

Weekly report

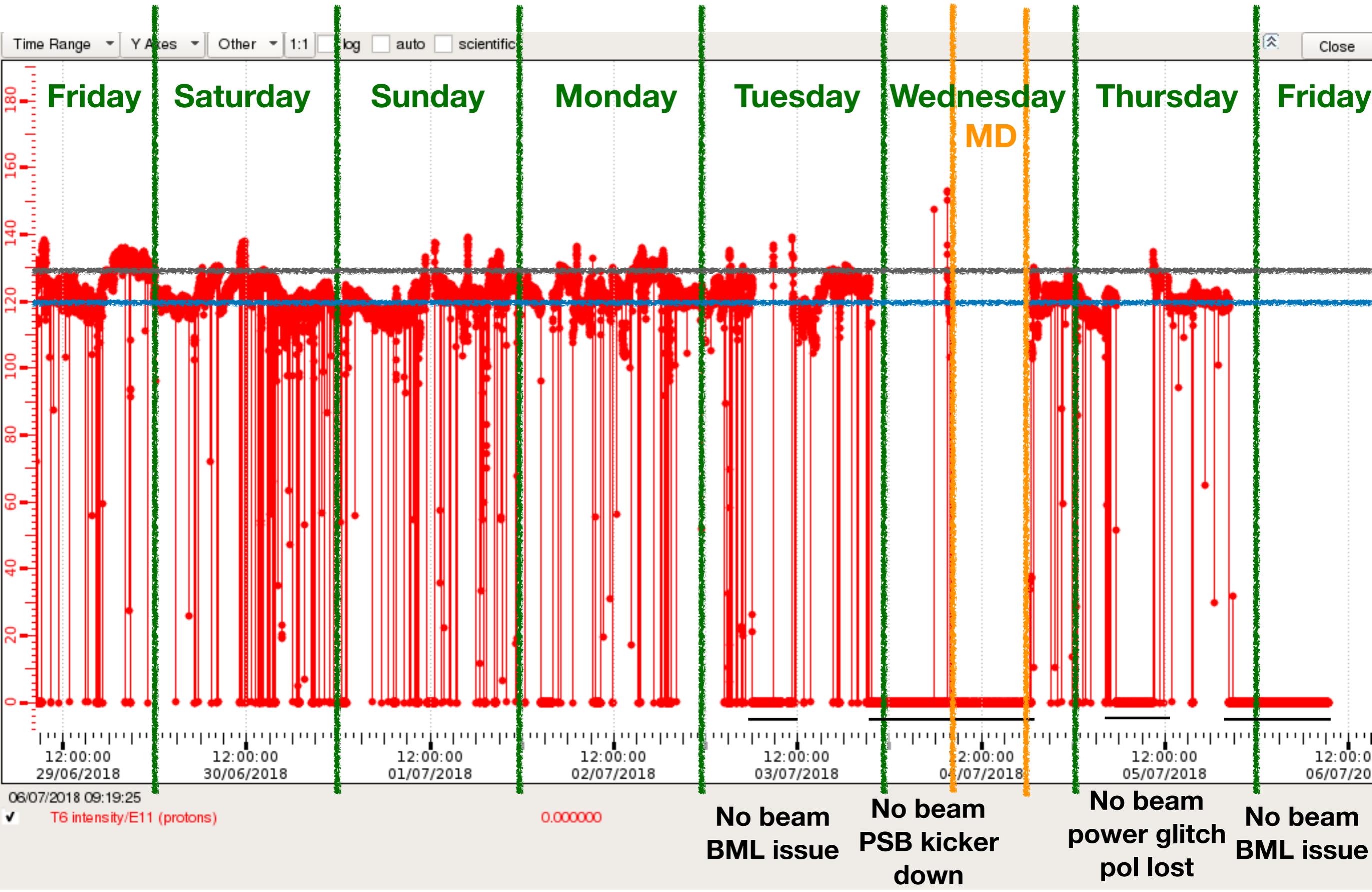
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6 July 2018

Main activities

Friday	<ul style="list-style-type: none"> ▶ short access for Cedars tests (also ECAL2 and MWPCs) ▶ alignment for around 2hours ▶ power glitch around midnight (affected on rack) that affected DC05 LV
Saturday	<ul style="list-style-type: none"> ▶ long access for Cedars tests (also MW1, GEMs, Straws)
Sunday	<ul style="list-style-type: none"> ▶ access for Straw due to high temperature in gallery (also MWPCs, GEMs)
Monday	<ul style="list-style-type: none"> ▶ GEM ADC was successful replaced
Tuesday	<ul style="list-style-type: none"> ▶ no beam from ~6.30am to 11.20am (BML issue on SPS) ▶ CO2 flow on GEMs, Straw and MWPCs was cut ▶ no beam since ~9.30pm (PSB kicker down)
Wednesday	<ul style="list-style-type: none"> ▶ MD started at 8am (several issues fixed) ▶ new data taking period started (W05) ▶ start to pop up the polarisation (from 7am to 1am)
Thursday	<ul style="list-style-type: none"> ▶ power glitch ~5.30am, polarisation was lost ▶ no beam since ~5.30am to ~10.30am ▶ start polarising ~8am ▶ no beam since ~9.30pm
Friday	<ul style="list-style-type: none"> ▶ no beam, still polarising

Beam - Intensity in T6



Some “minor” interventions

- ▶ **FI15 (Srcld 852) 100% errors on MurphyTV (only fixed after rebooting the VXS crate and replug the gandalf)**
- ▶ **Persisting problems on some DC00/01/04 Srclds, sometimes solved by power cycling LV and pccofee**
- ▶ **Persisting errors on some MWPCs Srclds mainly solved by power cycling the LV and checking the catch connections**
- ▶ **RICH, Srclds missing in MurphyTV, fixed after power cycling the LV and restart and load pccoffe 30**
- ▶ **Few communications lost in DCS, in general easily recovered**
- ▶ **Pull a new cable from norma bar to straw, done during MD**
- ▶ **Water leakage on beam line, close to one quadrupole far upstream, a quick fix was preformed, magnet group responsibility, a better fix should be done soon**

Main hardware interventions

- ▶ Cedars (>100 photoelectrons on PMTs, in coincidence in the 2 cedars)
- ▶ DC05 LV (new spare installed), work done in two stages, after power glitch that affected the crate and during MD, each time followed by a baseline scan and a study of thresholds
- ▶ DC04 (4 cards changed during MD)
- ▶ GM07 and GM08 low efficiency, found to be caused by a ADC card
- ▶ PS01 missing Scrd fixed during MD, unplug and plug the card
- ▶ MW1 HV board exchange (by a spare board from trigger group)
- ▶ Straw 3 HV trips which forced access to restart it, issues related to temperature in gallery, installation of a fan in between LV and HV and the filter on HV fan was removed
- ▶ CO2 flow cut on Gems, MWPCs and Straw, damaged power supply, all detectors in perfect conditions after few hours

Power glitch/polarisation lost

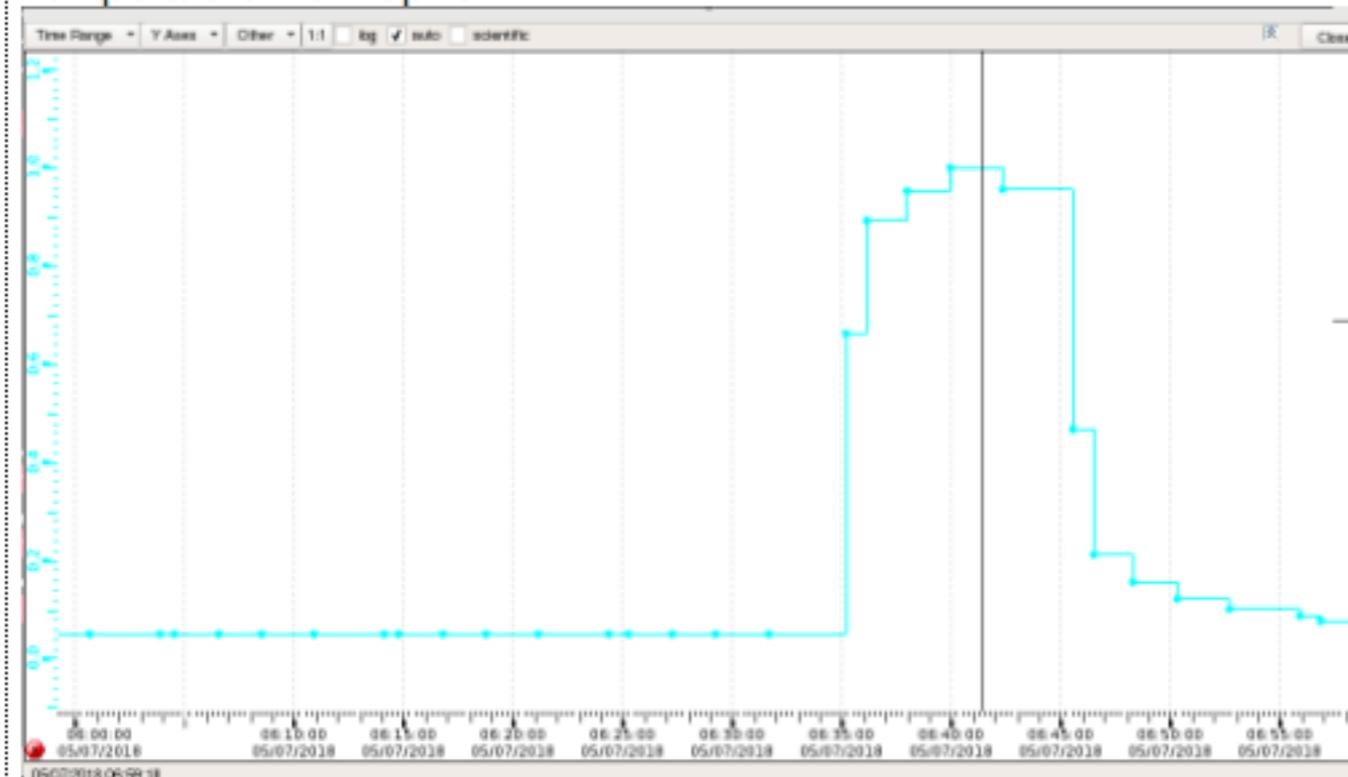
60688	Jaakko Koivuniemi	Thu 05 July 2018, 06:50	Target	Helium-3 roots pumps stopped
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Power glitch stopped helium-3 roots pumps at ~6:35. Restart pumps at 6:42.

Referred by [#60689](#)

60689	Jaakko Koivuniemi	Thu 05 July 2018, 06:59	Target	Polarized ammonia temperature during helium-3 pump stop
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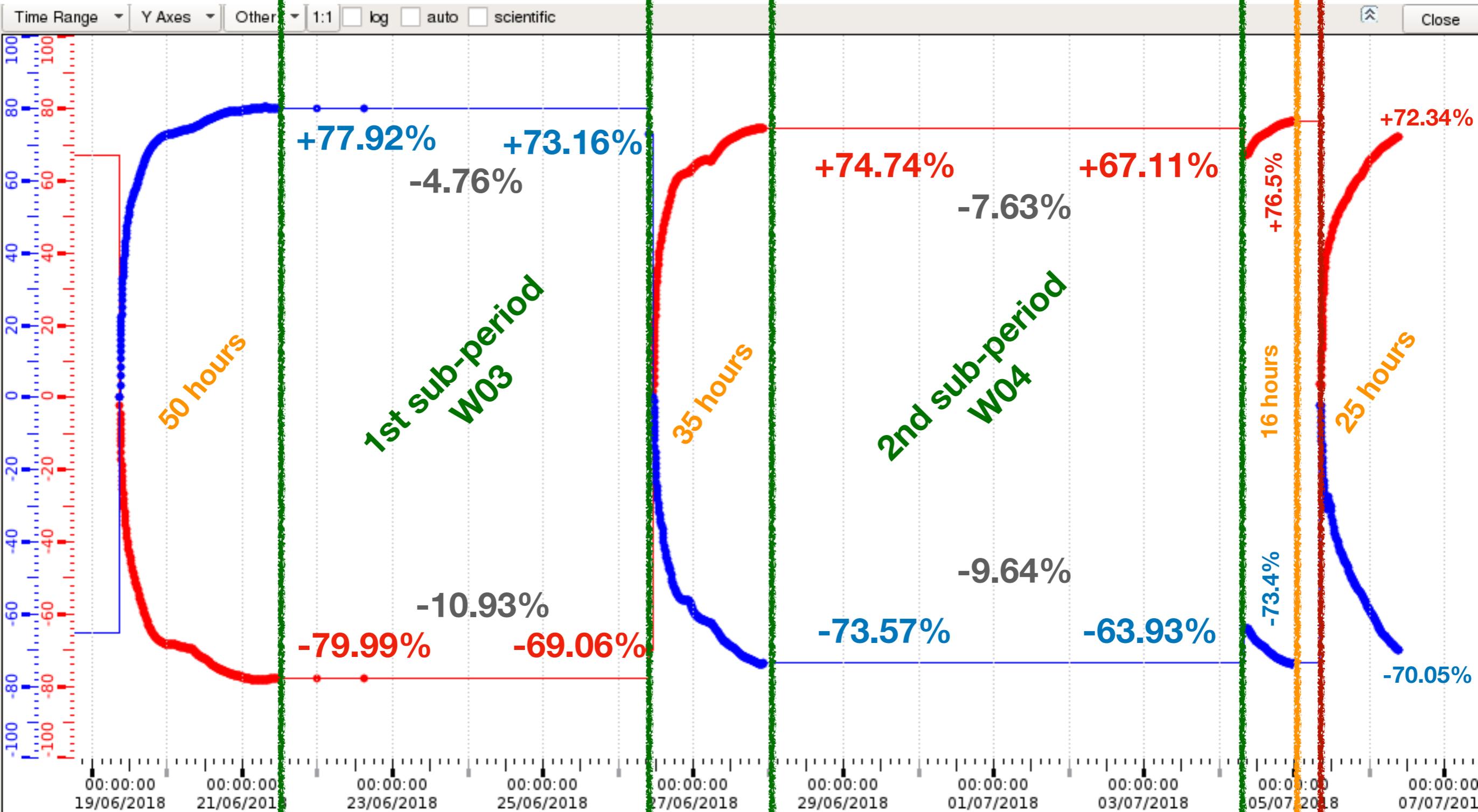
Temperature went up to 1 K.



Refers to [#60688](#)

Referred by [#60690](#)

Polarisation



06/07/2018 09:21:32

- ✓ NMR upstream average % 72.34
- ✓ NMR downstream average % -70.05

Good spills W03/W04

Spills Recorded by COMPASS Between 2018-06-21 13:59:40 and 2018-06-26 09:25:57

from run 283847 to run 284003

1st sub-period

Run Type	Recorded Spills	Good Spills	Particles per Good Spill	Bad Spills	Particles per Bad Spill	Empty Spills	Particles per Empty Spill
	4126	0		0		4126	5879
detector_test	33	19	1.753e+8	0		14	22889
drell-yan	16079	15462	1.666e+8	60	1.603e+8	557	15525
Total	20238	15481		60		4697	

Spills Recorded by COMPASS Between 2018-06-27 23:15:21 and 2018-07-03 21:28:54

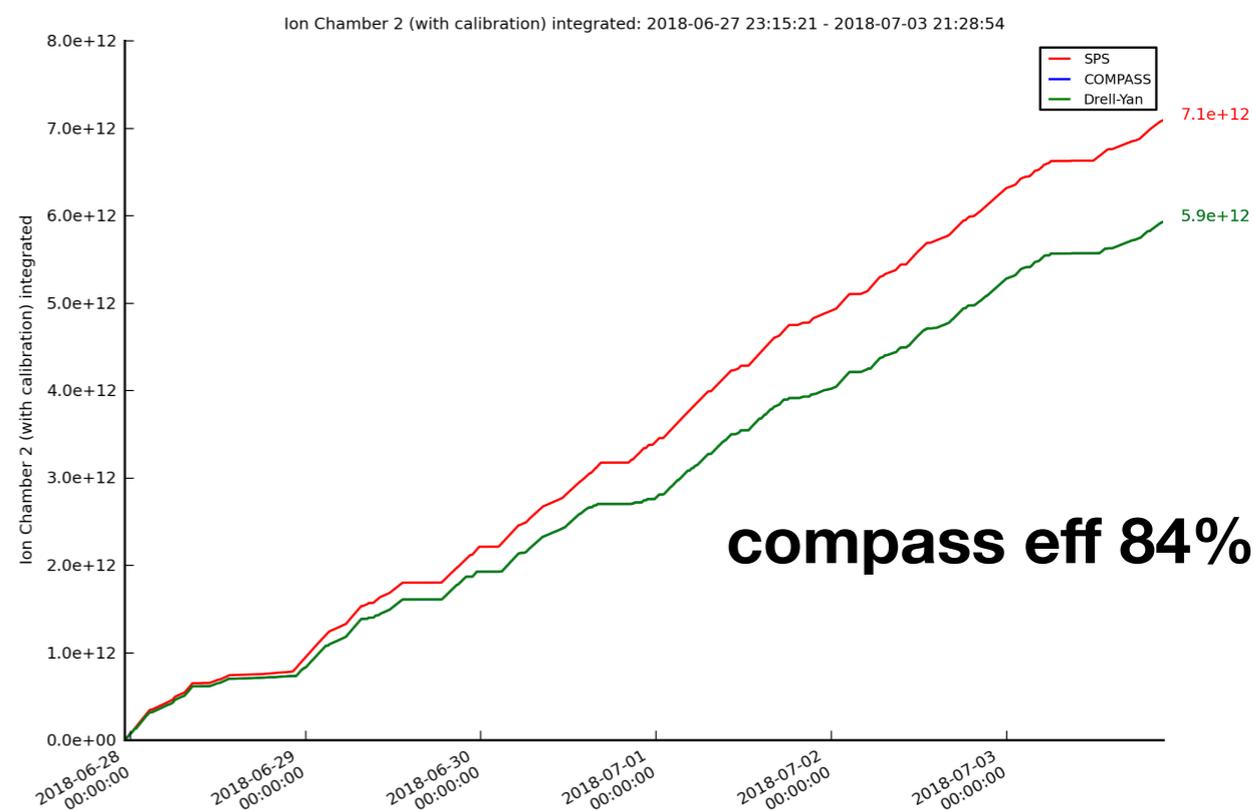
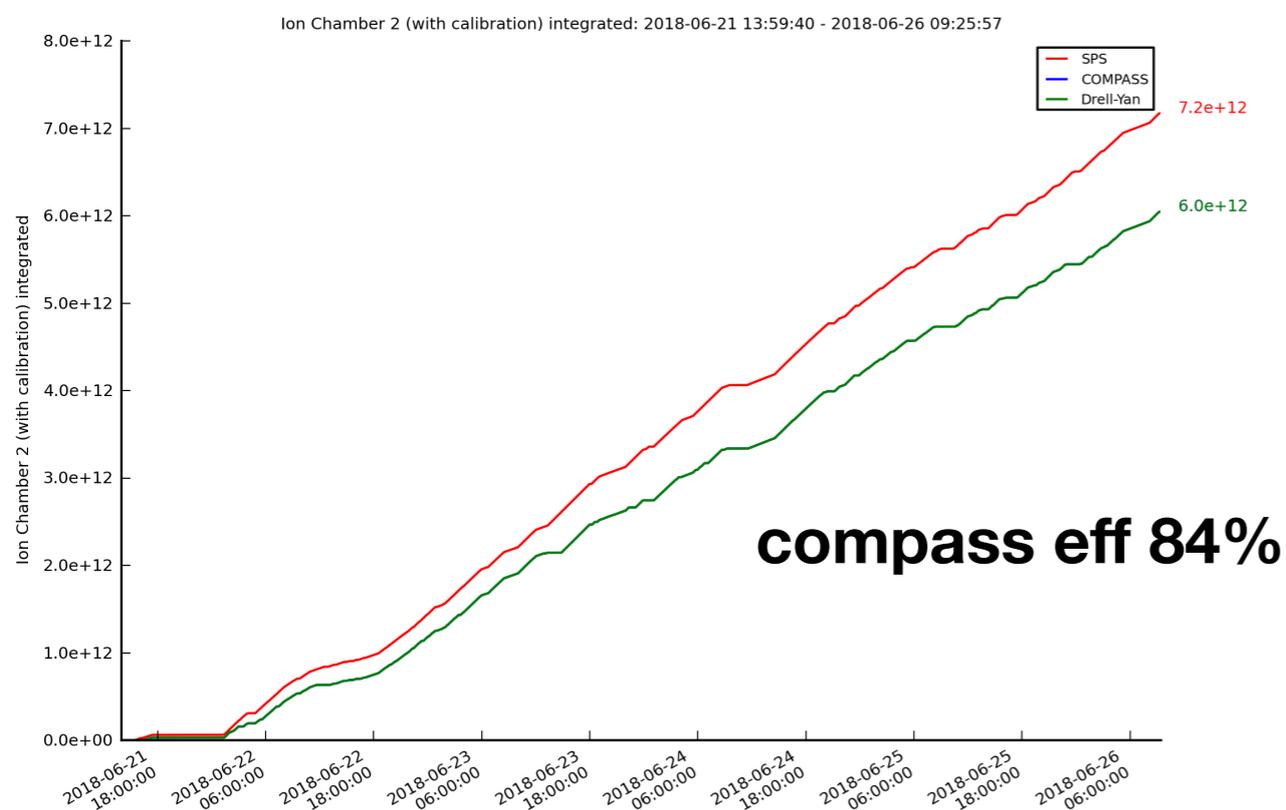
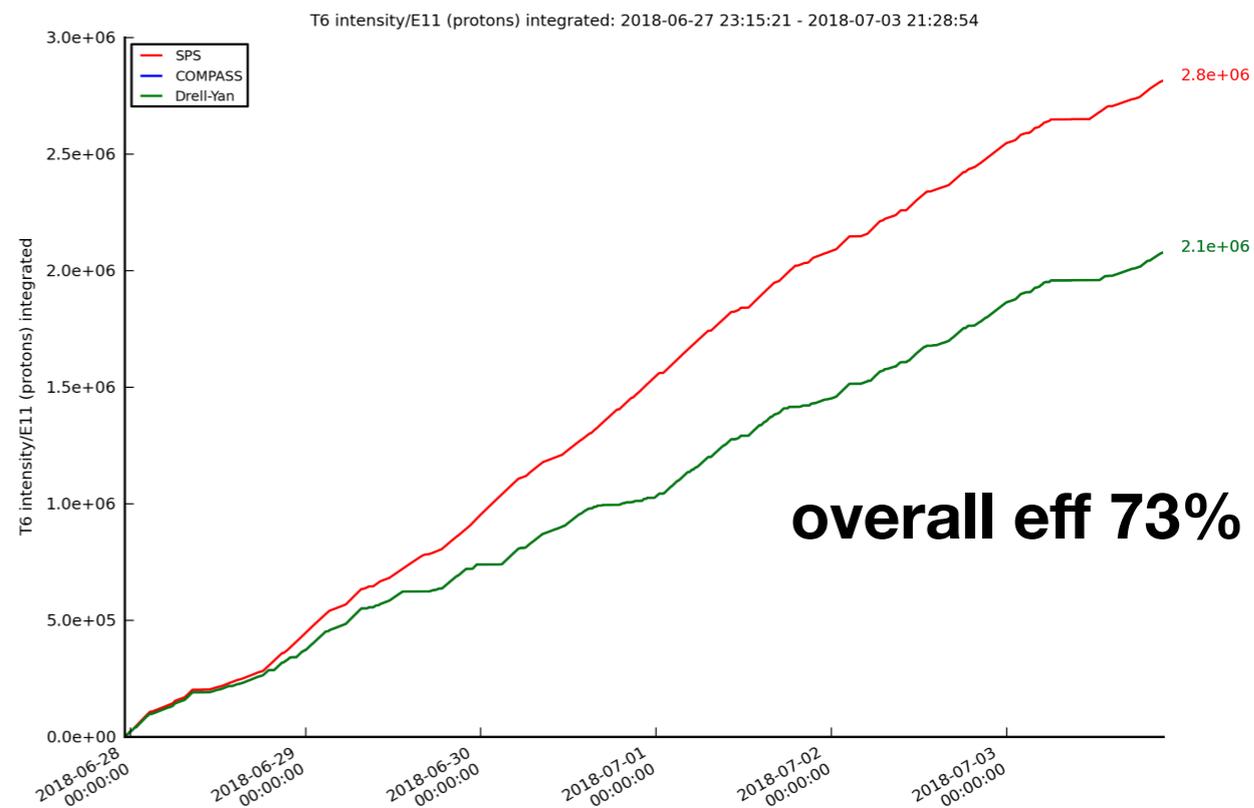
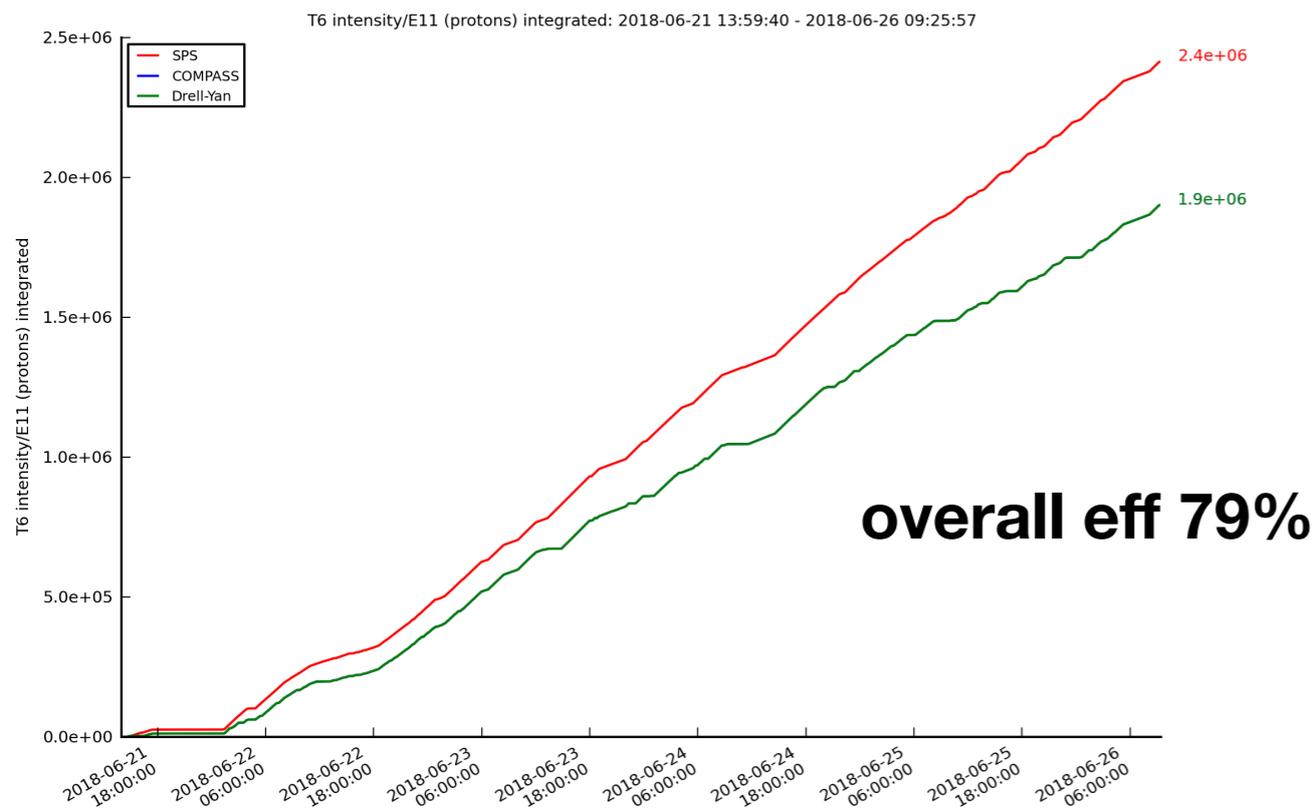
from run 284022 to run 284233

2nd sub-period

Run Type	Recorded Spills	Good Spills	Particles per Good Spill	Bad Spills	Particles per Bad Spill	Empty Spills	Particles per Empty Spill
	5289	0		0		5289	12710
alignment	101	0		0		101	8.505e+5
detector_test	201	0		0		201	3118
drell-yan	17763	15695	1.646e+8	1103	3.339e+7	965	17717
Total	23354	15695		1103		6556	

equalised statistics in terms of spills between the two sub-periods

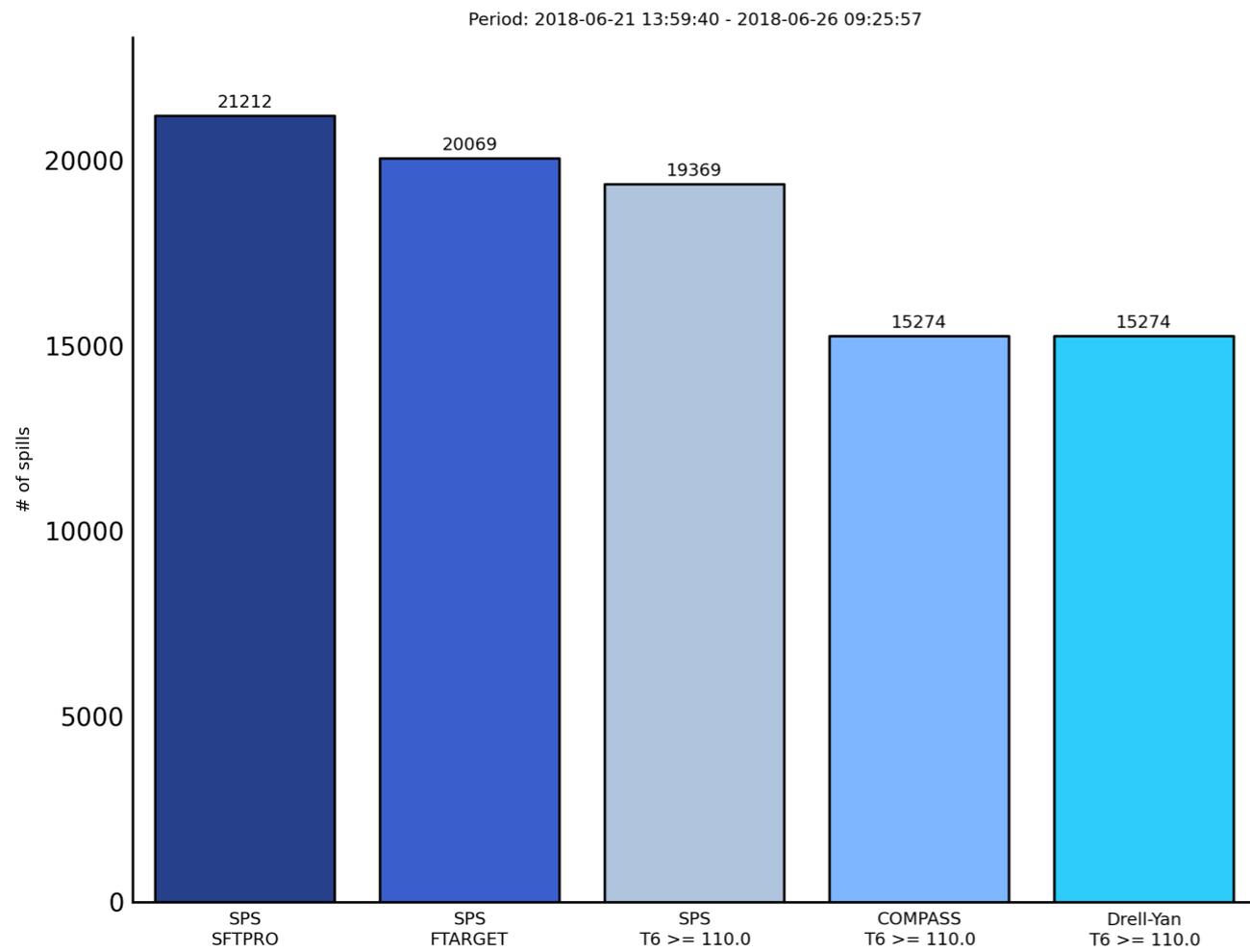
Efficiency for the last 2 sub-periods



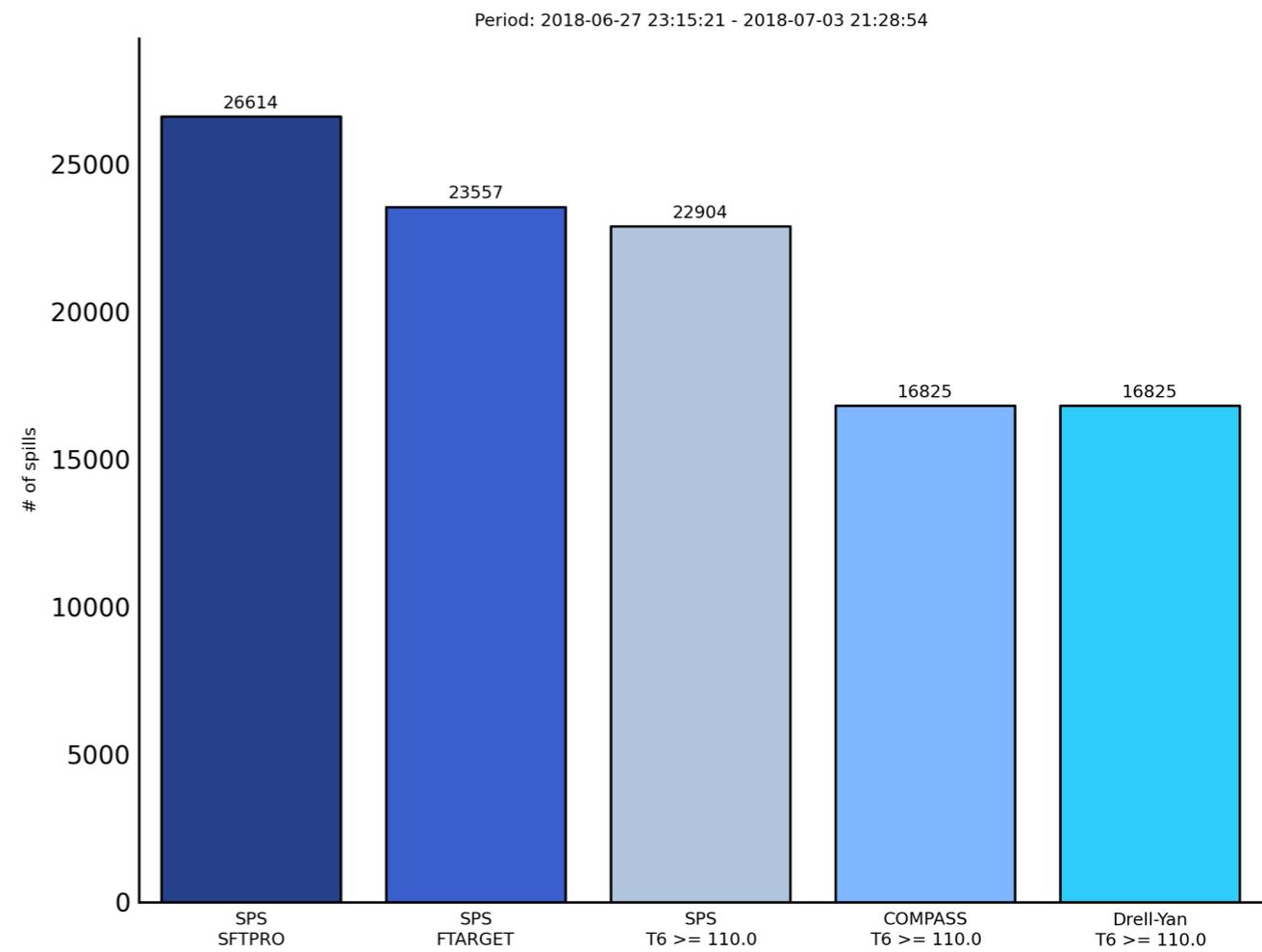
eff of beam usage 94%

eff of beam usage 87%

Efficiency for the last 2 sub-periods



overall eff 79%



overall eff 73%

Intensity and dead-times

	1st sub-period (W03)	2nd sub-period (W04)
Drell-Yan T6 \geq 110.0 mean value:	124.57	123.55
Drell-Yan ion2 (calibrated) mean value for FTARGET T6 \geq 110.0:	4.0e+08	3.5e+08
Drell-Yan DAQ dead time mean value	14.97	13.95
Drell-Yan Veto dead time (Random) mean value	17.24	15.48
Drell-Yan Veto dead time (MT) mean value	27.34	24.96
Drell-Yan Veto dead time (OT) mean value	24.79	22.59

Thanks to all shifters
and experts

Special thank to
Vincent and
Christoph

Good luck Michela