

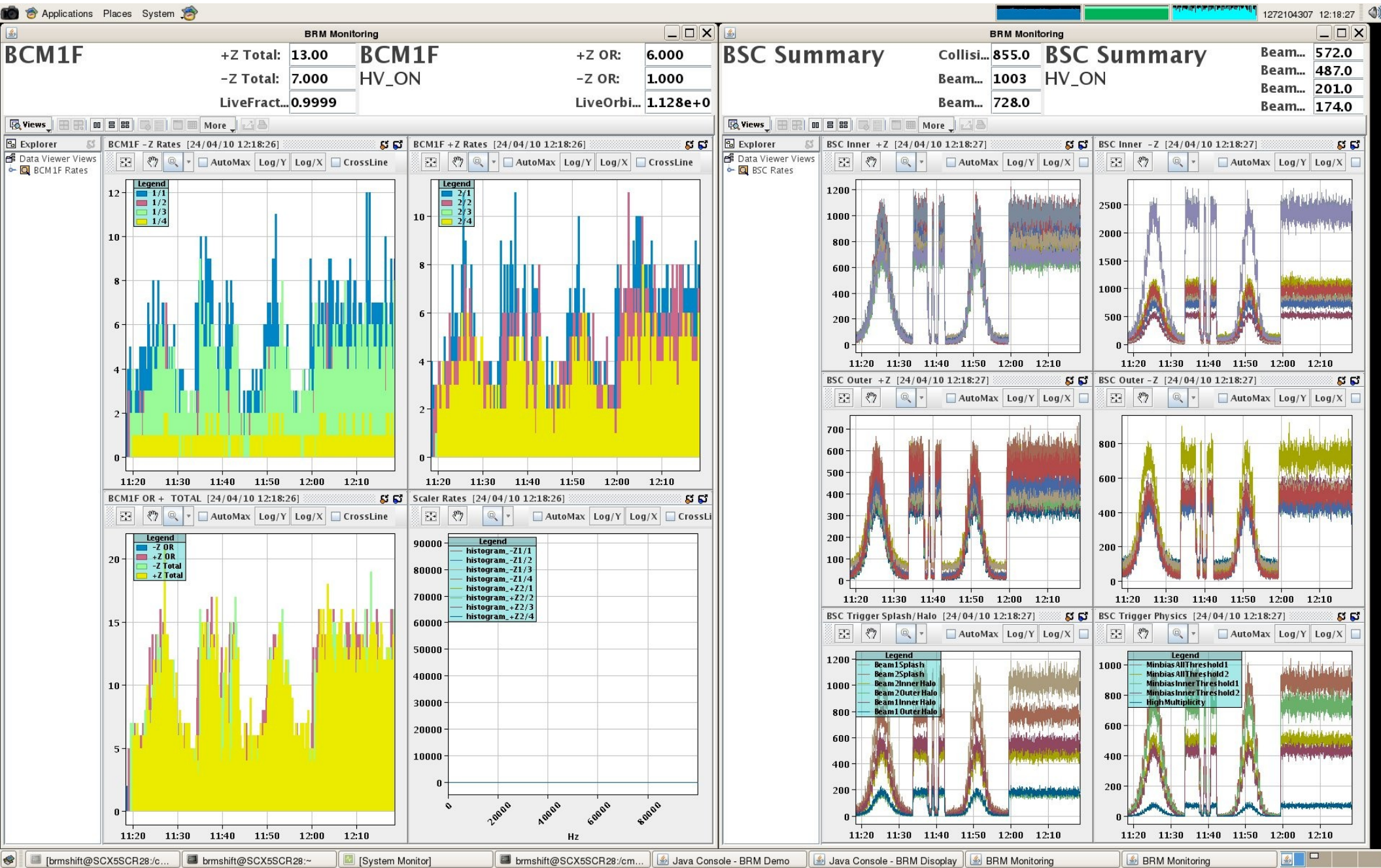
FCAL/CMS 2010-05-10

Status at CERN

Events at CERN

- New displays: Lumi, LHC Bunches (Structure)
- Weekend 24th/25th April: longest LHC fill with stable beams ever, about 30 h
- Lumi scan at P5
- Sun, 2nd May: BPTX features vs. ghost bunches
- Sun, 9th May: CMS publ. instant. lumi. wrong
- Many runs testing all possible things...

Lumi Scan – BCM1F & BSC



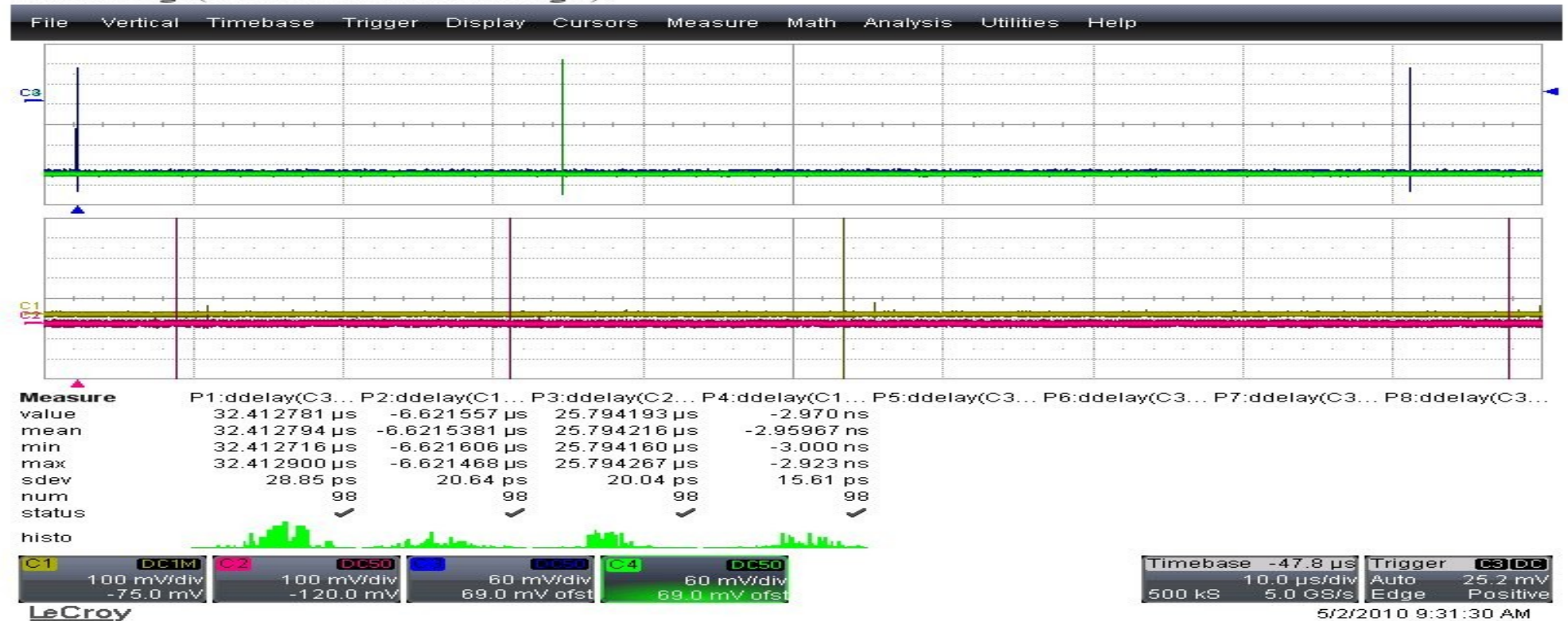
Ghosts – BPTX

BPTX Signals and RF Orbit Cl... x current.png (PNG Image, 800x... x

BPTX Signals and RF Orbit Clocks

- Channel 1: B P T X _ 1 (B P T X beam 1 = B P T X Left = B P T X from +z to -z)
- Channel 2: B P T X _ 2 (B P T X beam 2 = B P T X Right = B P T X from -z to +z)
- Channel 3: O R B I T _ 1 (R F Orbit Clock for Beam 1)
- Channel 4: O R B I T _ 2 (R F Orbit Clock for Beam 2)

Current image (see below for reference images):



Measured Parameters:

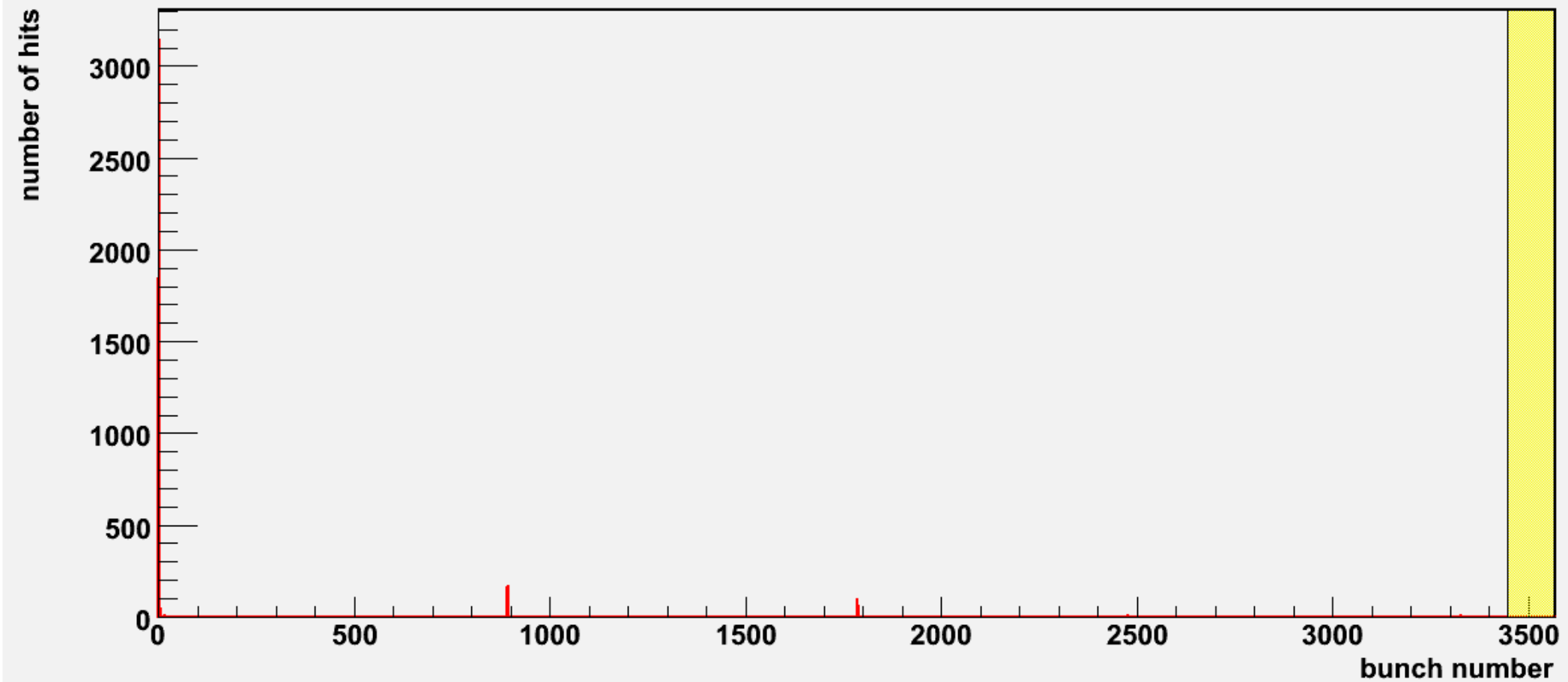
- P1: Delta_t(Orbit2-Orbit1) (us)
- P2: Delta_t(Orbit1-B P T X 1) (us)
- P3: Delta_t(Orbit2-B P T X 2) (us)
- P4: Delta_t(B P T X 2-B P T X 1) (ps)

Done

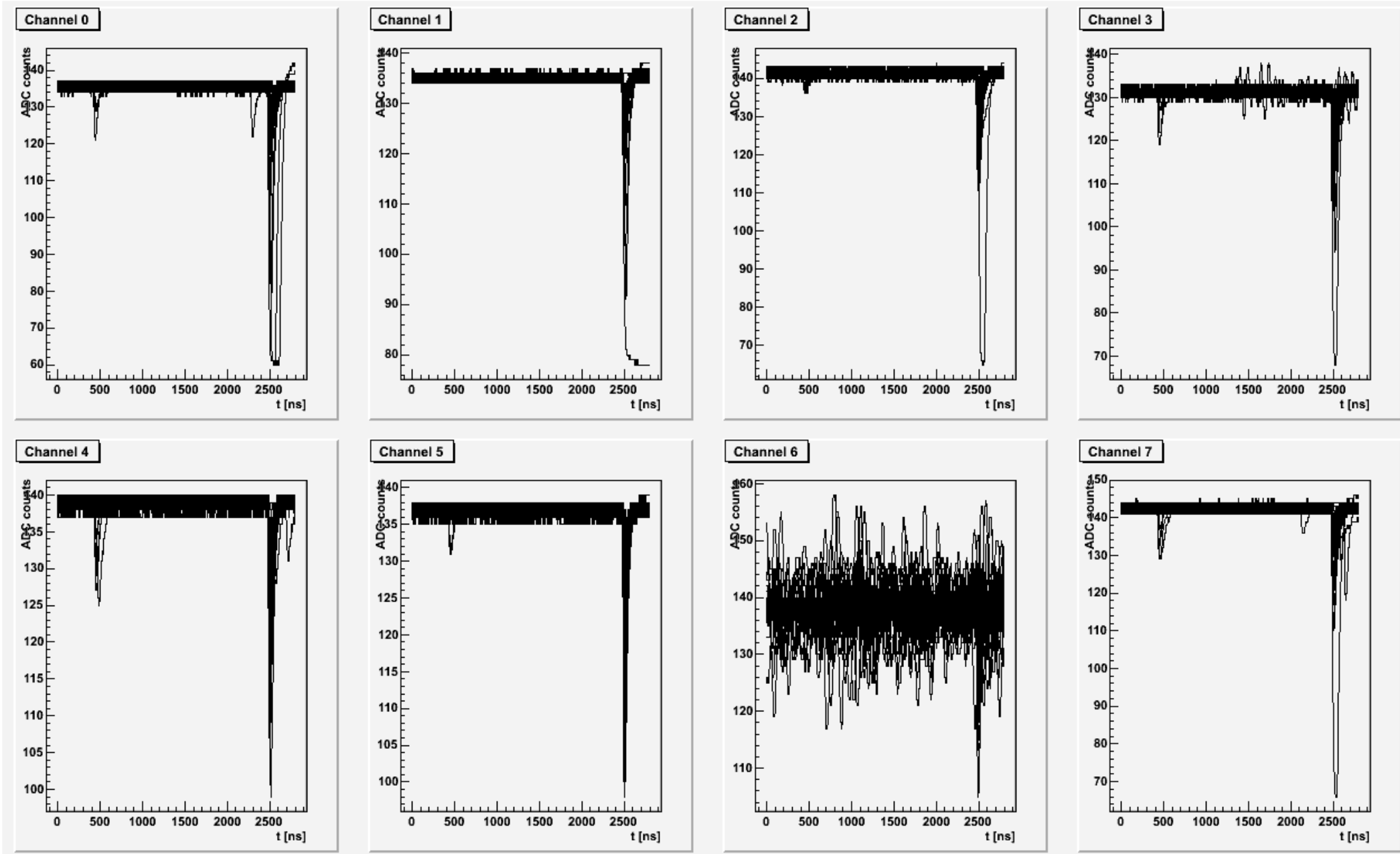
Ghosts – BCM1F TDC

CMS Fast Beam Condition Monitor (BCM1F)

Sun May 2 10:55:04 2010

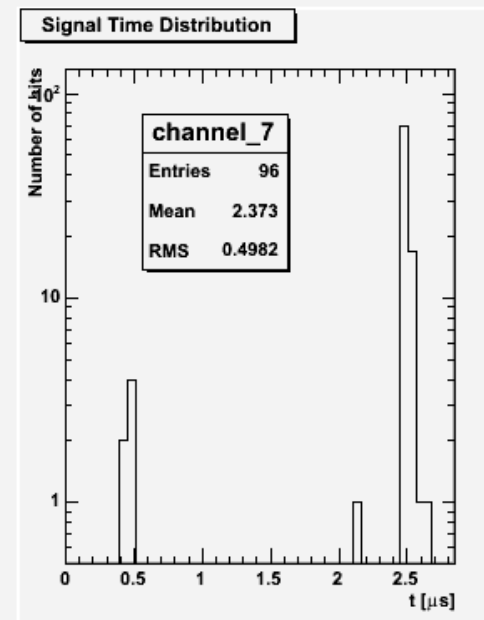
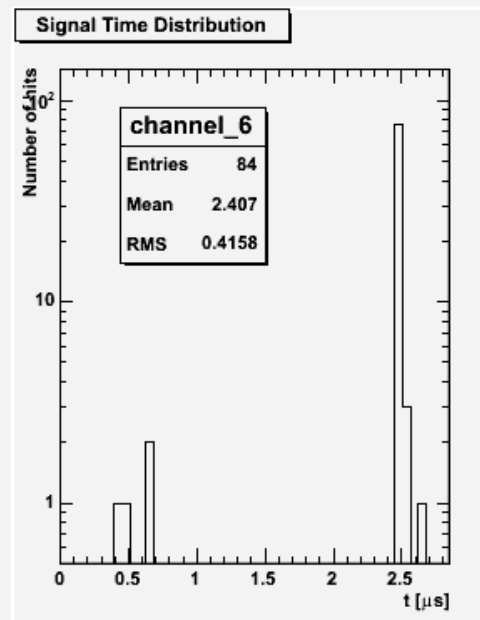
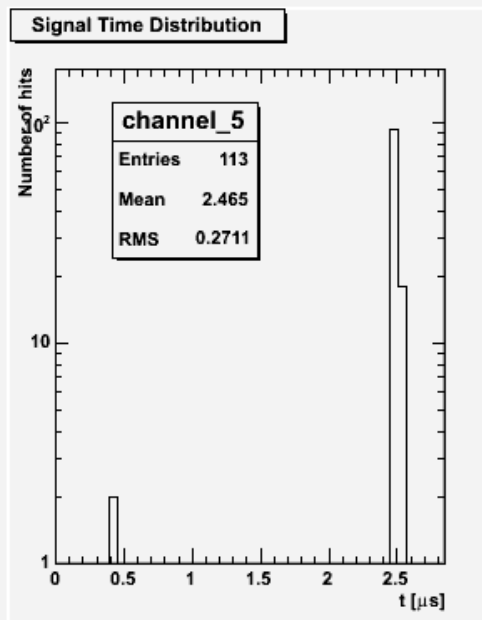
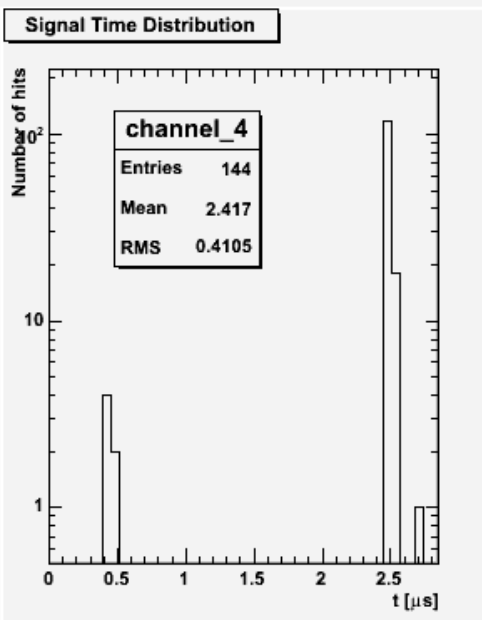
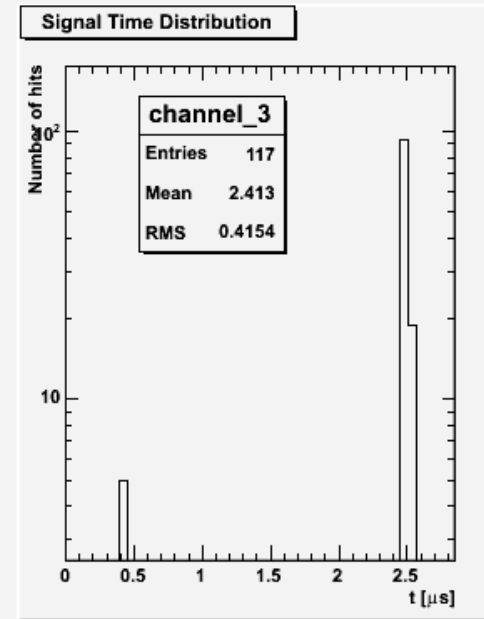
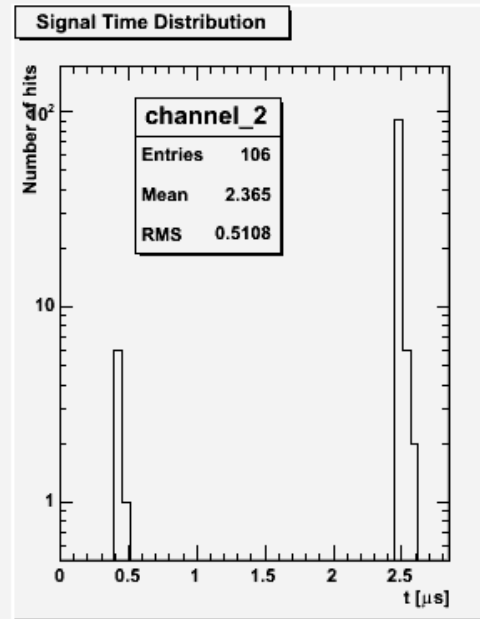
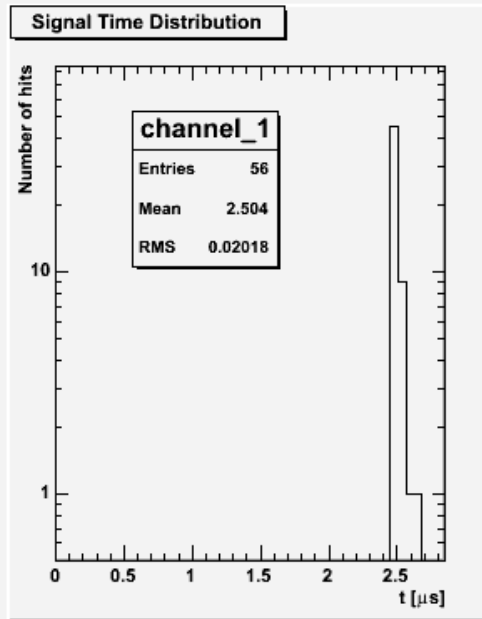
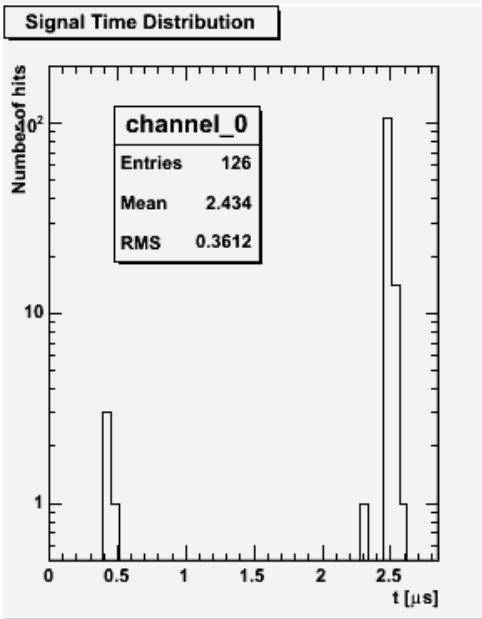


Ghosts – BCM1F ADC

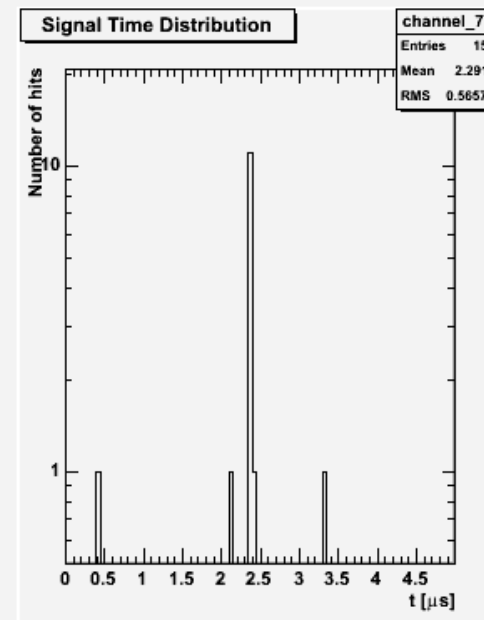
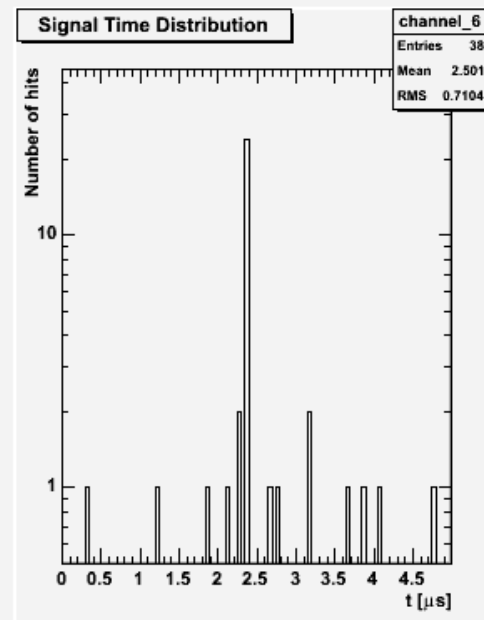
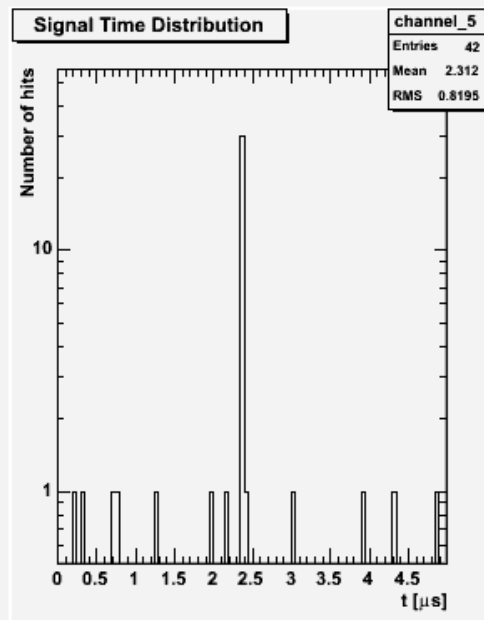
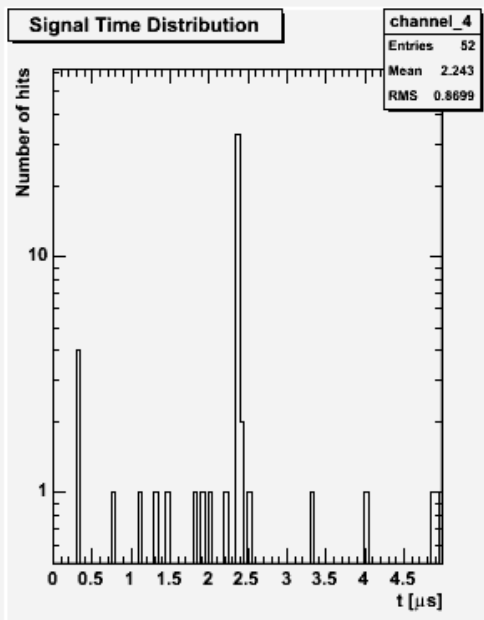
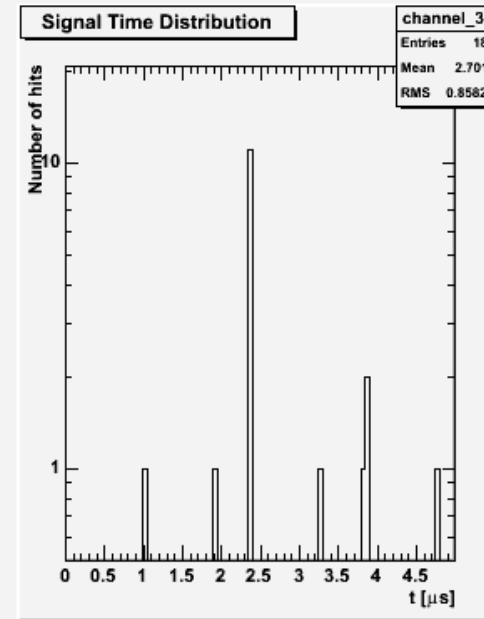
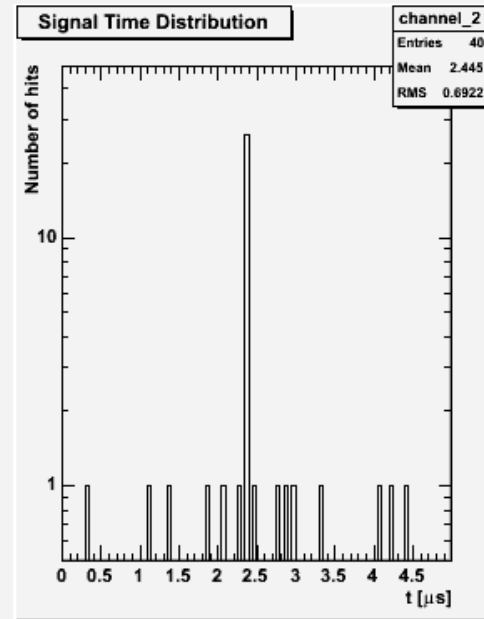
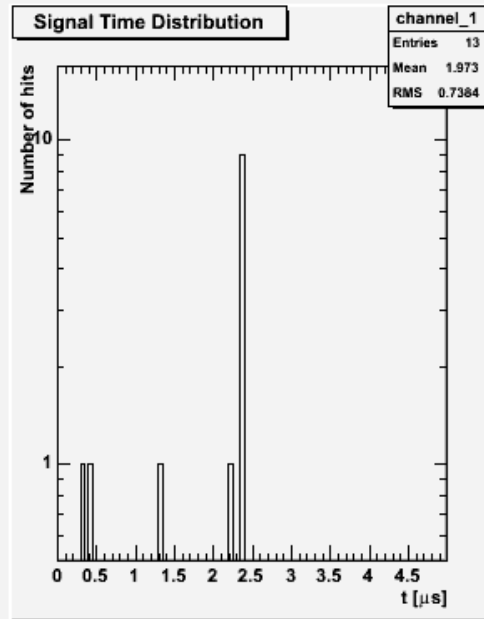
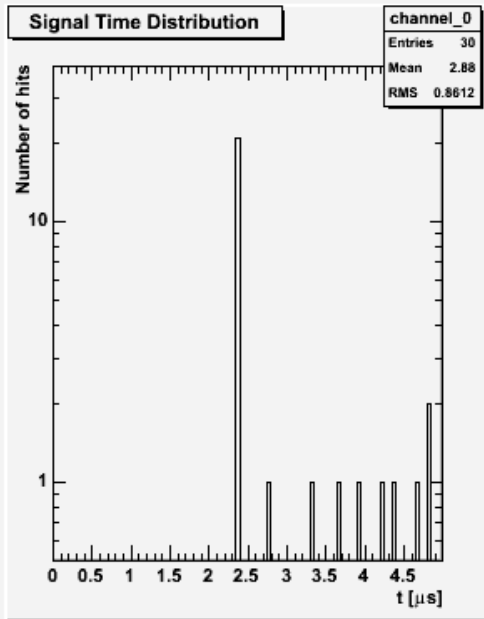


Window: 2800ns, Post trigger setting: 80ns, Position of expected bunch: ~2500ns

ADC Trigger: BPTX OR



No Evidence

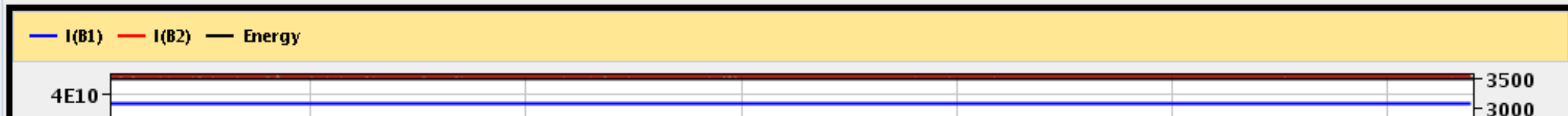


CMS Published Instantaneous Lumi

09-May-2010 10:08:47 Fill #: 1089 Energy: 3500.3 GeV I(B1): 3.82e+10 I(B2): 4.44e+10

| | ATLAS | ALICE | CMS | LHCb | | | |
|--------------------------|-----------|------------------|--------------------|-----------|-------------|--------|---------|
| Experiment Status | PHYSICS | PHYSICS | PHYSICS | PHYSICS | | | |
| Instantaneous Luminosity | 1.516e-02 | 1.257e-02 | 4.319e-02 | 1.288e-02 | | | |
| BRAN Count Rate | 2.200e+02 | 1.120e+02 | 4.470e+02 | 2.790e+02 | | | |
| BKGD 1 | 0.012 | 0.016 | 0.046 | 0.141 | | | |
| BKGD 2 | 0.000 | 26.520 | 6.662 | 1.313 | | | |
| BKGD 3 | 0.000 | 0.005 | 0.003 | 0.045 | | | |
| LHCf | PHYSICS | Count(Hz): 8.800 | LHCb VELO Position | IN | Gap: 0.0 mm | TOTEM: | STANDBY |

Performance over the last 12 Hrs



lots CMSdb Query L1_BscMinBias... CMSdb Query L1_BscMinBias... CMS PageZero Elog

CMS PageZero

DB queries are made every 45s; XML query interval is specified on the right.
Last updated: 2010.05.09 08:23:27 (UTC)

Date: Sun, 2010 May
UTC: 08:23:
Computer: 10:23:
Refresh: 45 sec

| CMS DAQ/Trigger | | Luminosity | |
|-----------------|----------------------|--|--------------|
| Run Number | 135149 | Lumi (E30 cm ⁻² s ⁻¹) | 0.01730000 |
| L1 Triggers | 0 | ∫ Lumi Fill (nb ⁻¹) | 795.48071289 |
| L1 Rate (Hz) | 0.00000000 | ∫ Lumi Live Fill (nb ⁻¹) | 795.48077393 |
| L1 Menu | <input type="text"/> | ∫ Lumi Run (nb ⁻¹) | 795.48120117 |
| HLT Triggers | 0 | ∫ Lumi Live Run (nb ⁻¹) | 795.48120117 |
| HLT Rate (Hz) | 0.00000000 | | |
| | | Miscellaneous | |

Things ongoing...

- Integration of the filter into the readout; DIP
- Test of the block transfer capacities using the baseline program
 - Generic data organisation has to allow for all readout window settings and acquisition modes
- Comprehensive analysis of all data taken
 - For example: real spectra without pre-selection
- Documentation (trying Doxygen)