

BCM1F activity last week and status

CMS meeting DESY Zeuthen

17th May 2010

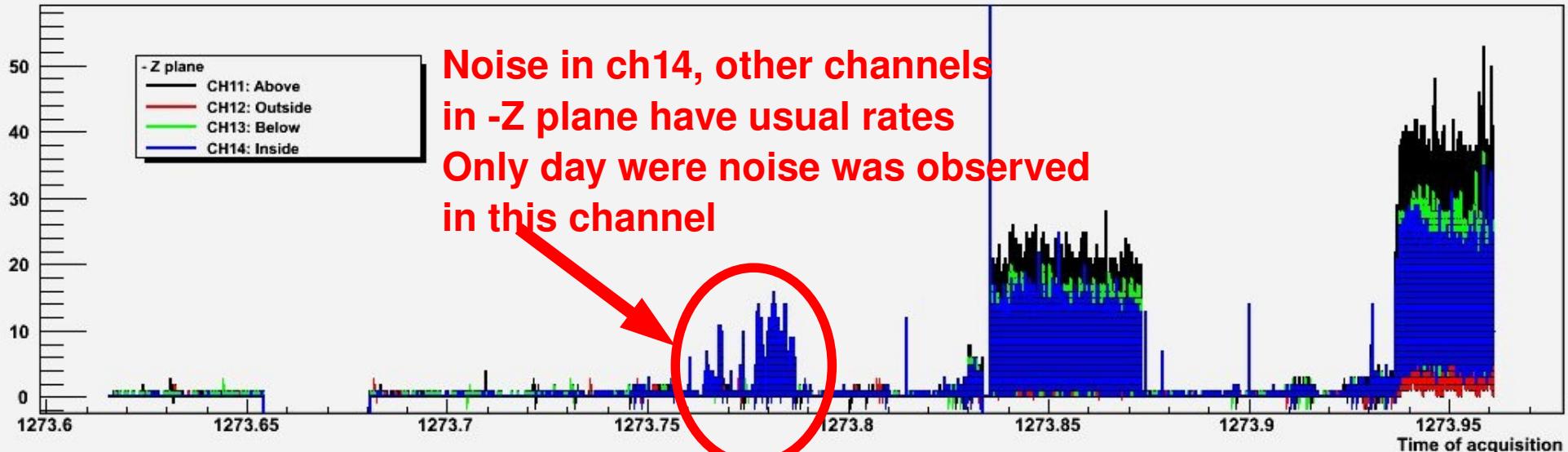
Activity last week...

- Noise studies in channel 6 of ADC
- Flash of new firmware of LUT including the use of a register to provide NIM output for the VETO functionality. The new feature was tested with a TDC old code and is working. Has to be included in current daq code.
- New signal for triggering ADC: BCM1F analog sum in Discr v258B. Thr=-16mV, the minimum possible.
- Our wiki is growing! Have a look to see all details of project

Noise summary: 12, 13, 14, 15, 16 May 2010

-Z plane

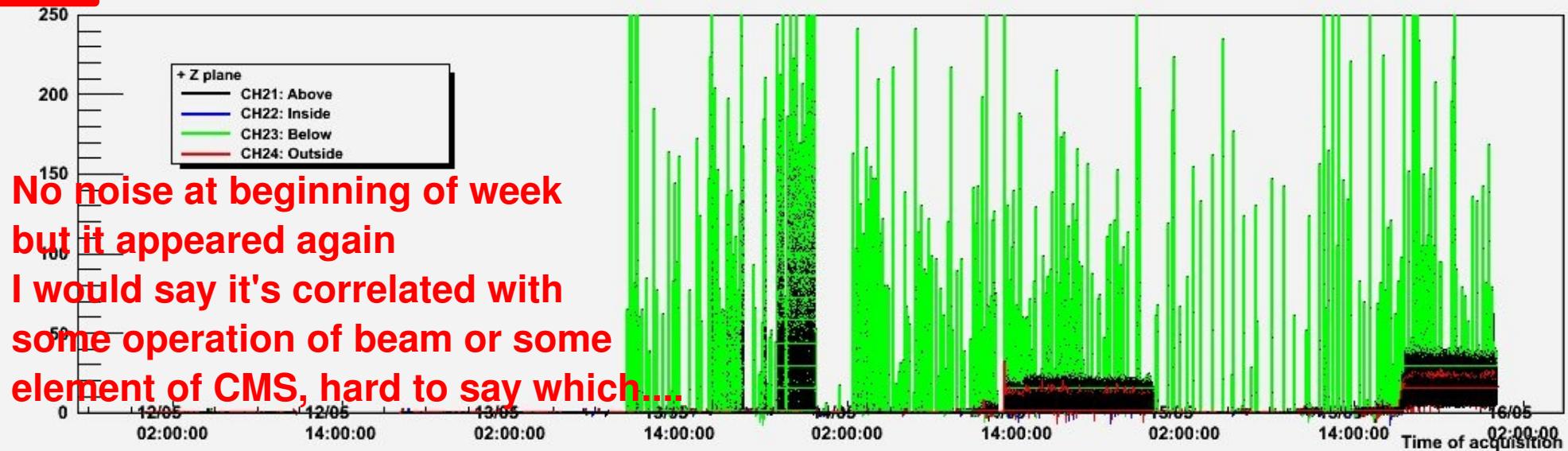
Hits per second



+Z plane

I would say noise is correlated with some operation related to beam injection

Hits per second

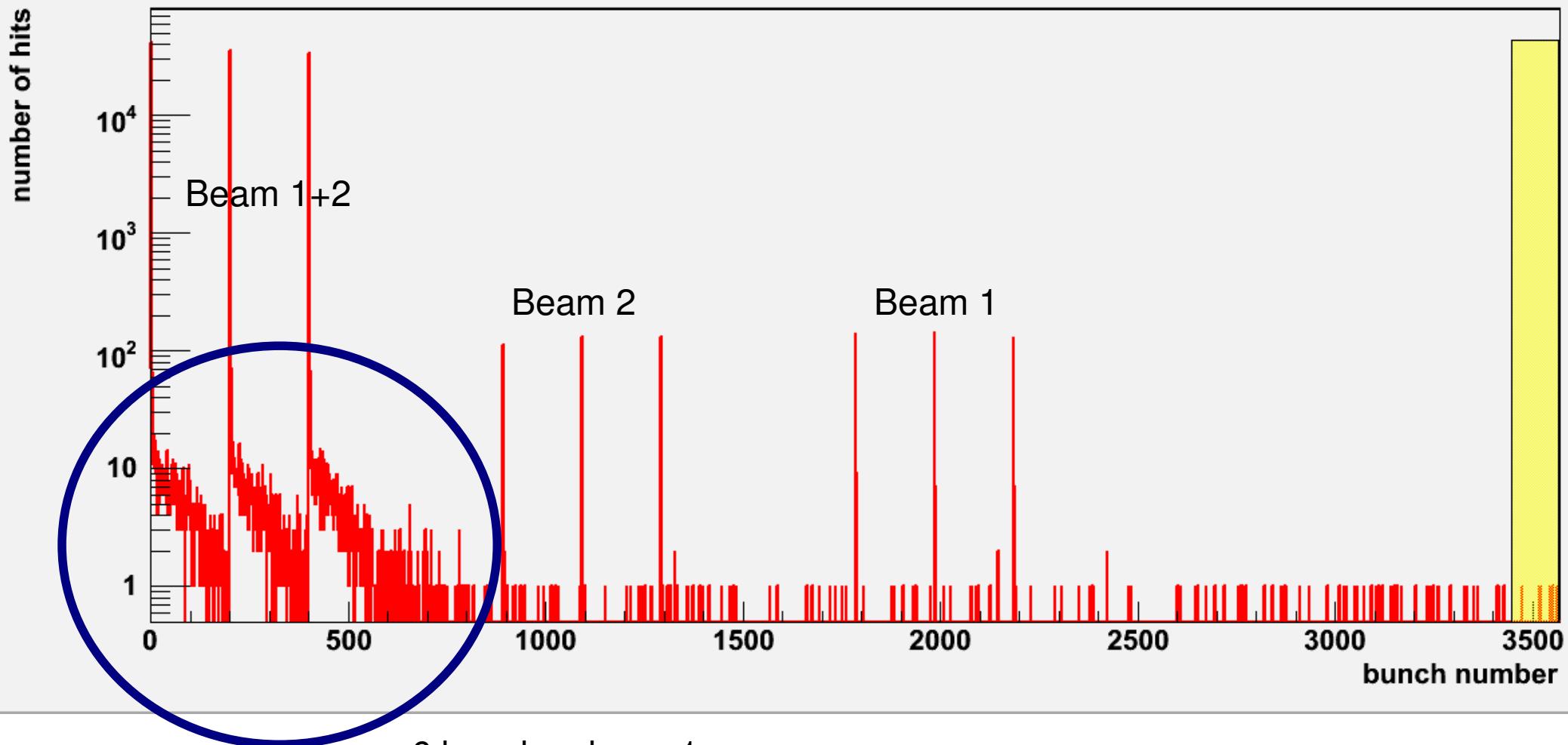


- TDC summary:

- daq crashed 2 times and had to be restarted (1 vme power cycle was required)
- good identification of bunches when beam is stable.
- Tails are observed in collisions

CMS Fast Beam Condition Monitor (BCM1F)

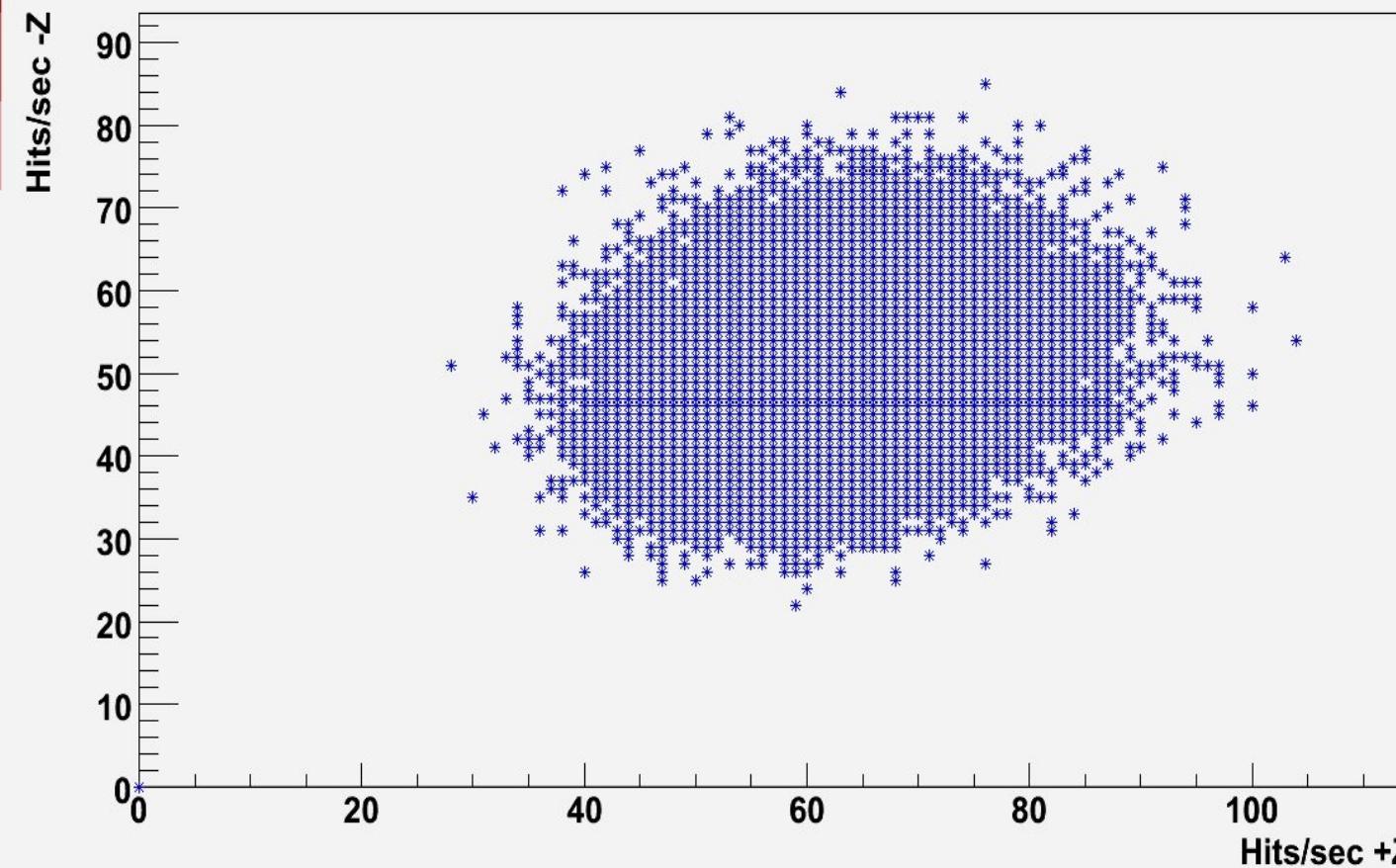
Sun May 16 10:25:06 2010



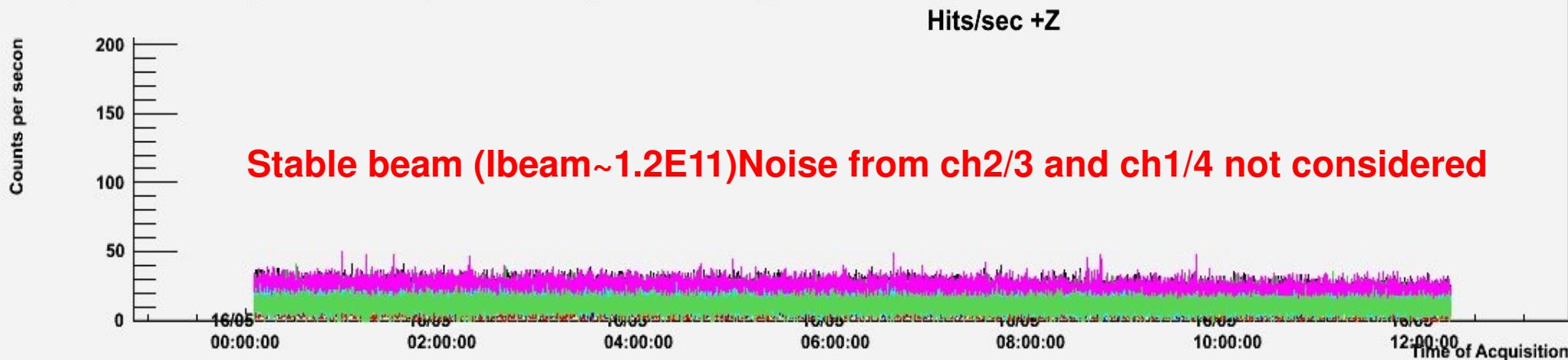
6 bunches beam1
6 bunches beam 2
3 bunches of beam 1 and 2 colliding

Correlations -Z +Z planes on 16May 2010 (00am12pm)
good correlation if noise in ch 6 of ADC is removed

Correlation Hits/sec in BCM1F +Z plane <--> -Z plane



Stable beam (Ibeam~1.2E11) Noise from ch2/3 and ch1/4 not considered



Coincidences using the LUT (16May 2010)

Next step: calculate Luminosity from these data (need help...)

