# CGEM Status

2025/06/24

# Status – last week

- L1 and L2, and L3 recovered to nominal values

- L2s to be studied – tuesday we had no beam, came back at 4:40 am on Wednesday

- Removed microsectors of sector 8 (1 of the 4 of L2s)

# Status L2s

- We increased slowly the voltages
- Tested up to same HV settings on GEM
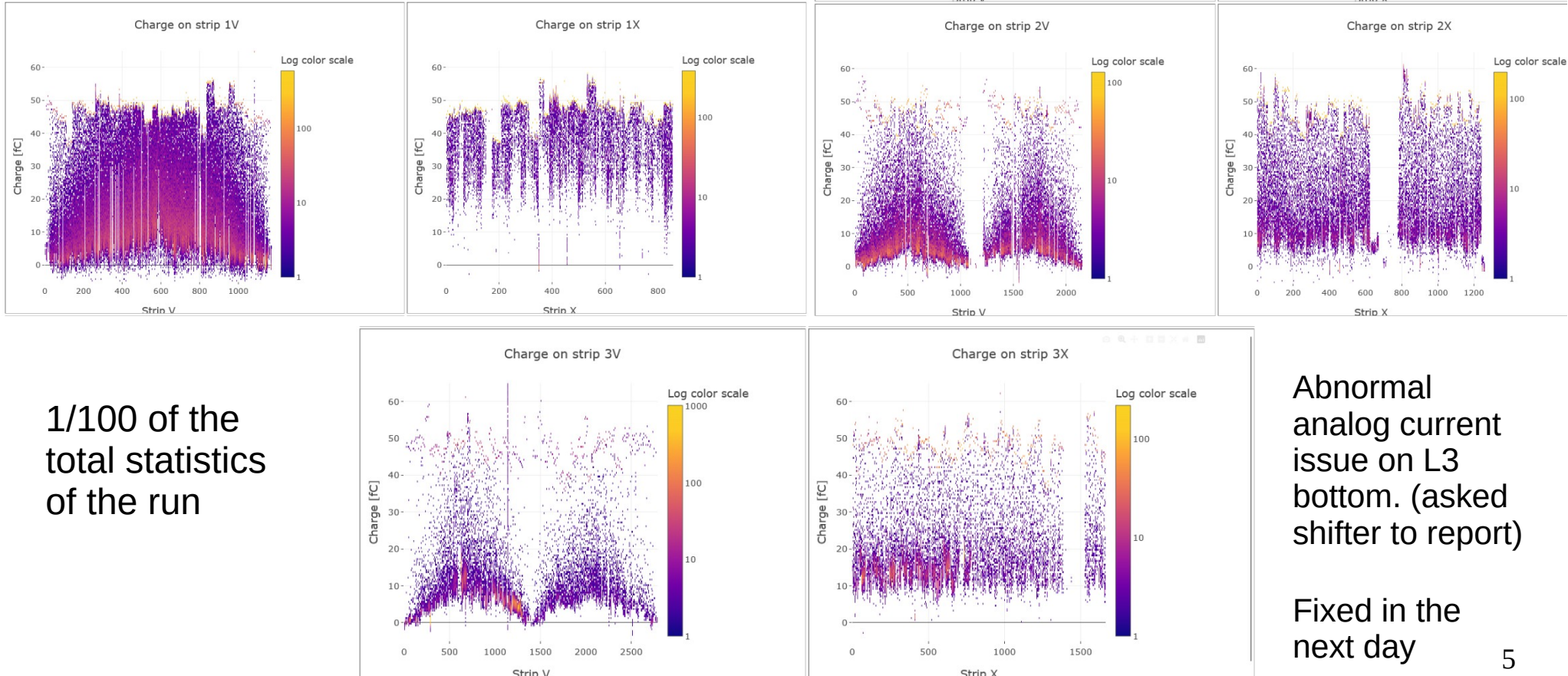  - Different transfer field (T1, T2) on L2 and L2s

From thursday, standard values on all the layers

# Run 85980
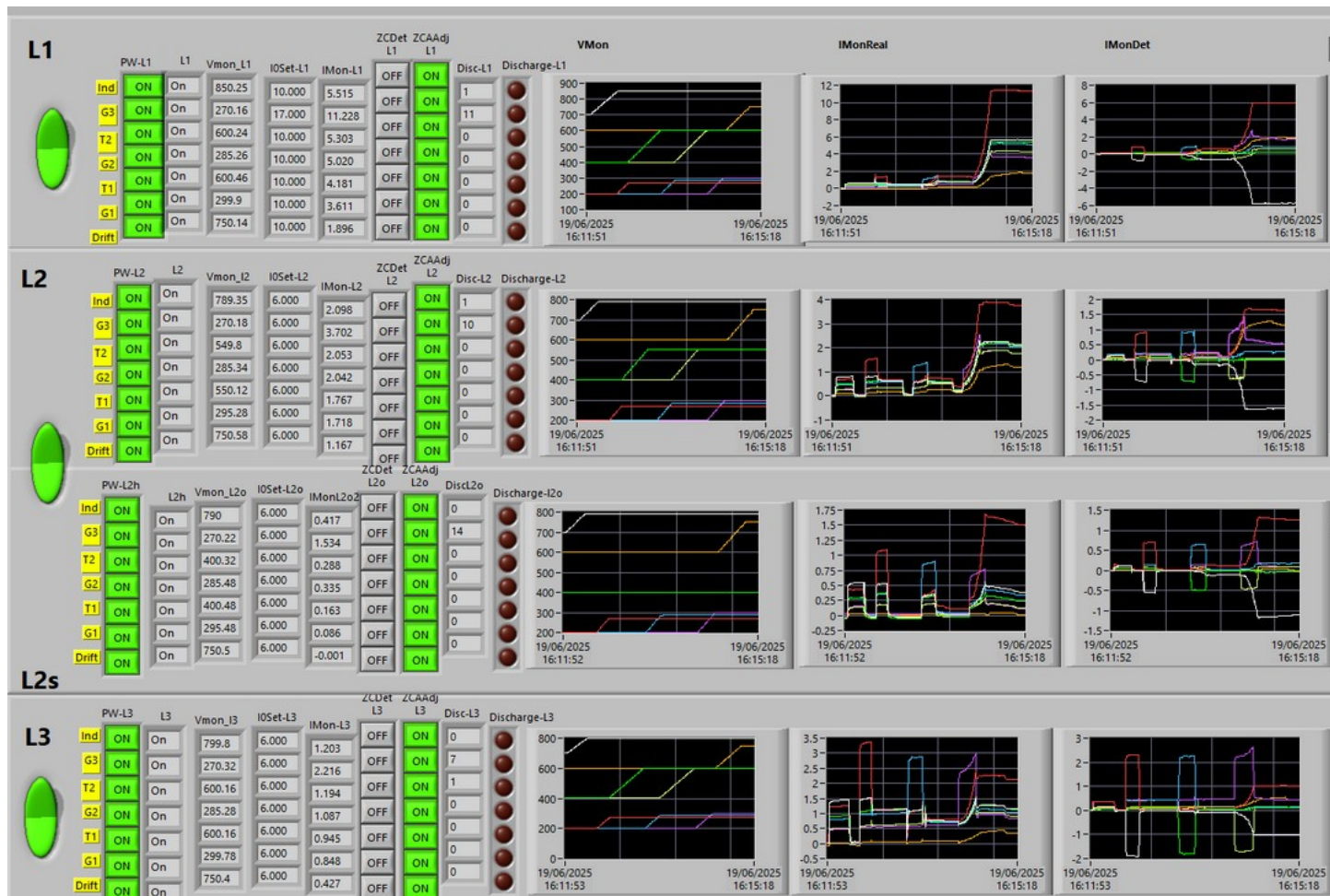
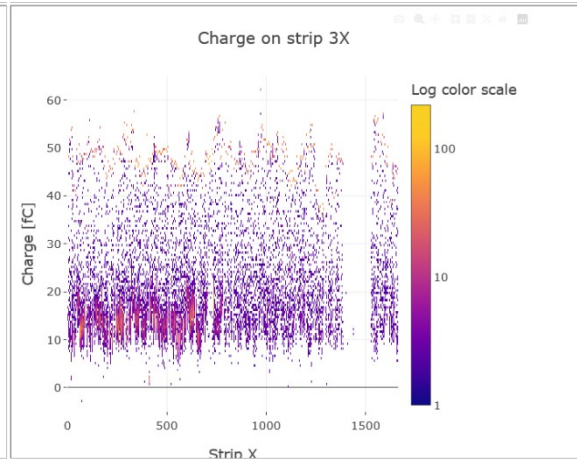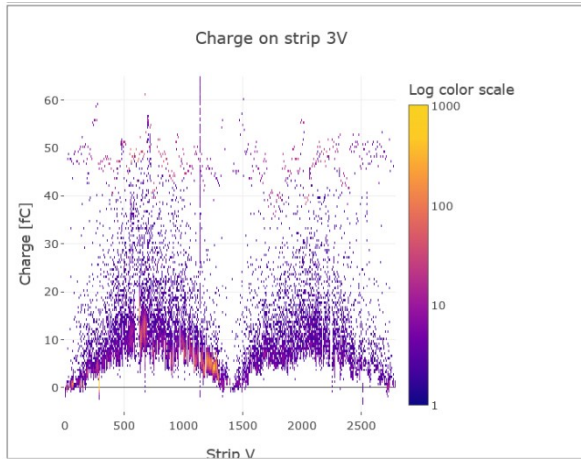# Online data 85980



Run 85980 status plot

1/100 of the total statistics of the run

Abnormal analog current issue on L3 bottom. (asked shifter to report)
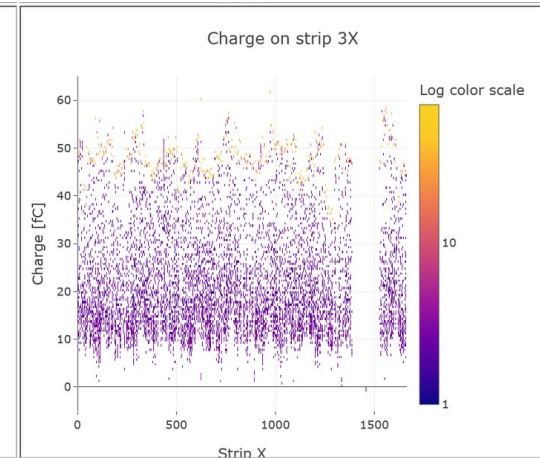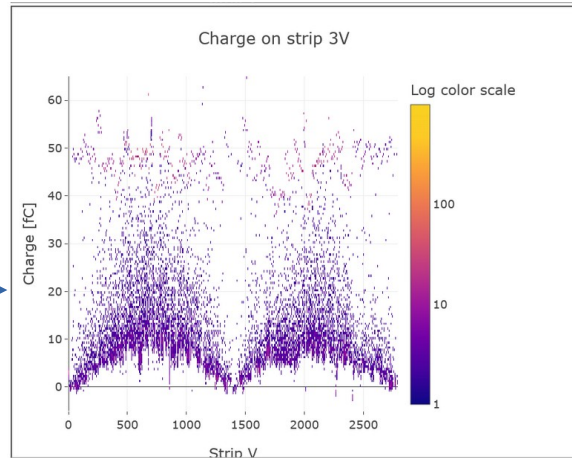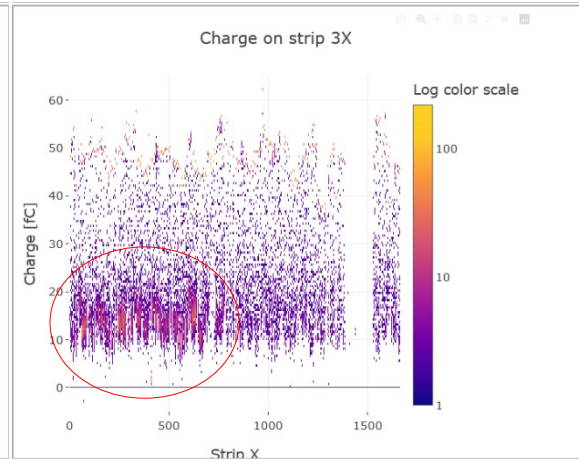
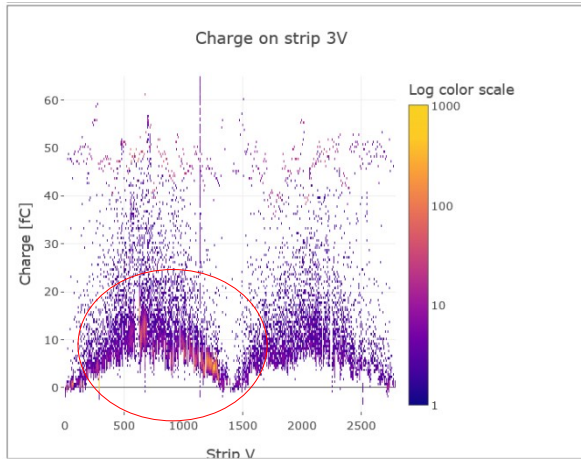Fixed in the next day

# Example with "normal" G18 F3



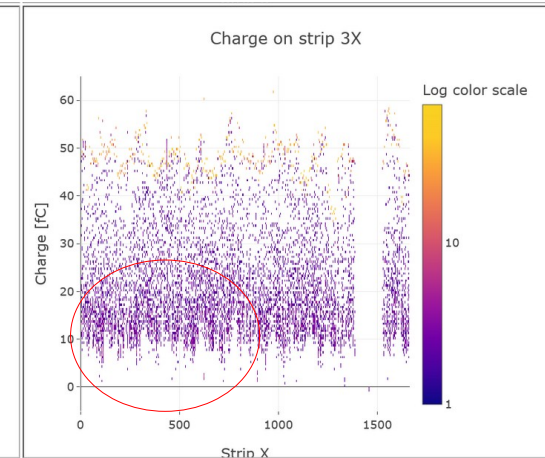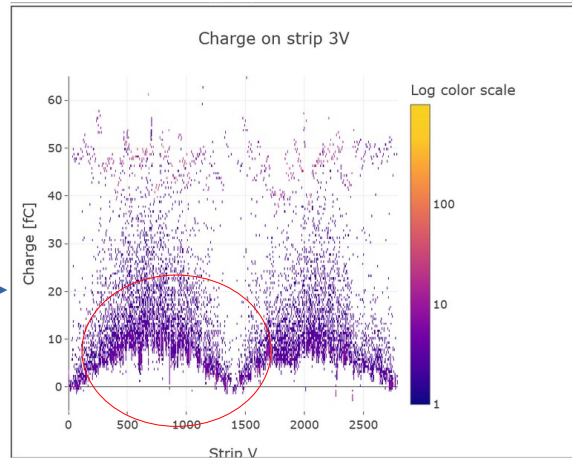Abnormal - run (85980)

Normal – run (85985)

# Example with "normal" G18 F3



Abnormal - run (85980)

Normal – run (85985)

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# Further steps

- Since few 8b/10b communication errors with this configuration, decided to switch to DAQ abort mode
  - From run 86001

- Stable data taking until Sunday evening

# Test to recover some acceptance

- We had:
  - 1 missing microsector in L1 (1/40 of the total L1 acceptance)
  - 1 missing sector in L2(s) (1/8 of the total L2 acceptance)
  - 1 missing sector in L3 (1/12 of the total L3 acceptance)

- Test to try to recover started on Sunday evening
  - Connected 2G2 and 2G1 of L3 – run 86056
  - Communication errors came back
  - Switched back to "ignore error" DAQ on run 86059
  - Went back to previous HV configuration on Monday afternoon. No error

# Test of L1 - I

- We are now running a test to recover microsector of L1
  - From run 86107
  - Very high current drawn by L1 G2 (where problematic microsector is)
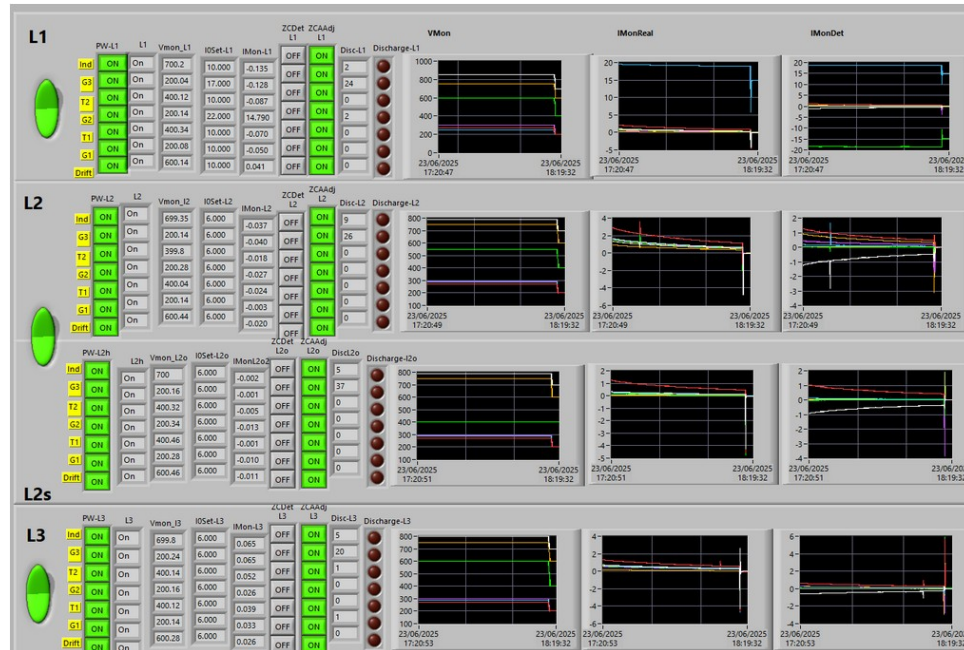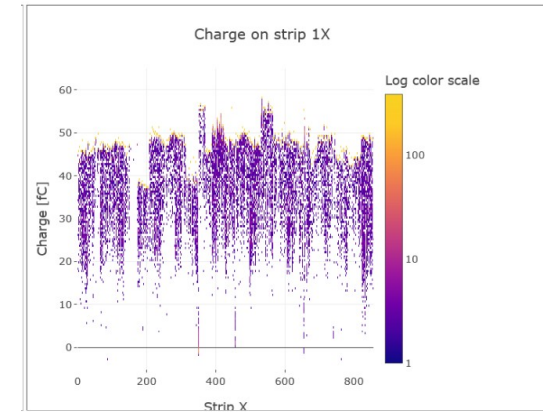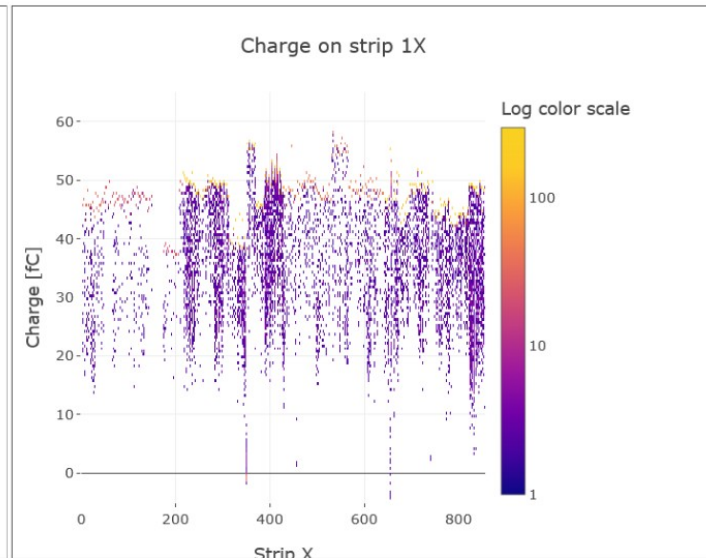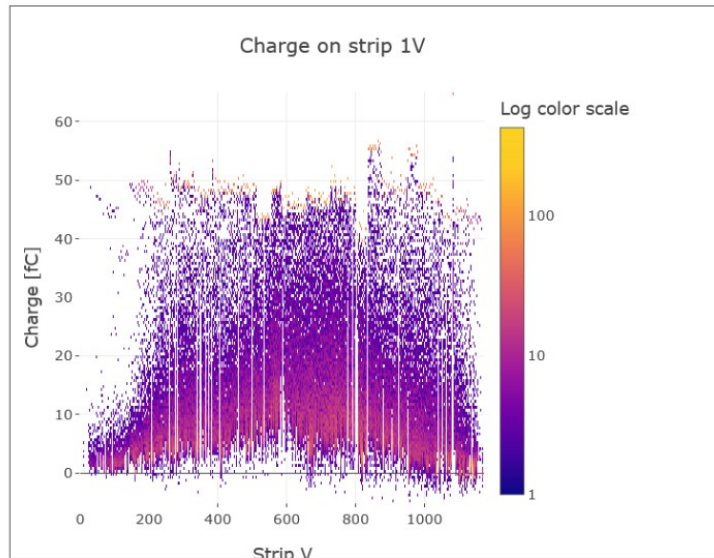


No electrical instability: High stable current at different HV

# Test of L1 - II

Run 86109 – HV on GEM of L1 almost nominal

Less hits and charge in two sectors (4 and 2) due to the high current of the GEM.

We would like to test this configuration for a couple of days to see whether we can recover the microsector. If no improvements, switch back to standard operations



Run 85980

# Summary

- Found a good and stable configuration for L1, L2 and L3 at "nominal voltages" with no (very few) errors
    - Took data from (at least) run 85985 to run 86056


- Some further tests on-going; if not successfull, we go back to the stable configuration
    - We will need a short access before next tuesday – 1 hour from machine stop to machine recovery


- Database ready to be updated, we shall plan to find a time to do it so with Alberto, starting from tomorrow afternoon


- Start to look at the data also from Italy:
    - Thanks Liangliang and Yaxuan for the support