

DCS status

F. Ferrarotto

Padme Coll. meeting 08/01/2019

DCS operations

- DCS running stable : restart programs works fine when it crashes (still problem with open sockets...)
- Successfully restarted (almost) everything after shutdown.
- History files working fine : we have all temporal info for all monitored quantities - up to now 3.2 GB of info stored
 - regular backup now in place (gzip tar only ~ 250 MB)
 - Interface with DB : in preparation
- Since 14/12 added automatic ECAL/SAC/Cosmics trip recovery procedure : working fine.
- **New node8 monitoring active now (thanks to A. Ruggeri – RM1 !)**
- **ECAL trip saga following**



New DCS summary page

<p>BTF DATA - 2018-12-20 09:02:12</p> <table border="1"> <tr><td>Producer status</td><td>OK</td></tr> <tr><td>DHPTB101 status</td><td>0</td></tr> <tr><td>BTF part type</td><td>e+</td></tr> <tr><td>Padme Magnet current</td><td>50.00</td></tr> <tr><td>Linac Phase</td><td>e-</td></tr> <tr><td>Modulator status</td><td>1</td></tr> <tr><td>Gun status</td><td>1</td></tr> <tr><td>Linac charge_C2 (C)</td><td>0.0000e+00</td></tr> <tr><td>BTF data OK</td><td>not OK</td></tr> </table>	Producer status	OK	DHPTB101 status	0	BTF part type	e+	Padme Magnet current	50.00	Linac Phase	e-	Modulator status	1	Gun status	1	Linac charge_C2 (C)	0.0000e+00	BTF data OK	not OK	<p>DHSTB001 - 2018-12-20 09:02:12</p> <table border="1"> <tr><td>DHSTB001 status</td><td>0</td></tr> <tr><td>DHSTB001 Energy</td><td>0.00</td></tr> </table> <p>DHSTB002 - 2018-12-20 09:02:12</p> <table border="1"> <tr><td>DHSTB002 status</td><td>0</td></tr> <tr><td>DHSTB002 Energy</td><td>0.00</td></tr> </table>	DHSTB001 status	0	DHSTB001 Energy	0.00	DHSTB002 status	0	DHSTB002 Energy	0.00	<p>PADME DAQ Status - Mon Jan 7 17:44:02 CET 2019</p> <table border="1"> <tr><td>merger node</td><td></td></tr> <tr><td>free disk l1padme1</td><td>/mnt/l1padme1 11T - used 43%</td></tr> <tr><td>free disk l1padme2</td><td>/mnt/l1padme2 8.4T - used 55%</td></tr> <tr><td>free disk DAQ</td><td>/home/daq/DAQ 2.0T - used 2%</td></tr> <tr><td>last file data</td><td></td></tr> <tr><td>last file reco</td><td>reco-run_0000000_20181219_194140_lvl1_00_363.root</td></tr> <tr><td>reco jobs</td><td></td></tr> <tr><td>recomonitor jobs</td><td></td></tr> <tr><td>last trigger events</td><td>Trigger</td></tr> <tr><td>last merger events</td><td></td></tr> </table>	merger node		free disk l1padme1	/mnt/l1padme1 11T - used 43%	free disk l1padme2	/mnt/l1padme2 8.4T - used 55%	free disk DAQ	/home/daq/DAQ 2.0T - used 2%	last file data		last file reco	reco-run_0000000_20181219_194140_lvl1_00_363.root	reco jobs		recomonitor jobs		last trigger events	Trigger	last merger events																																	
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BEAM OFF condition

Let me know what you still need !

New : DAQ status page

New : HV alarms now shown for remote shifters + alarm page

New : Cosmics HV for 4 PMTs now monitored

New : Vacuum for Padme Vacuum chamber and Beamline

Mimosa position std: RED because OFF BEAM

NEW ALARM page for remote shifters : to look for if in main page

HV ALARM line(s) go RED

Shifters in Dafne control room are alerted by popup windows

Example with HV ALARMS ON

ECAL Alarm 2018-12-04 10:20:43



ECAL alarms with actual timestamp empty

SAC Alarm 2018-12-04 10:20:44



SAC alarms with actual timestamp

Example with real alarms

Per every channel shows HV board, channel and HV, current and status bit

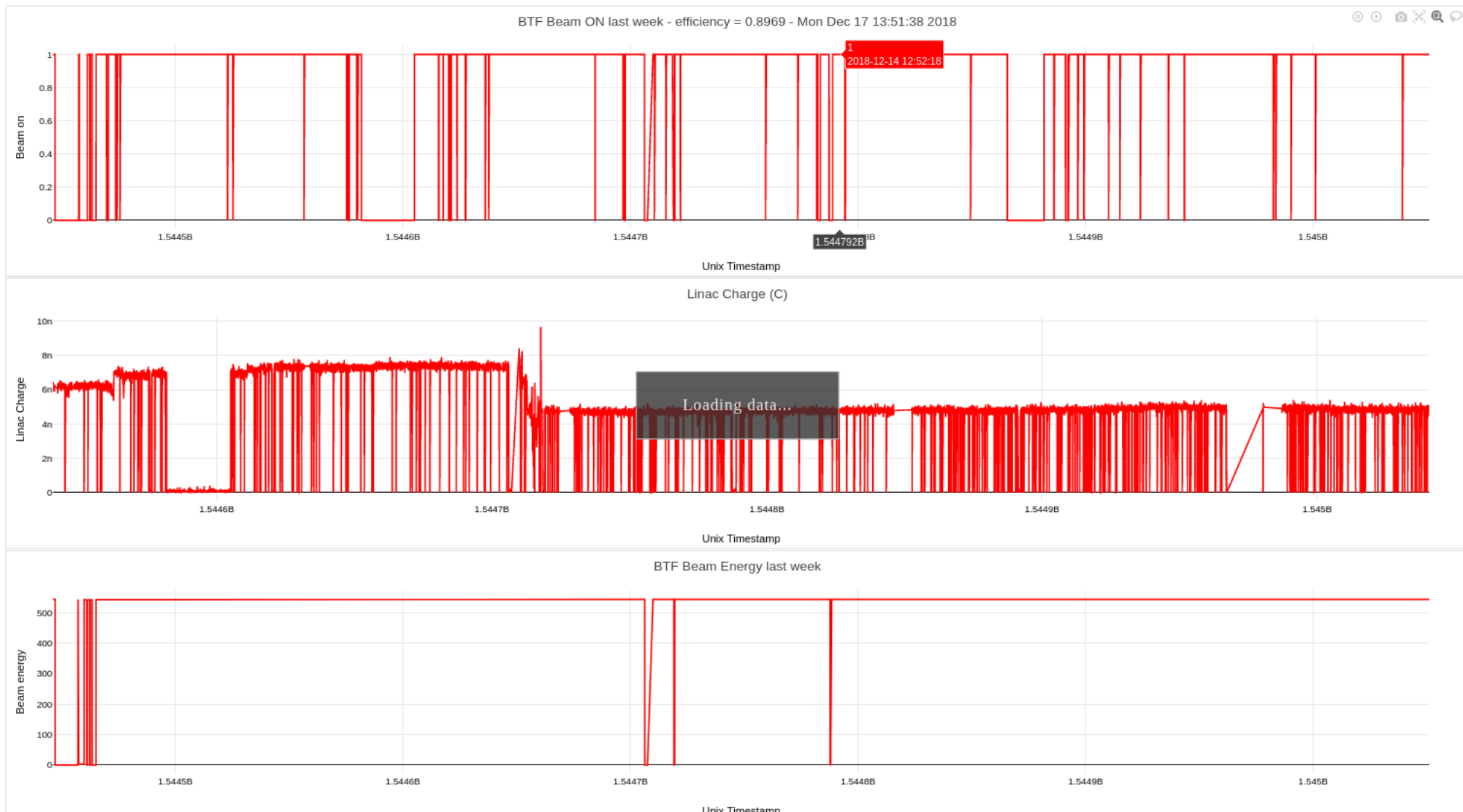
Using HV board and channel you can put up again the HV channel (only if automatic recovery fails)

SAC PMT	36987760
HV board	6
HV channel	40
HV	0.45
Current	-0.04
Status	0.00
SAC PMT	36987712
HV board	6
HV channel	39
HV	0.58
Current	-0.05
Status	0.00
SAC PMT	36987664
HV board	6
HV channel	38
HV	0.12
Current	-0.01
Status	0.00
SAC PMT	36987616
HV board	6
HV channel	37
HV	0.24
Current	0.01
Status	0.00
SAC PMT	36987568
HV board	6
HV channel	36
HV	0.80
Current	-0.01
Status	0.00
SAC PMT	36988000
HV board	6
HV channel	45
HV	0.36
Current	-0.10
Status	0.00

New Beam timeplot



Since 11/12 added in the std monitor timeplot the linac charge recorded by the BTF_LOG key : in 2019 will be synchronized with last week beam recording
Other timeplots : in progress



New problem SiPMs

- After shutdown , after powering on back SiPMs modules (no HV yet) a couple of channels give from time to time faulty temperature readings for the SiPMs :
 - P veto 4 , channel 6 (quite frequently)
 - Hep veto 2 , channel 13 (less frequently)
- At the moment these alarms have been “masked” in DCS
- Checked faulty temp reading also from module web page :
it is real ! → need to ask to G. Corradi

ECAL trips saga

We've been running VERY quietly with ECAL HV since the beginning of the experiment, BUT since 11/12 we had several trips recorded

Slot 0	Slot 2	Slot 5	Slot 7	Slot 8	Slot 9	Slot 11
Ch 34 - 1	Ch 22 - 1	Ch 19 - 1	Ch 6 - 1	Ch 0 - 2	Ch 5 - 1	Ch 24 -1
Ch 44 - 1	Ch 34 - 1		Ch 8 - 1	Ch 5 - 1	Ch 10 - 3	
	Ch 47 - 1		Ch 9 - 1	Ch 10 - 1	Ch 13 - 2	
			Ch 12 - 1	Ch 15 - 2	Ch 15 - 2	
			Ch 17 - 1	Ch 18 - 1	Ch 18 - 3	
				Ch 23 - 4	Ch 20 - 2	
					Ch 37 - 1	
					Ch 39 - 1	

+ 1 “generalized” trip of slot 10,11,12,13,14 on 2018-12-13 10:15:59
(maybe SY4527 problems – not seeing some slots)

Till 15/12 only slots 8 and 9 tripped , but after also slots 0,2,5,7,11
Now trips are recovered automatically, BUT not good anyhow !
Still inquiring

N.B. : NO TRIPS from SAC/Cosmics in this period



ECAL Thermocouples Readout

ECAL thermocouples readout after shutdown – HV still OFF

Readout easily switchable on/off via parameter in DCS configuration file

Flat cables shielded - to be tested with DAQ and trigger to see if we still have problems

After shutdown crystals are at ~ 10 C – heating (non uniform) can be critical ?

Ecal Temperature Right 1		Ecal Temperature Right 2	
Timestamp	2019-01-07 18:35:55	Timestamp	2019-01-07 18:34:44
Channel 201 T - C	10.50	Channel 211 T - C	10.47
Error flag	0	Error flag	0
Channel 202 T - C	10.44	Channel 212 T - C	10.35
Error flag	0	Error flag	0
Channel 203 T - C	10.31	Channel 213 T - C	10.37
Error flag	0	Error flag	0
Channel 204 T - C	10.39	Channel 214 T - C	10.36
Error flag	0	Error flag	0
Channel 205 T - C	10.33	Channel 215 T - C	10.46
Error flag	0	Error flag	0
Channel 206 T - C	10.36	Channel 216 T - C	10.46
Error flag	0	Error flag	0
Channel 207 T - C	10.31	Channel 217 T - C	10.45
Error flag	0	Error flag	0
Channel 208 T - C	10.24	Channel 218 T - C	10.48
Error flag	0	Error flag	0
Channel 209 T - C	10.38	Channel 219 T - C	10.23
Error flag	0	Error flag	0
Channel 210 T - C	10.41	Channel 220 T - C	10.41
Error flag	0	Error flag	0

Thermocouples Readout

Map of second L sensor thermocouple temperature recorded

0,0 bottom left - view as ECAL map from cable view

-1 means no detector

0 means no thermocouple

```
-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 0 0 0 0 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
-1 -1 -1 -1 -1 -1 -1 -1 -1 0 0 0 0 0 0 0 0 0 0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1
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