11.10.24 Cyrcé measurement slot start: 8:45

- Some problems with Python autogui for clicking, but seemingly fixed
- Start with dark measurements + short voltage scan
  ↳ we start with 2nA beam [round aperture of 25mm diam to wheel]
- we check the voltage, 2V is still not usable (0's in file) we choose 1,9V (looks good without problems)
- 1st Quick beam scan, without diffuser, 2nA Faraday cup
  {Start_QuickScan_2nA_} 2nA → 1,88nA

[- Gafchromic images are taken at lower current ~ pA instead of nA (otherwise Gafchromic burned)
  ↳ Cyrcé crew guarantees that there never was a change of beam shape when lowering for Gaf images!]

- y-scan {QuickYScan_Dum_2nA} 1,97nA → 1,87nA

[- 20% ambience pressure in Cyrcé chamber]

- 1 dark current {Dark_" } — {same prefix as before}

- We position the Peek trapezoid (compare pictures)
  ↳ we choose the 200µm diffuser and want 2nA

[PEEK is positioned so that we use the maximum of the 24mm aperture and still have some unblocked beam]

[The wheel: we have a program to change wheel position, we start at P01

- 2nA P06 / P08 [Beam kept in 1,99 - 2,01 nA range]

[We had the extra 25mm collimator in beam line for all measurements until now, now we take it out!]

[- We now have the full 36,5... aperture!]

- Beam scan 01: {BeamScan1_0µm_2nA} 2,02nA → 1,93nA
↳ each time with Gafchromic afterwards [estimated delay: 10min ~]
≈100pA per Saf-Scan {Gafchromic
[The scan was shifted a bit to the left ~ we readjust to middle = 21]
- Beam scan 02: {BeamScan2_....} 2,00nA →
[We had a crash of the array with the aperture ~ resulting in a crash of the set voltage/current
↳ We went down, repositioned the array and it still works!]
- We restart the Beam scan {BeamScan2_} 2,00nA → 1,95nA
↳ measurement looks fine
- change to diffuser: 40µm at first {DiffBeamScan03_...}
2,01nA → 2,01nA
[We get the Gafchromic images as a Tiffmap greyscale image, ~1GB for best resolution]
↳ Gafchromic image: delay ~ 5min {Gafchromic_1110_Beam11 +12}
- 200µm diffuser {DiffBeamScan04_...} ~~2,02nA~~ →
[We were out of the Beam ...] 2,01nA → 1,97nA
↳ now it works
↳ Gafchromic delay ~ 5min [ongoing numbering?!]
- 400µm diffuser {BeamScan05_400µm_...} 1,02nA → 1,00nA
[Laser current due to staying on ambience activation]
↳ Gafchromic delay ~ 5min {#14}{#15}
12:38
- 1 Gafchromic without diffuser {#16}
- Line Scan: 0 → 41 in x, 70 in y, 0,5steps 3000 samples
↳ start: ~~12:48~~ 12:50
{Line1_0µm_2_nA} 2nA → 1,695nA
- Gafchromic delay ~ 15min {#17}

14:43 Center: 21 = x_center | 140.7 = y_center

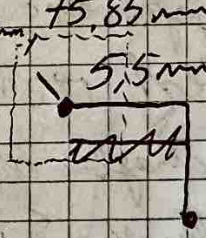
- We have switched to Trigger Matrix array (1×1mm diodes)
- We start with voltage scan (200µm diffuser, 2nA when with gel)
- voltage scan 0–2V, qualitatively same behaviour as with 128 array, 2 diodes not working {2D Matrix - dark ...}
- with beam: 2,03nA → 2,05nA {2D Matrix ...}

[We choose 1,9V for measurements]

- XScan 0 → 42, 1mm steps | 2,06nA → 2,06nA
  (some diodes will always be in the beam)
- YScan 96.35 → 99.35, 1 steps | 2,06nA → ~~2,06nA~~ 2,06nA
  {2D Large - XScan} {2D Large - YScan}

[Some strange behaviour because XScan continued after finishing, 1st posi was overwritten]

- XY scan: 2,05nA →



⇒ Scan from:

x: 15.5mm → 26.5mm

y:

end scan 2,05nA

— XY scan d = 40µm. C = 2,02nA

1,99nA

Gaf chromic after {#18}

— XY d = 0 Naked beam

Gaf chromic before {#19}

C = 2,04.

Curve ~~XScan 0 to 3~~

2D Large - XScan 1 - 0 → 2,04nA

- {XY Scan 2}: 2,04nA → 2,01nA
- Movie Scan of Beam (position of MATRIX in middle of beam, fast readout, 1s)
  ↳ Beam turned on during live scan !

[~16:49:40 short Beam Stop] + Faraday Adjustment

- We started to play with the Beam at ~16:50
  At 17:04 we moved a wire through the Beam used to obtain the internal Beam profile
  ↳ 200 · 0.4s ≈ 80s later
  · 0.3s ≈ 60s before
  } for wire movement
- 1,92nA after Beam off final

[voltage on power display: 1,91 - 1,92 V]