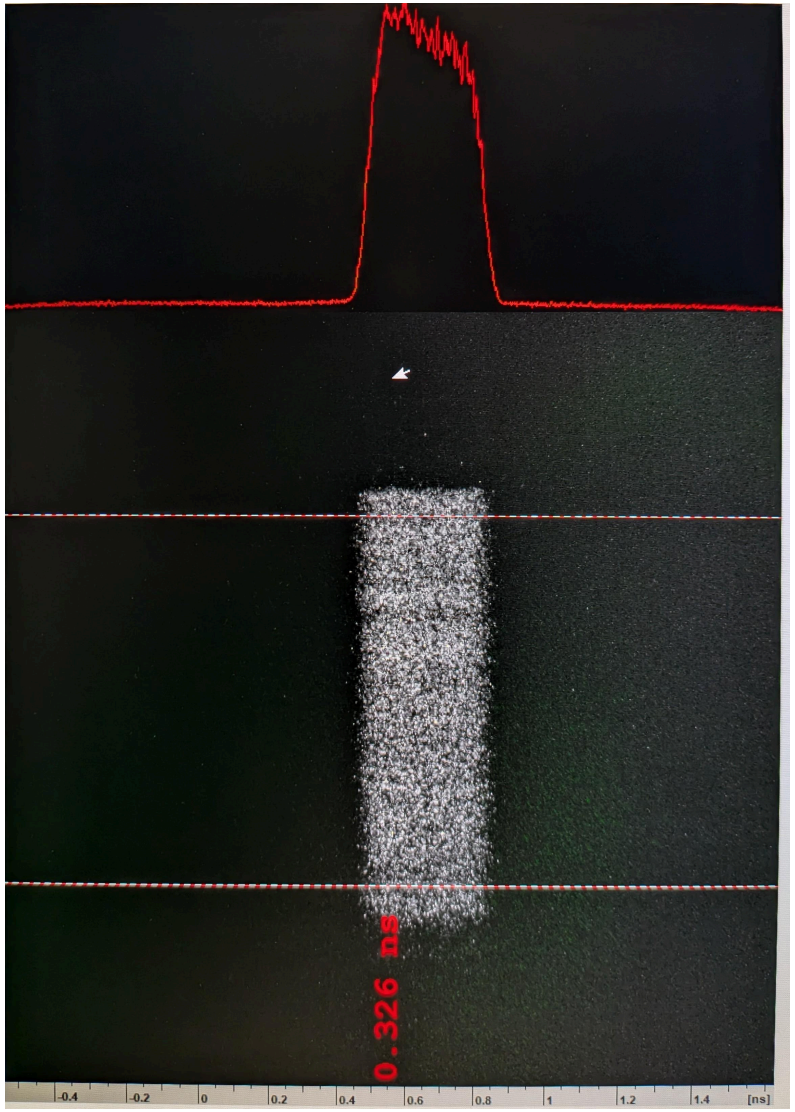
CeC status – 9.17.24

Change in laser:

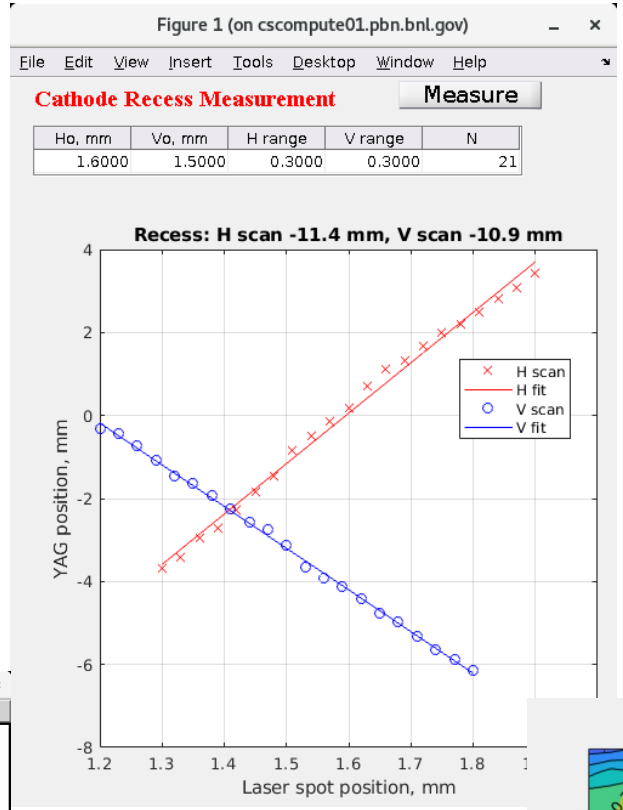
- Laser with multiple-beamlet needs a lot of work for fine tuning and will be done during shutdown.

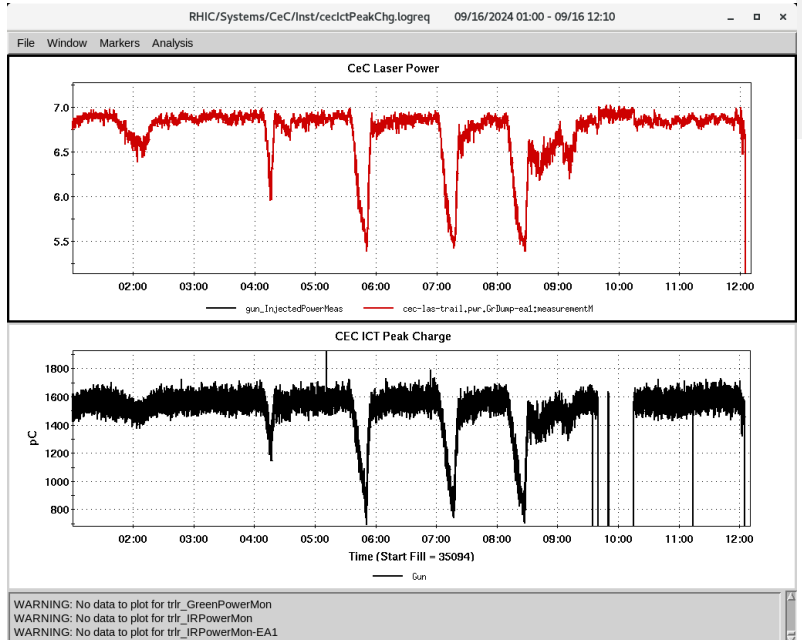
- Switch to old seed laser for the rest of the Run to improve stability of the machine and test beamline components for PCA (Run’ 22).

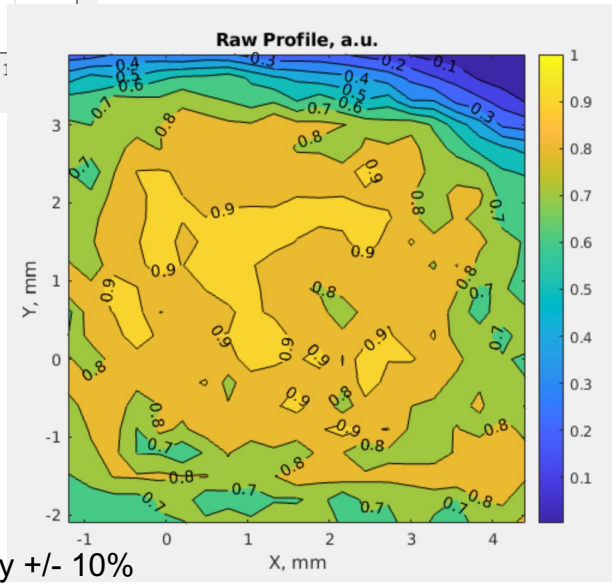


New cathode

- We are back to normal operation (1.5 nC, 1.25 MeV gun).
- Measure cathode QE ~ 2.3% and no sign of QE decay so far.
- Cathode recess location is ~ - 11 mm, close to desirable -10.5 mm.





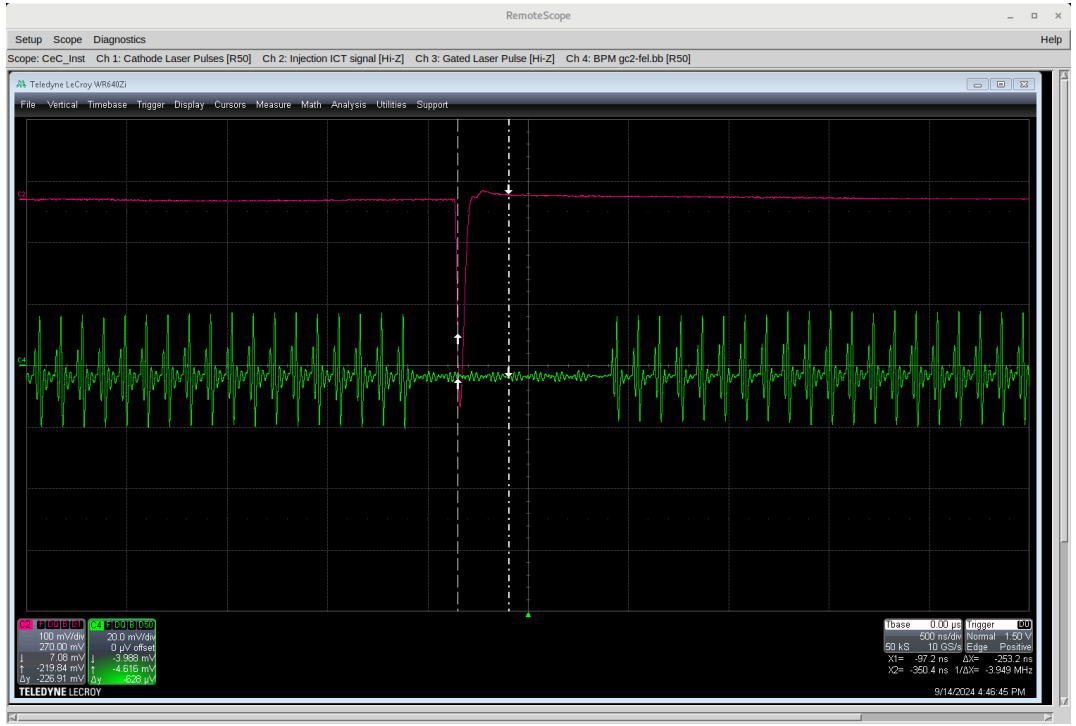


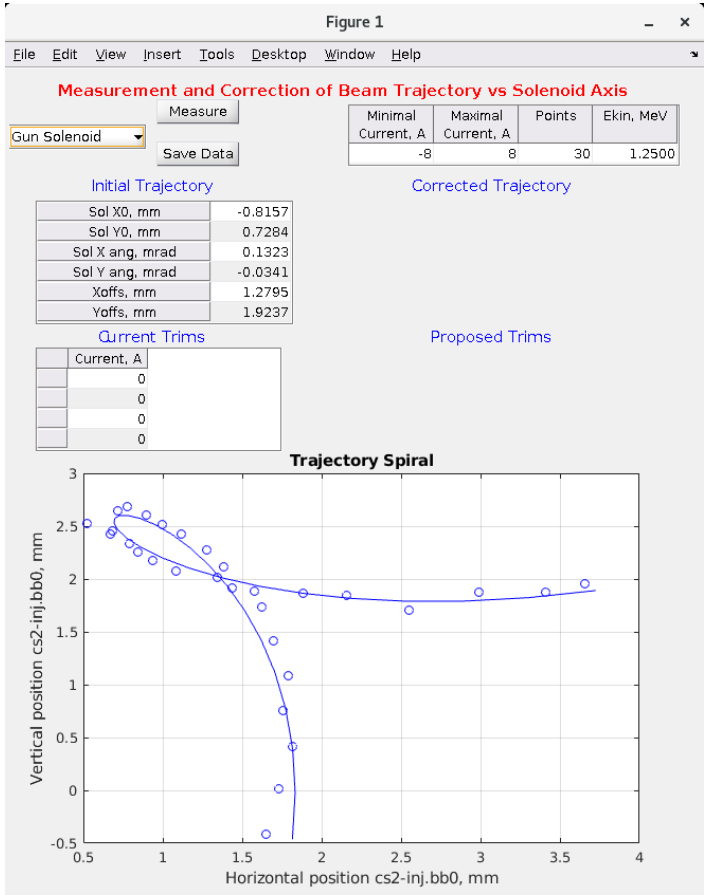
QE uniformity +/- 10%

Work on initial beam alignment

- Laser spot was chosen so that first few magnets are aligned (least orbit steering).

- Beam is aligned to RHIC abort gap (ready for co-propagation, limit < 100 pusles) with ASE board.

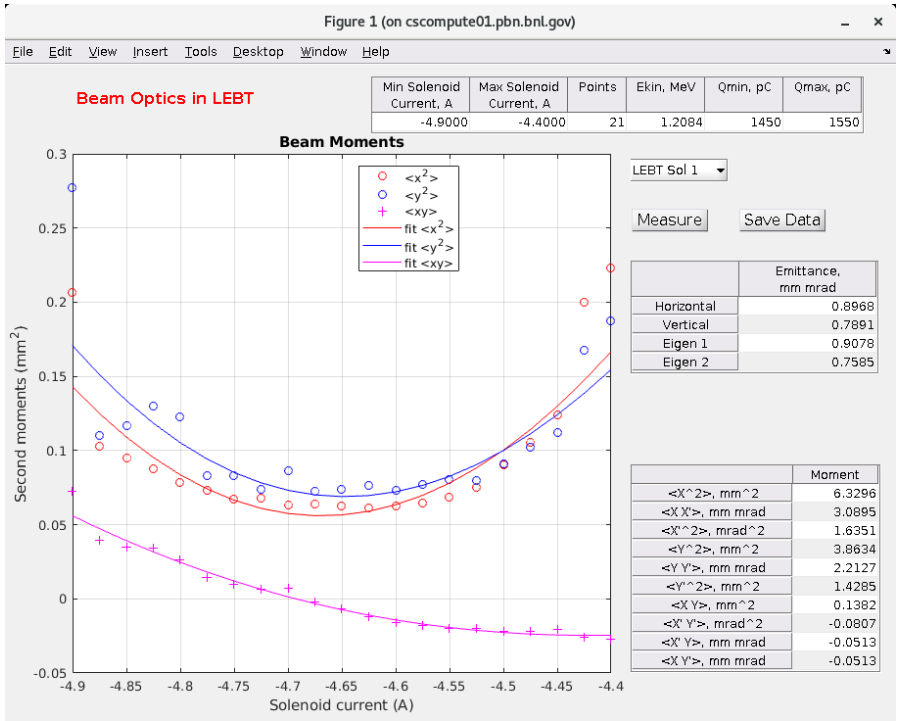




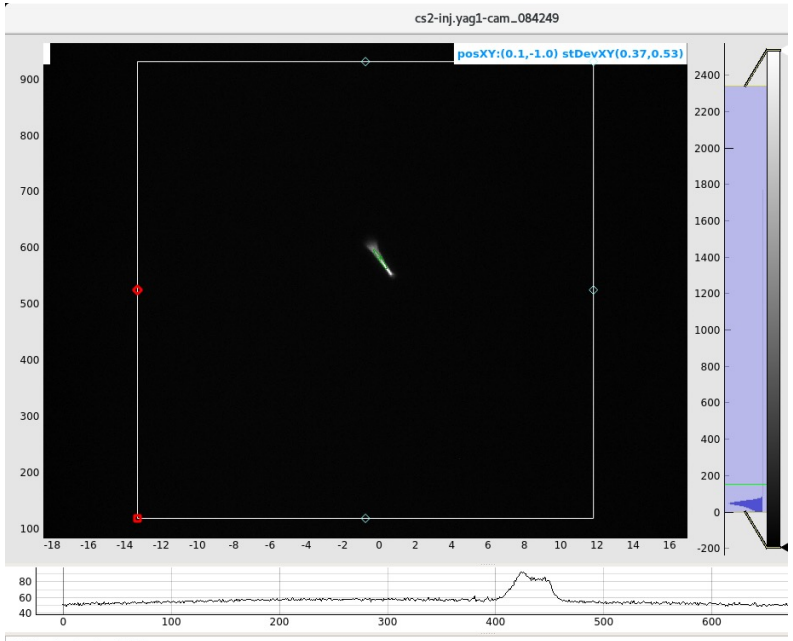
Problems to solve

- New bunching cavity shows large effect on beam distortion when steered off-axis.

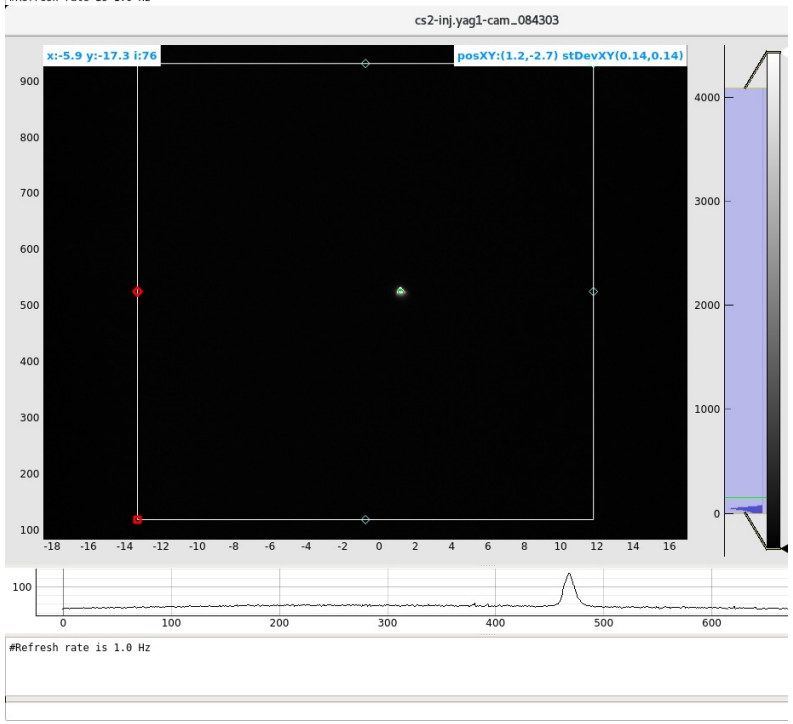
- Need to complete study on the effect of bunching cavity's effect on beam quality and optimize the emittances after buncher.



0.8 – 0.9 um geo. emittance >> 0.5 - 0.6 um desirable



Off-axis



On-axis