BCM1F TDCs status

Roberval Walsh
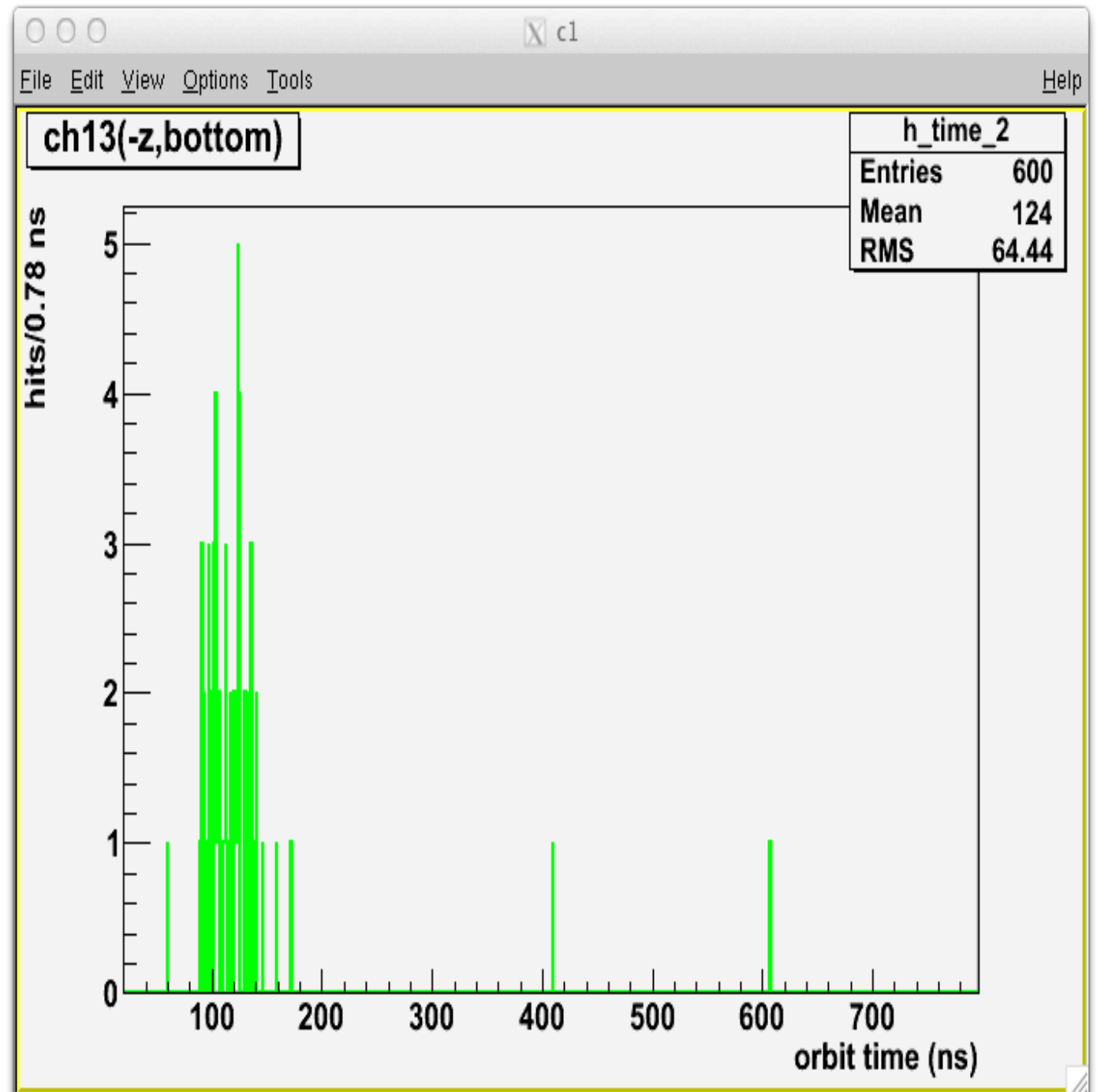DESY

FCAL–CMS weekly meeting
21.11.2011

Technical stop activities

- Implementation of Hans' features to veto hit and start signals via look-up table done successfully. Veto of scalers during block transfer not implemented yet.

- Investigation of possible VME issues. Meeting with Christoph Schwick.

  - `[ERR:TDC_V767_CAEN-BLTRead_Output_Buffer] Read Error!` and `mismatch of number of readout bytes` seemed very strange to him.

  - Looking the logfile of ctrl3 found `BRMBCMCTRL3 kernel: a2818: Timeout on RX` where a2818 is the PCI card. Message correlated with `[ERR:TDC_V767_CAEN-BLTRead_Output_Buffer] Read Error!`

  - Christoph gave a few suggestions: Upgrade firmware of PCI and Controller (+optical driver); maybe change the fibre and/or PCI card.

  - Firmware upgrade does not seem trivial, straightforward. Exercise started with test crate in B186 together with Elena and Arkady.

Noise in channel 13

- Strange broad peak in ch13 in sync with orbit trigger.

- Disappears when discriminator threshold is lowered below -12mV.

- No sign of such peak with ADC (checked by Elena) or in the scope (cheked by Wolfgang)

- Rate ~0.4 Hz

Monday, 21 November 11

Status last week

- Readout running since 17 November.

- Errors (see below) only between 14:14 and 14:21. Since then, all running smoothly.

```
@Readout: Number of bytes = 10002, different than expected = 10000. Skipping these data!
  UNIX time=1321535662

@Readout: Number of bytes = 65538, different than expected = 65536. Skipping these data!
  UNIX time=1321535910

@Readout: Number of bytes = 65538, different than expected = 65536. Skipping these data!
  UNIX time=1321536075

@Readout: Number of bytes = 65538, different than expected = 65536. Skipping these data!
  UNIX time=1321536150

@Readout: Number of bytes = 2, different than expected = 65536. Skipping these data!
  UNIX time=1321536431

  [ERR:TDC_V767_CAEN-BLTRead_Output_Buffer] Read Error!
Readout time = 15.0024 s
  UNIX time=1321536501
```

Heavy Ions 2011

- For the time being mostly doing tests with readout.

- Few data taking.

- Data looks fine.