ECAL DOC/DGL Report

ECAL PFG Meeting

19th November 2018

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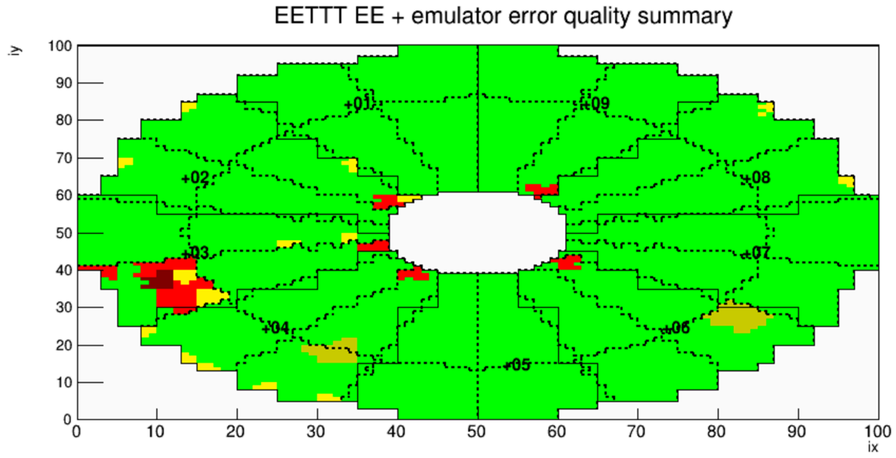
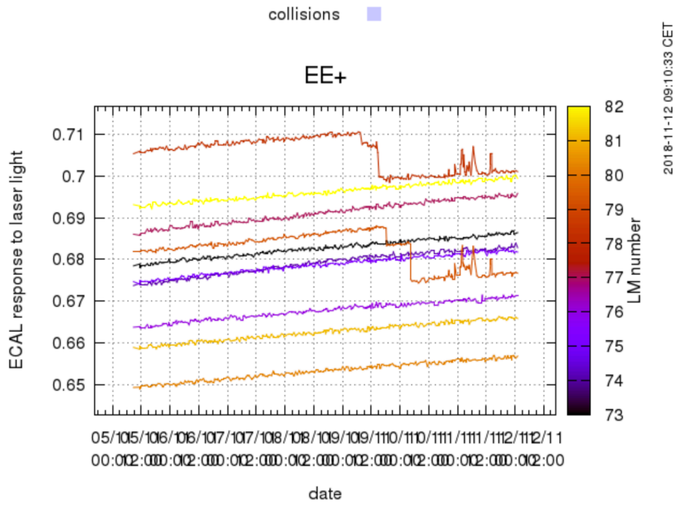
12th November (Monday)

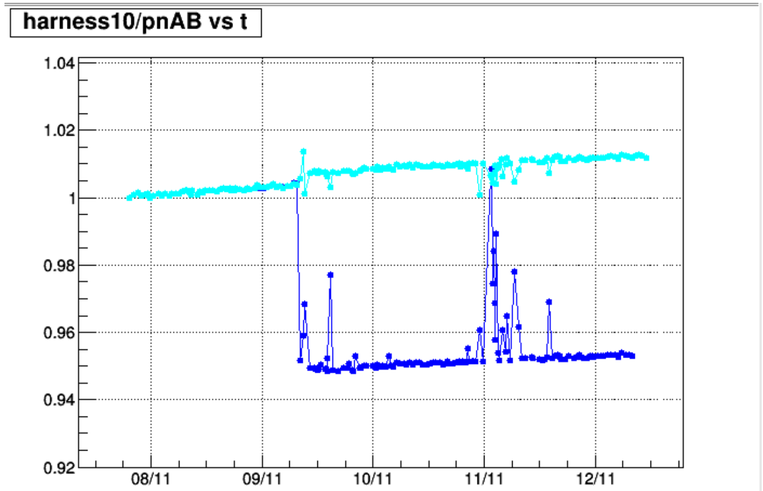
- There were two issues observed:
- PFG shifter noted a recurring problem of red clusters in EE+03 region of the trigger primitives summary plot (more on next slide)
- See **ELOG**

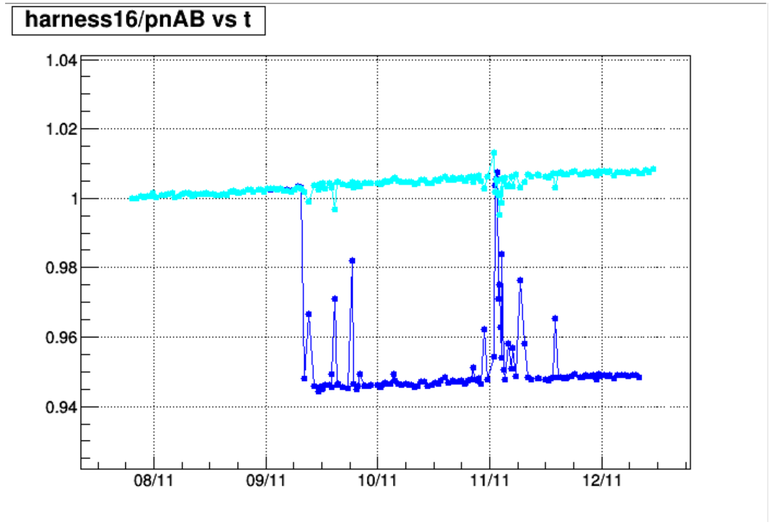
- Light monitoring modules 78 and 79 also observed to be affected since 9th Nov'18
  - Prompt reco was stopped to fix this laser issue
  - This problem was fixed during pause of prompt (for a few hours)
  - Payloads for runs 326392-326596 with the fixed LM's were produced and uploaded to the DB
  - See **ELOG** from Serguei



Blue: Before fix
Cyan: After fix

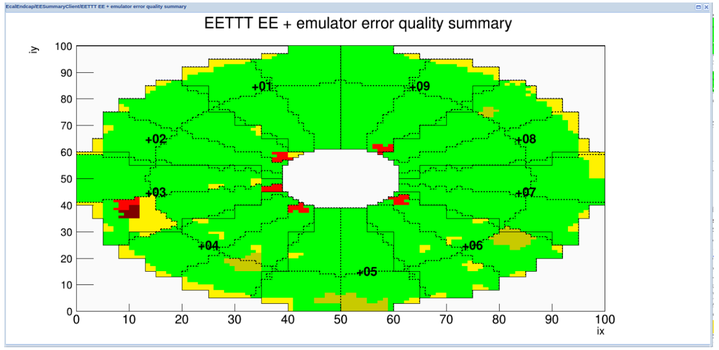






12th November (Monday) and 13th November (Tuesday)

- Jose suggested the TT emulator quality problem might be solved by power cycling the crate at the next interfill
  - Trigger could be misaligned
  - Trigger primitives were checked and were not found to be corrupted



- Power cycle was performed during the interfill
  - In the new run (326617) after the power cycle, the same problem with TP emulation was observed **ELOG**
  - The gap flag measurement performed in this region pointed to some misaligned strips in TCC83
  - Next morning, problem had disappeared (could have been an effect of statistics)
  - Performed gap flag measurement for EE and all towers were found to be aligned. However, the misalignment was expected to be back during a high intensity fill.
  - New delays (+1) were introduced for TCC83 —> the red towers were back (not as large as before)
  - Reverted to the old delays and changed the phase instead—>Alignment looked good in cosmics, however this still needed to be confirmed with high intensity fill
  - High intensity fill (on Friday) —> Strip 2 was still misaligned; the phase on this reverted (1—>0)

Detailed **ELOG** by Inna

13th November (Tuesday) and 14th November (Wednesday)

- ECAL/ES pedestals measurements were performed

- ECAL DCS operator called at night to inform about lost communication with EB- crates
  - Since we were in stable beams and data quality was not being affected we waited until the interfill next morning to perform a reset of those crates, after which communication was restored

- **Wednesday**

  - ES was in local during cosmics run to update the DB password

15th November (Thursday) and 16th November (Friday)

- **Thursday**

- ECAL DCS shifter received a call from CMS DCS operator regarding SNIFFER alarms **ELOG**

- ECAL partitions were ON and no action was needed (could have just been a CMS DCS monitoring issue?)

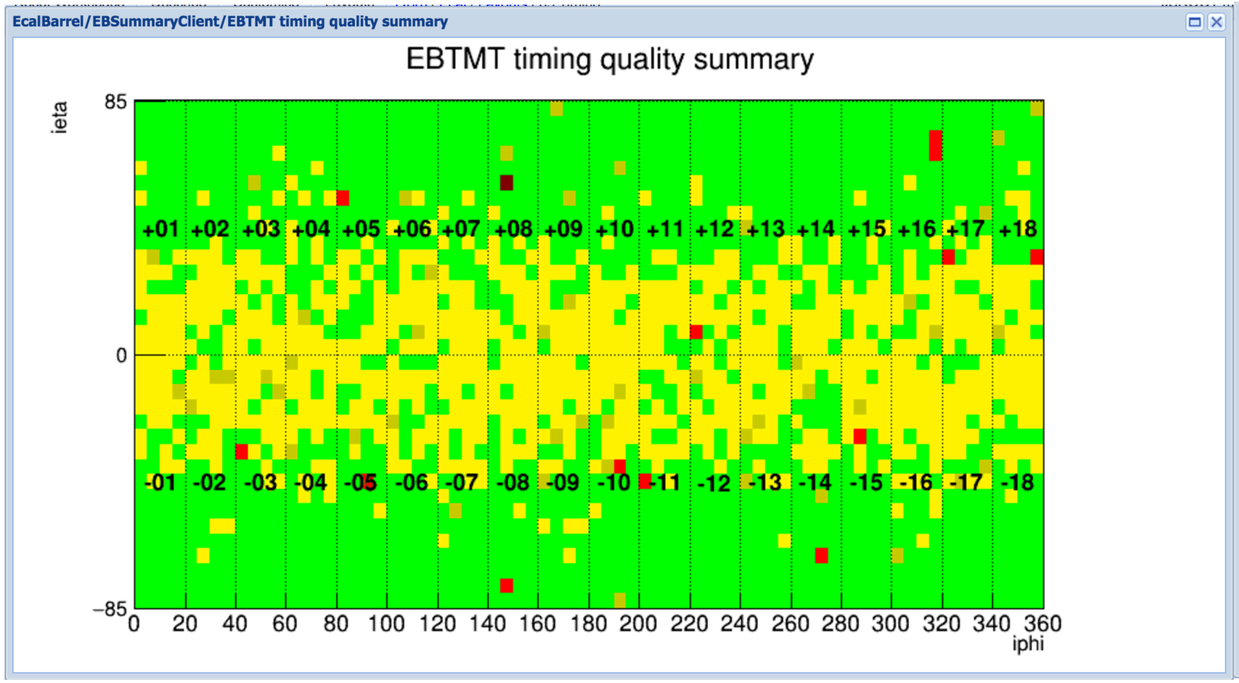
- **Friday**

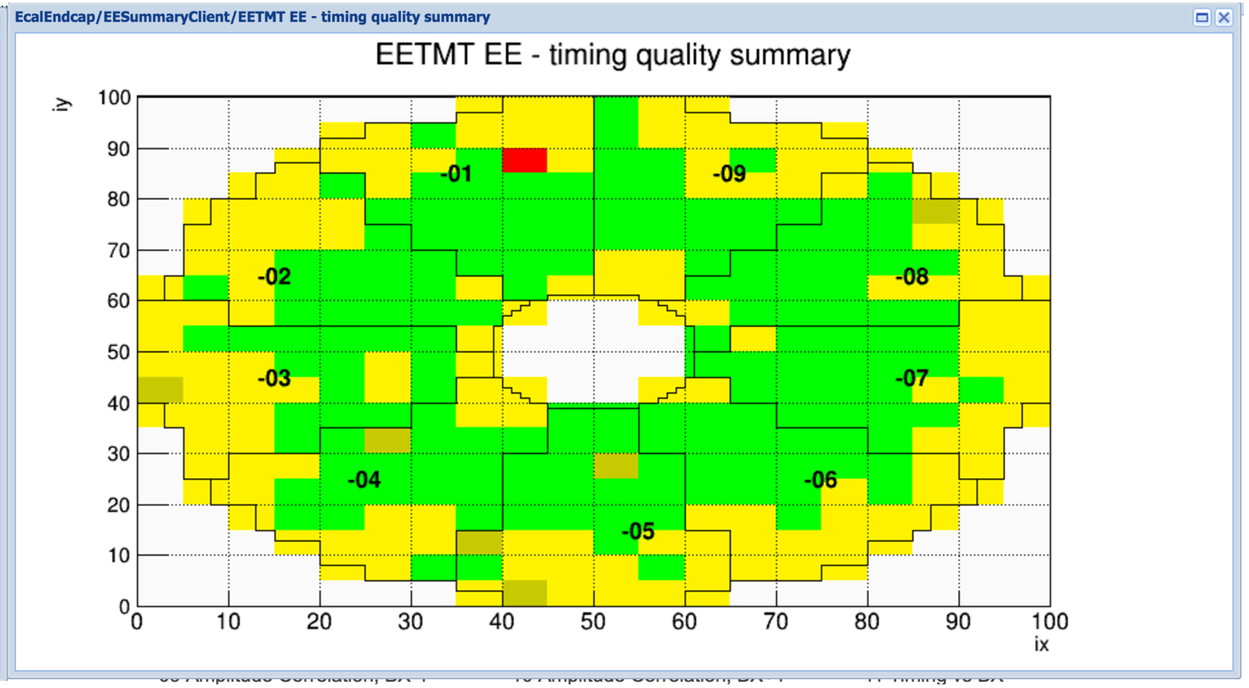
- New laser corrections deployed **ELOG**

17th November (Saturday)

- cDQM shifter reported yellow towers in the timing quality summary plots

- This is a manifestation of beam luminosity being low for HI runs, so there are fewer meaningful rechits. Hence the timing plots generally fill up slower than during regular pp collisions runs.
- The yellow towers turn green with more statistics
- Badder confirmed that due to lower luminosity, it was expected for the timing to be shifted upwards ELOG





18th November (Sunday)

- Received a call from the SL late at night about an ES FED causing high dead time (in Fill 7454) (Run 326884) **ELOG**
  - Started with high dead time from Strips
  - Strips changed their configuration, after which ES started causing high dead time. The two issues were most likely not related, however, just to rule out any errors, Strips reverted to their previous condition.
  - Immediately after this, the ES dead time went down, but then raised back up again.
  - It took some time for the cDAQ shifter to inform exactly which FED was causing the dead time
  - It took around 5-7 mins to communicate with Giacomo (there was no problem with that FED apparent at that time)
  - Took FED 554 out of global starting Run 326887
  - More investigation needed —> Will try to do this today during interfill