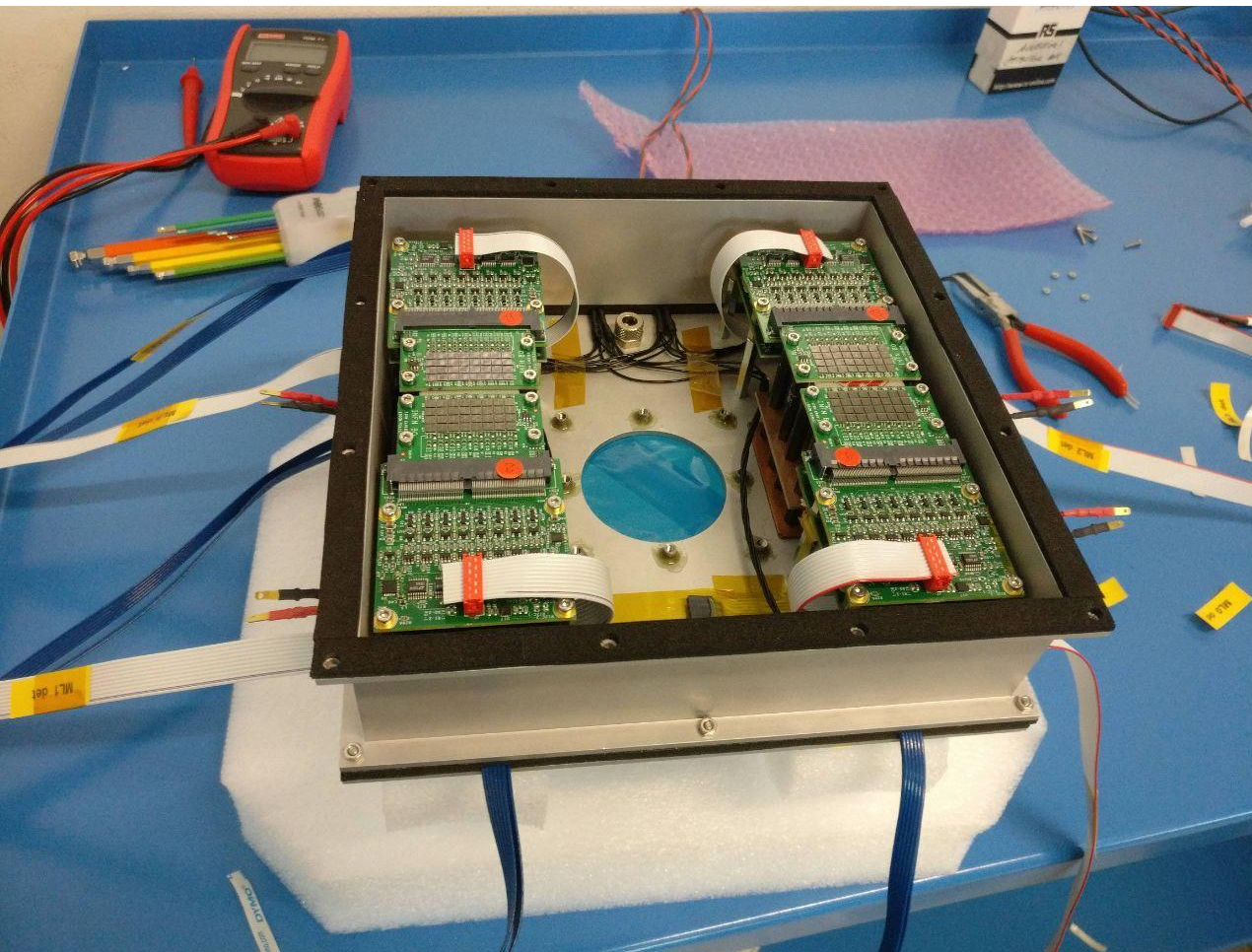


SiPM updates

Roberto Preghenella

dRICH prototype SiPM readout box in Bologna



thanks to Luca the dRICH prototype SiPM readout box is in Bologna

currently being equipped with services

- water
- dry air
- power
- computing

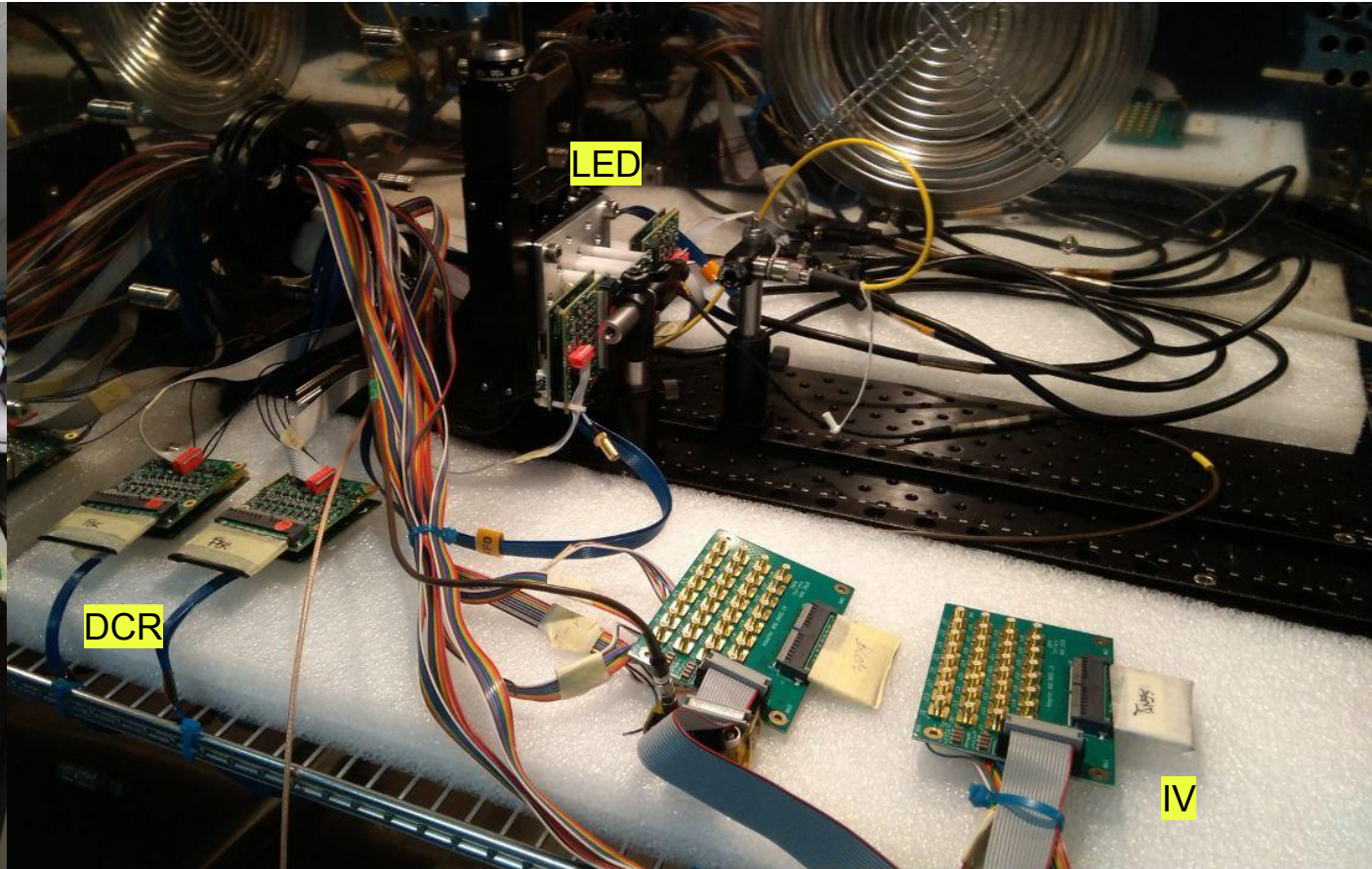
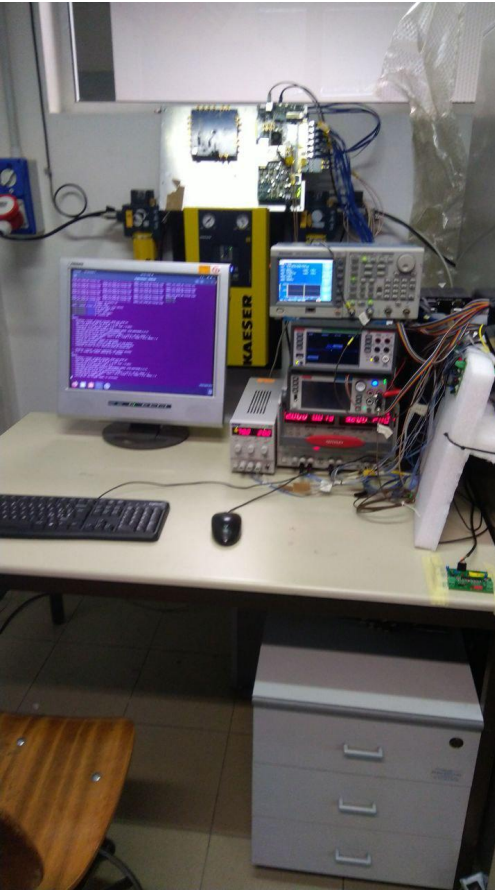
few adapter boards damaged fixed by Roberto M

a new setup for operation of SiPM in realistic conditions in preparation for test beams

expected to be fully operative by end of May, **help is welcome**

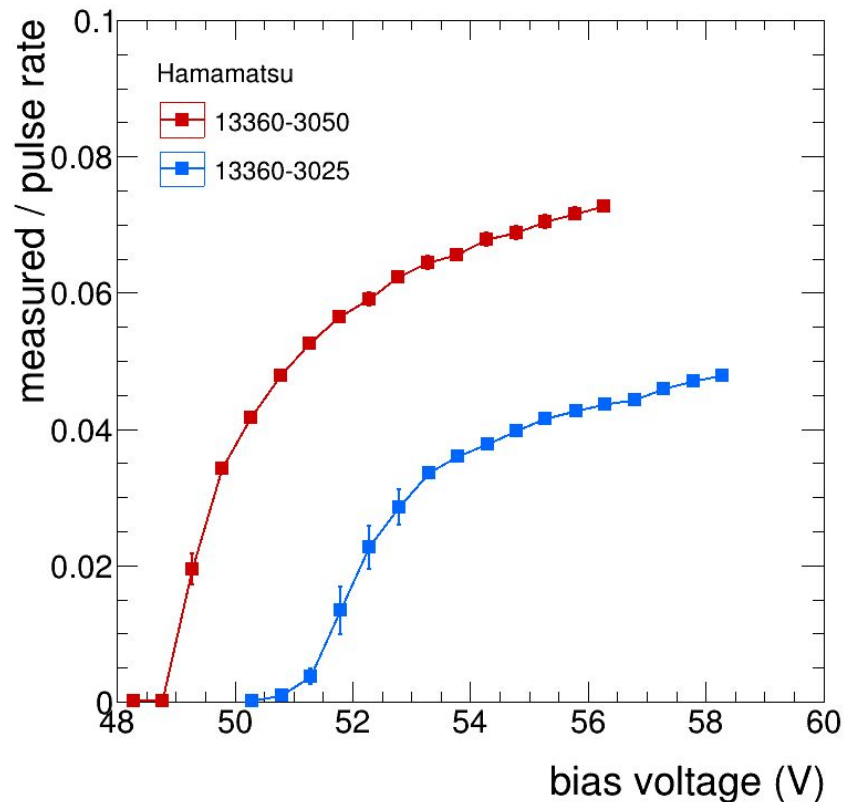
SiPM irradiation campaign characterisation setup

I did not show pictures last time, here you can see the setup inside (right) and outside (left) with all equipment



Recent plots from the LED measurements

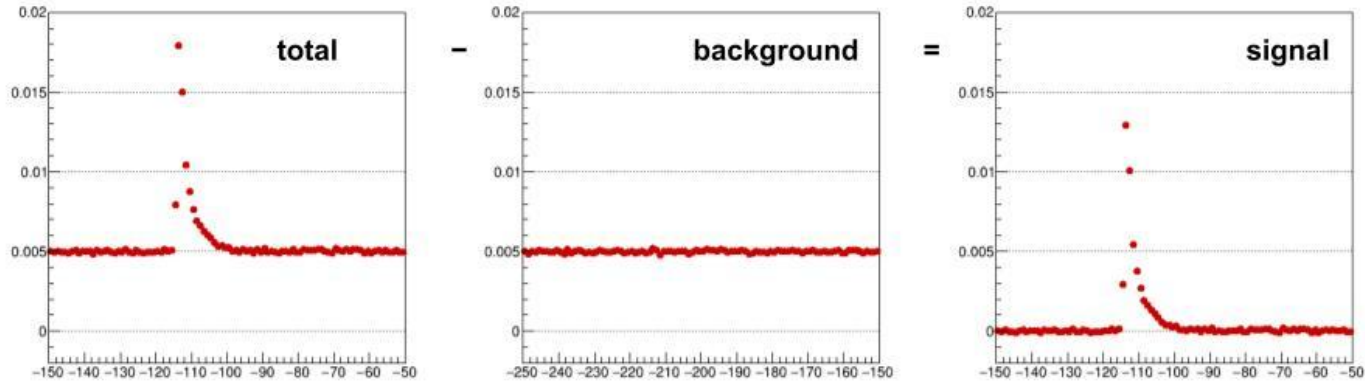
I did not show pictures last time, here you can see the setup inside (right) and outside (left) with all equipment



the LED setup can
measure differences
in the PDE between
50 and 25 um
Hamamatsu sensors

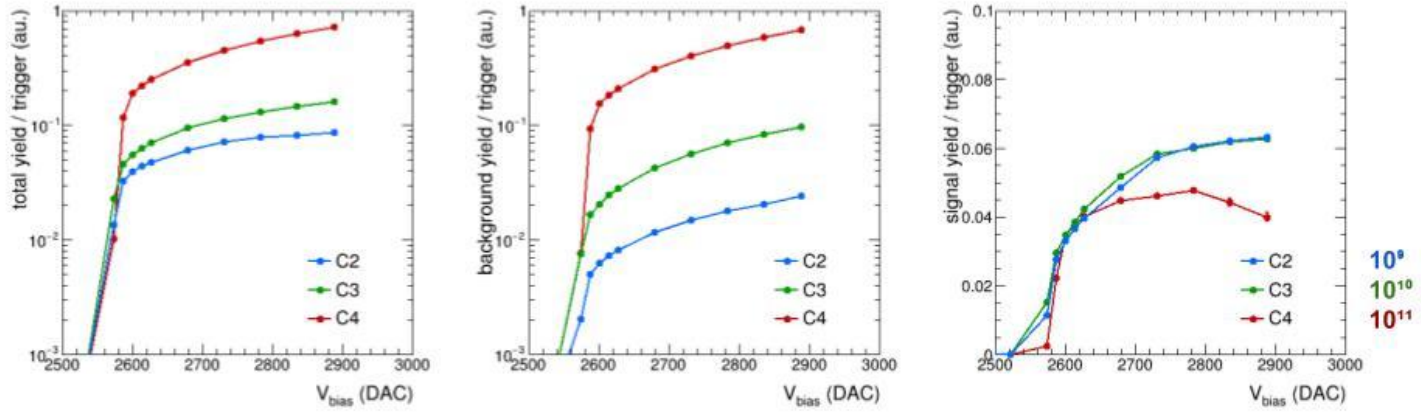
Old plots from the LED measurements

plots I have in the drawer since long, never shown because I wanted to repeat the measurement measurement is going to be repeated soon. Anyway, here they are



measurement with the LED setup and time coincidences

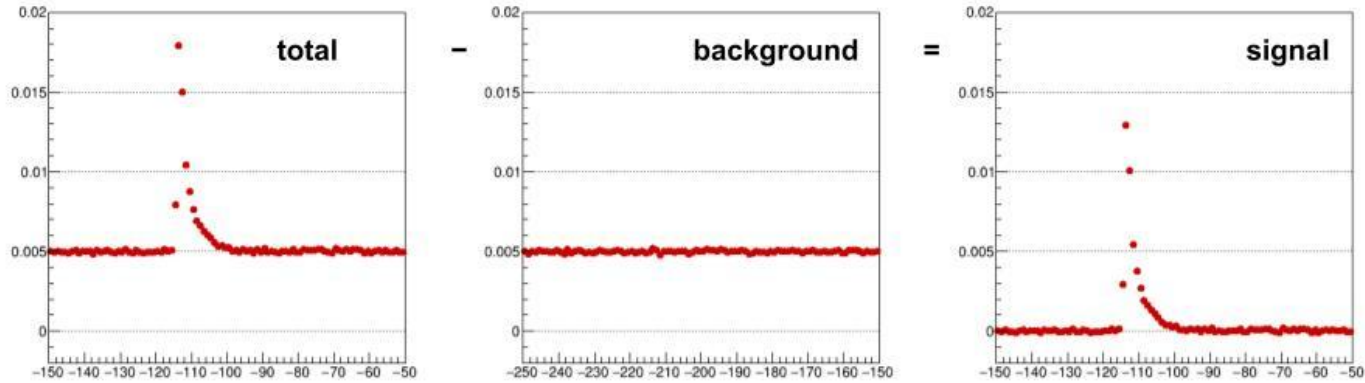
can measure the background subtracted yield normalised by number of pulses (triggers)



see left plot, shows that efficiency is ~constant over full Vbias range up to NIEL = 10^{10}

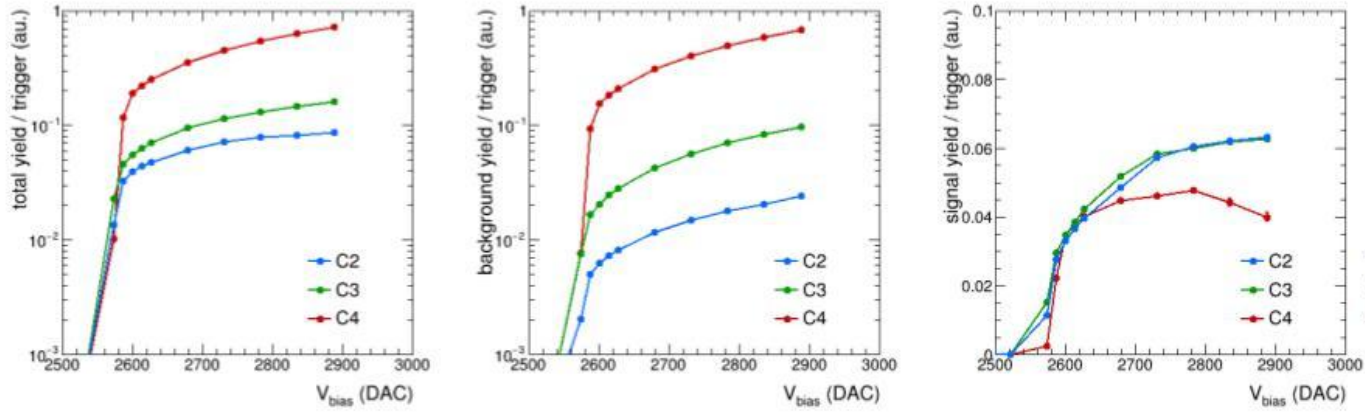
Old plots from the LED measurements

plots I have in the drawer since long, never shown because I wanted to repeat the measurement measurement is going to be repeated soon. Anyway, here they are



NIEL = 10^{11} has same efficiency as 10^9 and 10^{10} up to a certain V_{bias} , then it decreases.

the decrease might be due to ALCOR or the overlaps of signals with DCR



nonetheless, the fact that efficiency is the same up to a certain point indicates that there is no damage to window following irradiation + annealing

10^9
 10^{10}
 10^{11}