

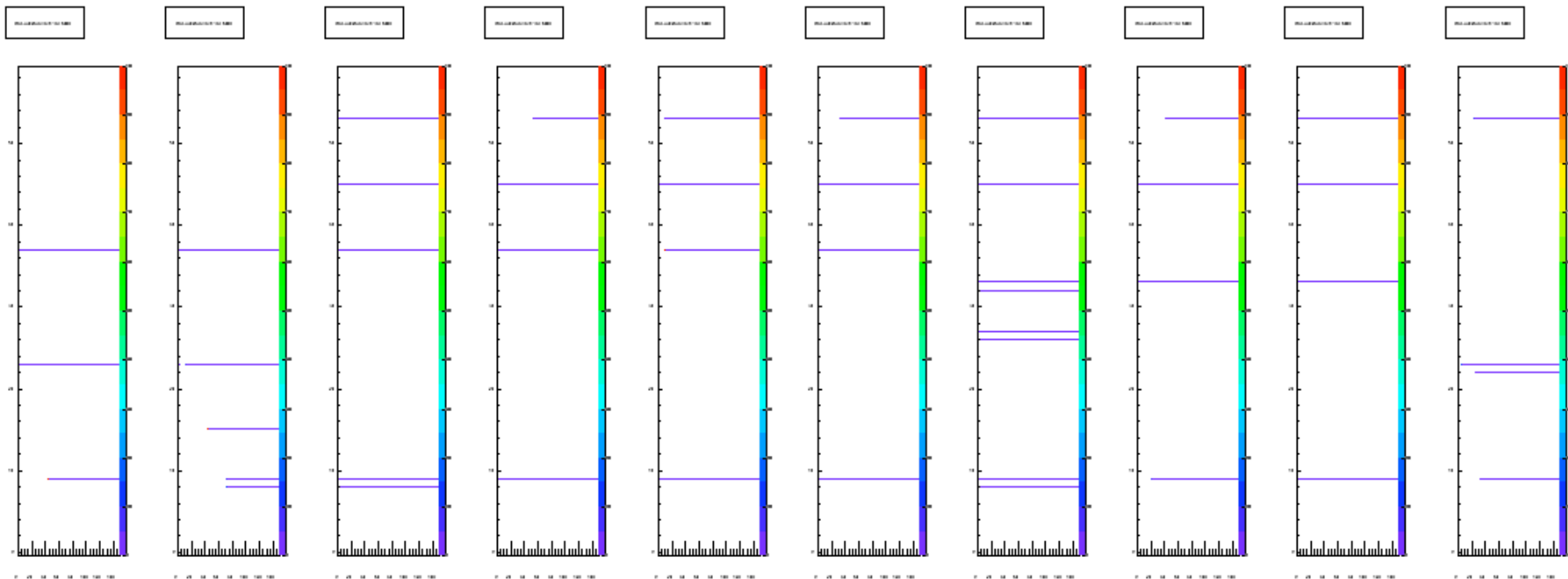
Investigate Empty Data(or chopped data) problem

Remark:

-This type of half chamber is marked with “link monitor error” flag in GTU header word.

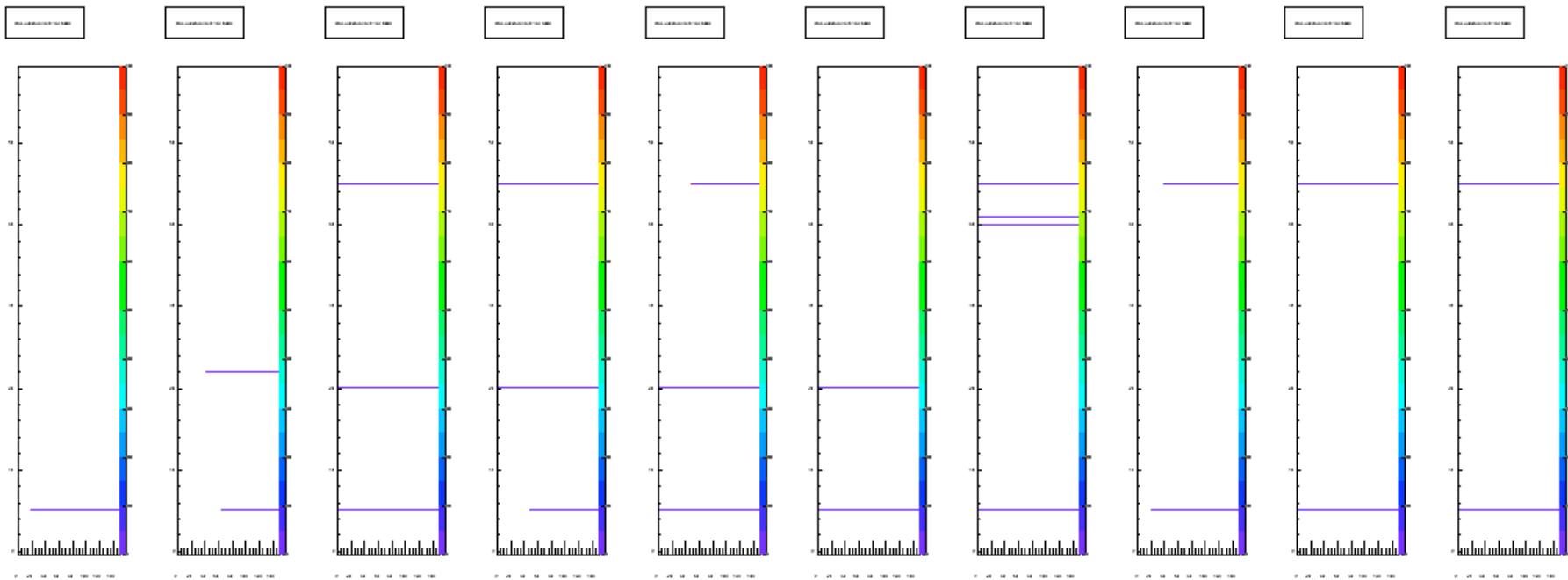
SM00

- 10 plots from 10 different runs (below listed, color denotes “runs taken different day”)
 - ▶ 50502 / 50503 / 50866 / 50876 / 50879 / 50884 / 51586 / 51587 / 51588 / 51590
- plot : take “link monitor error status” from GTU header and fill. you will see colored marker if there is link monitor error.
 - ▶ x-axis: event number (from 0 to 149), y-axis: half chamber number (from 0 to 59)
 - ▶ color code:
 - ▶ coldest color - no data words following on the link monitor errored HC (most of the case as you see)



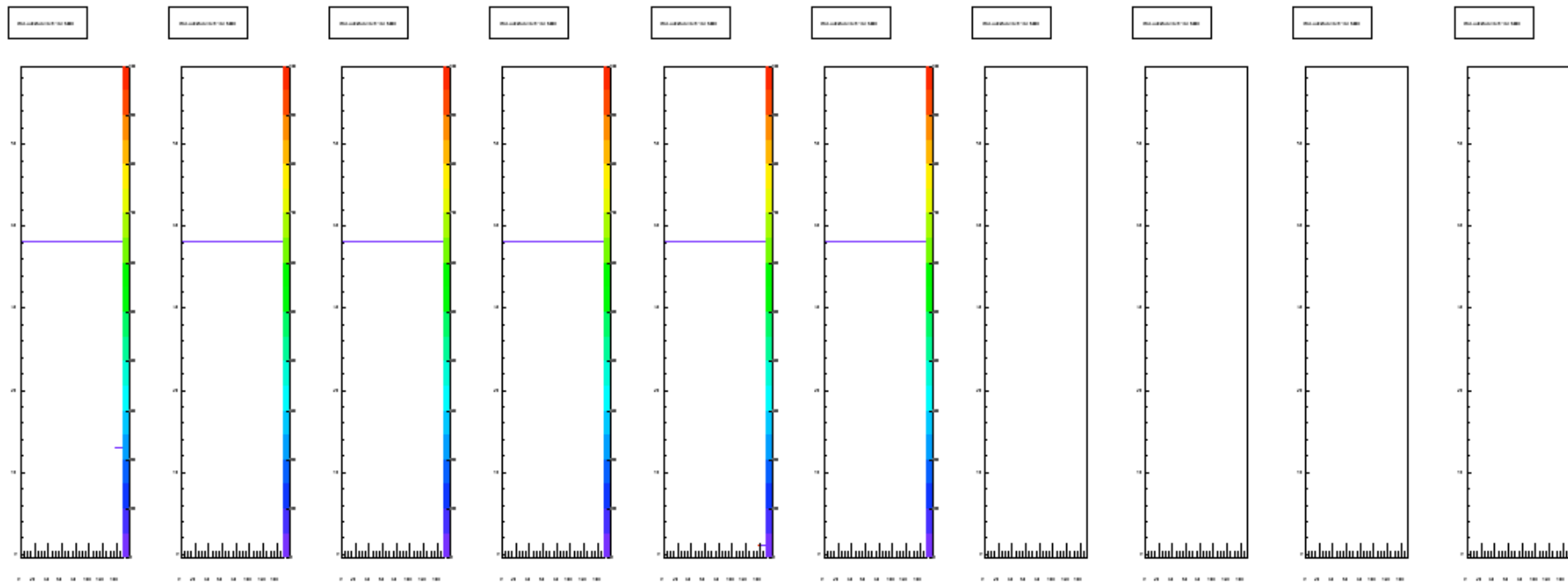
SM08

- 50502 / 50503 / 50866 / 50876 / 50879 / 50884 / 51586 / 51587 / 51588 / 51590



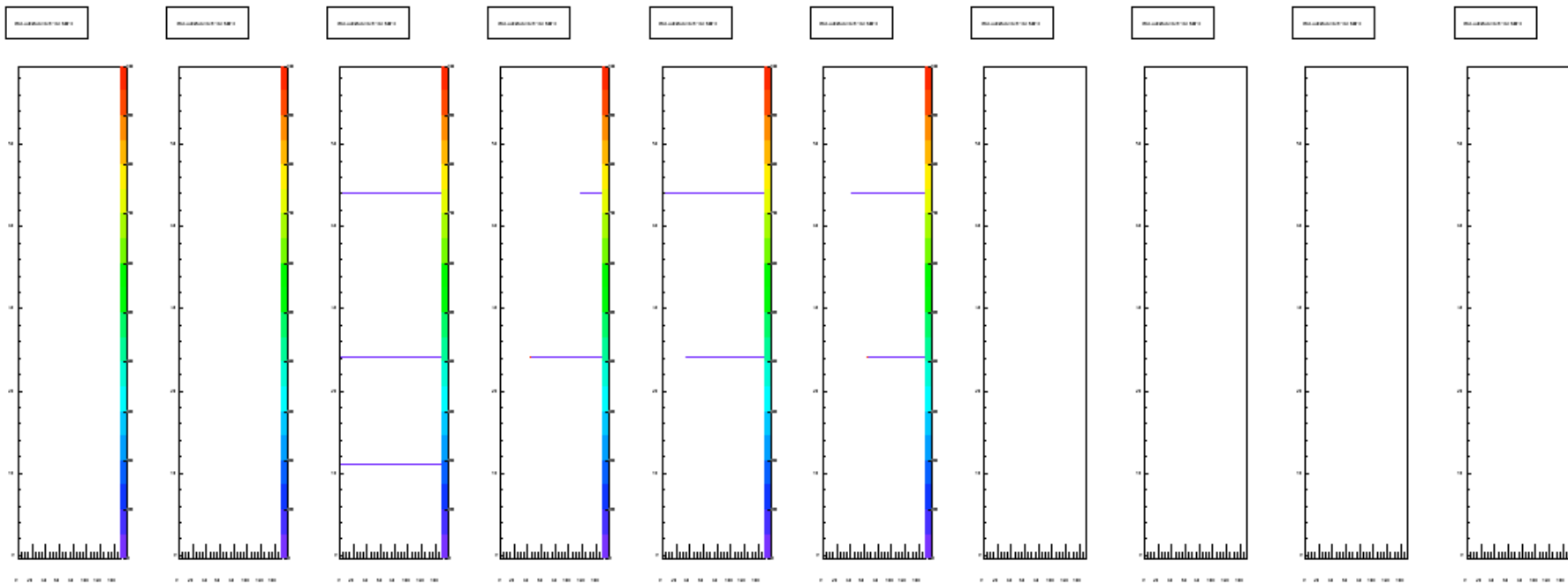
SM09

- 50502 / 50503 / 50866 / 50876 / 50879 / 50884 / 51586 / 51587 / 51588 / 51590 (SM09 data empty - understood by Jochen)

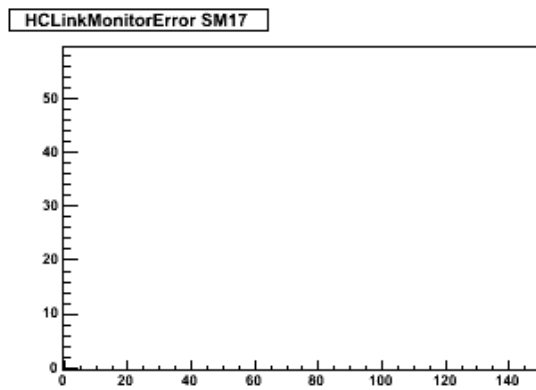
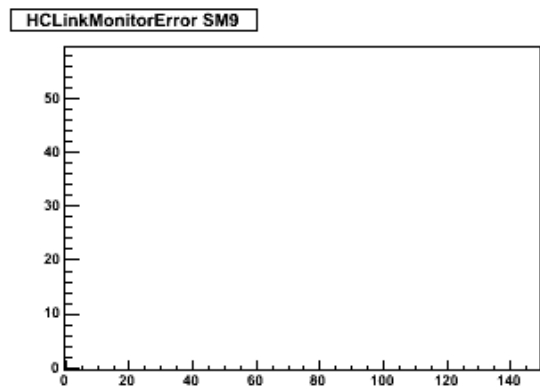
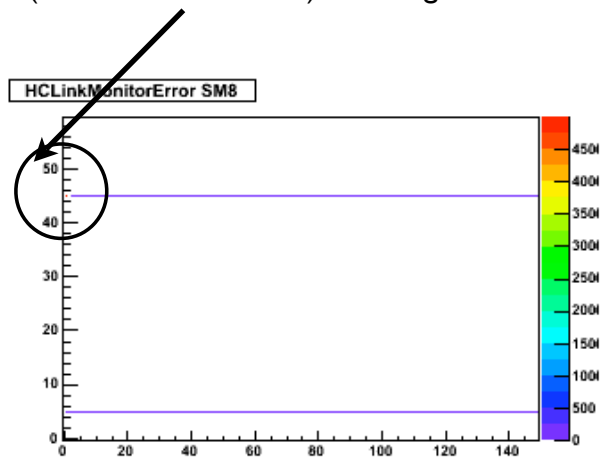
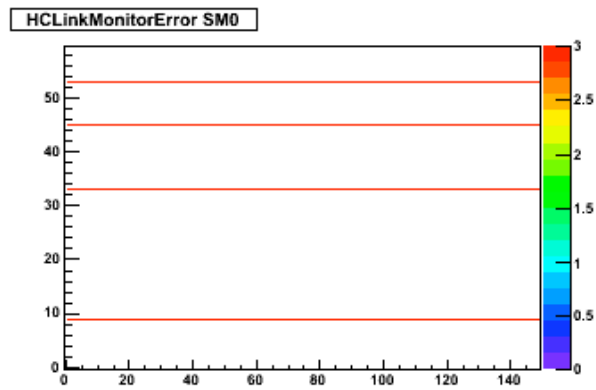


SMI7

- 50502 / 50503 / 50866 / 50876 / 50879 / 50884 / 51586 / 51587 / 51588 / 51590 (SMI7 data empty - understood by Jochen)



- Run 51588
- there is event having half chamber having some chopped data (marked with red dot), at first glance, the data looks fine but didn't fully checked.



summary

- Link monitor error
 - ▶ For some half chambers, the problems were very often occurred but not all the time.
 - ▶ Problem looks very localized, but we cannot conclude that it only happens to these chambers but never happens to the other chambers.
 - ▶ Most of the case, no data words following on the errorred HC
 - ▶ sm 9, stack 3 link 2 always shows problem(rstate were ok)
 - ▶ runs taken same period shows similar behaviors
- We have no SM data for two runs taken yesterday(Run 51591, 51592) with configuration 110,113. There were GTU header, but no SM data. It doesn't look like configuration problem since it also happened before twice. We should investigate why sometimes it happens.
- When we have a chance to play with detector, it will be good to sit together and take/check data together with chamber rstate. I'll be at PI tomorrow. Could you arrange the schedule for it?