

# SBS GEM Commissioning meeting update - UVA GEMs

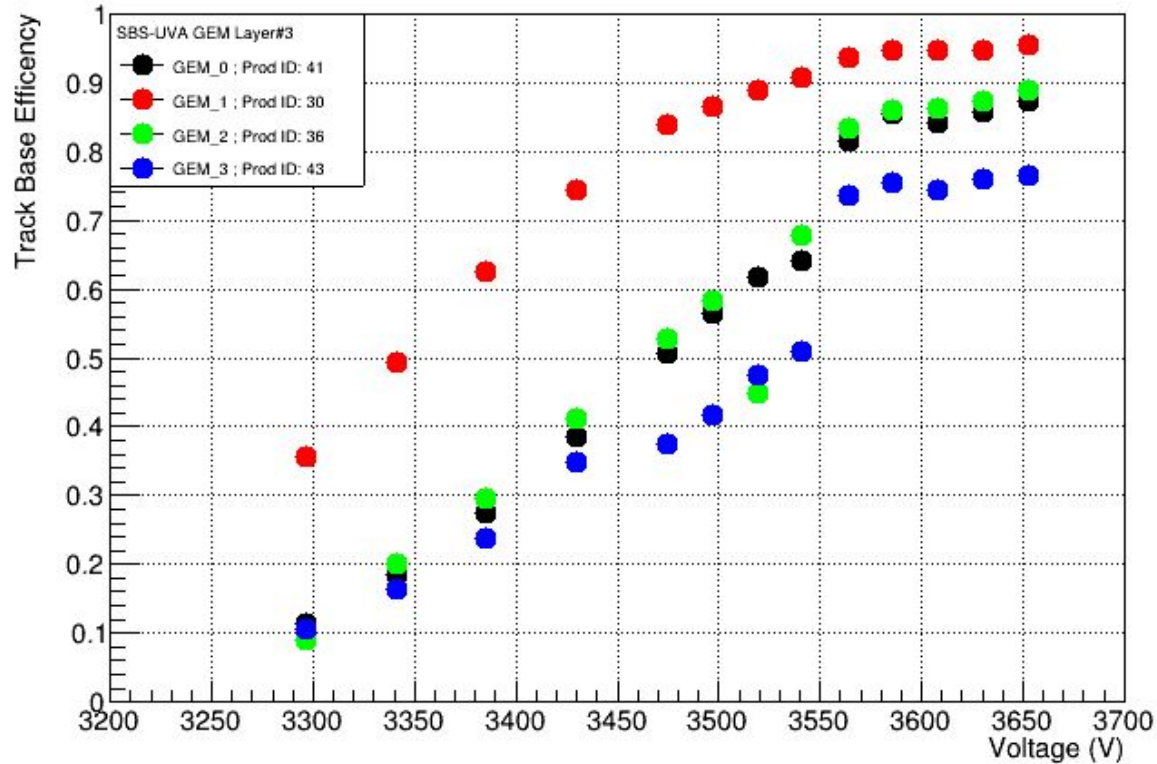
Malinga, Thir and Anuruddha  
11/11/2020

# Completed and ongoing work

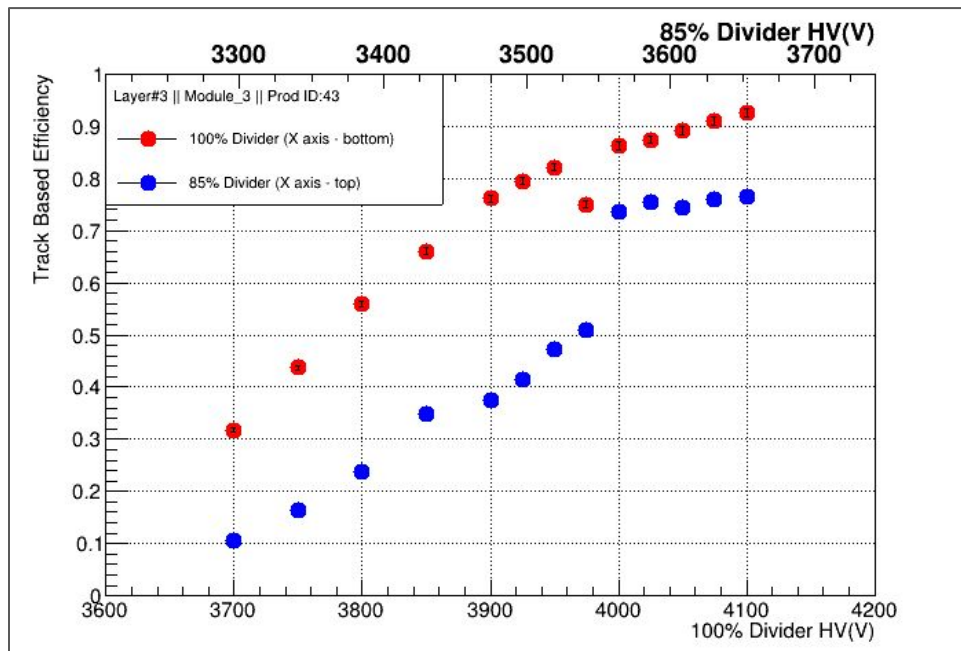
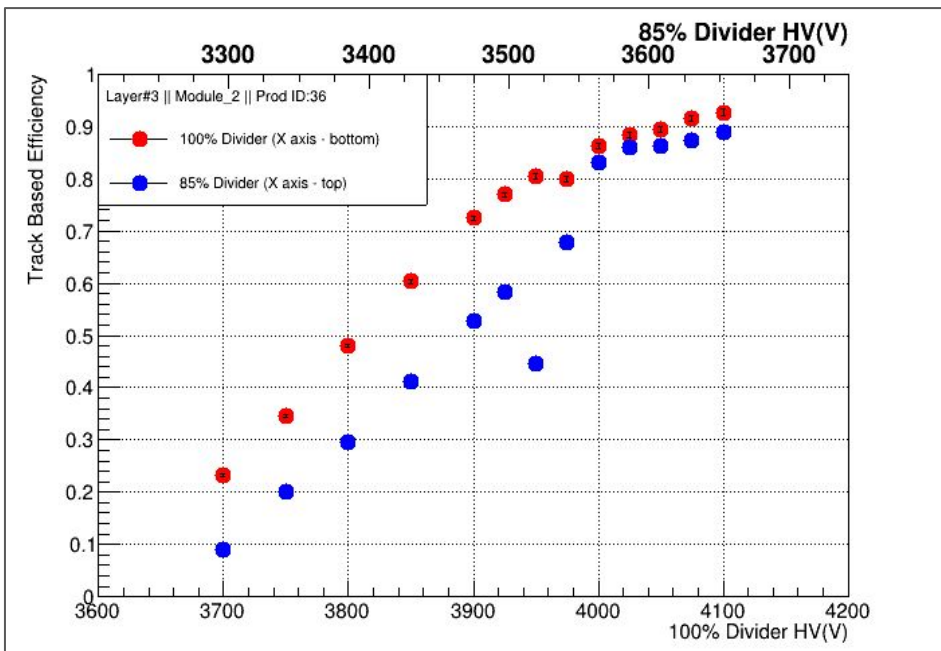
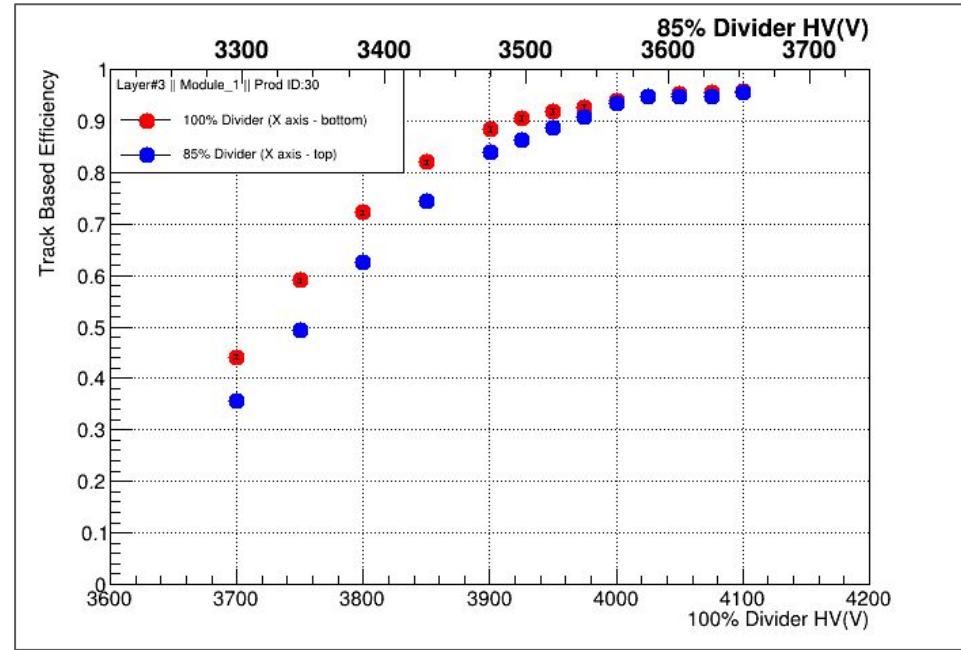
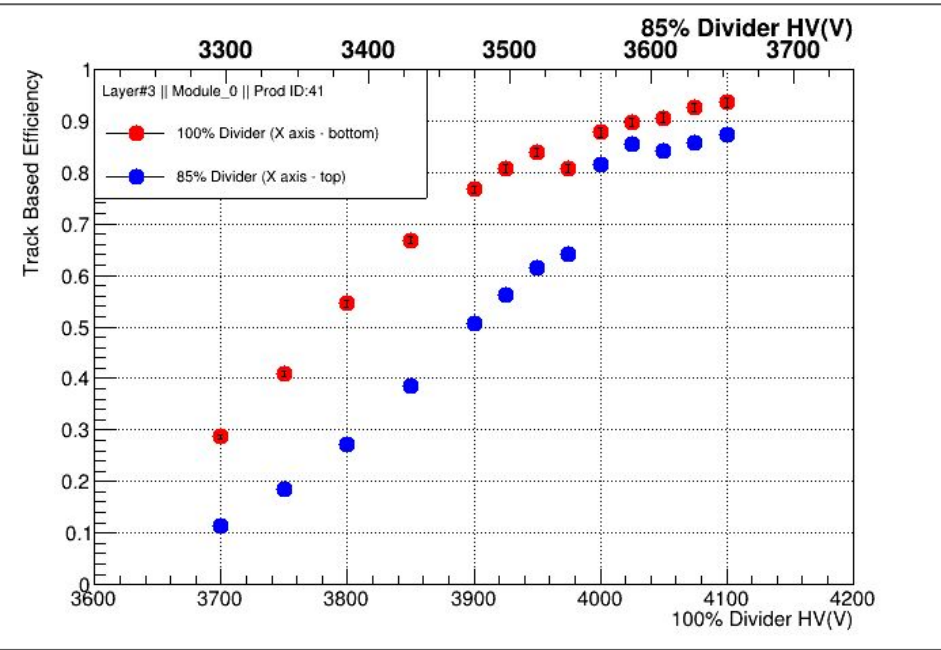
- Assembly of the 7th layer is almost complete -> waiting for some patch panels from Siyu, which are currently inside the Hall A (in PREX/CREX experiment setup)
- Next step of the 7th layer assembly would be to flush the 4 modules with Nitrogen for a week and test them on HV
- We finished the HV scan of the 4th layer last week after installing the 85% divider in the modules of the 4th layer
- We are investigating a HV instability issue in one of the modules (#25)
- Planning to make the same kind of plots Evaristo Et al have made (Avg ADC vs time sample) to investigate the MPD instability issues we have experienced

# 4th Layer High voltage scan with 85% divider

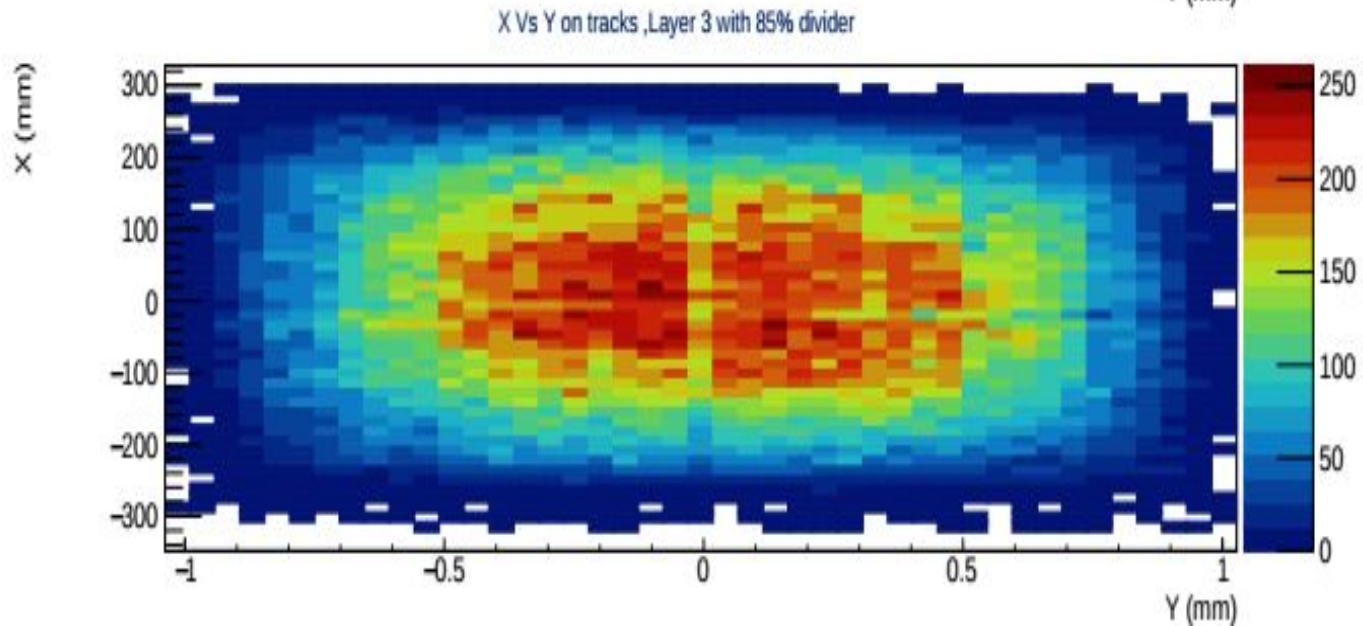
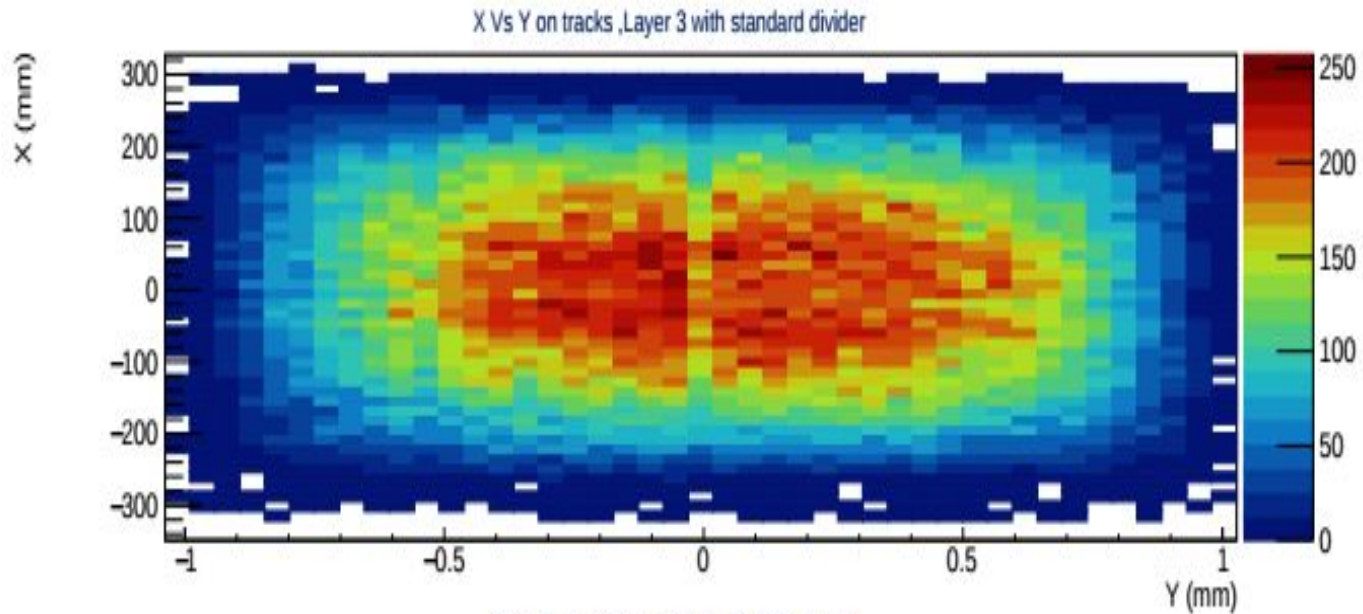
GEM Layer#3



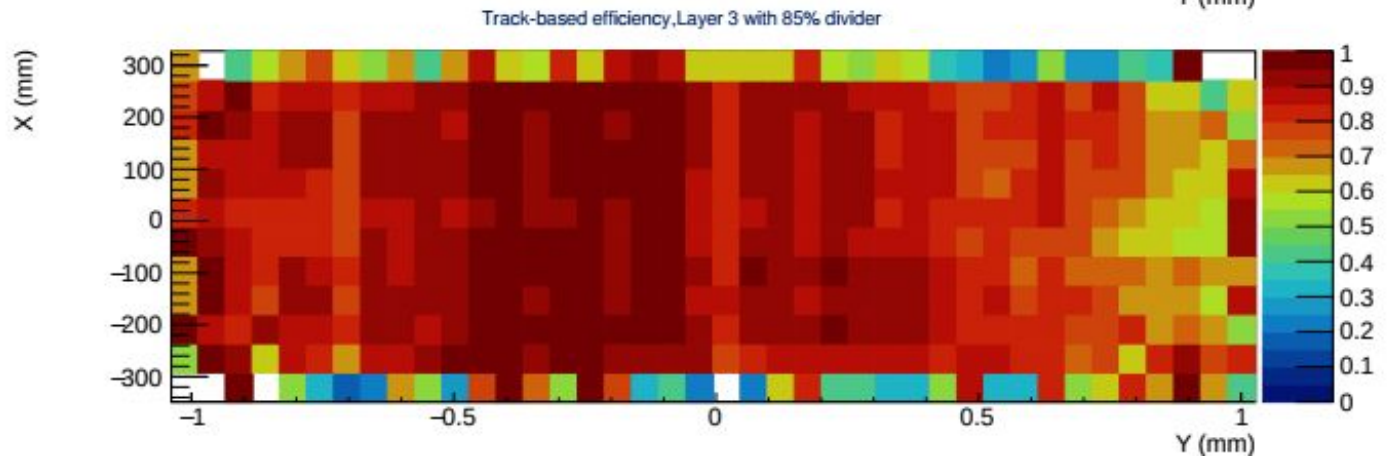
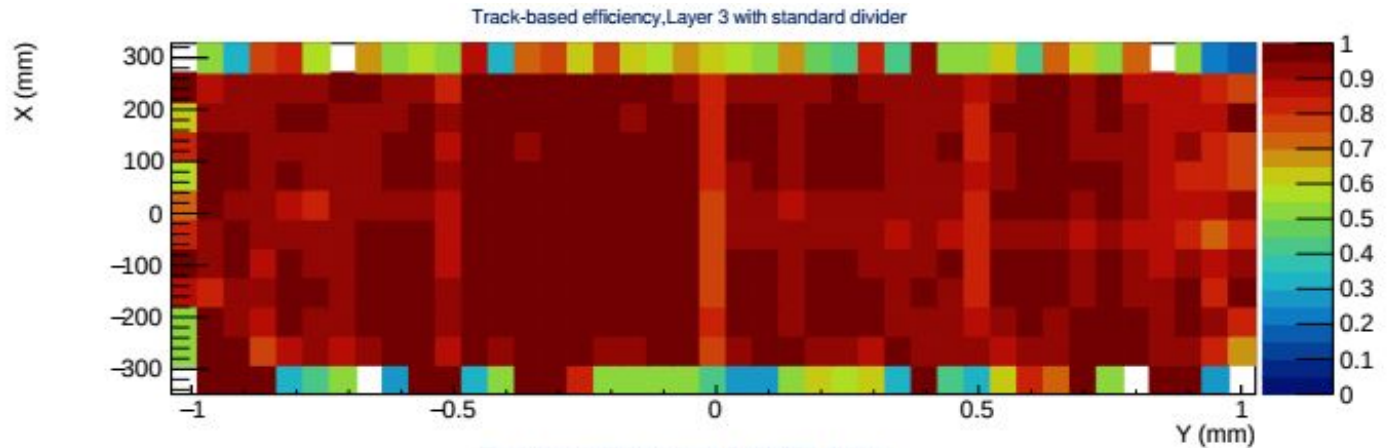
# 4th layer 85% and standard divider HV scan results comparison



# Hits on tracks Standard divider vs 85% divider (4100 V/ 4100 V equivalent)

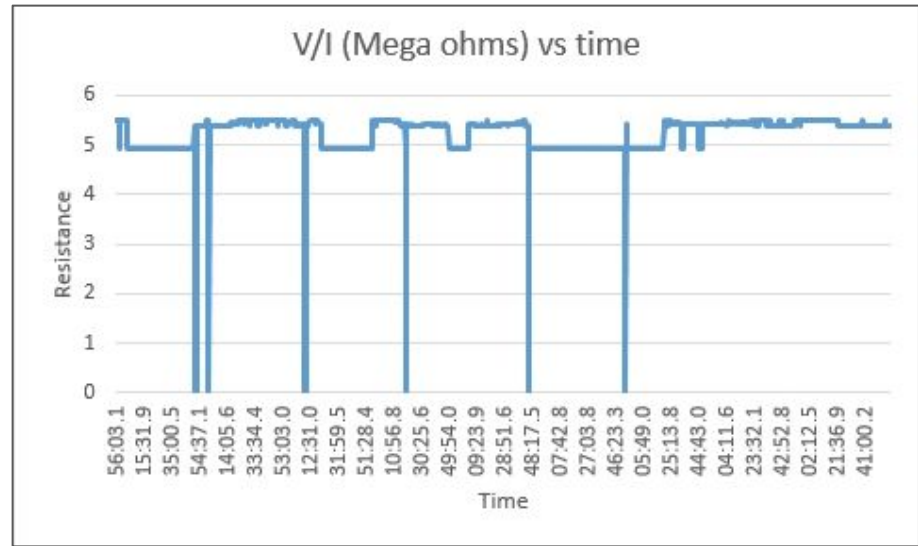
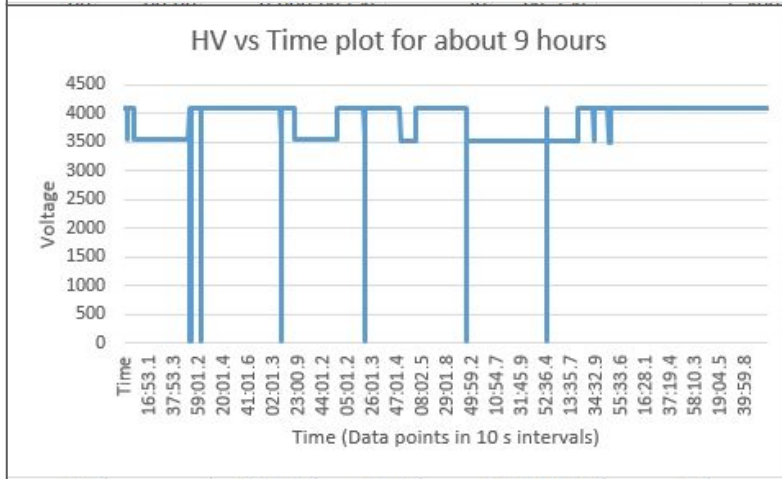
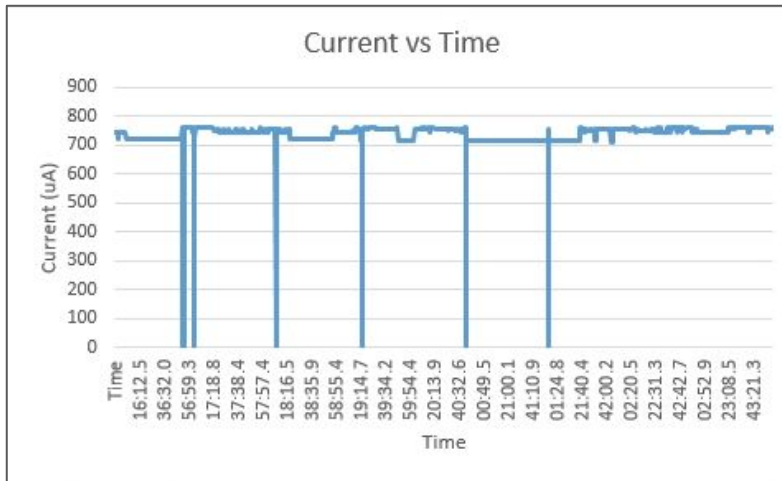


# Track-based efficiency Standard divider vs 85% divider (4100 V/ 4100 V equivalent)



# Current behaviour of the module #25 throughout the run (9 hours)

- X axis starts at 2:56 PM and ends at 11:59 PM (time span of 9 hours). This was last Thursday. The hour values are missing in the X axis. It just progresses in minutes. Data points were collected at 10s intervals.



Resistance should be at 5.5 M (for the standard divider); but that's also not the case. For the spots corresponding to 3500 V in the left bottom plot, the resistance has become ~ 5 M

Voltage is not held at set value of 4100 V always which is the set value. Sometime it stays 3500 V stably as can be seen.