Online CMS Web-Based Monitoring

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(On behalf of the CMS Collaboration)

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Technology and Instrumentation in Particle Physics
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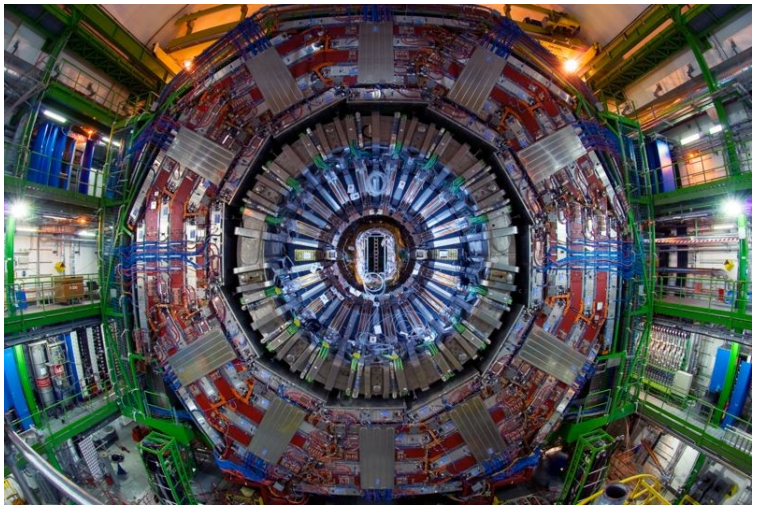
Chicago, USA

CMS

One of the high energy physics experiments at the LHC of CERN



~3000 collaborators from 172 institutes spread over 39 countries

Online CMS Web-Based Monitoring

Accessible for collaborators locally and remotely, anywhere and anytime

- **Monitor status of experiment: real-time and historical**
- **Help identify problems and improve data taking efficiency**

Data Sources

Online Oracle database

- **Real-time and historical states: detector status, DAQ status, trigger rates, luminosity, etc**

Various messaging systems

- **LHC hardware serial line, LHC software messaging system, CMS online real-time information, text message from shift leader, etc**

We aggregate multiple heterogeneous software and hardware data sources into one integrated user-friendly web interface

Technologies

Server side

- **Linux, Apache, Tomcat, Java Servlet, PL/SQL, C, C++, ROOT, JFreeChart, XML, etc**

Client side

- **HTML, CSS, JavaScript, AJAX, jQuery, SVG, HTML5 canvas, etc**

Online CMS Web Based Monitoring Main Page

CMS Web Based Monitoring

online

Subdetectors WBM

ECALSummary
DTSummary
RPCSummary
HCALHome
CSCSummary
BRMSnapshots
TriggerModes
TrackerTools
S^3 ScreenSnapShots

Core Services

RunSummary [24h] [24h&1+trig]
RunTimeSummary [LHC Fills] FillReport β
DataSummary α
TriggerHistory | TriggerRunListing
TriggerRates (HTML5)
LumiScalers
LastValue | ConditionBrowser | [iPlot]
MagnetHistory | CurrentBunches | BunchFill
LhcMonitor | LHCStatusDisplay | BLM | BPM | DIP
LhcCollimators | AbortGaps
ShiftAccountingTool
PageZero | CMS Page 1

Links

DQM Run Registry
Online DQM GUI
FNAL ROC
Commissioning & Run Coordination
CMS Twiki: OnlineWB TriDAS
CMS Online
Shift eLog
Snappy eLogViewer
LHC Page 1

WBM Twiki Page | WBM Savannah | WBM Support & Contact
Last modified 2011-05-28 07:27:33 UTC

Outline for CMS WBM Products

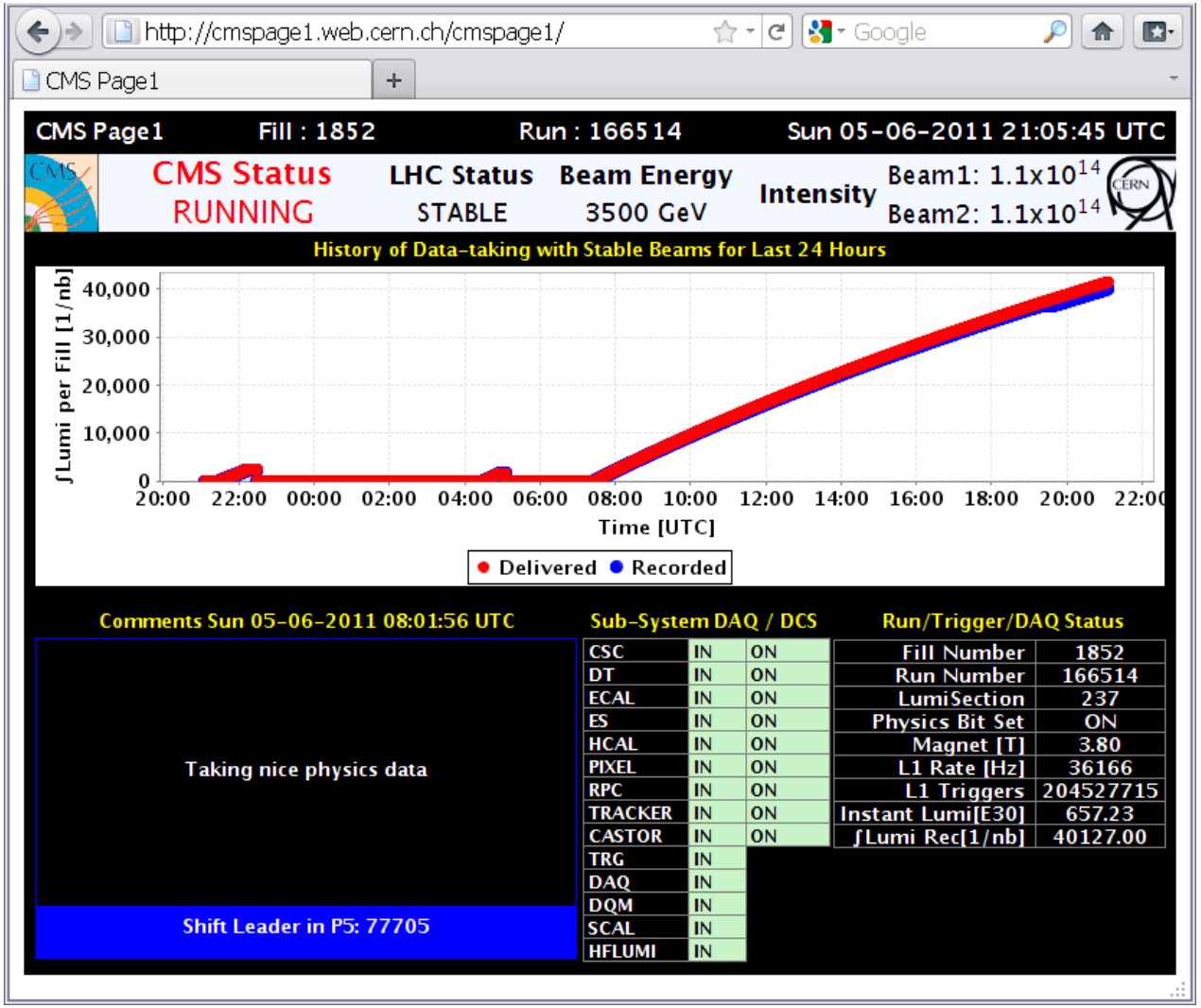
Real-time

Historical

Data taking efficiency

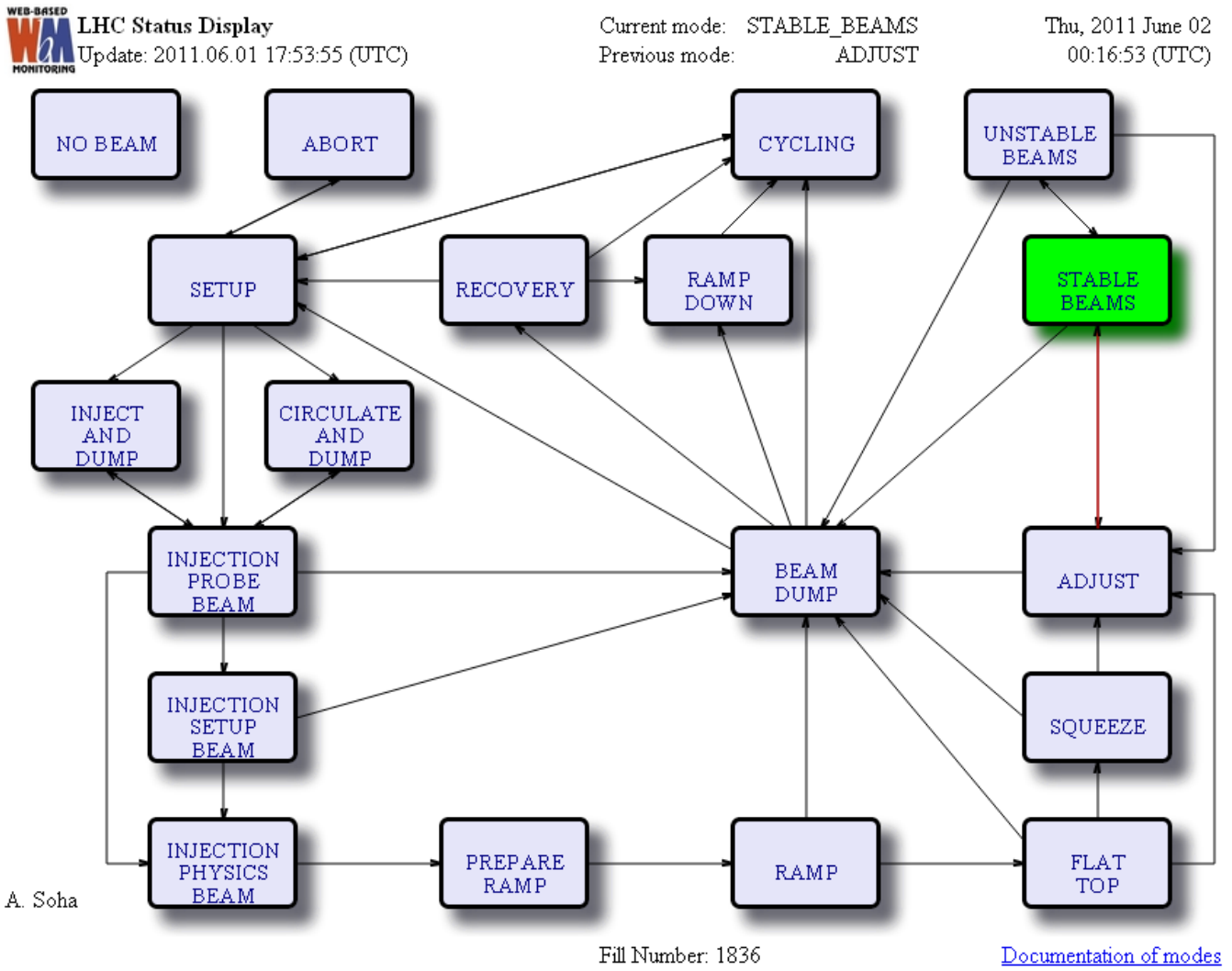
CMS Page1

High-level non-expert type of page for general CMS members



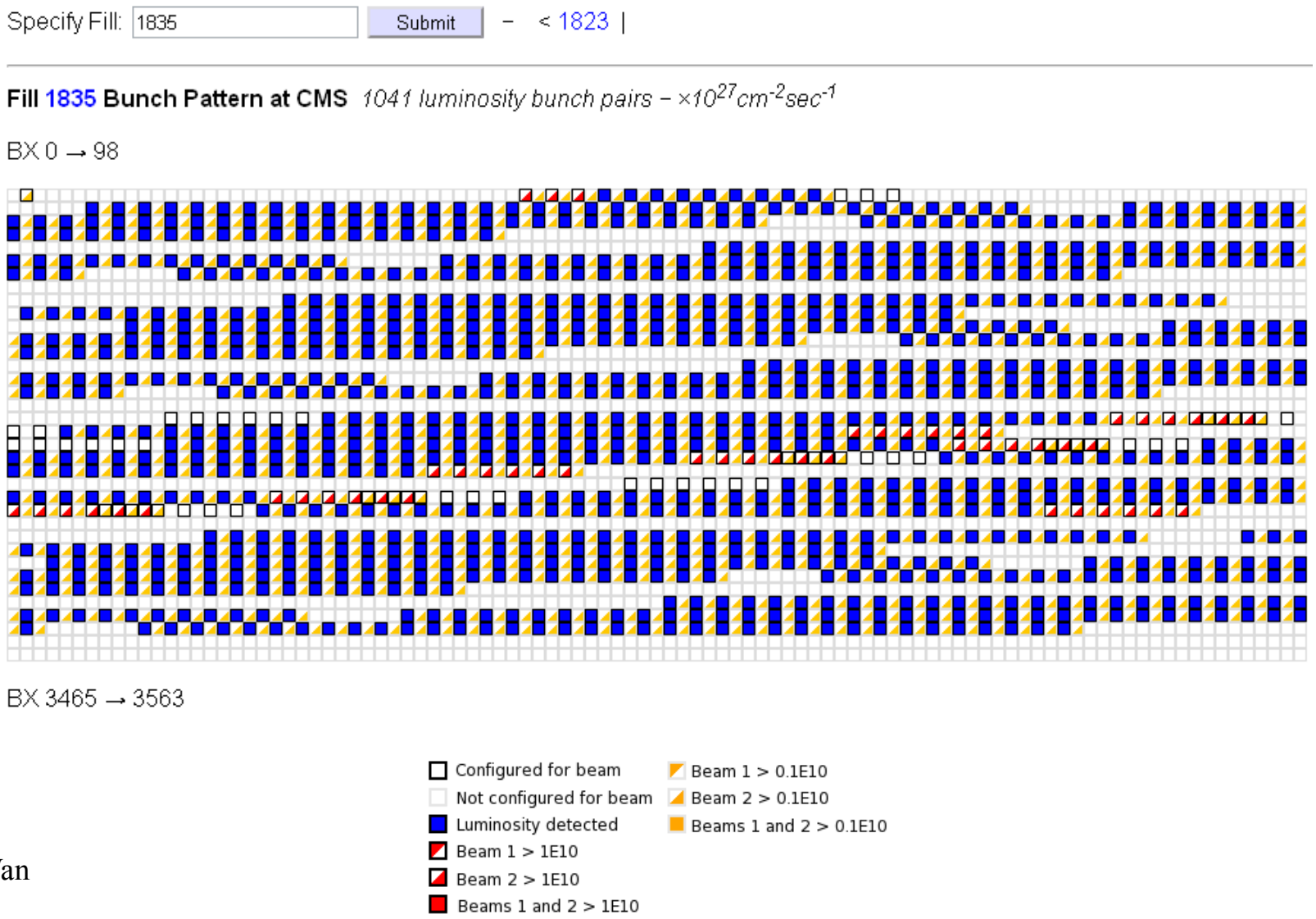
LHC Status Display

Beam state in the context of possible states



Bunch Pattern of LHC Fill

Fill is a period of time when proton beams circulate in the LHC.
Bunches of the proton beams as seen at CMS

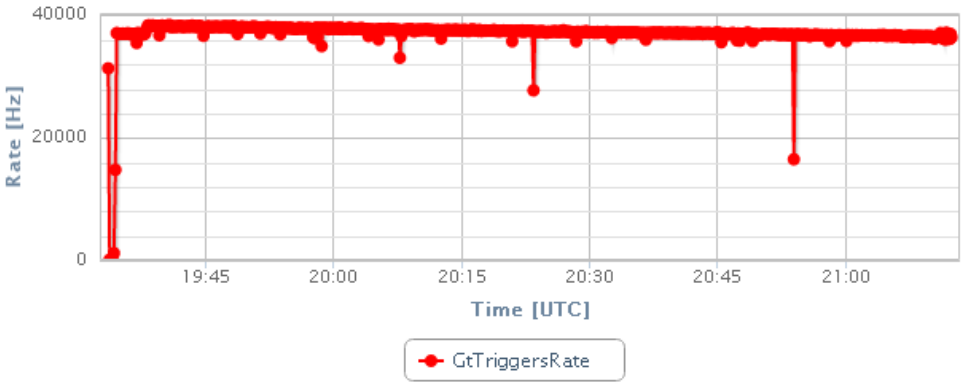


Trigger Rates of CMS Run

Run is a period of time CMS takes data with a well defined configuration. Trigger configuration, rates, alarm, time trend (works on phone too)

L1 TriggerRates 166514 (older version)

RunNumber	166514
TSCKey	TSC_20110527_002600_collisions_BASE
GTKey	gt_2011_48_deadtBPTX_DTTFautores
GTRunSettingsKey	gtrs_2011_collisions_1e33_1100b_v1
L1Menu	L1Menu_Collisions2011_v3/L1T_Scales_201C
GTSource	Physics Random Calib Algo: true Tech: true Te
HLTConfiguration	/cdaq/physics/Run2011/1e33/v2.4/HLT/V5
TriggerState	RUNNING
CollectionTime	2011.06.05 21:12:08.834190000
CollectionTimeLumiSeg	2011.06.05 21:11:56.891609000



Instant Lumi (E30 $cm^{-2}s^{-1}$): 655.04

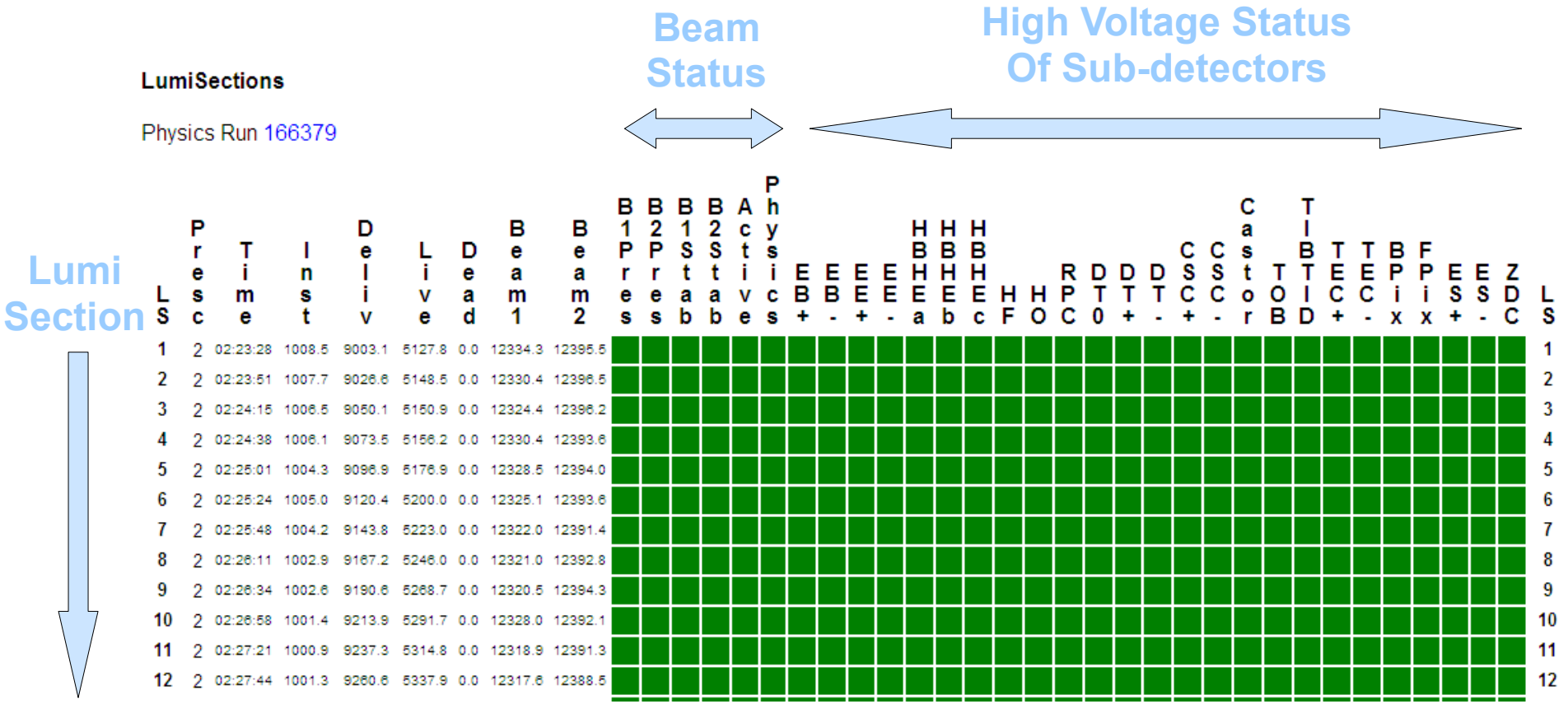
	Counts	Inst Rate	Plot
GtTriggers	218607554	36,438.40	☑
GtEvents	4801797		
LumiSegmentNr	254		
OrbitNr	66467945		☐
GtResets	77		
BunchCrossingErrors	0		
LumiSegmentNrLumiSeg	253		
TriggersPhysicsGeneratedFDL	855560	36,702.92	☐
TriggersPhysicsLost	19232	825.04	☐
TriggersPhysicsLostBeamActive	6462	277.22	☐
TriggersPhysicsLostBeamInactive	30359	1,302.38	☐
L1AsPhysics	836328	35,877.88	☐
L1AsRandom	14121	605.78	☐
L1AsTest	0	0.00	☐

0 16 32 48 64 80 96 112 T0 T16 T32 T48

Bit	TriggerName	Counts	Inst Rate	Plot
0	L1_ZeroBias	11098	476.10	☐
1		0	0.00	☐
2		0	0.00	☐
3	L1_PreCollisions	1	0.04	☐
4	L1_BeamGas_Bsc	58	2.49	☐
5	L1_BeamGas_Hf	159	6.82	☐
6	L1_InterBunch_Bsc	208	8.92	☐
7		0	0.00	☐
8	L1_BeamHalo	792	33.98	☐
9		0	0.00	☐
10	L1_SingleJet92_Central	14058	603.08	☐
11	L1_DoubleJet44_Central	57204	2,454.01	☐
12	L1_MuOpen_EG5	88608	3,801.22	☐

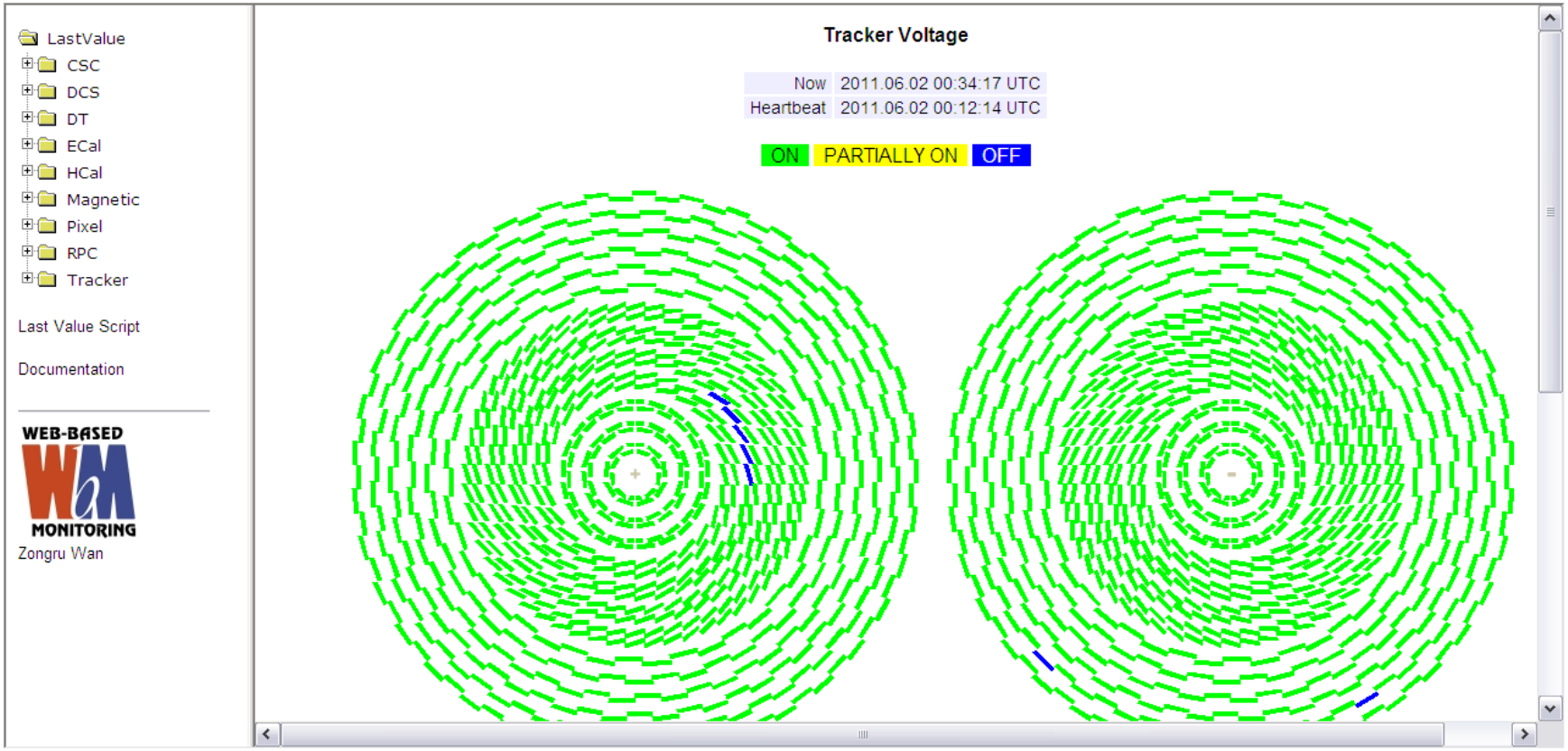
Status of Lumi Sections

A lumi section is about 23 seconds and the smallest quantized time range to define data taking quality



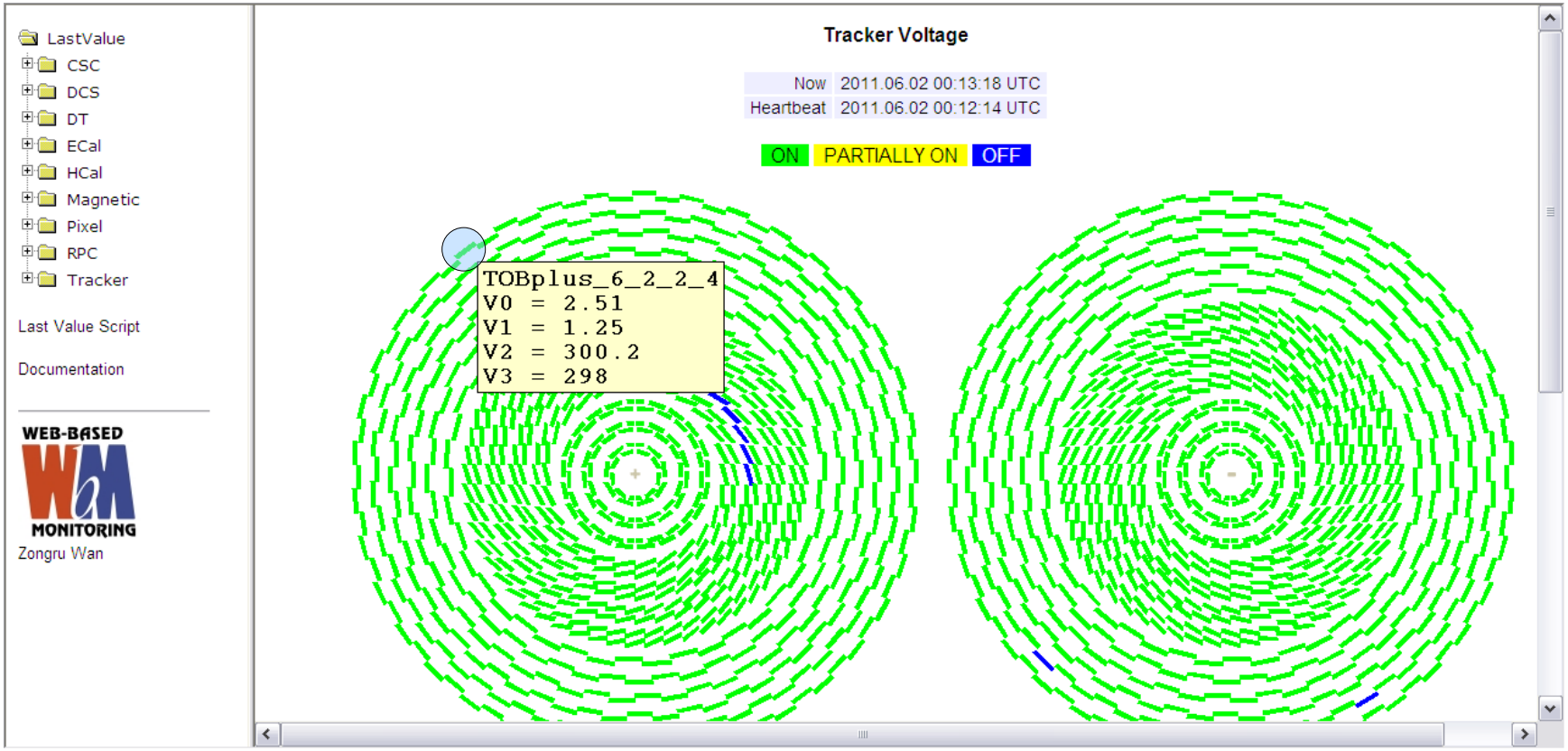
Last Value for Slow Control Status

Voltage, current, temperature etc displayed by image map



Last Value (continued)

Point to a component to display its last values



Last Value (continued)

Click the component to show its statistics during last 24 hours

Begin 2011.06.01 00:13:46

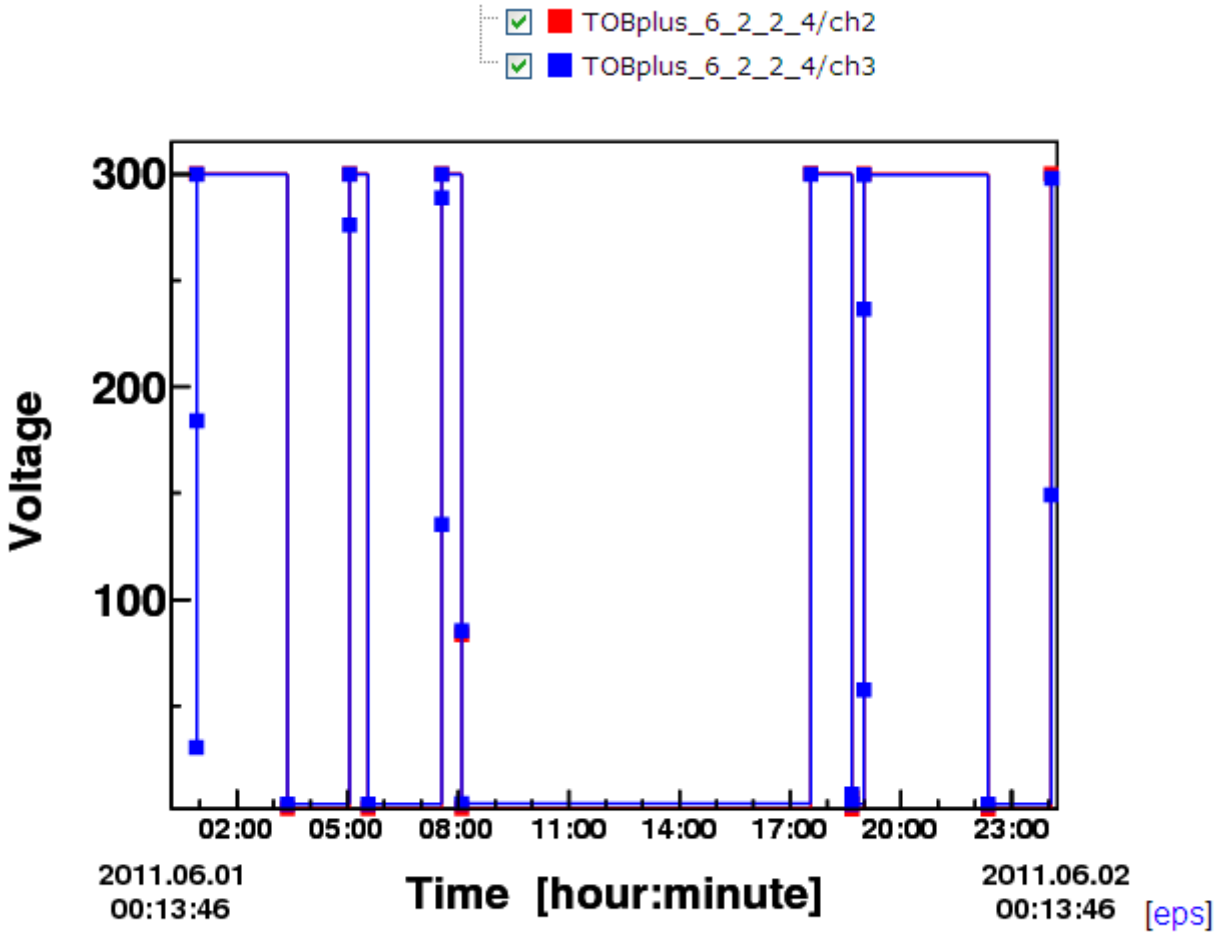
End 2011.06.02 00:13:46

Select Channel and Plot Value vs. Time

SELECT	NAME	COUNT	MIN	MAX	AVG	STDDEV
☐	TOBplus_6_2_2_4/ch0	3	5E-3	2.5	1	1.3
☐	TOBplus_6_2_2_4/ch1	2	1.5E-2	1.2	0.6	0.9
☑	TOBplus_6_2_2_4/ch2	13	1.5	300.3	146.1	150.1
☑	TOBplus_6_2_2_4/ch3	21	3.8	300	155.6	128.8

Last Value (continued)

Select sub-channels and plot time trend.
Output in png, eps, html, text, csv, xml, query, root, script formats



Rows: 34 Data: html | text | csv | xml | query | root | script

Real-time

Historical

Data taking efficiency

Start from Fill Report

It shows a list of fills and summary information for each fill

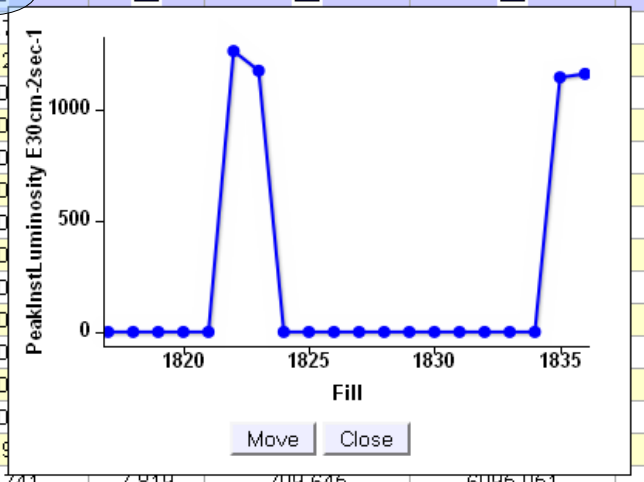
Specific Fill: [ ] GO Begin: 1817 End: 1836 ☐ Stable GO Last *n* Fills: 20 ☐ Stable GO < 1835 |

Fill	CreateTime	Duration Stable	PeakInstLumi $\times 10^{30}$cm^{-2}sec^{-1}	Peak Pileup <*n*>	PeakSpecLumi $\times 10^{30}$cm^{-2}sec^{-1}(10^{11}p)$^{-2}$	DeliveredLumi nb^{-1}	RecordedLumi nb^{-1}	EffByLumi %	EffByTime %
	LHC Fill Declared	*HH:MM*							
1836	2011.06.01 18:49:10	1:25	1163.730	7.179	727.097	5642.718	3892.512	68.983	99.220
1835	2011.06.01 16:01:31	1:06	1148.200	7.080	726.489	4413.552	4409.536	99.909	100.000
1834	2011.06.01 15:04:31		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1833	2011.06.01 11:46:46		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1832	2011.06.01 07:31:04		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1831	2011.06.01 04:59:05		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1830	2011.06.01 00:22:33		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1829	2011.05.31 20:29:18		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1828	2011.05.31 17:49:07		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1827	2011.05.31 15:13:26		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1826	2011.05.31 14:19:48		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1825	2011.05.31 13:46:02		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1824	2011.05.31 08:49:34		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1823	2011.05.31 04:32:31	1:12	1177.905	7.472	667.762	4850.250	3521.061	72.595	83.869
1822	2011.05.31 00:44:45	1:27	1266.741	7.819	709.645	6095.051	2605.986	42.756	46.723
1821	2011.05.30 21:19:33		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1820	2011.05.30 18:29:59		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1819	2011.05.30 17:11:21		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1818	2011.05.30 13:50:19		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1817	2011.05.30 09:19:55		0.000	0.000	0.000	0.000	0.000	0.000	100.000
stable		5:10	1266.741	7.819	727.097	21001.572	14429.095	68.705	82.453

Click the plot icon under a summary column to visualize e.g. peak instantaneous luminosity vs fill

Specific Fill: GO Begin: 1817 End: 1836 Stable GO Last *n* Fills: 20 Stable GO < 1835 |

Fill	CreateTime	Duration Stable	PeakInstLumi $\times 10^{30}cm^{-2}sec^{-1}$	Peak Pileup <*n*>	PeakSpecLumi $\times 10^{30}cm^{-2}sec^{-1}(10^{11}p)^{-2}$	DeliveredLumi nb^{-1}	RecordedLumi nb^{-1}	EffByLumi %	EffByTime %
	LHC Fill Declared	*HH:MM*							
1836	2011.06.01 18:49:10	1:25	1163.7				3892.512	68.983	99.220
1835	2011.06.01 16:01:31	1:06	1148.2				4409.536	99.909	100.000
1834	2011.06.01 15:04:31		0.00				0.000	0.000	100.000
1833	2011.06.01 11:46:46		0.00				0.000	0.000	100.000
1832	2011.06.01 07:31:04		0.00				0.000	0.000	100.000
1831	2011.06.01 04:59:05		0.00				0.000	0.000	100.000
1830	2011.06.01 00:22:33		0.00				0.000	0.000	100.000
1829	2011.05.31 20:29:18		0.00				0.000	0.000	100.000
1828	2011.05.31 17:49:07		0.00				0.000	0.000	100.000
1827	2011.05.31 15:13:26		0.00				0.000	0.000	100.000
1826	2011.05.31 14:19:48		0.00				0.000	0.000	100.000
1825	2011.05.31 13:46:02		0.00				0.000	0.000	100.000
1824	2011.05.31 08:49:34		0.00				0.000	0.000	100.000
1823	2011.05.31 04:32:31	1:12	1177.9				3521.061	72.595	83.869
1822	2011.05.31 00:44:45	1:27	1266.741	7.819	709.645	6095.051	2605.986	42.756	46.723
1821	2011.05.30 21:19:33		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1820	2011.05.30 18:29:59		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1819	2011.05.30 17:11:21		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1818	2011.05.30 13:50:19		0.000	0.000	0.000	0.000	0.000	0.000	100.000
1817	2011.05.30 09:19:55		0.000	0.000	0.000	0.000	0.000	0.000	100.000
stable		5:10	1266.741	7.819	727.097	21001.572	14429.095	68.705	82.453



Scroll to right and the fill column is movable. Still know which fill is which. As we see begin time and end time, let's click e.g. fill 1822

Fill	ByTime %	BeginTime	EndTime	Type	Energy	Beam1 $\times 10^{11}$	Beam2 $\times 10^{11}$	nB1	nB2	nCol	nTar	×Ing µrad
		Stable Beams	*Beams Dumped*									
1836	9.220	2011.06.02 00:03:02		*Proton*	3500	1263.212	1267.021	1092	1092	1041	1042.0	120.0
1835	00.000	2011.06.01 17:31:37	2011.06.01 18:37:58	*Proton*	3500	1257.580	1256.762	1092	1092	1041	1042.0	120.0
1834	00.000			*Proton*		0.000	0.000	0	0	0	0.0	0.0
1833	00.000		2011.06.01 15:04:31	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1832	00.000		2011.06.01 11:46:46	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1831	00.000		2011.06.01 07:31:04	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1830	00.000		2011.06.01 04:59:05	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1829	00.000		2011.06.01 00:22:33	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1828	00.000		2011.05.31 20:29:18	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1827	00.000		2011.05.31 17:49:07	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1826	00.000		2011.05.31 15:13:26	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1825	00.000		2011.05.31 14:19:48	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1824	00.000		2011.05.31 13:46:02	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1823	3.869	2011.05.31 07:26:00	2011.05.31 08:37:43	*Proton*	3500	1332.371	1323.926	1092	1092	961	1042.0	120.0
1822	6.723	2011.05.31 02:55:24	2011.05.31 04:22:03	*Proton*	3500	1336.146	1335.959	1092	1092	1041	1042.0	120.0
1821	00.000		2011.05.31 00:44:45	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1820	00.000		2011.05.30 21:19:33	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1819	00.000		2011.05.30 18:29:59	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1818	00.000		2011.05.30 17:11:21	*Proton*		0.000	0.000	0	0	0	0.0	0.0
1817	00.000		2011.05.30 13:50:19	*Proton*		0.000	0.000	0	0	0	0.0	0.0
stable	2.453				3500	1297.327	1295.917	1092	1092	1021	1042.0	120.0

Fill 1822 is 7 TeV proton proton collision with peak lumi 1E33, etc etc. There is a list of runs for this fill. Let's click e.g. run 166150

CMS Fill 1822 Report

Fill 1822 BunchFill | LhcEvents | RuntimeLogger | ConditionBrowser

CreateTime (declared)	2011.05.31 00:44:45
BeginTime (stable)	2011.05.31 02:55:24
PeakTime (lumi)	2011.05.31 02:56:10
EndTime (dumped)	2011.05.31 04:22:03
Type	*Proton*
Energy	3500 GeV
InitialLumi	1266.070×10^{30} $cm^{-2}sec^{-1}$
PeakLumi	1266.741 ×10^{30} $cm^{-2}sec^{-1}$
PeakPileup (interactions/BX)	<*n*> = 7.819
PeakSpecificLumi	709.645×10^{30} $cm^{-2}sec^{-1}$ (10^{11}p)$^{-2}$
DeliveredLumi	6095.051 nb^{-1}
RecordedLumi	2605.986 nb^{-1}
Efficiency by lumi	42.756%
Efficiency by time	46.723%
InjectionScheme	50ns_1092b+1small_1042_35_1008_108bpi13inj
IntensityBeam1	1336.146×10^{11}
IntensityBeam2	1335.959×10^{11}
nBunchesBeam1	1092
nBunchesBeam2	1092

Run	BeginTime	EndTime	Triggers	Lumi nb^{-1}	Recorded nb^{-1}
166145	2011.05.31 03:12:37	2011.05.31 03:16:52	741	520.112549	0.015815
166147	2011.05.31 03:20:07	2011.05.31 03:21:39	125311	458.261353	2.356431
166148	2011.05.31 03:26:52	2011.05.31 03:28:39	109191	255.666992	2.500038
166149	2011.05.31 03:30:49	2011.05.31 03:40:29	110126	844.466553	2.026248
166150	2011.05.31 03:42:59	2011.05.31 04:29:35	144566392	2,752.527588	2,610.060313

For this run number 166150, lumi delivered and recorded, configurations, events, magnetic field, DAQ components, level 1 and High Level Trigger (HLT) rates, data file size, etc. Everything is amazingly linked together! Let's click e.g. eLog (next slide) to see what was going on and HLT Key (next next slide) to see HLT rate trend

RUN	LUMI_NB_LIVE_DELIV	SEQUENCE	L1_HLT_KEYS	STARTTIME	STOPTIME	TRIGGERS	BFIELD	COMPONENTS
166150	2,610.060313 2,752.527588	GLOBAL-RUN toppro	l1_hlt_collisions/v117 TSC_20110527_002600_collisions_BASE /cdaq/physics/Run2011/1e33/v2.3/HLT/V3	2011.05.31 03:42:59	2011.05.31 04:29:35	144566392	3.799	CASTOR CSC DAQ DCS DQM DT ECAL ES HCAL HFLUMI PIXEL RPC SCAL TRACKER TRG

<166149|166152> **Components:** CASTOR CSC DAQ DCS DQM DT ECAL ES HCAL HFLUMI PIXEL RPC SCAL TRACKER TRG CLOCK

Links: LumiSections PrescaleChanges LhcEvents RunInfo Files DBS DCS eLog DQMBrowser Online Offline

BField	3.799 Tesla
InitialPrescaleIndex	2
TriggerMode	l1_hlt_collisions/v117
TTC MI Key	beam1-manual-20110408
L1 Key	TSC_20110527_002600_collisions_BASE
HLT Key	/cdaq/physics/Run2011/1e33/v2.3/HLT/V3
HLT Version	CMSSW_4_2_0_HLT8
L1 Rate	52493.685 Hz
HLT Rate Stream A	331.064 Hz
L1 Triggers	144566392
HLT Triggers Stream A	910633
HLT Size Stream A	214.814 Gb
HLT Rate Stream A	0.078 Gb/sec

eLog

```
04:54 Run 166143 start (collisions key)
04:58 apply PS = 2
05:03 Run 166143 stop

05:43 Run 166150 start (collisions key)
PS = 2, L1 rate ~ 65 kHz, stream A ~ 400 Hz, express ~ 27 Hz
06:23 trigger rates drop (L1 rate ~ 0.8 kHz, stream A ~ 7 Hz): beam dump
06:29 Run 166150 stop

06:40 Run 166152 start (cosmics key)
PS = 0, L1 rate ~ 0.9 kHz, stream A ~ 140 Hz
```

High Level Trigger summary

scroll down

HLTSummary Run 166150

HLTConfiguration	/cdaq/physics/Run2011/1e33/v2.3/HLT/V3
ConfigID	15966
Config	HLT
Created	2011.05.28 15:11:09
Creator	steph
ProcessName	HLT
Description	Correct prescale in lower column for Razor paths
Avg. CPU Load	47.4610%

Full Configuration .cfg file or browse all HLT Configurations

LS number from to

Submit Query

HLTSummary Trigger Paths

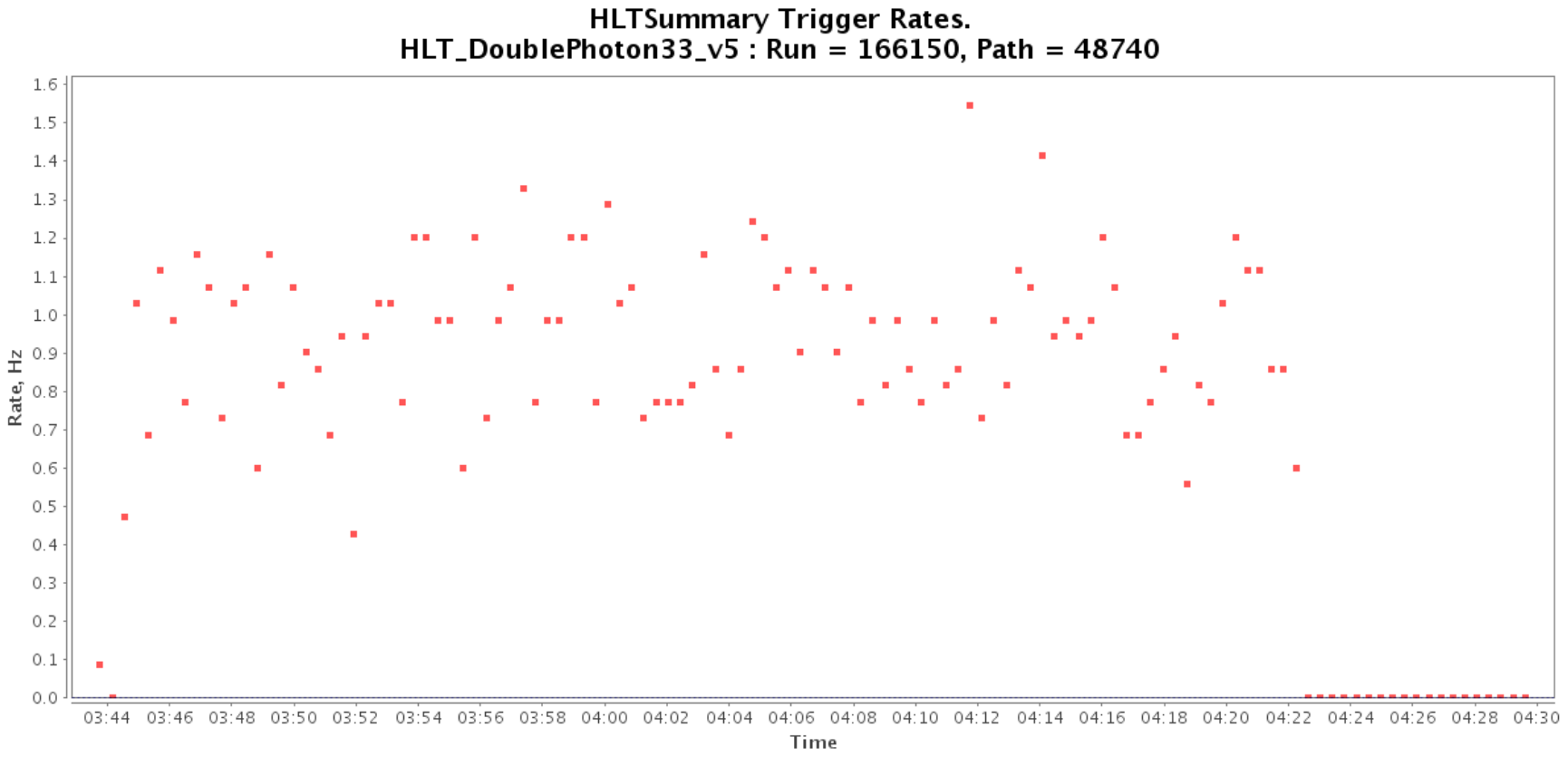
n	Name	nLS	L1Pass	PSPass	PAccept	RateHz	PExcept	PRejec
0	ALCAP0Output (48906)	119 (119)	143493849	143493849	4249321	1,531.87	0	1392445
1	ALCAPHISYMOutput (48907)	119 (119)	143493849	143493849	1053562	379.81	0	1424402
2	AOutput (48905)	119 (119)	143493849	143493849	903866	325.84	0	1425899
3	AlCa_EcalEta_v5 (48898)	119 (119)	63063851	10510657	1313475	473.51	0	1421803
4	AlCa_EcalPhiSym_v5 (48899)	119 (119)	1053562	1053562	1053562	379.81	0	1424402
5	AlCa_EcalPi0_v6 (48897)	119 (119)	63063851	9009118	3008848	1,084.68	0	1404850

Click e.g. the average rate for a trigger path

75	HLT_DoubleMu45_v1 (48683)	119 (119)	5056348	5056348	133	0.05	0	1434937
76	HLT_DoubleMu4_Acoplanarity03_v4 (48684)	119 (119)	5056348	5056348	14859	5.36	0	1434789
77	HLT_DoubleMu5_Acoplanarity03_v1 (48685)	119 (119)	5056348	5056348	6851	2.47	0	1434869
78	HLT_DoubleMu5_Ele8_CaloIdL_TrkIdVL_v6 (48824)	119 (119)	18429895	18429895	1741	0.63	0	1434921
79	HLT_DoubleMu5_Ele8_v6 (48823)	119 (119)	18429895	18429895	5644	2.03	0	1434882
80	HLT_DoubleMu6_v3 (48681)	119 (119)	5056348	252800	2505	0.90	0	1434913
81	HLT_DoubleMu7_v3 (48682)	119 (119)	5056348	505612	2660	0.96	0	1434911
82	HLT_DoublePhoton33_HEVT_v2 (48741)	119 (119)	5971610	5971610	9490	3.42	0	1434843
83	HLT_DoublePhoton33_v5 (48740)	119 (119)	5971610	597158	216	0.78	0	1434916
84	HLT_DoublePhoton40_MR150_v3 (48830)	119 (119)	5971610	5971610	8756	3.16	0	1434850
85	HLT_DoublePhoton40_R014_MR150_v3 (48831)	119 (119)	5971610	5971610	4661	1.68	0	1434891
86	HLT_DoublePhoton50_v2 (48742)	119 (119)	5971610	5971610	3179	1.15	0	1434906
87	HLT_DoublePhoton5_IsoVL_CEP_v4 (48744)	119 (119)	20905	20905	1	0.00	0	1434938
88	HLT_DoublePhoton60_v2 (48743)	119 (119)	5971610	5971610	1372	0.49	0	1434924
89	HLT_EcalCalibration_v2 (48885)	119 (119)	143493849	264414	264414	95.32	0	1432294
90	HLT_Ele10_CaloIdL_TrkIdVL_CaloIsoVL_TrkIsoVL_R005_MR200_v3 (48841)	119 (119)	18249120	365000	1298	0.47	0	1434925
91	HLT_Ele10_CaloIdL_TrkIdVL_CaloIsoVL_TrkIsoVL_R020_MR200_v3 (48842)	119	18249120	18249120	13239	4.77	0	1434806

We see the time trend of the trigger rate.

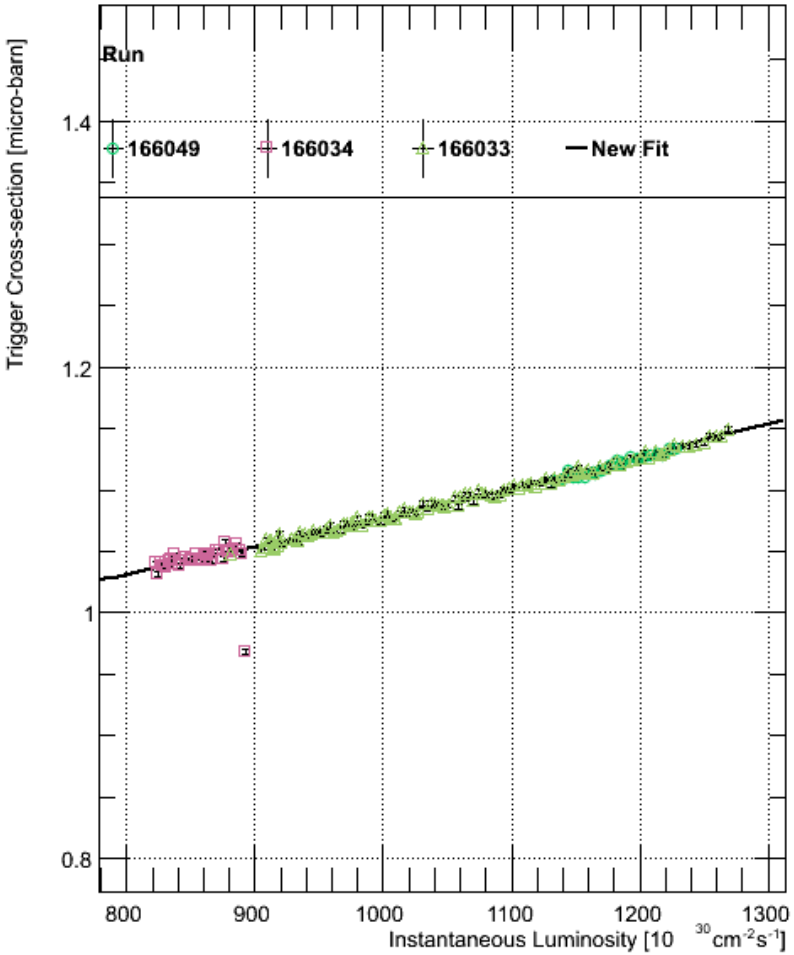
Many other historical information are amazingly linked together!



Trigger rate vs time is great. What about

trigger cross section vs instantaneous luminosity?

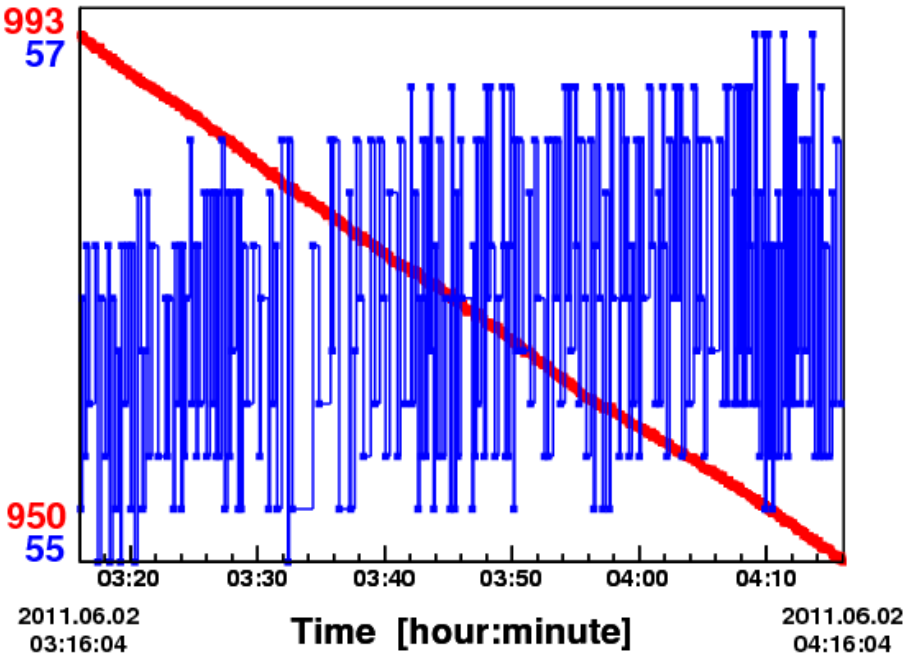
Important for trigger design as luminosity goes higher. Example for one trigger path is shown

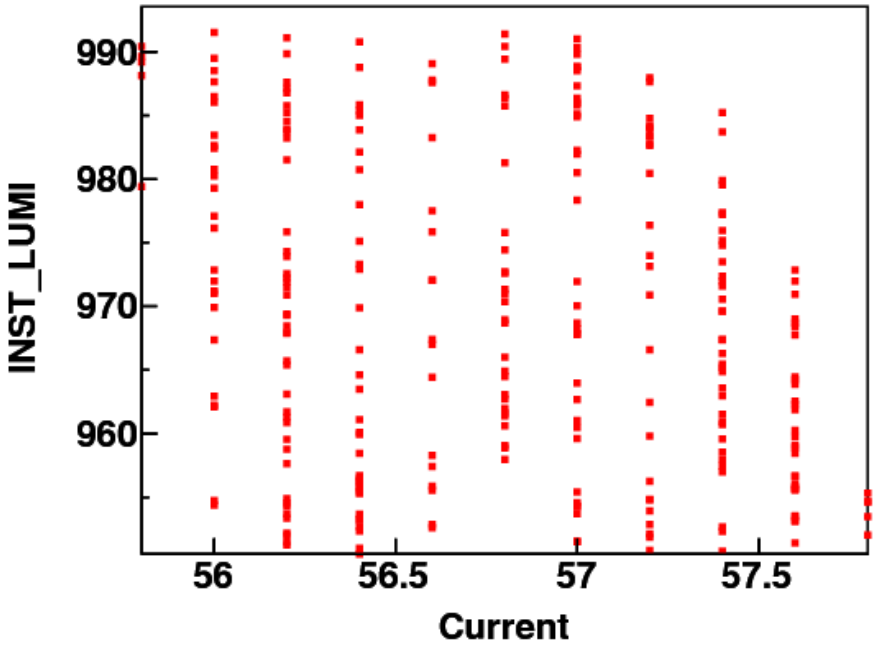


Trig Bit =	L1 Algo Bit 22	
Formula =	Inverse + Quadratic	
Constant =	1.04662	± 0.00692188
Inverse =	-50.5838	± 4.66418
Linear =	-2.58776e-05	± 6.61808e-06
Quadratic =	1.06092e-07	± 4.25872e-09

Anything vs Anything

Left side: A vs time, B vs time, put together
Right side: A vs B, joined by closest time difference
Work is reduced to tell where to find A and B, the rest are automated





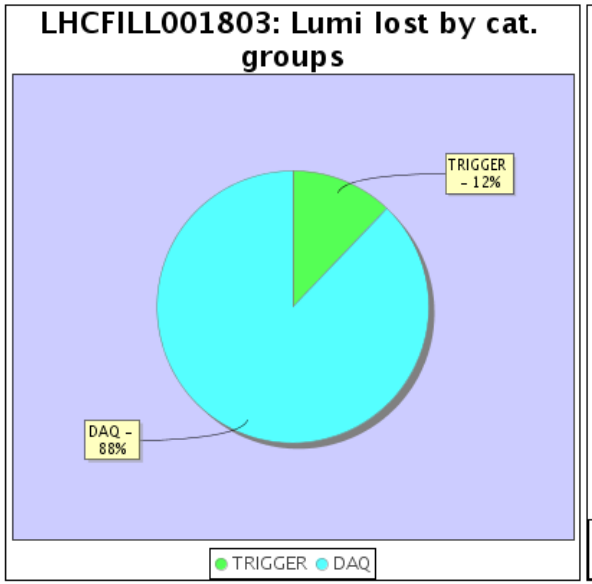
Real-time

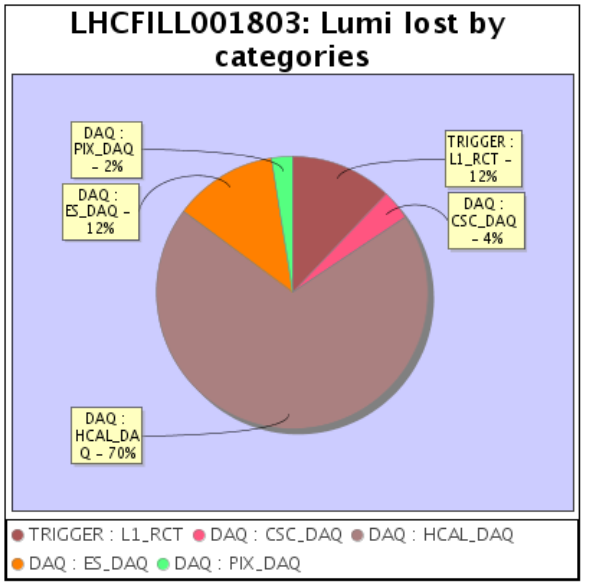
Historical

Data taking efficiency

Run Time Logger

Luminosity lost by category groups and categories
Details for the reasons

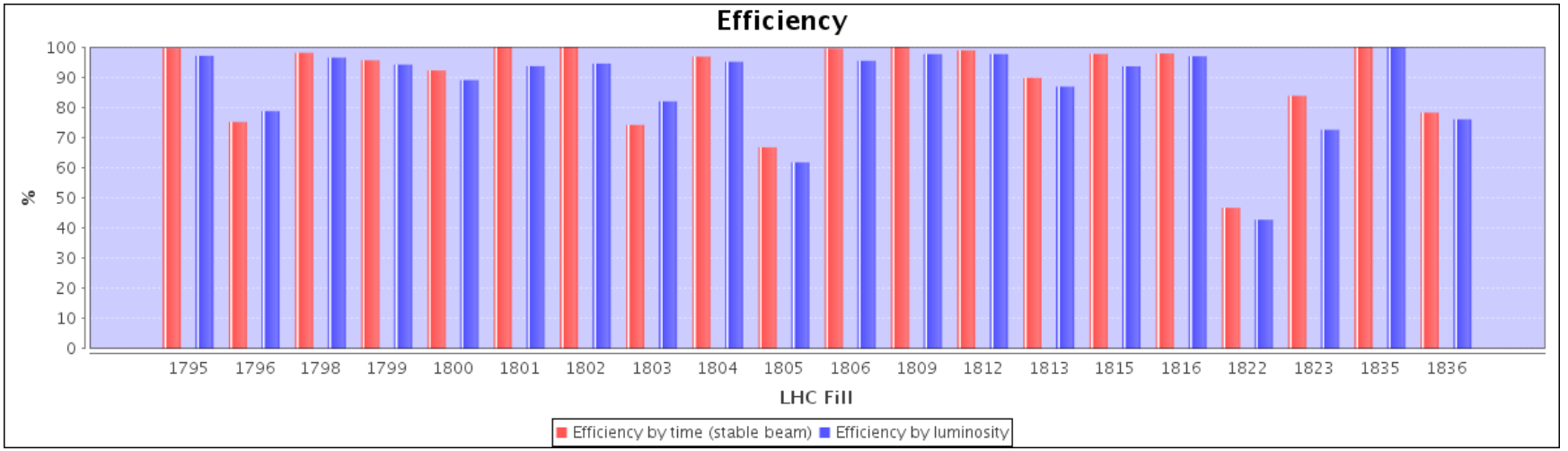




Downtime start	Downtime end	Lost Time	Lost Lumi, nb^{-1}	No stable beam	Group (Filter: All)	Category	Details	Run (Filter: All)
2011.05.23 07:36:04	2011.05.23 07:53:18	0:17:13	897.63318359		TRIGGER	L1_RCT	RCT in error (probablty not configured)	165523
2011.05.23 08:05:25	2011.05.23 08:47:03	0:41:39	2124.93563086		DAQ	HCAL_DAQ	HCAL in error	165525
2011.05.23 08:47:52	2011.05.23 09:37:07	0:49:15	2354.11635352		DAQ	HCAL_DAQ	HFLUMI in error	165529
2011.05.23 09:38:47	2011.05.23 09:44:36	0:05:50	269.28051758		DAQ	CSC_DAQ	CSC sync loss	165536
2011.05.23 11:37:40	2011.05.23 11:38:13	0:00:33	32.16943359		DAQ	PIX_DAQ	PIXEL OOS (automatic resync did not work)	165537
2011.05.23 11:39:23	2011.05.23 11:42:55	0:03:32	150.42919922		DAQ	PIX_DAQ	PIXEL OOS	165537
2011.05.23 12:50:53	2011.05.23 13:05:06	0:14:13	683.78603125		DAQ	HCAL_DAQ	RBX error + HFLUMI at reconfigure	165542

Data Taking Efficiency vs Fill

Red: efficiency by time
Blue: efficiency by luminosity



Summary

Online CMS Web-Based Monitoring is accessible to collaborators locally and remotely, anywhere and anytime

Provides a vast amount of in-depth information including real time data, historical trend, and correlations, in a user-friendly way

A key element for successful data taking operation of the CMS experiment

Back up slides

Sub-detector Contributions

Electromagnetic Calorimeter is shown

ECAL Summary: Ver. 5.1

All times are in UTC - [get support]

Current ECAL Run

Count	RUN NUM	IOV ID	RUN START	RUN END	DURATION	DB TIMESTAMP	RUN TYPE	CONFIG TAG	DESCRIPTION	NUM EVENTS	BFIELD	LHC ENERGY
1	166380	55028	02-06-2011 03:12:45	31-12-9999 23:59:59	in progress	02-06-2011 05:12:46	PHYSICS	SelectiveReadout	CMS PHYSICS RUN	352060221	3.799	3500

Configuration (Click on Supermodule to get Trigger Configuration)

EE-1	EE-2	EE-3	EE-4	EE-5	EE-6	EE-7	EE-8	EE-9	EE+1	EE+2	EE+3	EE+4	EE+5	EE+6	EE+7	EE+8	EE+9
EB+1	EB+2	EB+3	EB+4	EB+5	EB+6	EB+7	EB+8	EB+9	EB+10	EB+11	EB+12	EB+13	EB+14	EB+15	EB+16	EB+17	EB+18
EB-1	EB-2	EB-3	EB-4	EB-5	EB-6	EB-7	EB-8	EB-9	EB-10	EB-11	EB-12	EB-13	EB-14	EB-15	EB-16	EB-17	EB-18

DBS data

Configuration data Show details

Count	RUN MODE	TAG	VERSION	FE CONFIG TAG	USER COMMENT
1	GLOBAL	SelectiveReadout	43	Default V. 289	Putting back the correc values for TBY_ID VFE_ID and GOL_ID

Select FE Configuration data table: Please select

Last Laser data

Count	RUN NUM	SEQ NUM	BEGIN	END	FROM LMR	TO LMR	COLOR	NEVENTS
1	166367	1	2011-06-01 21:36:38.0	2011-06-01 21:52:31.0	3	91	blue	1200

Submit Query or Click here to go back

Main choice | Options | Help

Start run: LAST Last run: -25

or select start and end date

Start date: End date:

Sub-detector Contributions

Drift Tube is shown, and many others