

Setup - 27-28/10/2025



Beam current monitored by a picoamperometer, in control room.
[Data](#) with converter python script.

Measurement schedule

5 irradiation steps

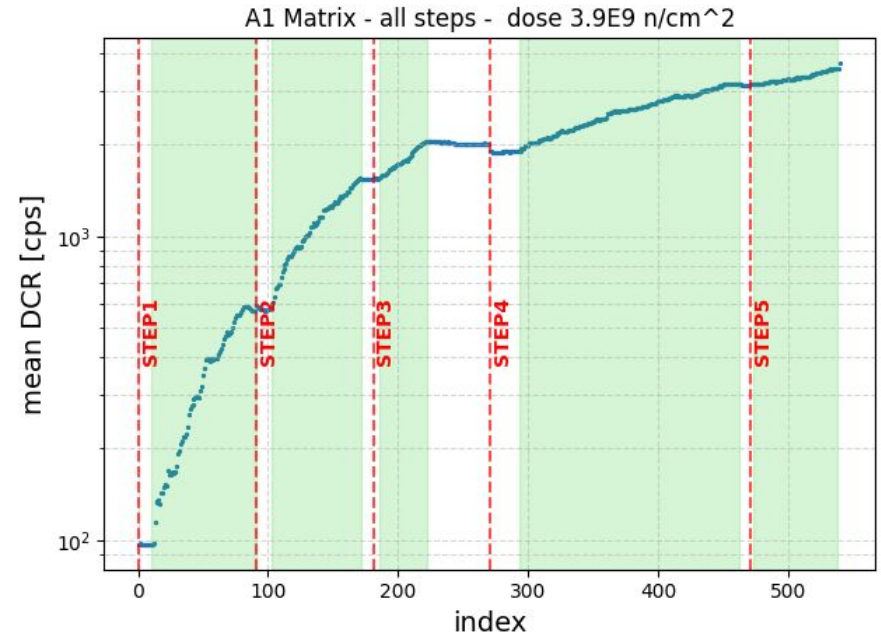
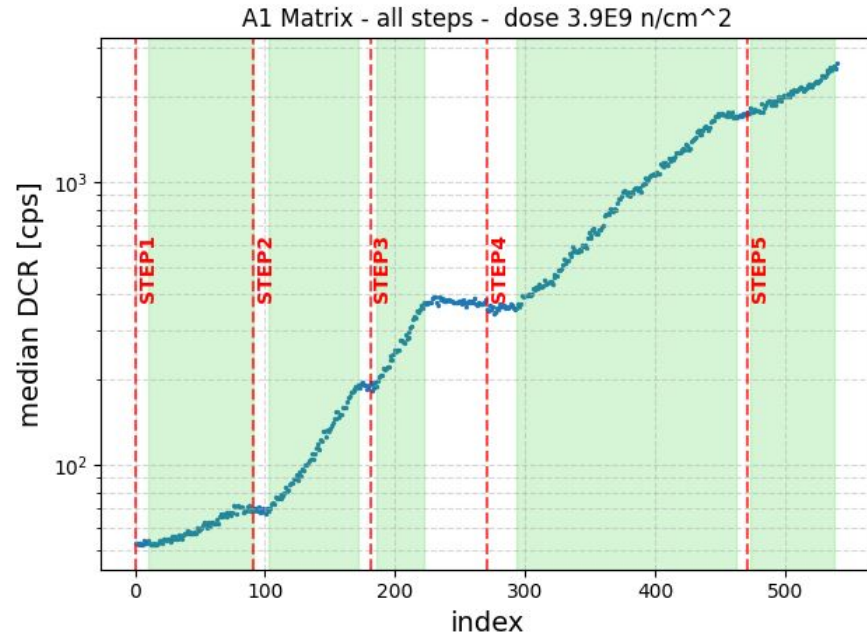
Totale dose of $\sim 3.3 \text{ n}_{\text{eq}}/\text{cm}^2$

- Online DCR measurement during irradiation on A1-A3
- DCR and BD measurements after each steps on A1,A2,A3 and ASIPM
- AP measurement after step 3 (during the night)

data path:

<https://drive.google.com/drive/folders/1-p6ODrHnRuqjd49jt-xa6jsXsojUFHX4?usp=sharing>

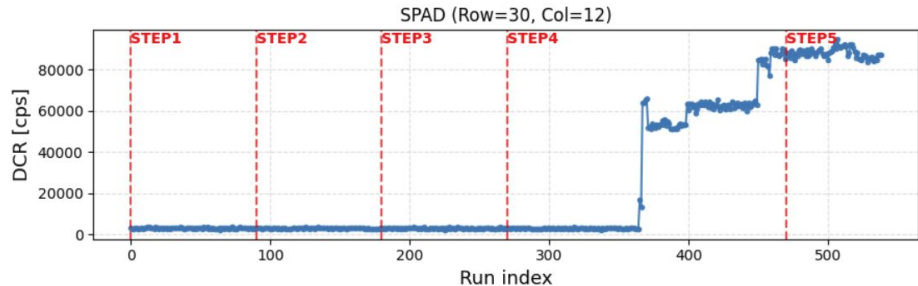
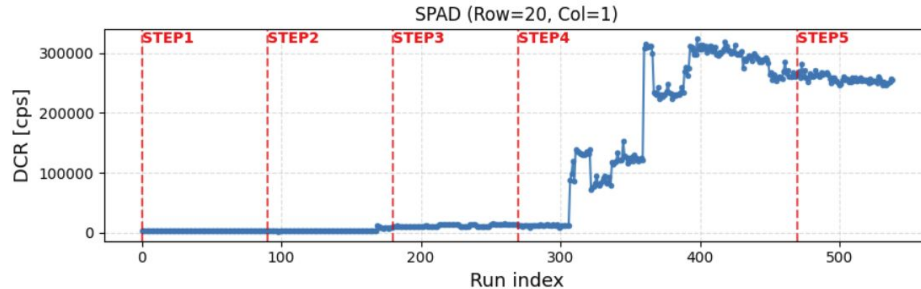
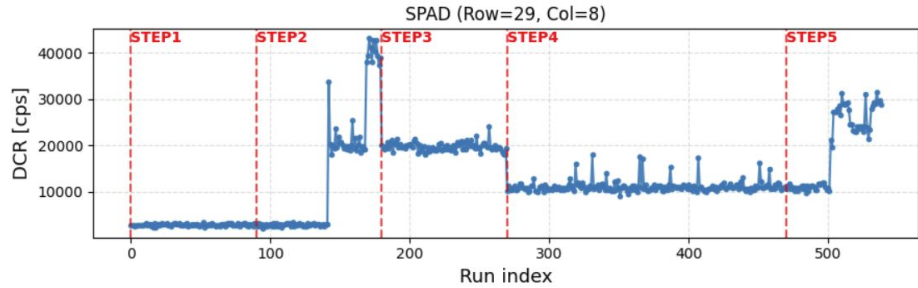
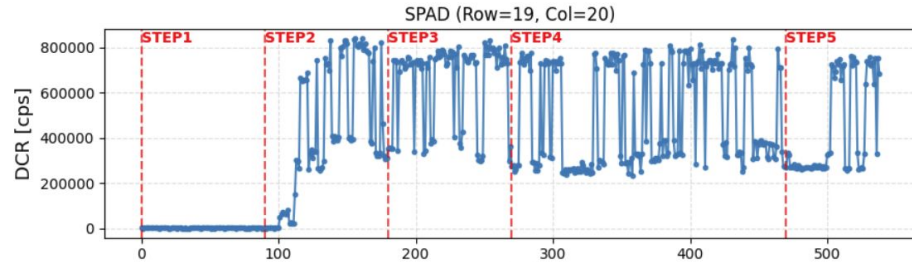
Online DCR measurement - A1 matrix



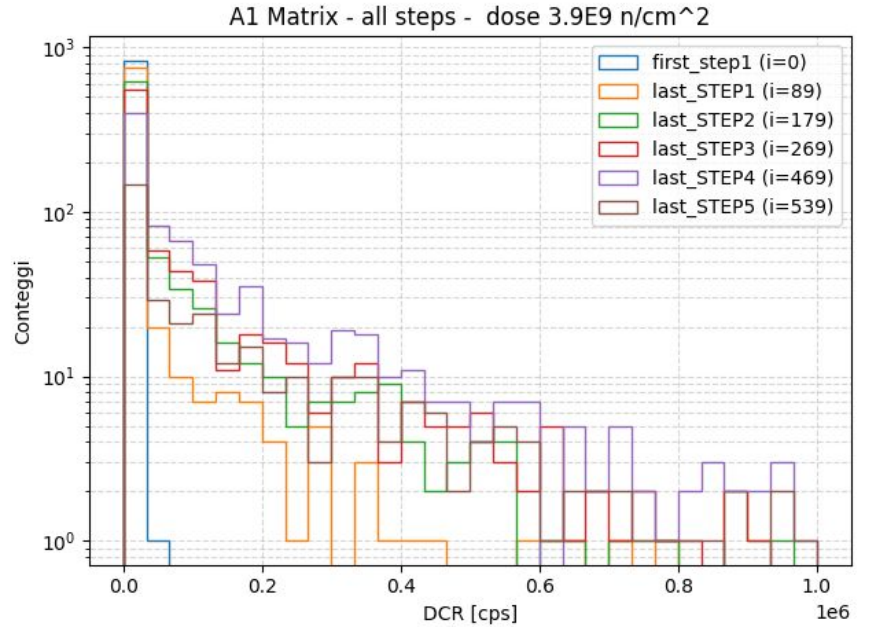
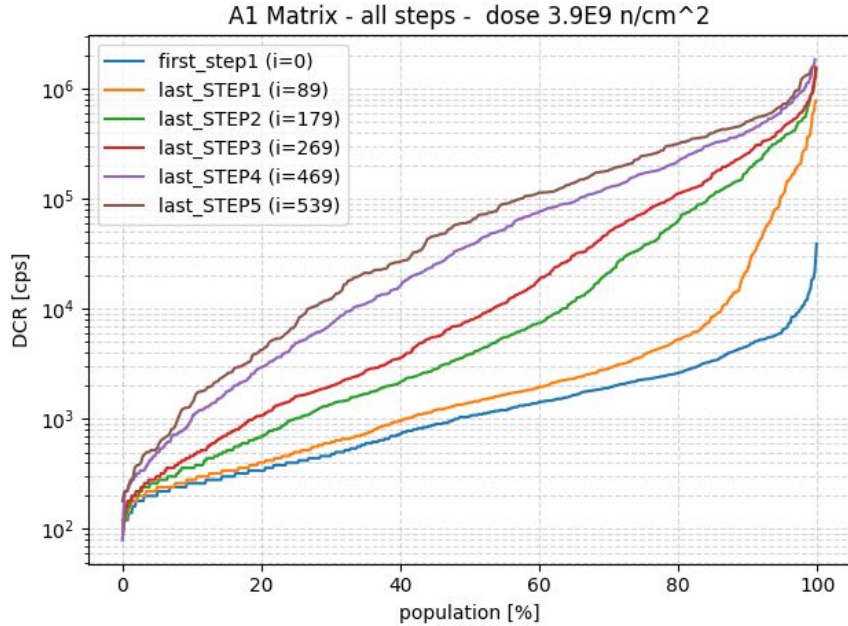
Online DCR measurement - A1 matrix

the best we achieved
modifying v10 software on
the spot

- SPAD by SPAD DCR measurement with a sampling rate of ~ 40 s

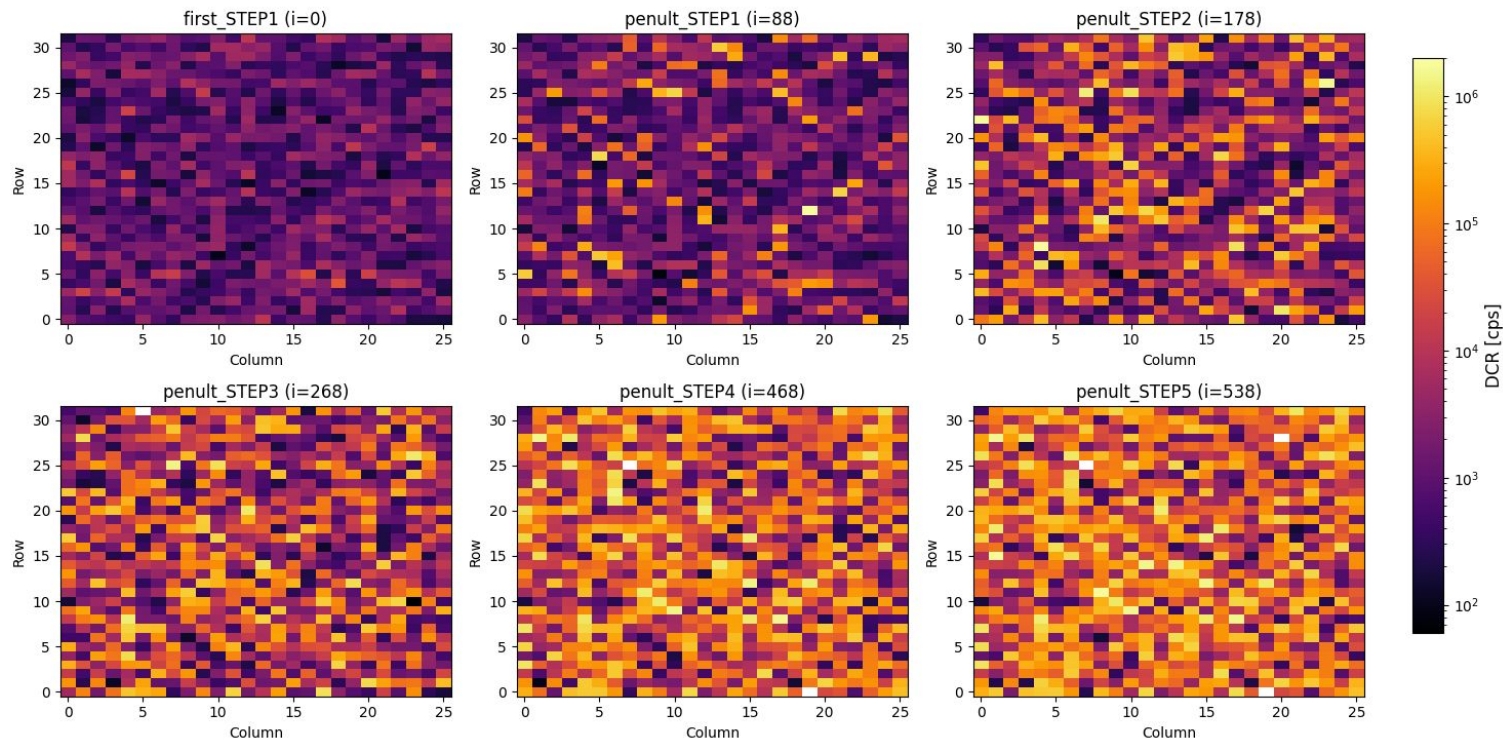


Online DCR measurement - A1 matrix

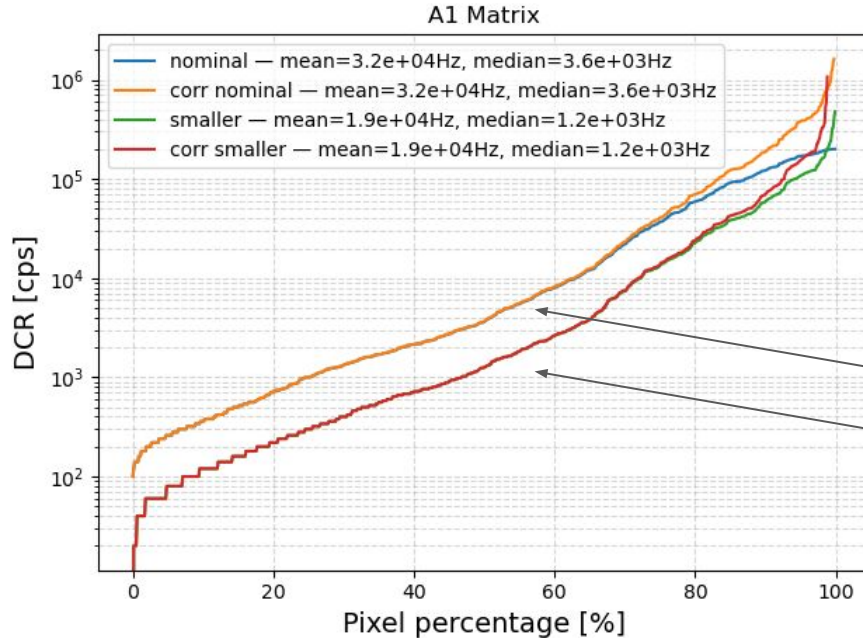


Online DCR measurement - A1 matrix

A1 Matrix - all steps - dose $3.9\text{E}9 \text{ n/cm}^2$



A1 matrix



Issue:

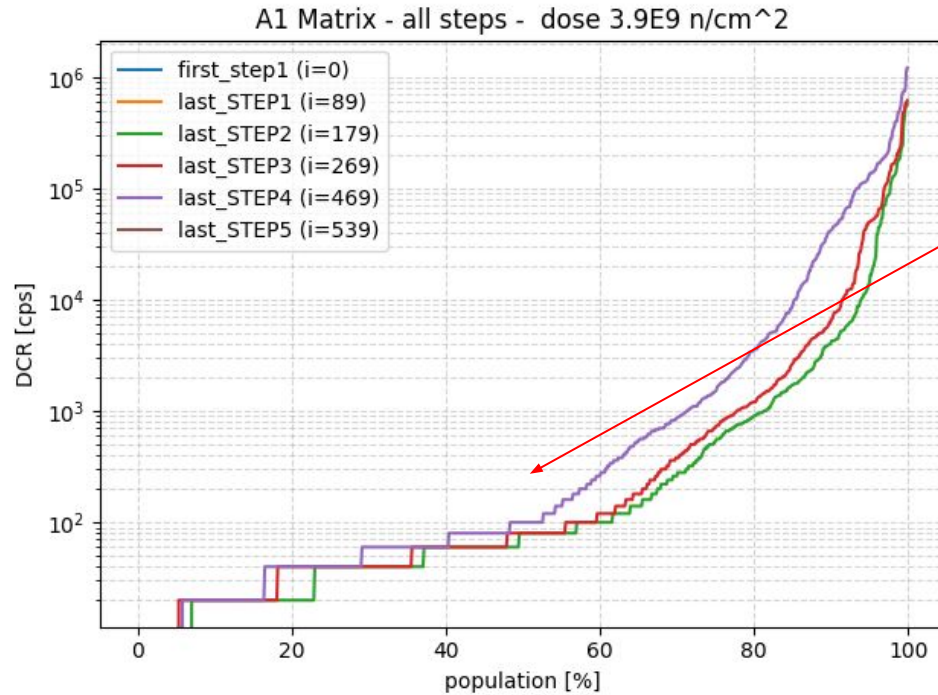
We take measurement with a shorter small window time to avoid saturation of the 1 bit counter.

We observed different DCR values in the two measurement conditions:

- TIT = 250*10E4
- TIT = 25*10E5

Integration time is the same.
DCR should be as well.
Hint of dead time?

A3 matrix

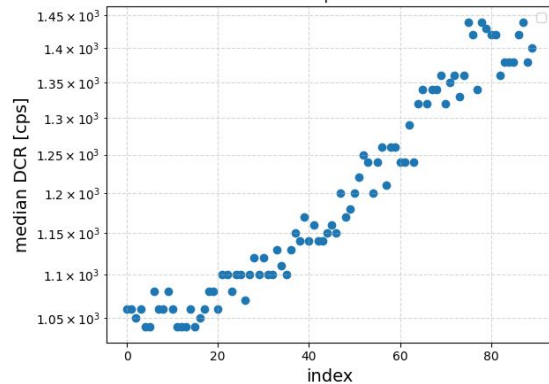


Issue:
part of A3 matrix was not really
responsive

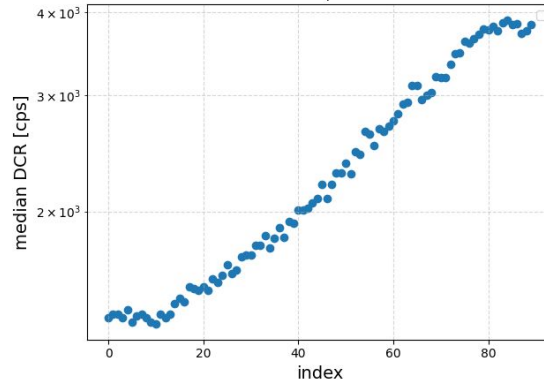
backup

A1 matrix

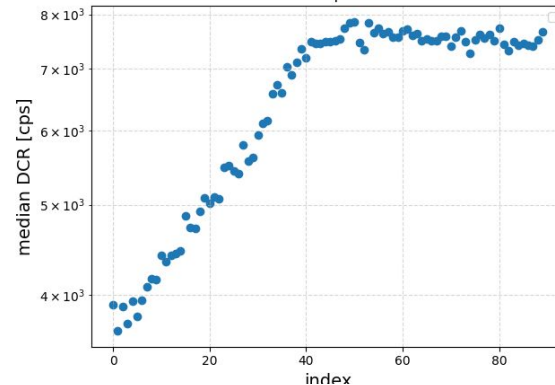
A1 Matrix - step 1 dose 4.01E8



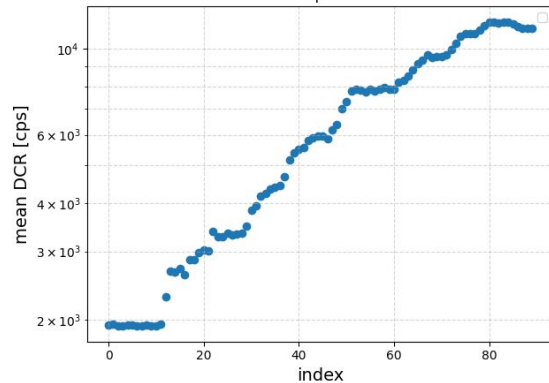
A1 Matrix - step 2 dose 9E8



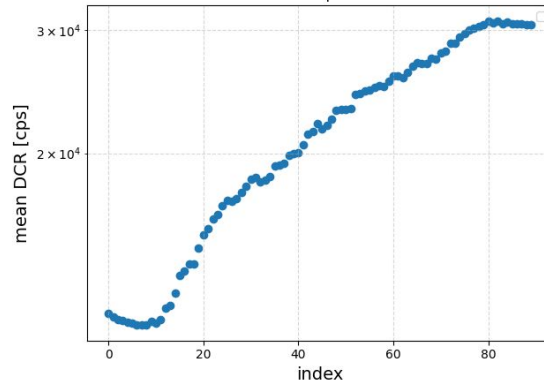
A1 Matrix - step 3 dose 5E8



A1 Matrix - step 1 dose 4.01E8



A1 Matrix - step 2 dose 9E8



A1 Matrix - step 3 dose 5E8

