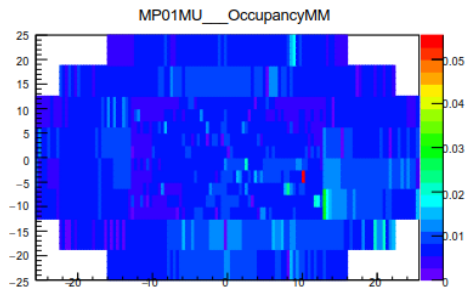
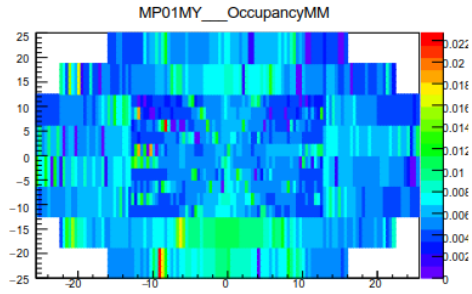
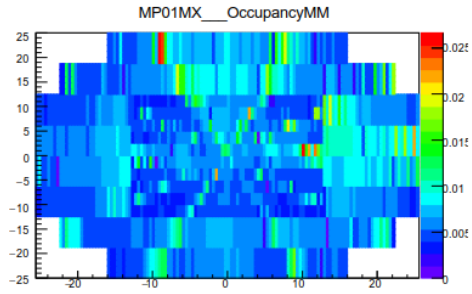
DC04



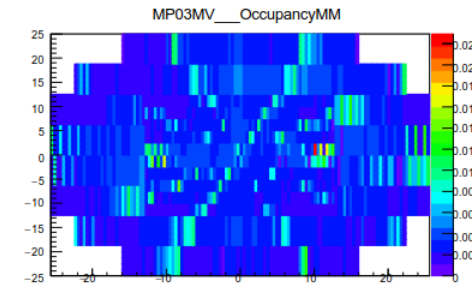
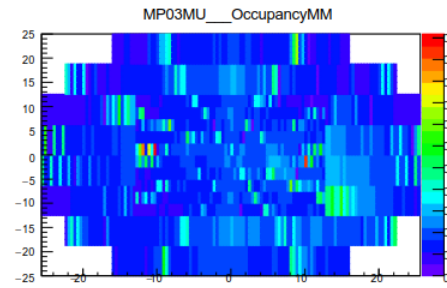
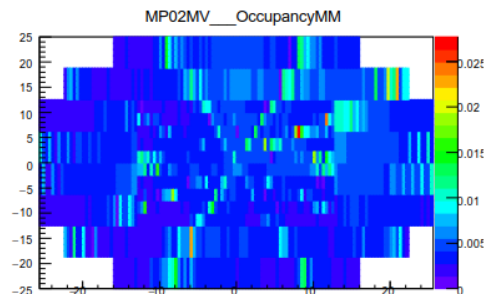
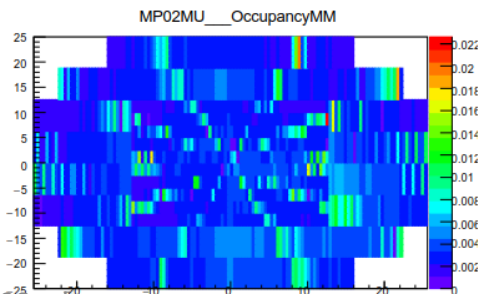
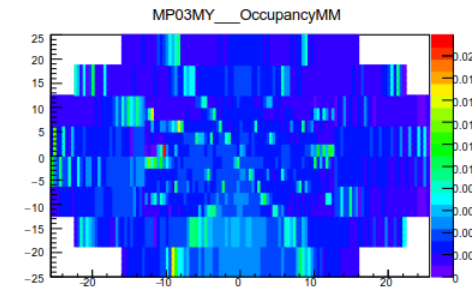
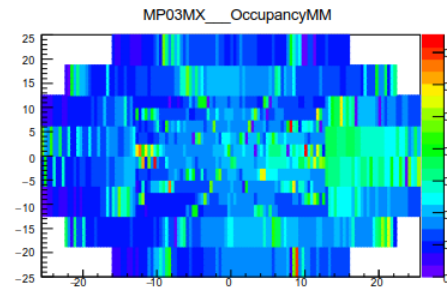
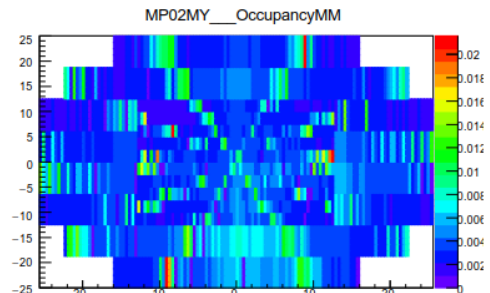
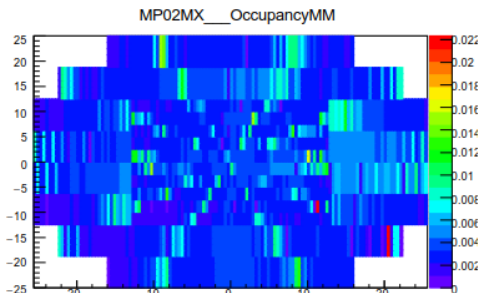
before intervention 01.08.



after intervention
DC04U1 problem came back

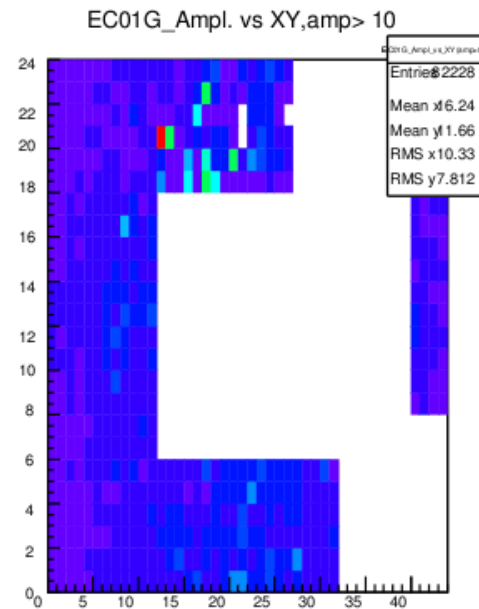
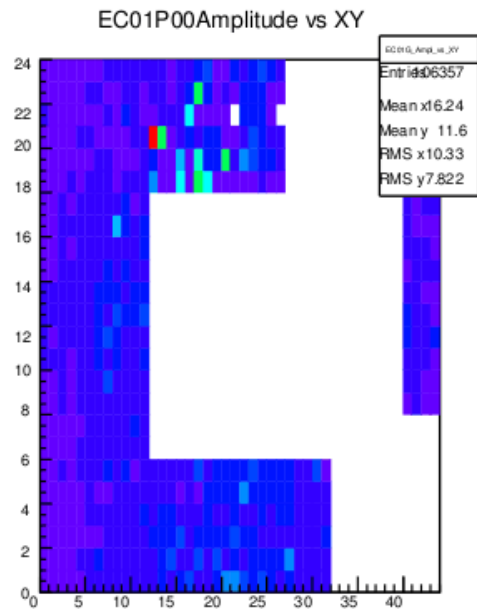


PMM
complete!



New problem: ECAL1

SourceID	Type	v BadEvents	#Header	#Data	#Errors	Special	Special at	#Spills	Last spill
626	ECAL	100.0%	0.00	0.00	1.00	1.00	330	8	8
886	DC05	0.5%	0.00	77.87	0.01	0.00	0	7	8
2	Master-T	0.3%	8.00	82.02	0.01	0.00	0	5	8
852	SciFi-15U	0.1%	24.00	23.92	0.00	0.00	0	2	8



since about 03.08. 00:00

Thanks to the shift crews

for an after all successful week

a particular thank goes to
Vincent and Christophe

good luck

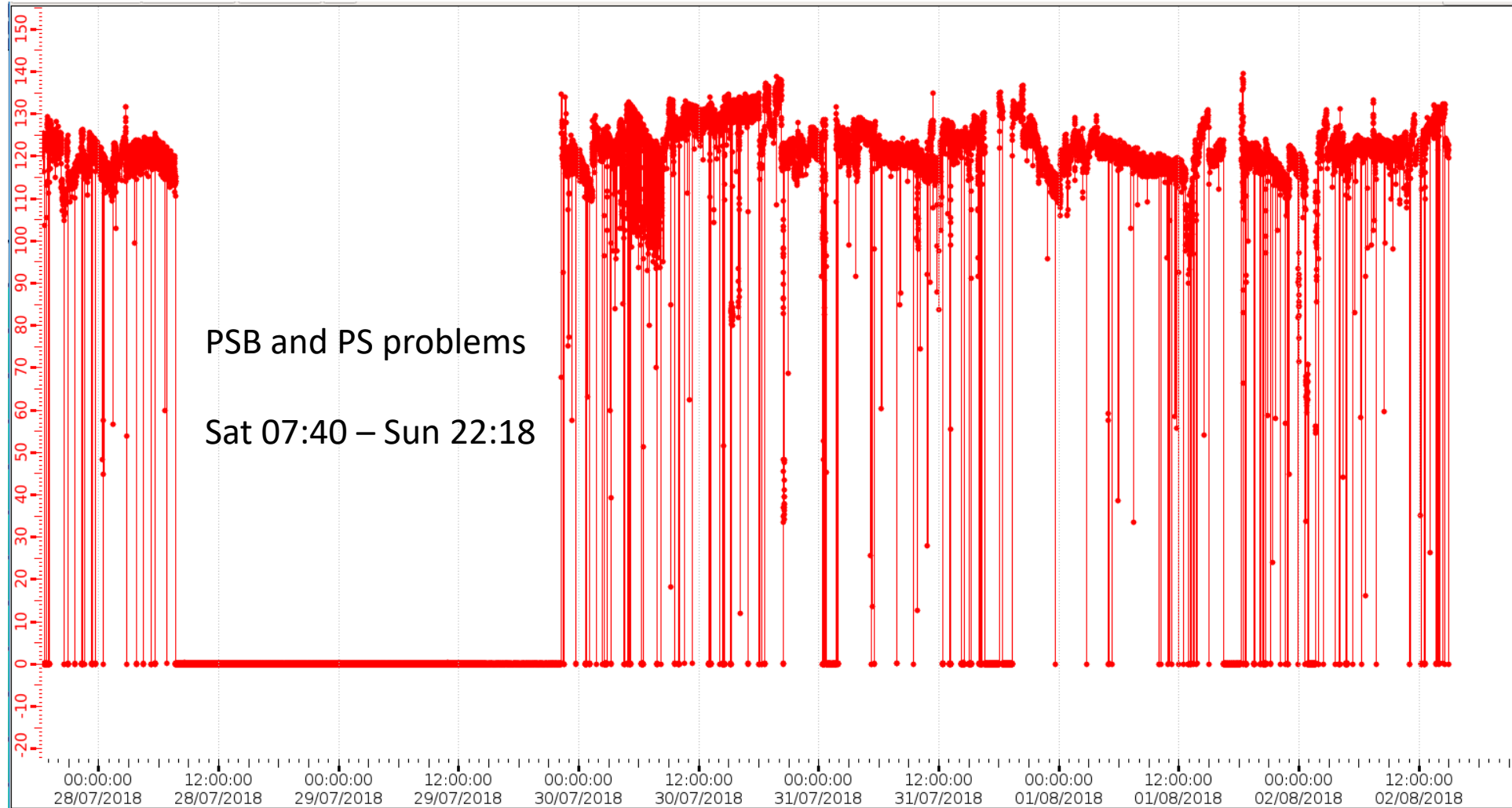
Jan

Day-by-day slides

02.08. 2018

Weekly report W30/31

1/2 August (2018-W09)

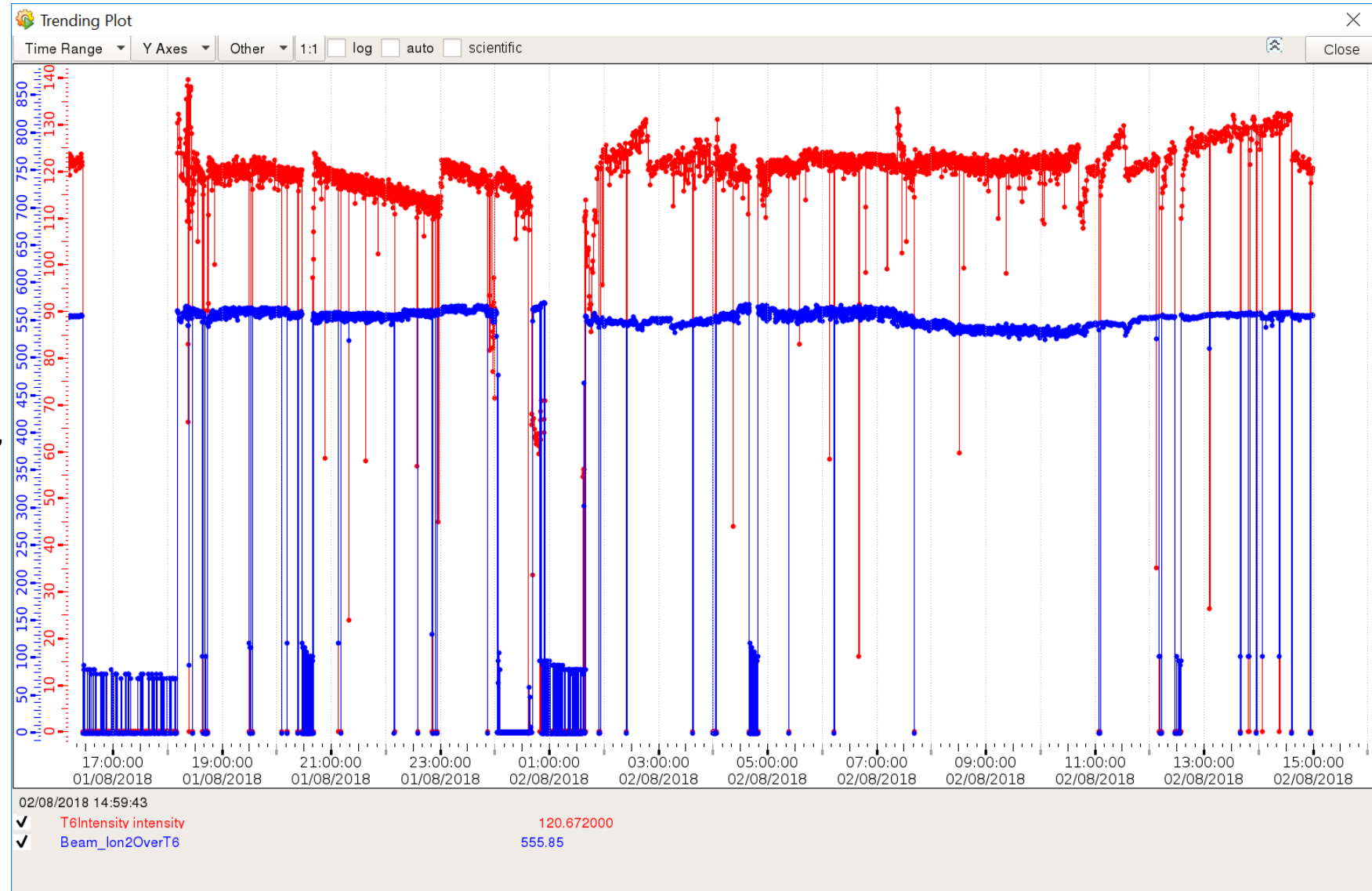


✓ T6 intensity/E11 (protons)

0.000000

Beam last 24 h

- 01.08: 16:26-18:11
RF rack off, 1:45
- 01.08: 20:25-20:45 beam off,
0:20
- 02.08: 00:00-01:50
no/bad beam,
access till 00:40 (straws),
1:50



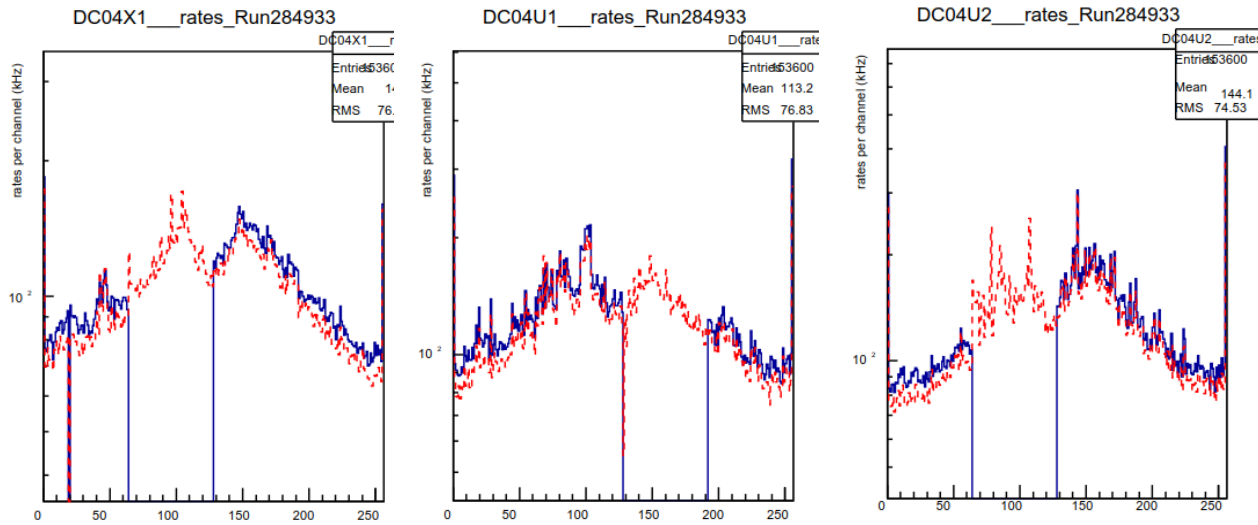
Detector problems

- PMM: ok since ~ 1.8. 16:00 (Vincent, Christophe) , [need new refs.](#) solved
- MP01: MP01X01 noisy since 11:00 persistent
- DC01V2: ok since about 2.8. 01:00 (Vincent) solved
- DC04: DC04U1 missing port (srcID 259 port 10) in centre, since about 16:20 1.8. persistent
DC01 srcID 256 port 11 23:00-00:00 solved
- Straw 3: 1.8. 18:00-18:50, 20:00ff, 2.8. 0:00 access, srcID 323 port 15 blocked multiplexer (320-323), bad hotlink connection; solved 2.8. 00:40 (Vincent), [new references put](#) solved
- PA05: noise persistent
- W45: DW04Y2 solved itself ~ 1.8. 16:00, noise gone, [new refs. put](#) solved
- RICH: LV problems, hard to switch on (temperature?) solved
01.08 17:10

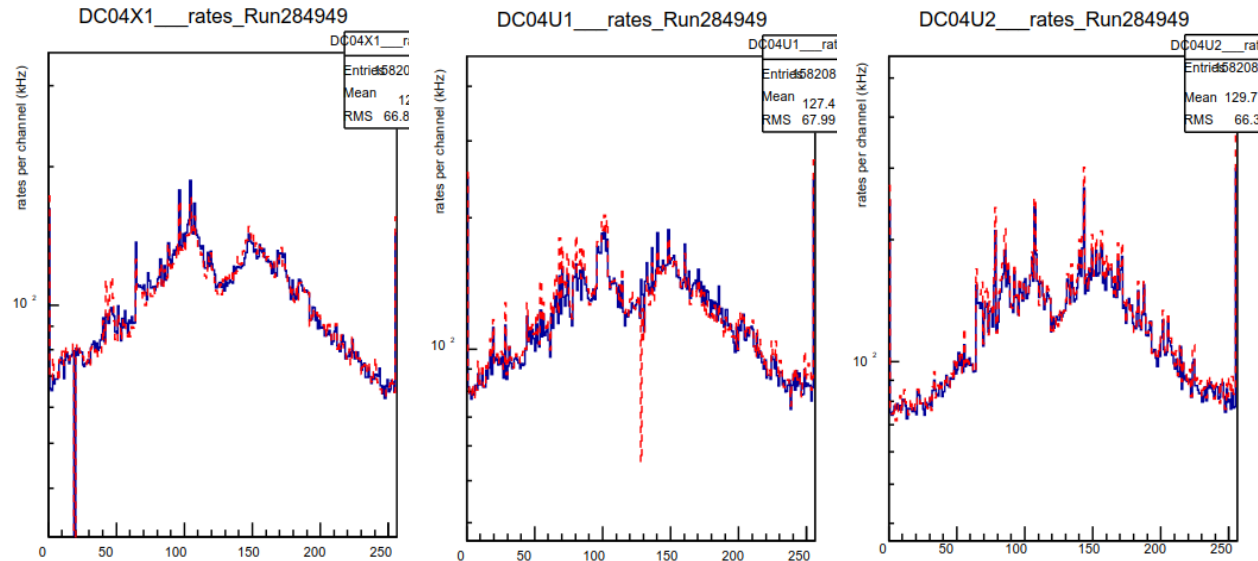
Good news DC04



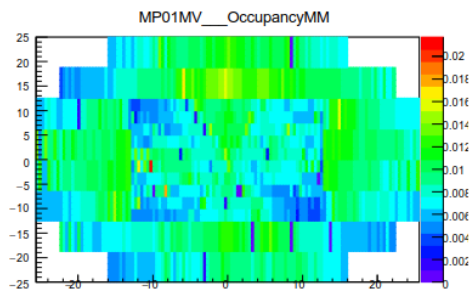
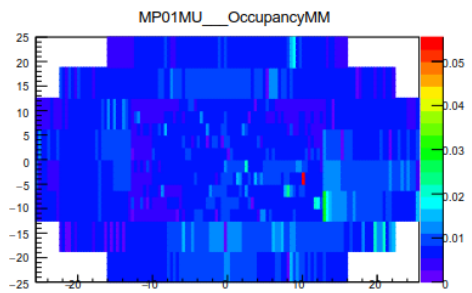
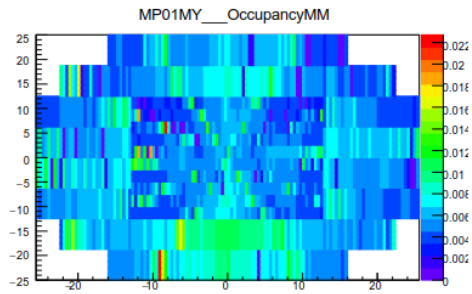
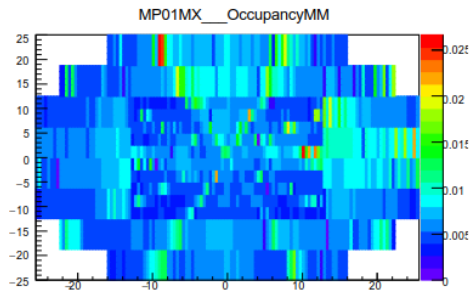
Good news, everyone!



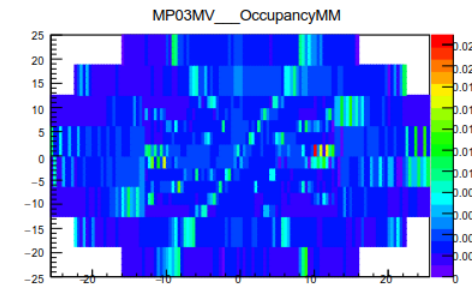
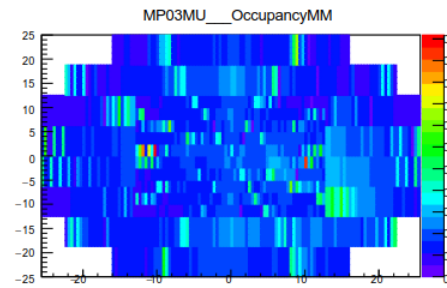
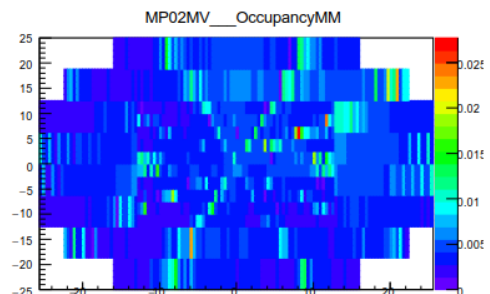
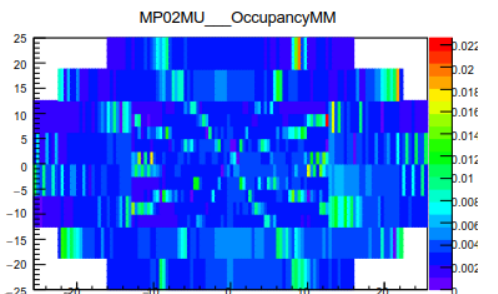
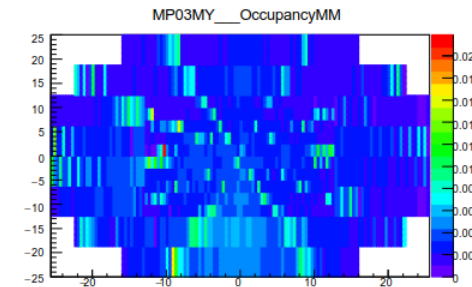
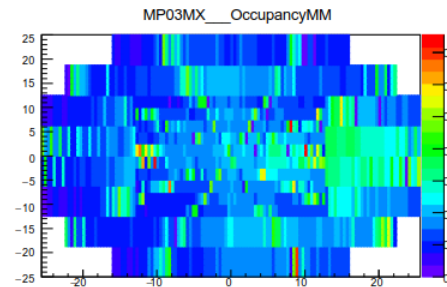
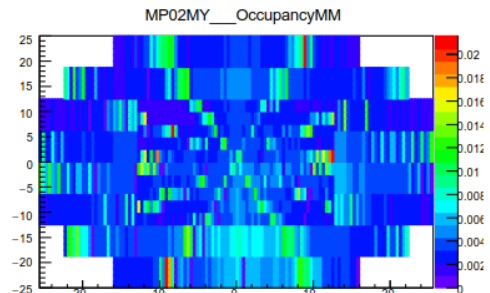
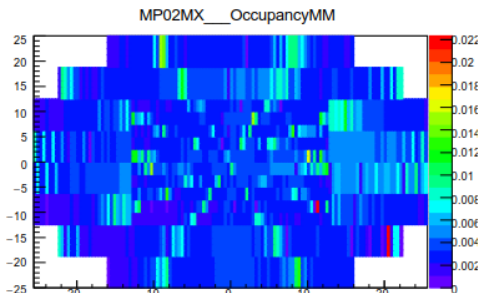
before intervention



after intervention

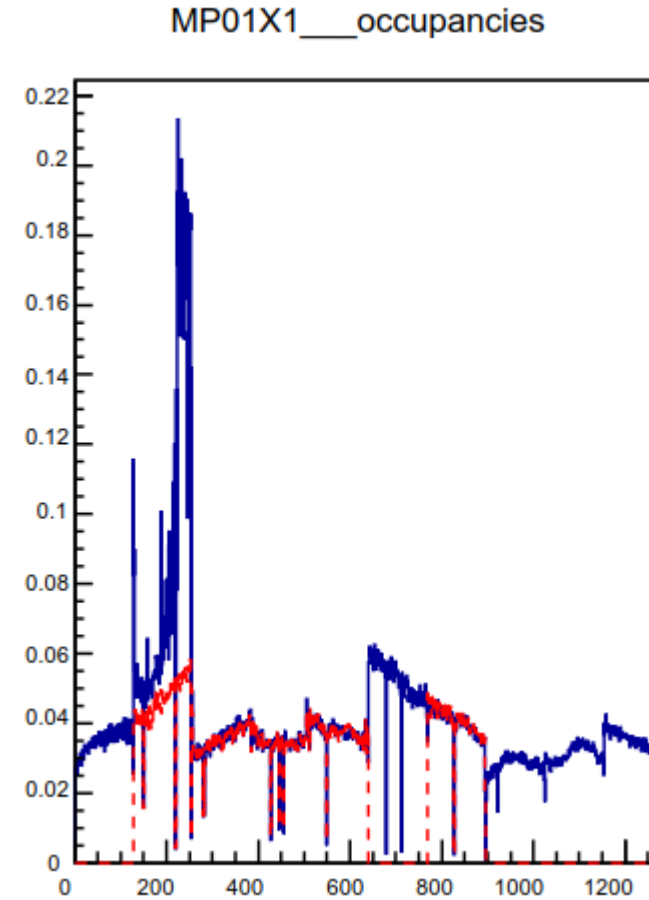
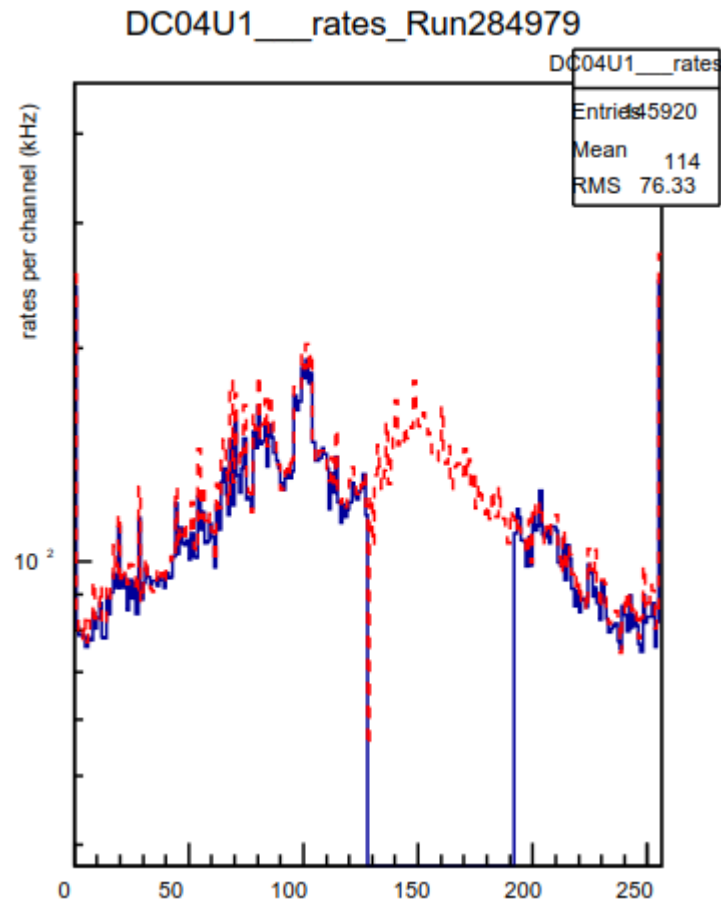


PMM
complete!



DC04 U1

MP01X1



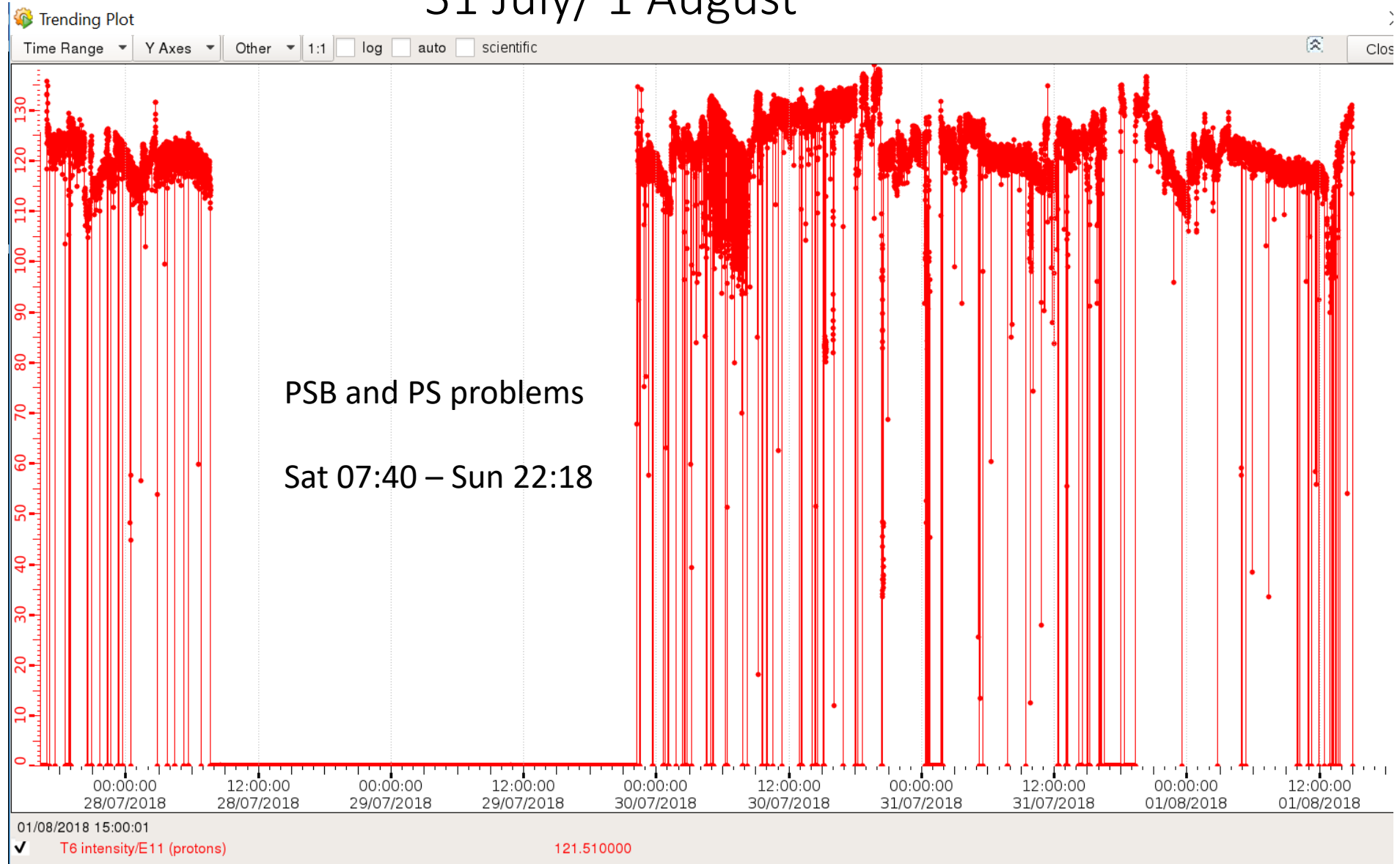
Spills since 27.07. 11:00 to 2.8. 15:00

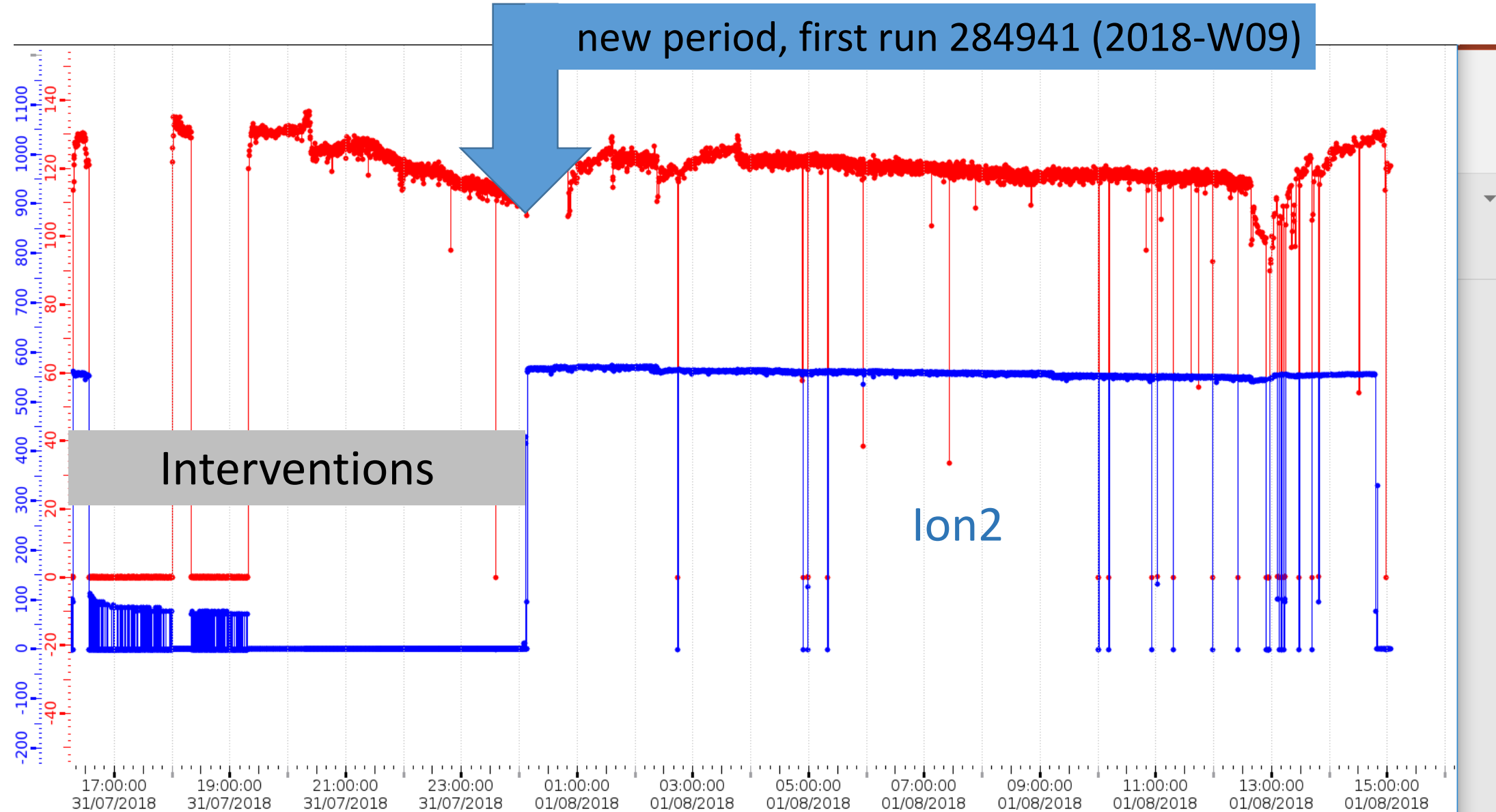
	W08	W09
• Drell-Yan:	11814	5512
• Good:	10958	5220
• SPS/PS	67%	
• COMPASS	80%	

01.08. 2018

Weekly report W30/31

31 July/ 1 August





Interventions 31. July 15:30 – 24:00

- DC04: all ports recovered (cables)
- PMM: module 1 recovered (fuses), module 3 changed but still faulty
- RW: improved gas flow, some improvements, flow references to be adjusted
- GEM: pedestal run for all GEM and PGEMs, 2 spare ADCs validated
- Straw: threshold data taken
- PT: polarization measured: -71.7% upstream, $+76\%$ downstream
- Trigger: OT, MTLAS dead times measured, veto&trigger timing checked

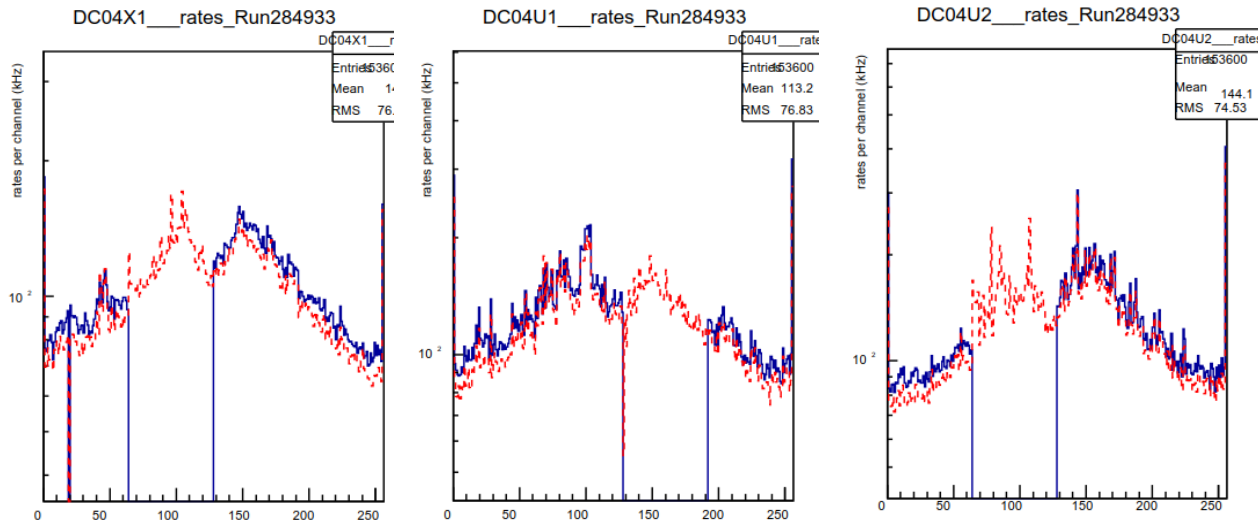
Detector problems

- PMM2: MP02MX and MP02MY sectors lost 03:45
PMM3: MP03MX and MP03MY missing sectors persistent
persistent
- DC01V2: SrcID 257, port 6, missing region in centre 06:30 persistent
- RW: moderate inefficiencies, some improvement persistent
- PA05: noise persistent
- W45: DW04Y2 very low eff., spikes in current since 31.07 16:00 persistent?
- ECAL2: missing sectors (Leds, Peds) since? persistent
- PT: He4 pumps stopped, restarted solved

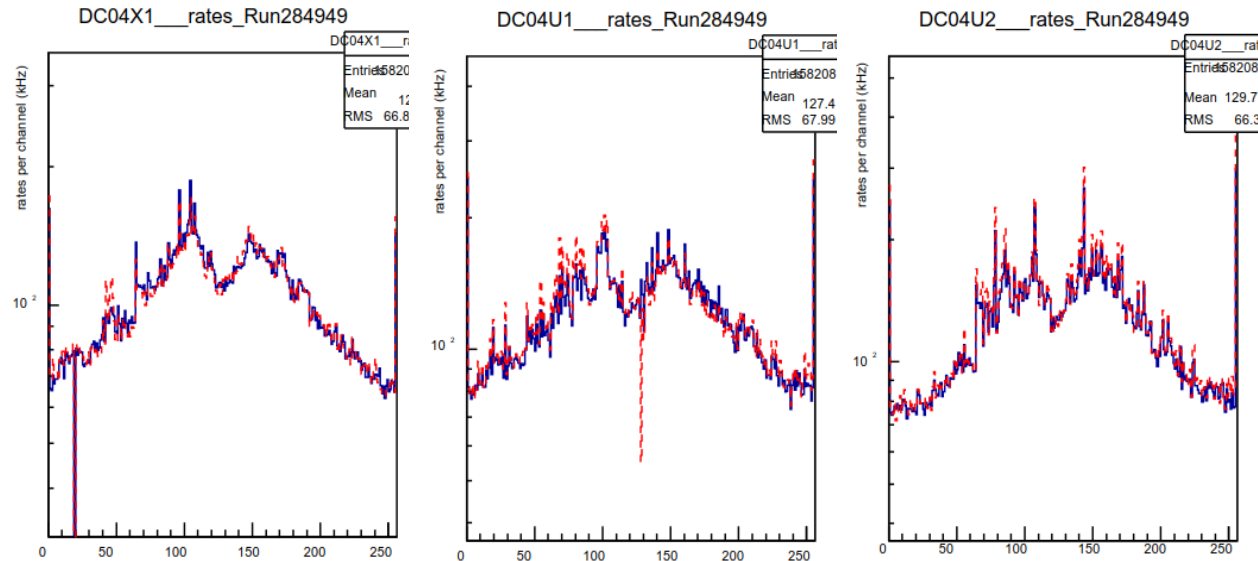
Good news DC04



Good news, everyone!



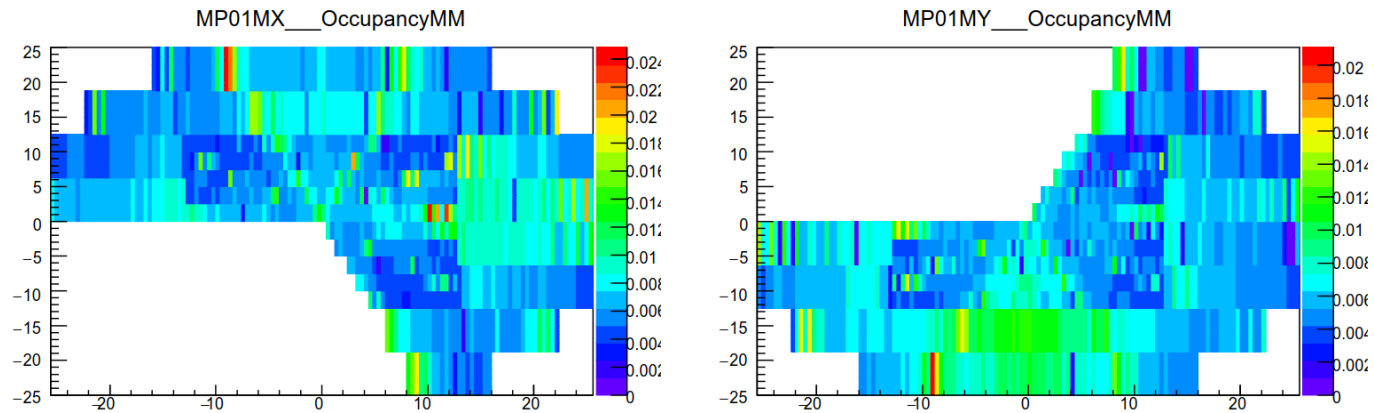
before intervention



after intervention

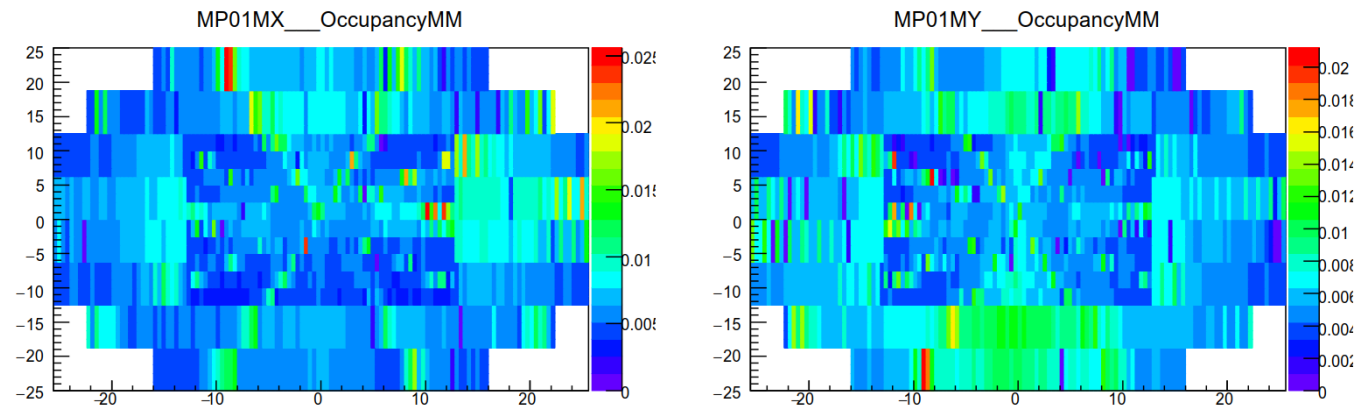
Good news PMM1

Run 284933 Canvas_MP01MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 4 (60096 evts) Tue Jul 31 14:07:34 2018



before intervention

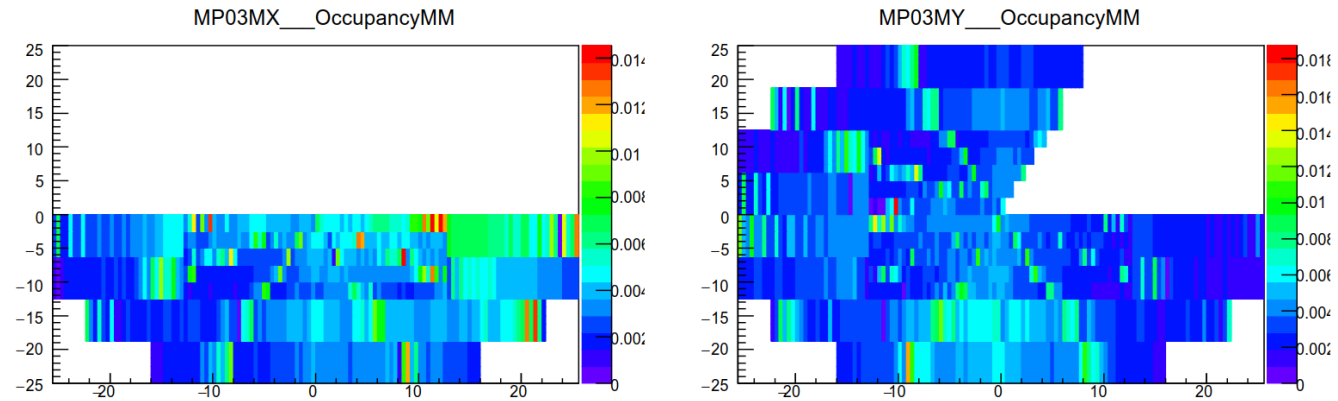
Run 284949 Canvas_MP01MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 4 (61809 evts) Wed Aug 1 07:03:18 2018



after intervention

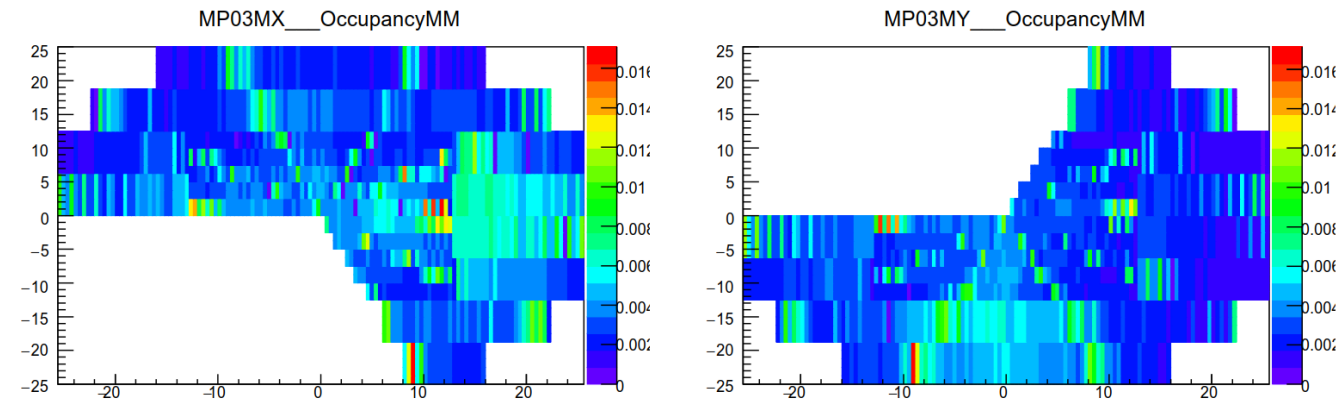
Not so good news PMM3

Run 284933 Canvas_MP03MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 6 (60096 evts) Tue Jul 31 14:07:34 2018



before intervention

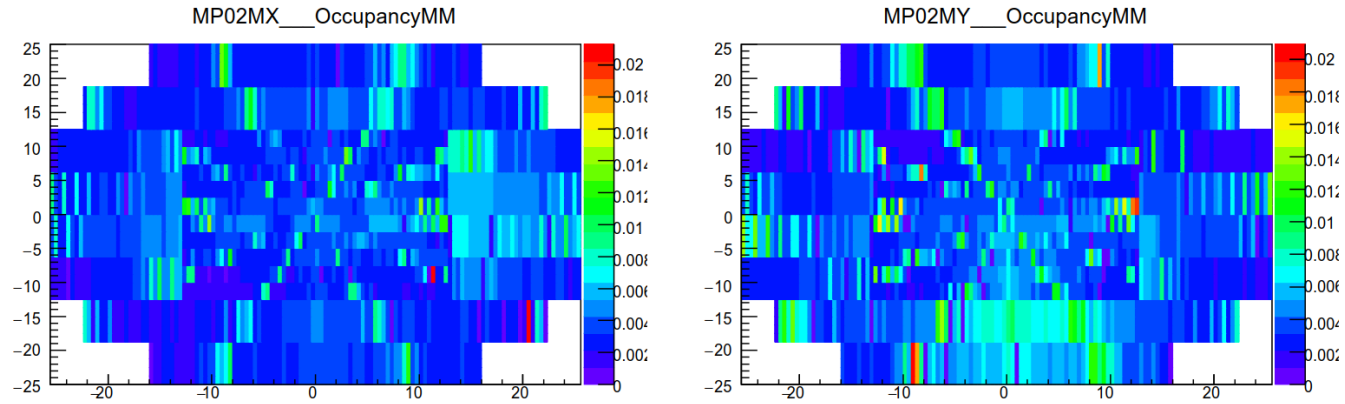
Run 284949 Canvas_MP03MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 6 (61809 evts) Wed Aug 1 07:03:18 2018



after intervention

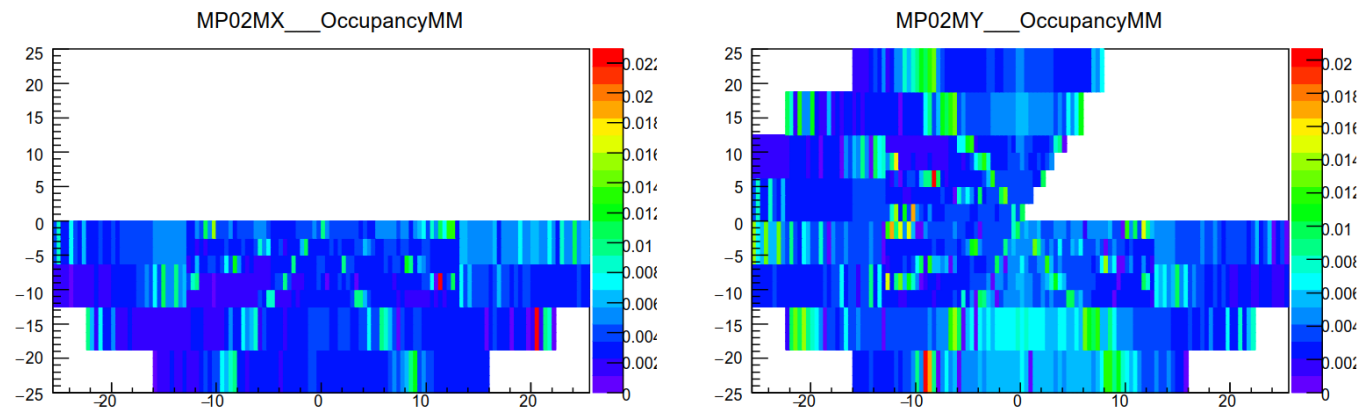
Bad news PMM2

Run 284933 Canvas_MP02MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 5 (60096 evts) Tue Jul 31 14:07:34 2018



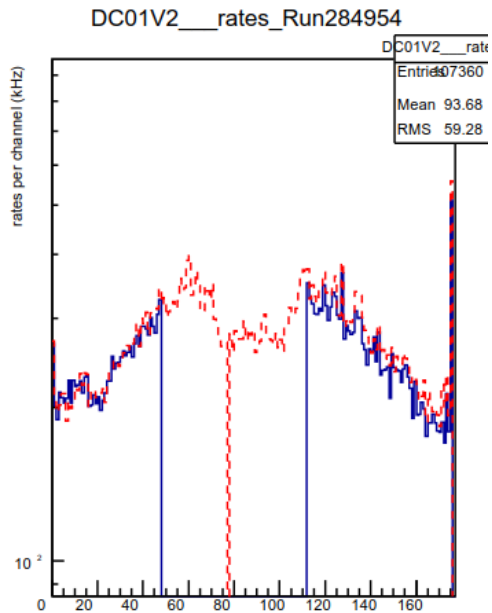
yesterday

Run 284949 Canvas_MP02MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 5 (61809 evts) Wed Aug 1 07:03:18 2018

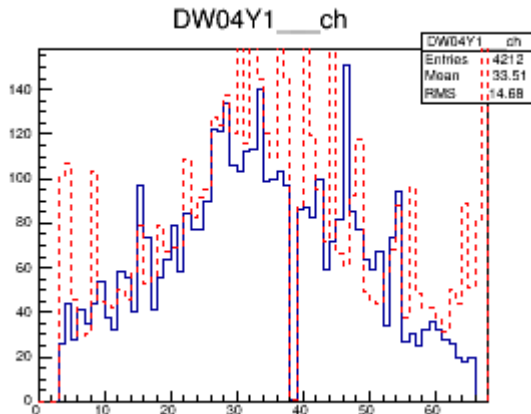


now

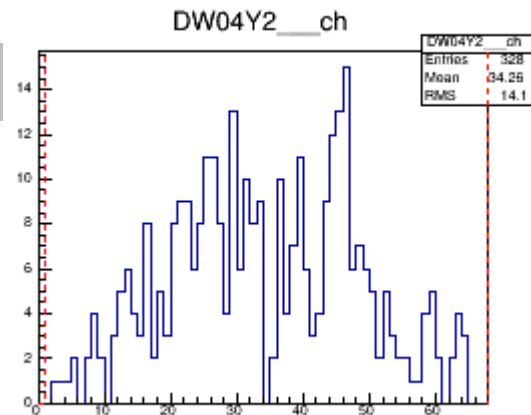
DC01V2, DW04Y2



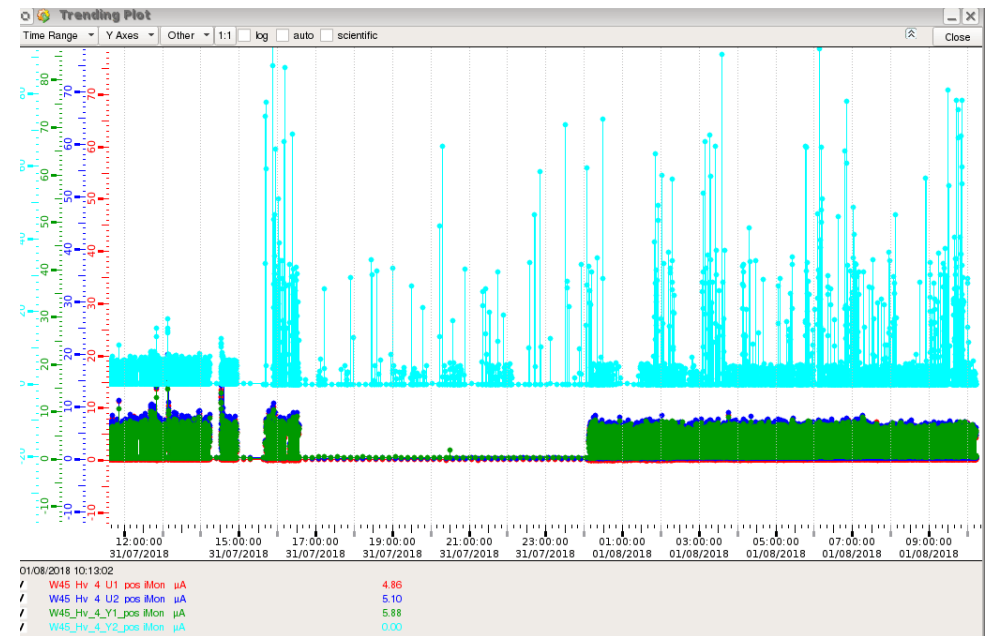
140



14

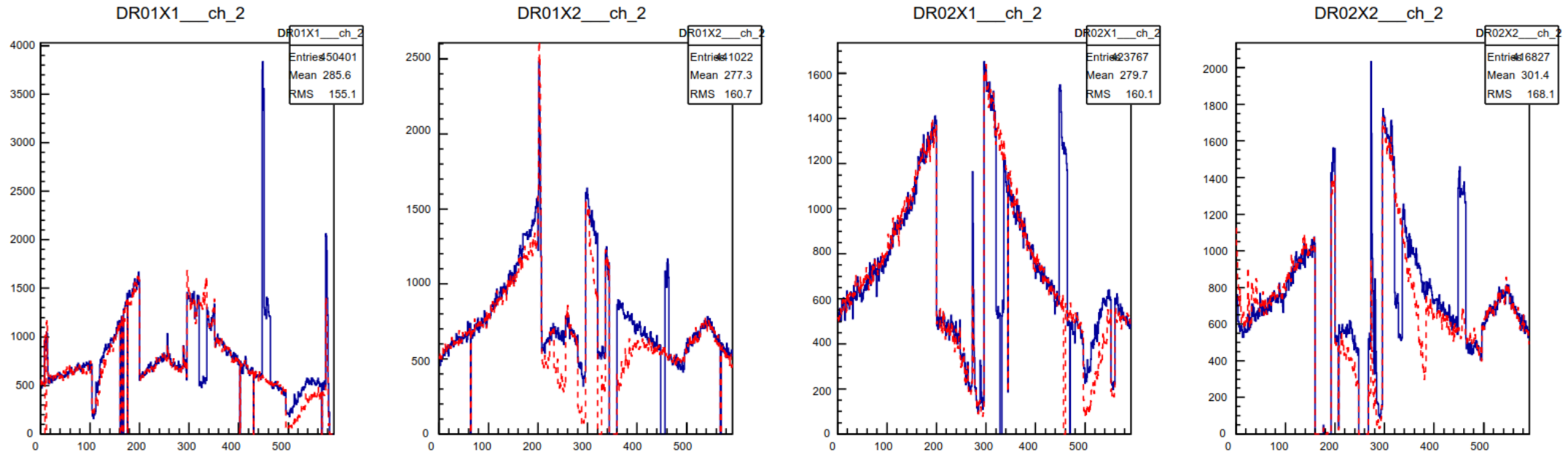


W45 maybe cured itself → check current DW04Y2 (cyan) and others



Richwall: some improvement

Run 284954 Canvas_DR01X1___ch_2: RW.cfg - Page 1 (61052 evts) Wed Aug 1 09:54:55 2018



Spills since 27.07. 11:00 to 1.8. 15:00

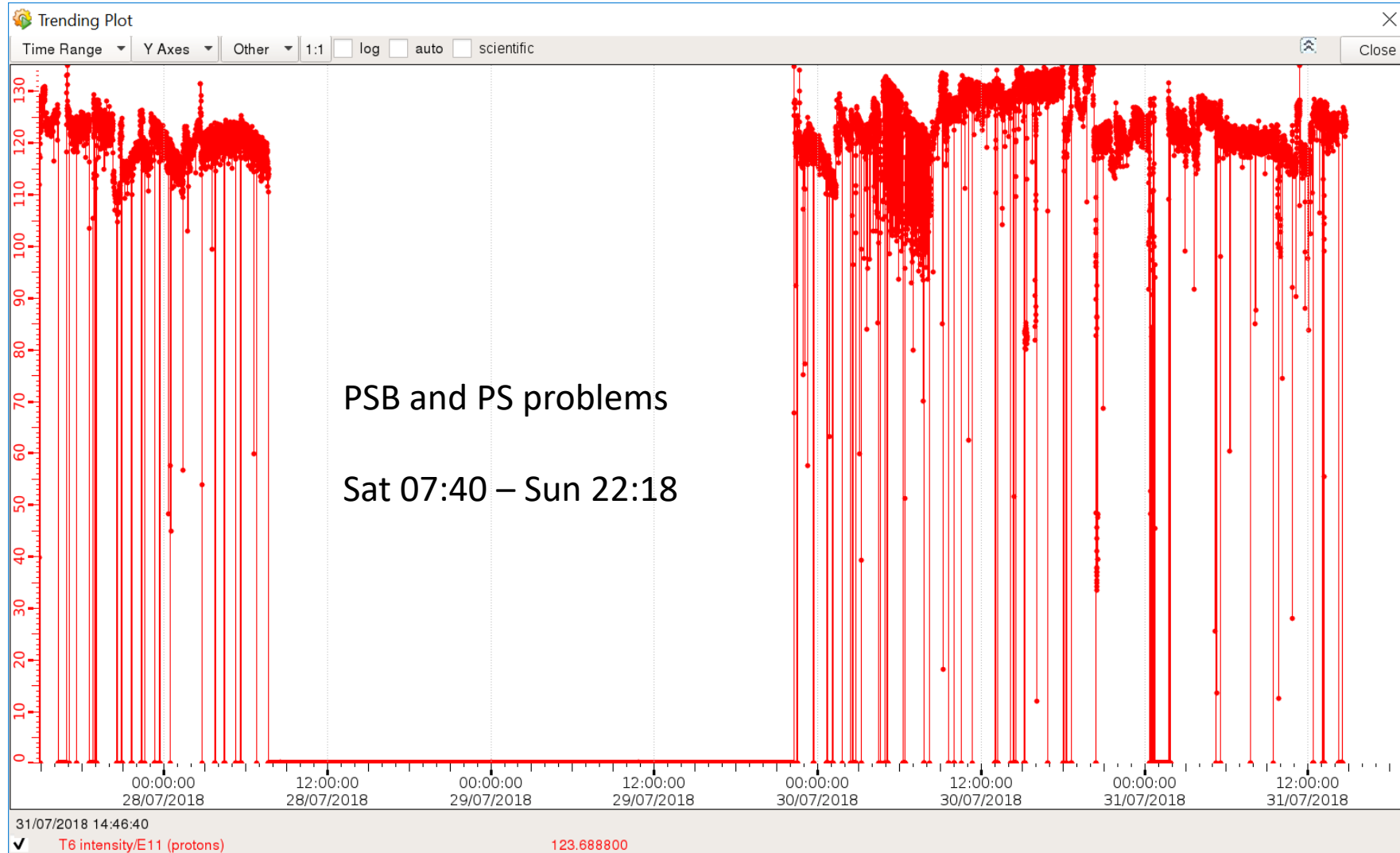
- Drell-Yan: 14161
- Good: 13277

- SPS/PS 64%
- COMPASS 81%

31.07. 2018

Weekly report W30/31

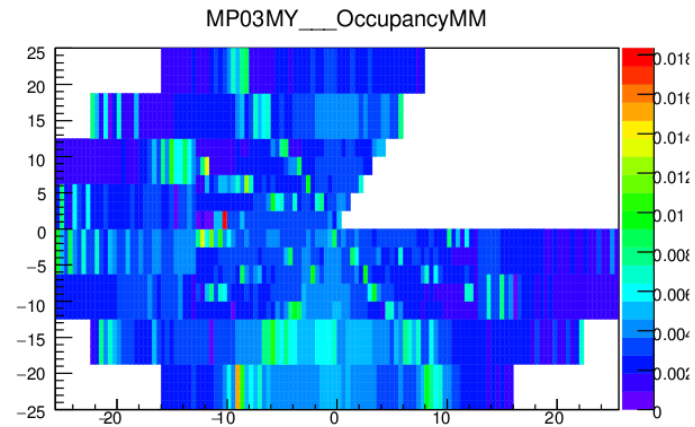
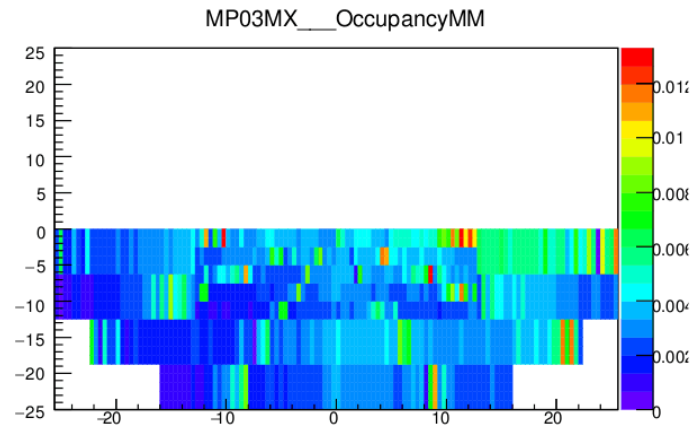
30/31 July



Detector problems

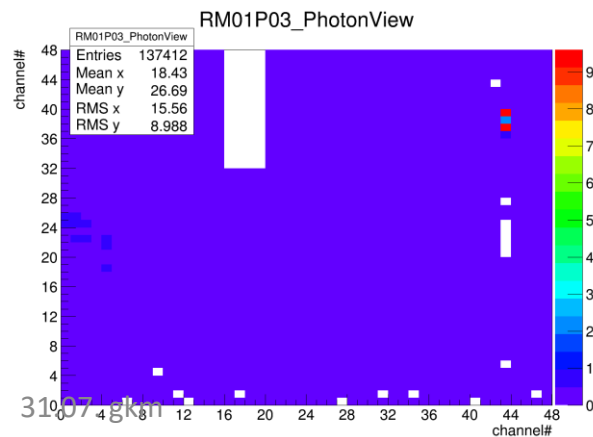
- FI15U: pccotg05 power cycled, 960 reloaded, etc
FI01 scaler: srcID 21, reloaded
30.07, solved
31.07, solved
- PMM: MP01MX and MP01MY missing sectors,
PMM3, SrcID 382, lost sectors , 30.07 ~19:00
persistent
persistent
- DC01V1: SrcID 257, reloaded
31.07, solved
- DC04: three ports missing DC04X1, DC04U1, DC04U2 all pretty
central
persistent
- Hot spot in RM01P03 masks the data, since at least Friday, run
284855
persistent
- RW: moderate inefficiencies, Maxim invest. gas flow
persistent
- PA05: noise
persistent
- HV crate manually rebooted (PMM_CCR7), DC1, MM

Histos



30.07. ~19:00 Lost part
pf PMM3 pixels

Rich hot channels,
at least since Friday

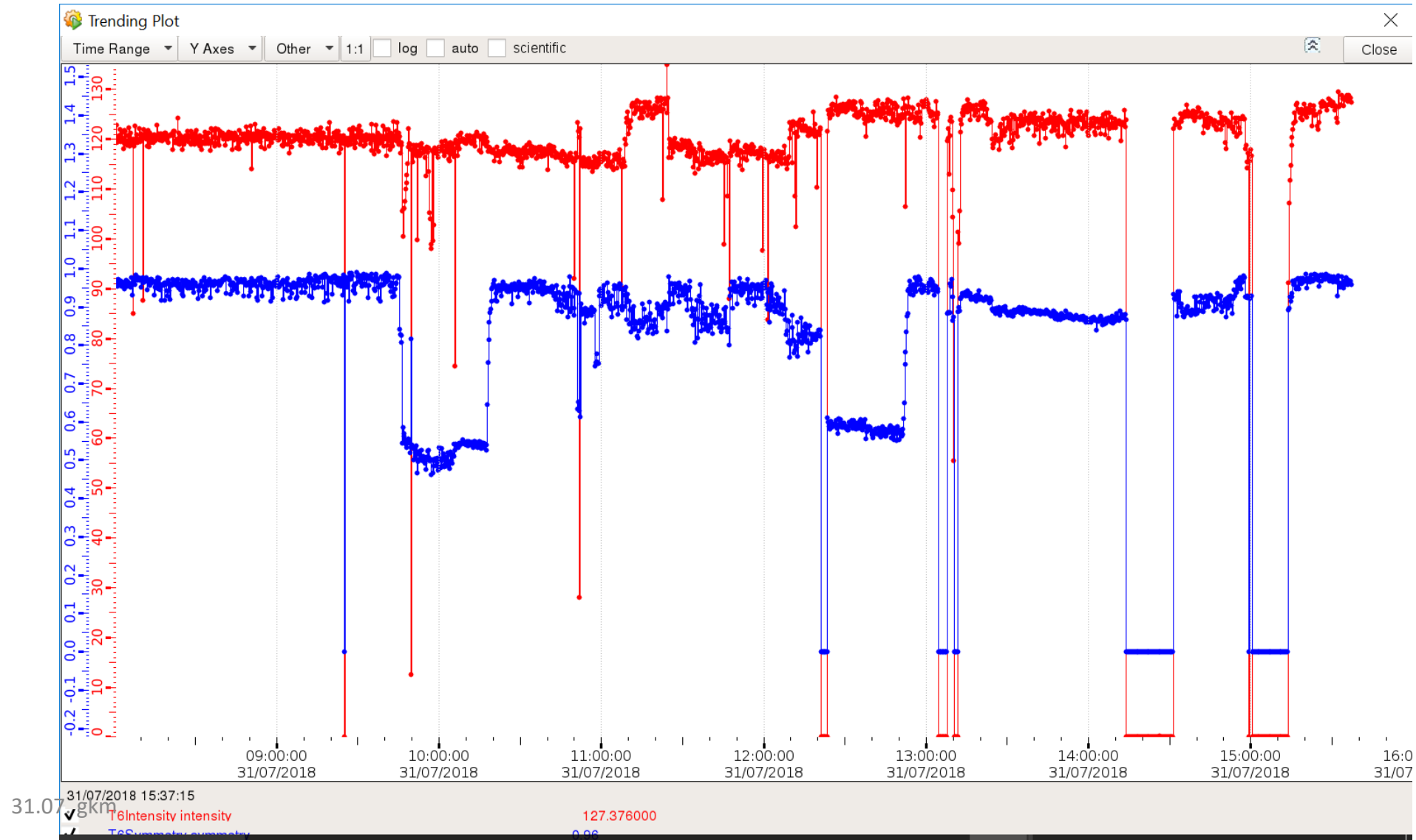


Spills since 27.07. 11:00 to 31.7. 14:44

- Drell-Yan: 11781
- Good: 10925

- SPS/PS 58%
- COMPASS 91%

Last eight hours not too stable (T6 rate & sym)



Wednesday (Vincent), anticipated to NOW:

- **8am: ACCESS**

- Switch SM1 OFF
- DC04 move into garage position
- Gas flow adjustment of RW
- Target magnet: Dipole to solenoid.
- Refilling water, LN2 trap dewar, target material dewars
- Load new GEM04 pedestal
- Preparation for low intensity beam - change T6 head to 40mm, move TAX01 to 0mm

- **9ish am (as soon as all the previous items are done):**

- end of access, Switch SM1 ON
- Take few trigger efficiency data to check if the gas adjustment done by Maxim is satisfying

- **10ish or as soon as Maxim can draw a conclusion on RW efficiency:**

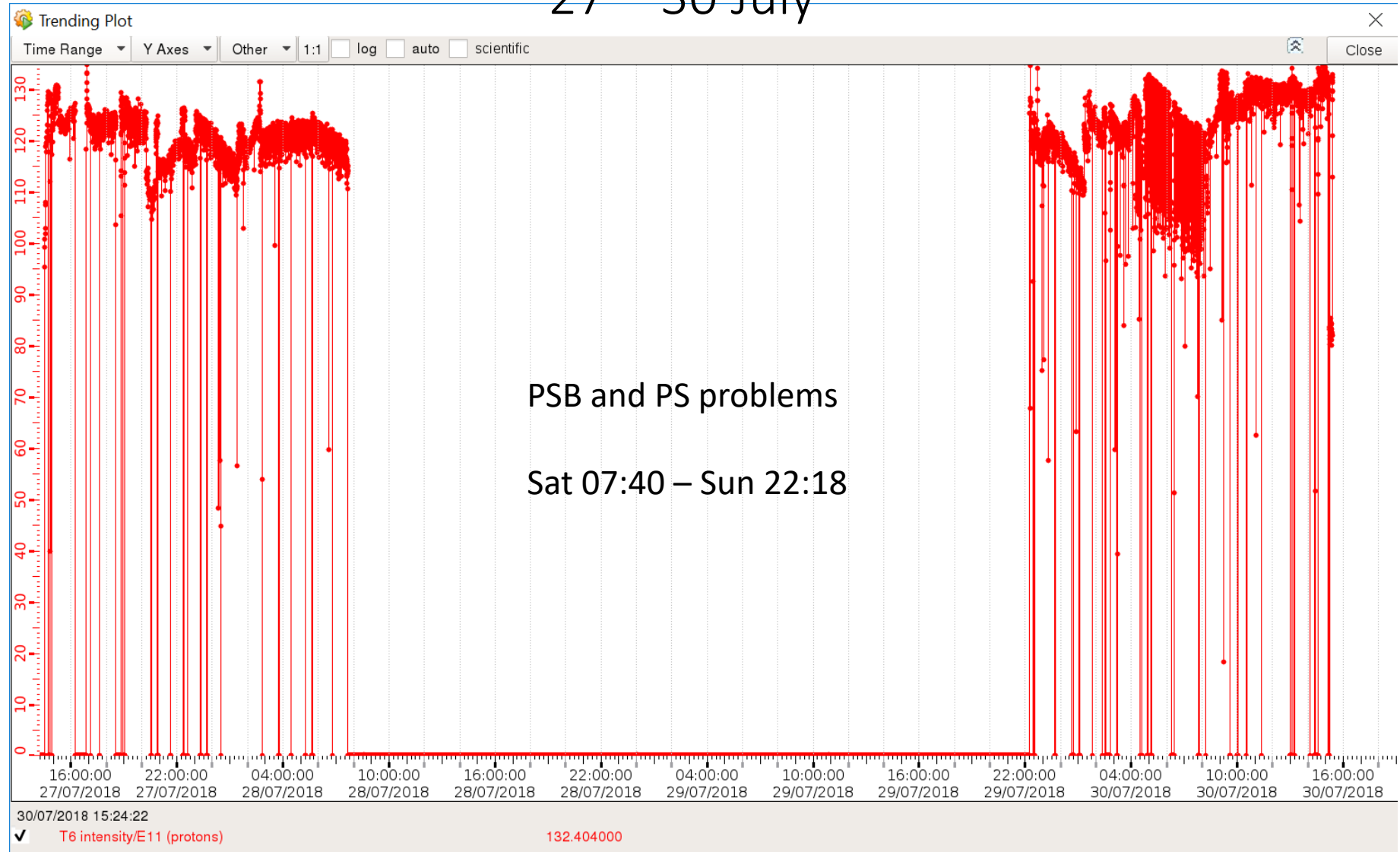
- access, Switch SM2 OFF for power saving,
- keep SM1 ON for ST03 threshold scan (about 1h) and OFF afterwards
- Additional intervention for RW if necessary
- In principle even with SM1 ON, we should be able to:
 - Exchange the internal cables of the three problematic ports of DC04 (maybe also F1 cards...)
 - Exchange the fuse of PMM01

- **10ish (cnt'd):**
 - Most likely we need to re-flash the firmware for PMM3
 - Check the spare ADCs of GEM on GEM11
 - access, Switch SM2 OFF for power saving,
 - keep SM1 ON for ST03 threshold scan (about 1h) and OFF afterwards
 - Additional intervention for RW if necessary
 - In principle even with SM1 ON, we should be able to:
Exchange the internal cables of the three problematic ports of DC04 (maybe also F1 cards...)
Exchange the fuse of PMM01
 - Most likely we need to re-flash the firmware for PMM3
 - Check the spare ADCs of GEM on GEM11
 - Take new pedestal if necessary. Do you need SM1 and SM2 ON? If yes, I would do it before ST03 thresholds scan in order to switch SM2 only afterwards.
- **As soon as everything is finished or about to finish:**
 - Switch target from solenoid to dipole
 - END OF ACCESS
 - Physics data taking (I would prefer to take alignment runs on Thursday 9th of August and top up the polarisation at the same time).

27.07–30.07. 2018

Weekly report W30/31

27 – 30 July

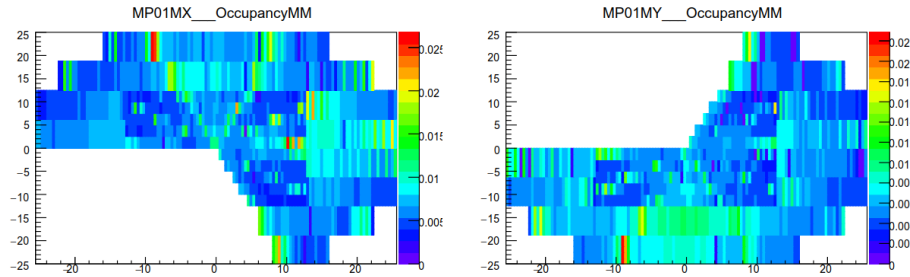


Detector Problems

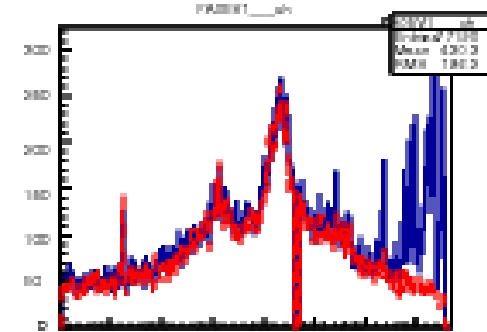
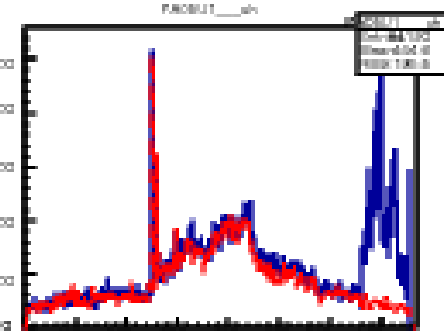
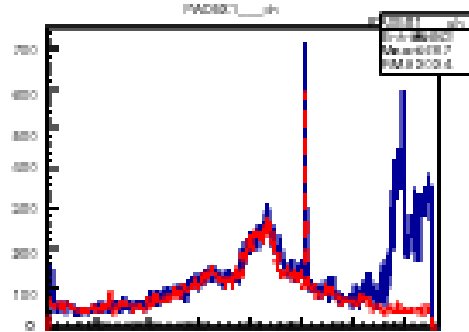
- PMM: MP01MX and MP01MY missing sectors, PMM3, SrcID 382, needed to reboot pccofe15 (Gesica) **persistent**
27.07, solved
- DC01X1: SrcID 256, miraculously solved 27.07, solved
- DC04: three ports missing DC04X1, DC04U1, DC04U2 all pretty central **persistent**
- RW: moderate inefficiencies, Maxim invest. gas flow **persistent**
- ECAL1: SrcIDs 627, 628, 629 off from Fri to Sat 11:00, fan-tray exchanged 28.07, solved
- PA05: noise **persistent**

histos

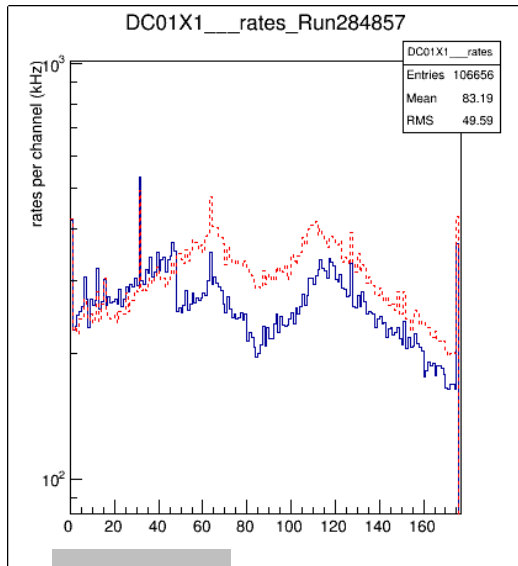
Run 284893 Canvas_MP01MX__OccupancyMM: PixelMM_Occupancies.cfg - Page 4 (47550 evts) Mon Jul 30 07:58:32 2018



PMM 1

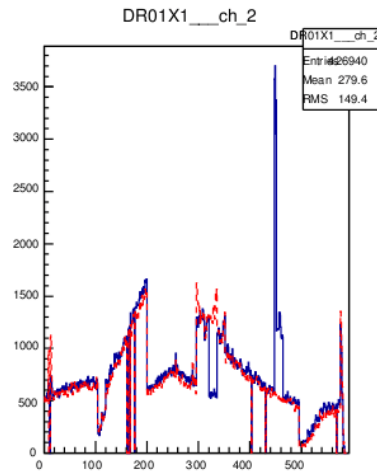


PA05

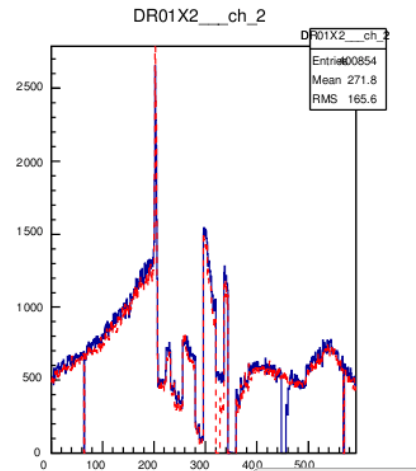


DC01
30.07 gkm

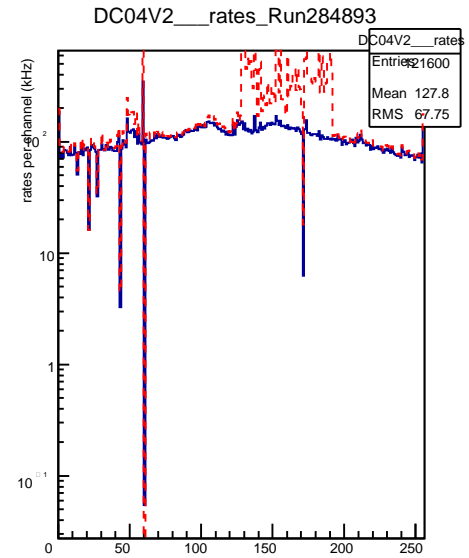
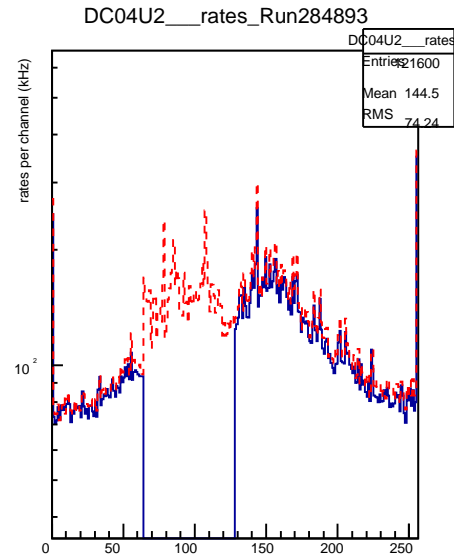
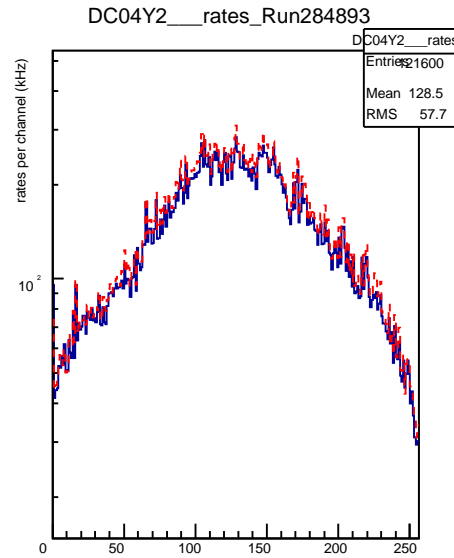
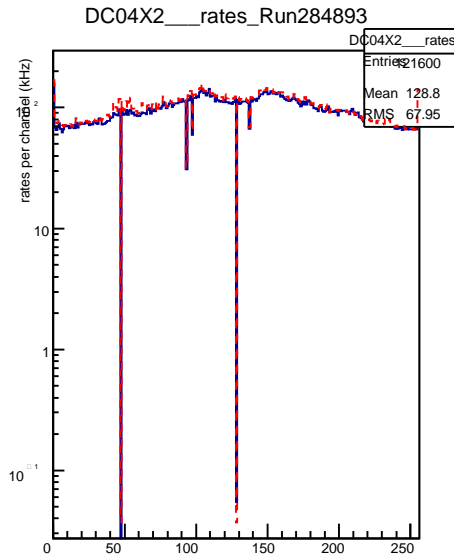
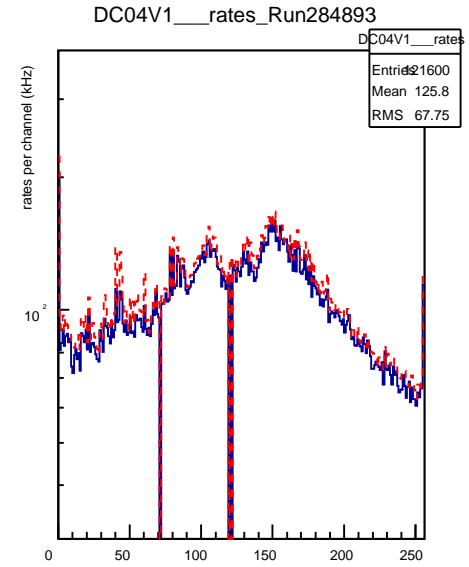
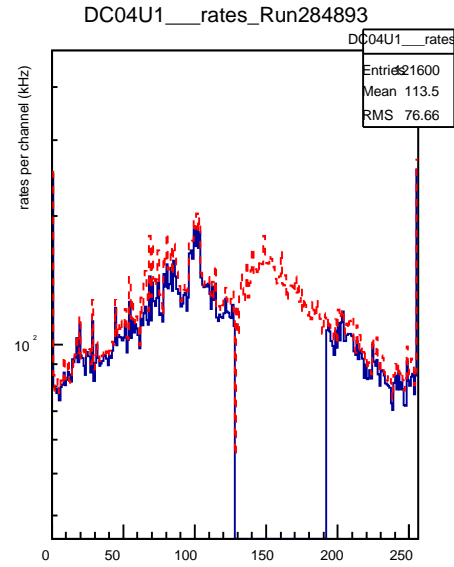
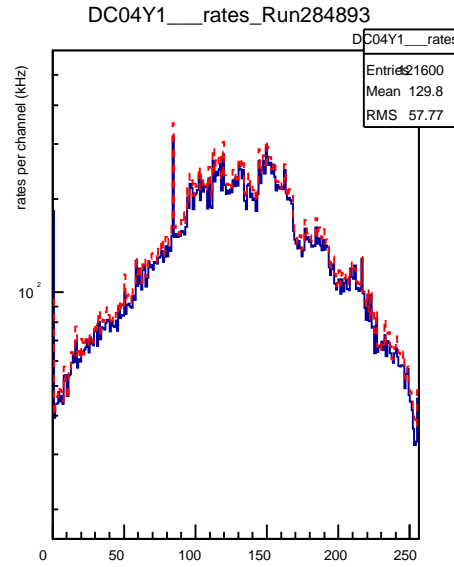
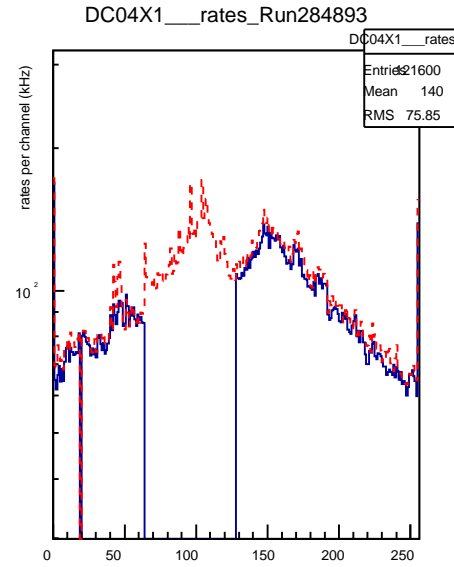
Run 284862 Canvas_DR01X1__ch_2: RW.c



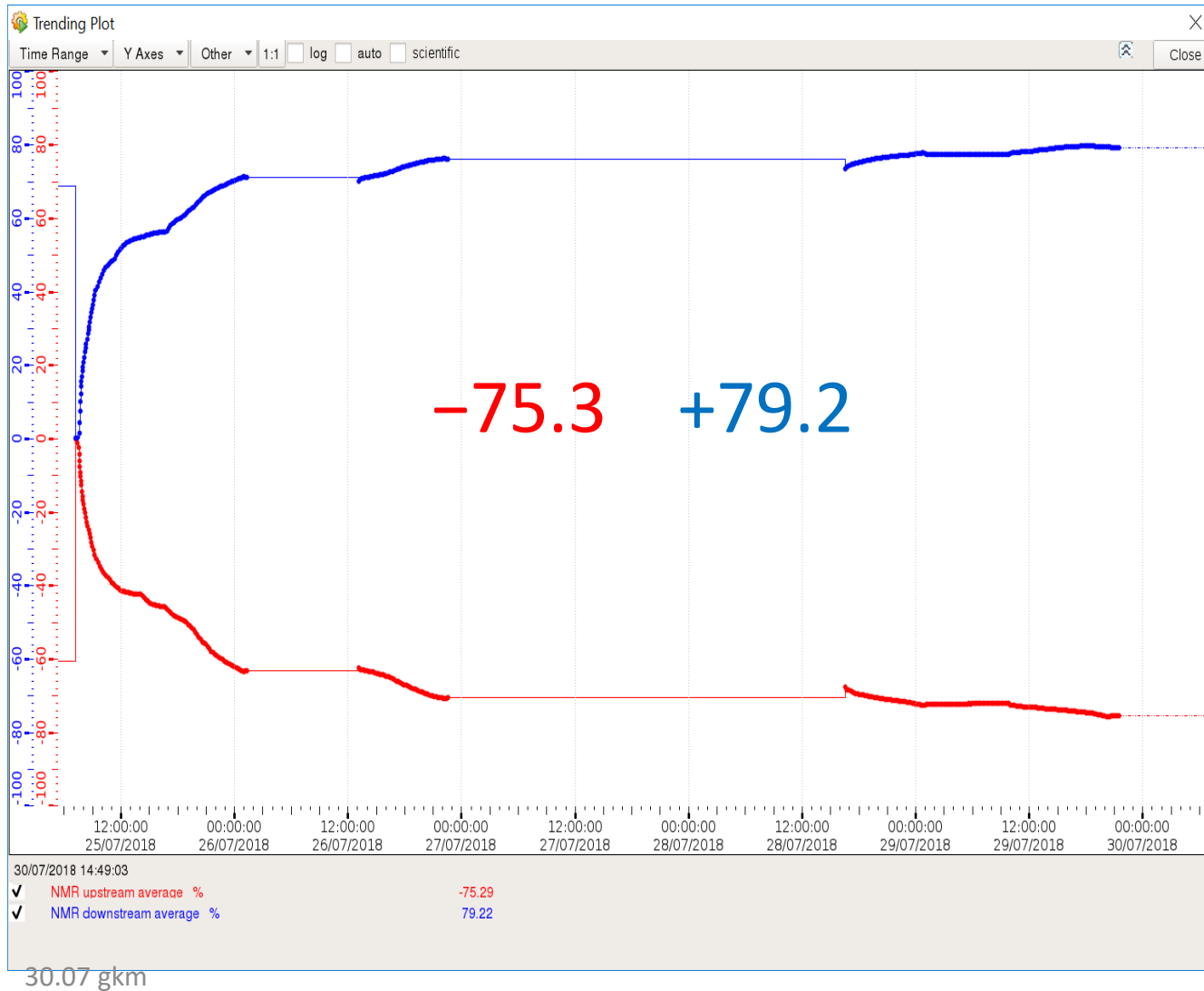
RW



DC04



Polarised Target



topped-up polarisation:

Sat: 16:00 – Sun 01:00

Sun 10:00 – Sun 21:30

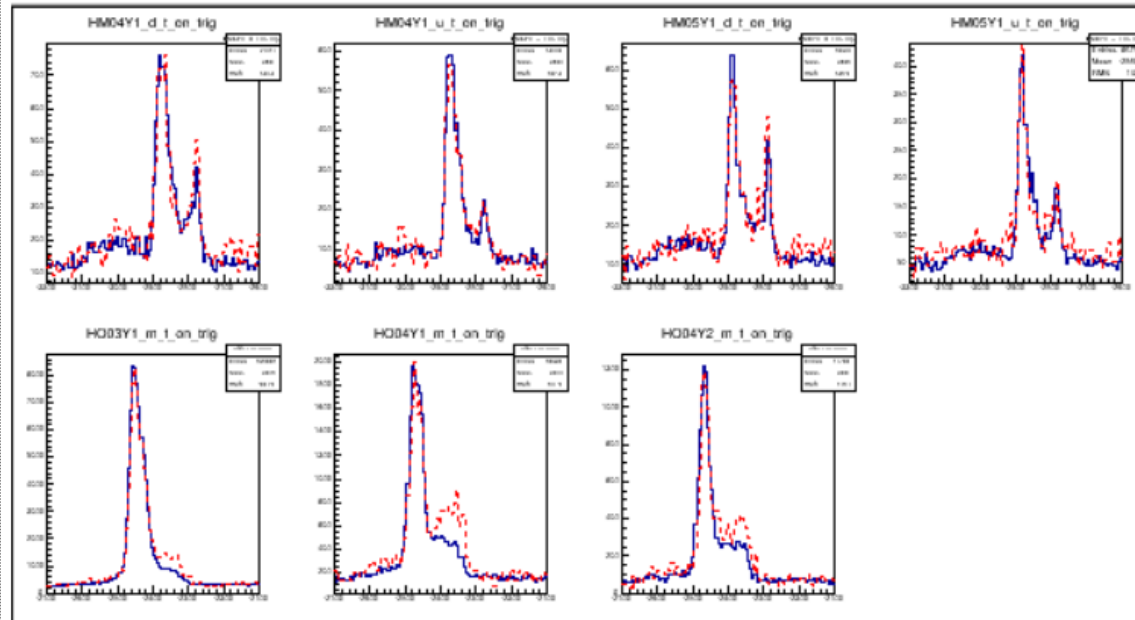
Observation: HO

#	Author	Date	Domain	Title
61110	Y.Bedfer	Sat 28 July 2018, 23:58	Trigger	Double peak in hodo timing

I replayed 8 chunks of run #284876 to investigate the problem.

=> The situation in HMs has not changed since reference.

=> Not the case in HOs, where the amplitude of the smaller has decreased...



Spills since 27.07. 11:00

- Drell-Yan: 7599
- Good: 6967

- SPS/PS 46%
- COMPASS 94%