

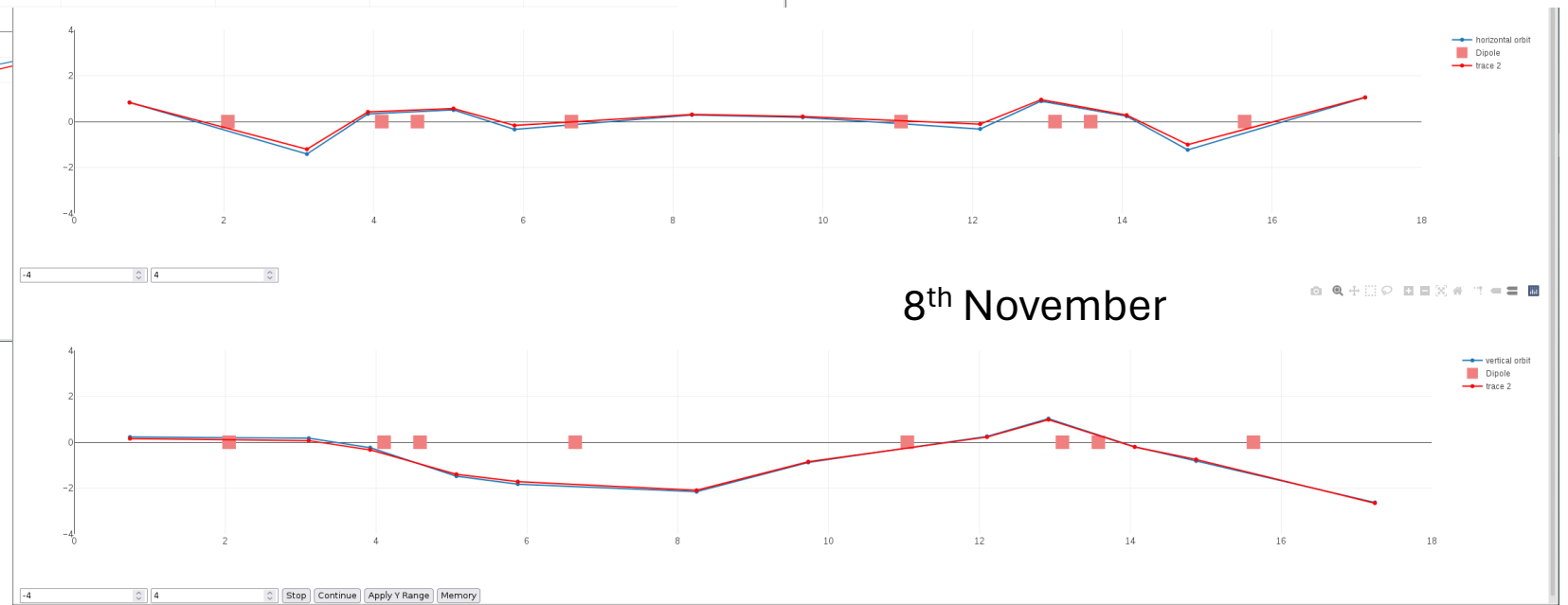
Update on Beam measurement Ring studies

18th November 2024

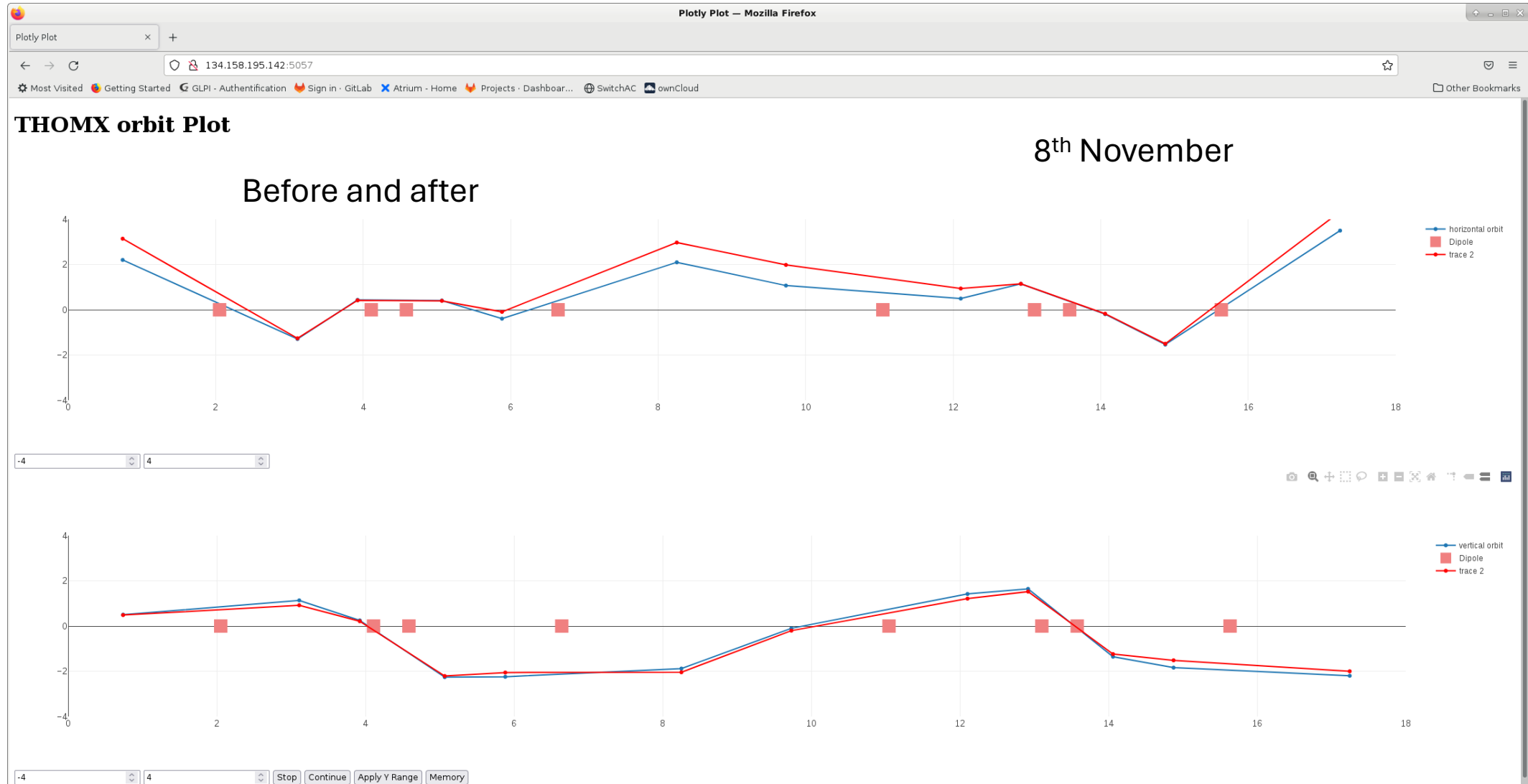
Beam orbit: shunts installed on 4 Dipoles (33 Ohms)



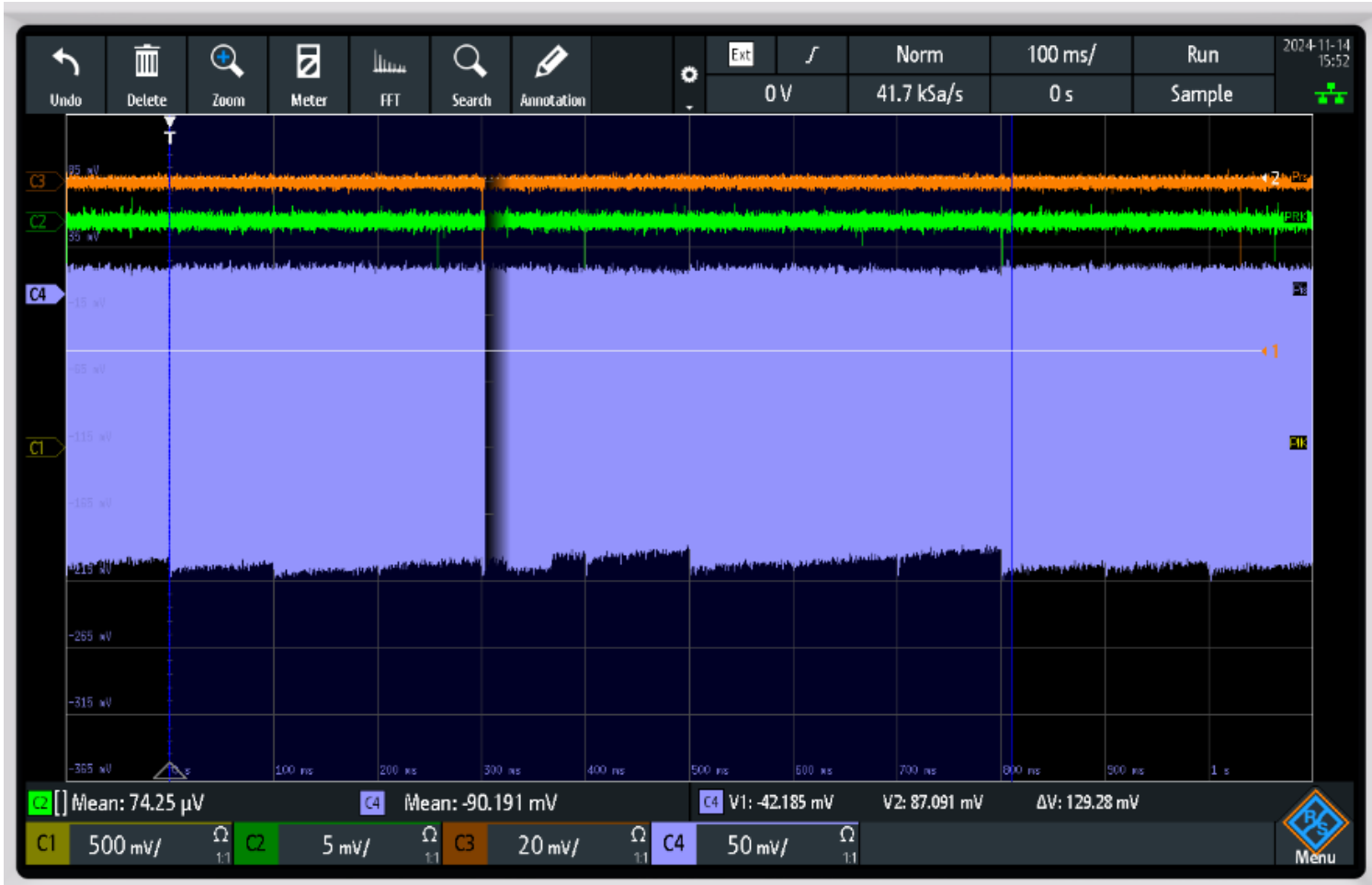
We calculated the required change in Dipole current to offset the orbit (to compensate the dipole “overbend”)



Beam orbit: shunts installed on 4 Dipoles (33/2 Ohms)



Optimization of storage for X-ray generation

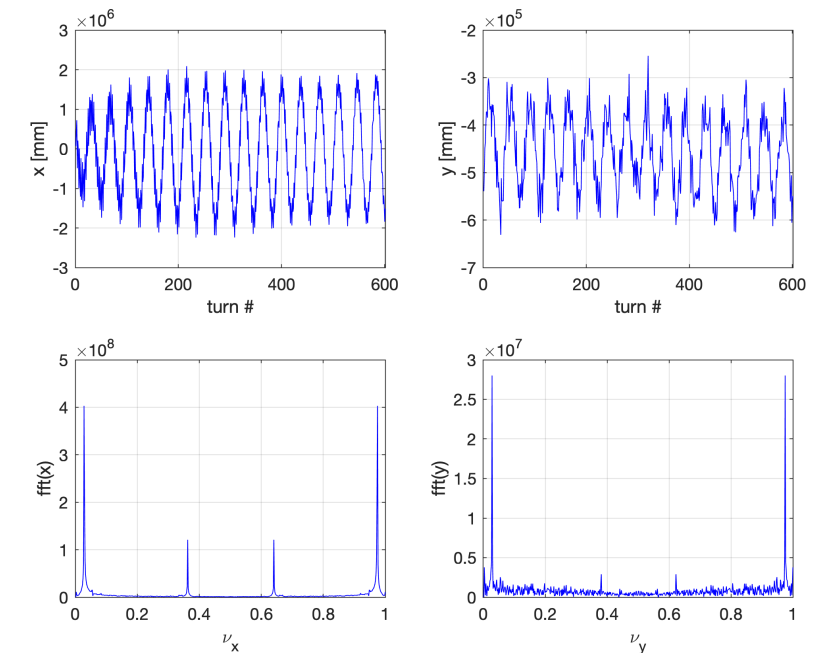


14th November

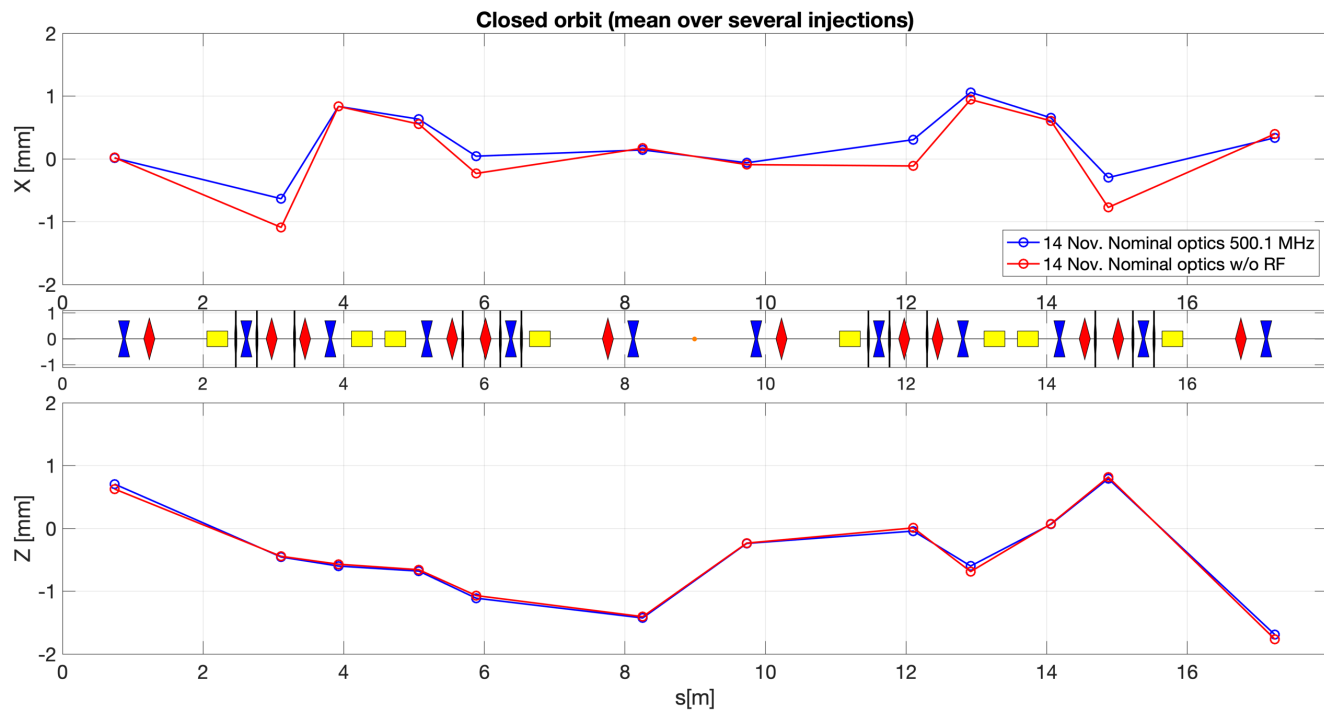
Reasonable optics is found

Tune: 0.18

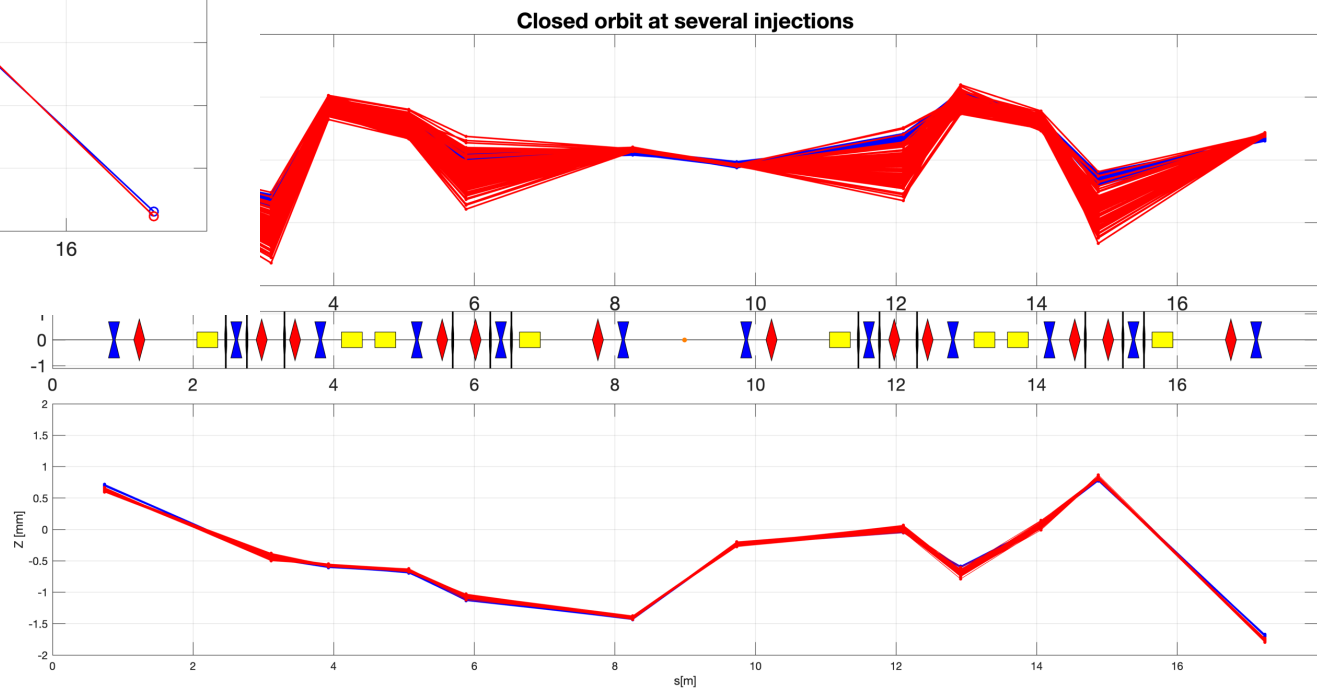
Good storage for X-rays



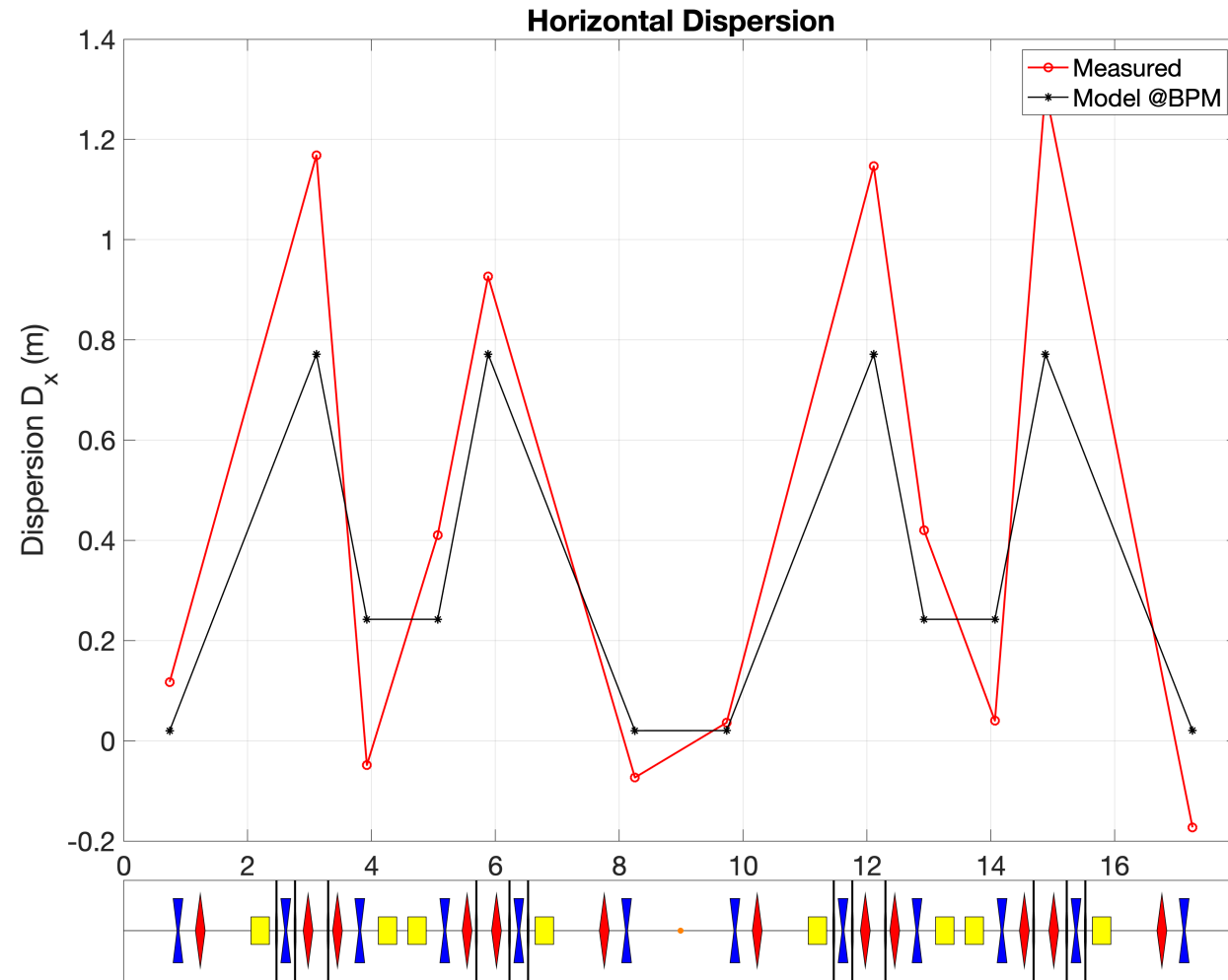
Ring Frequency studies



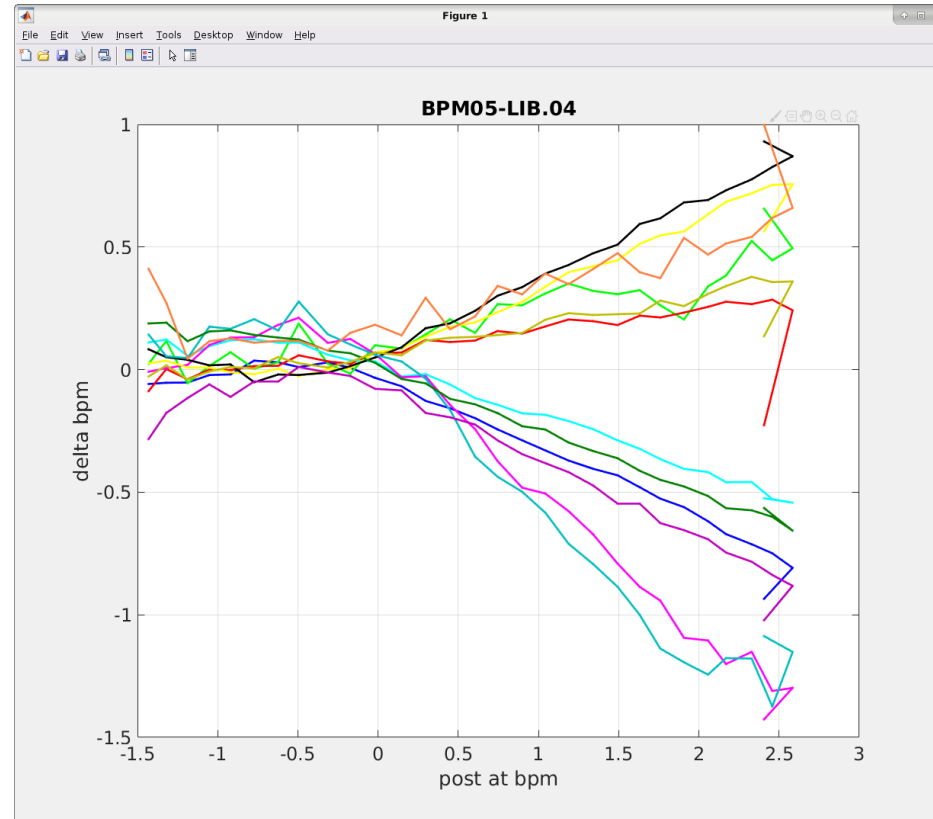
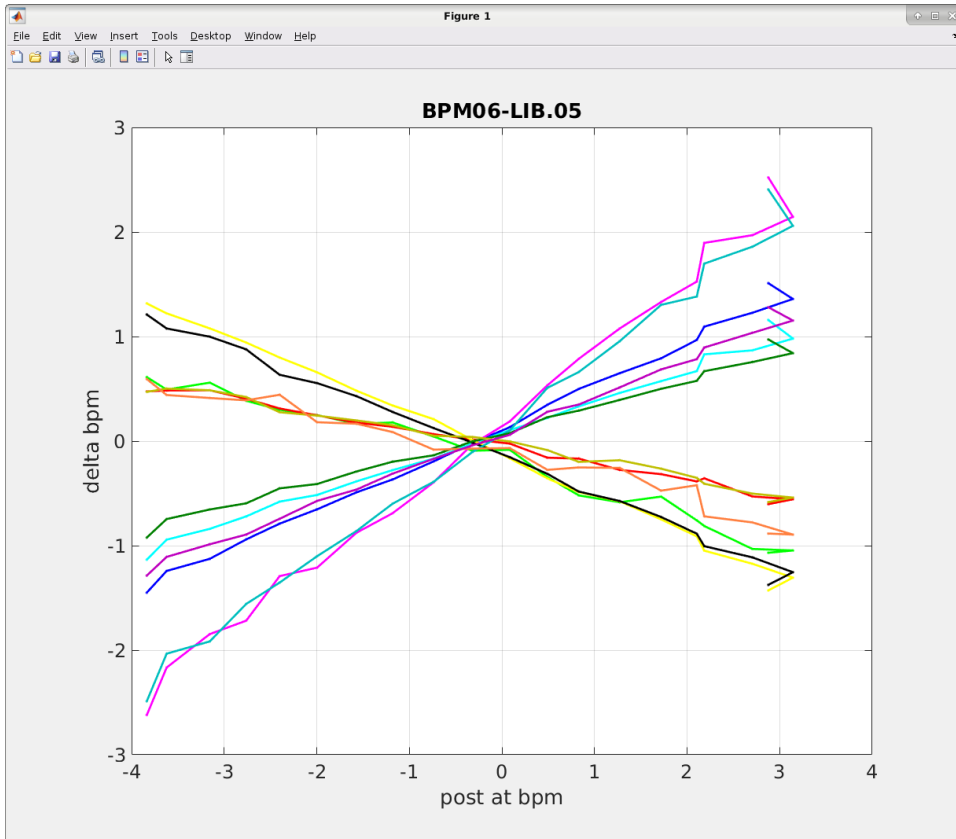
Frequency RF=500.1003 MHz



Beam studies: dispersion measurements



BBA (first iteration)

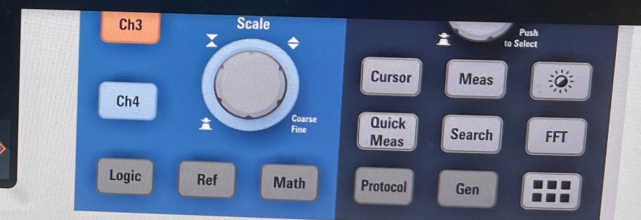
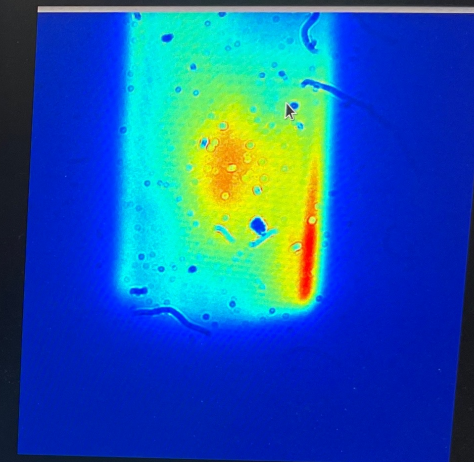
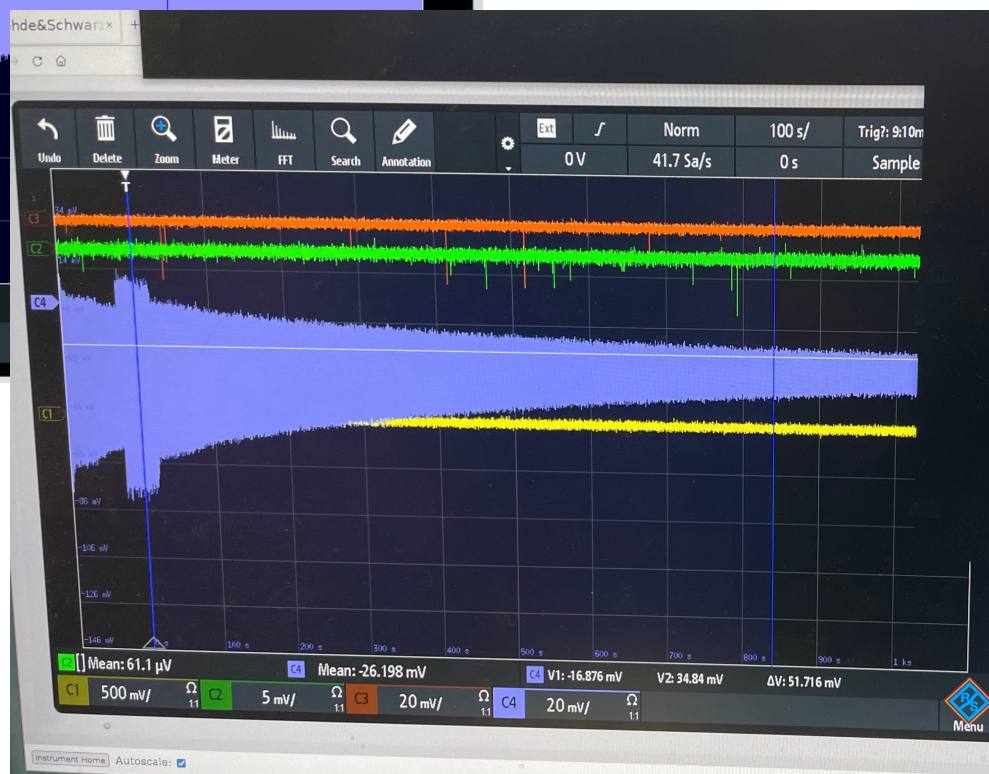
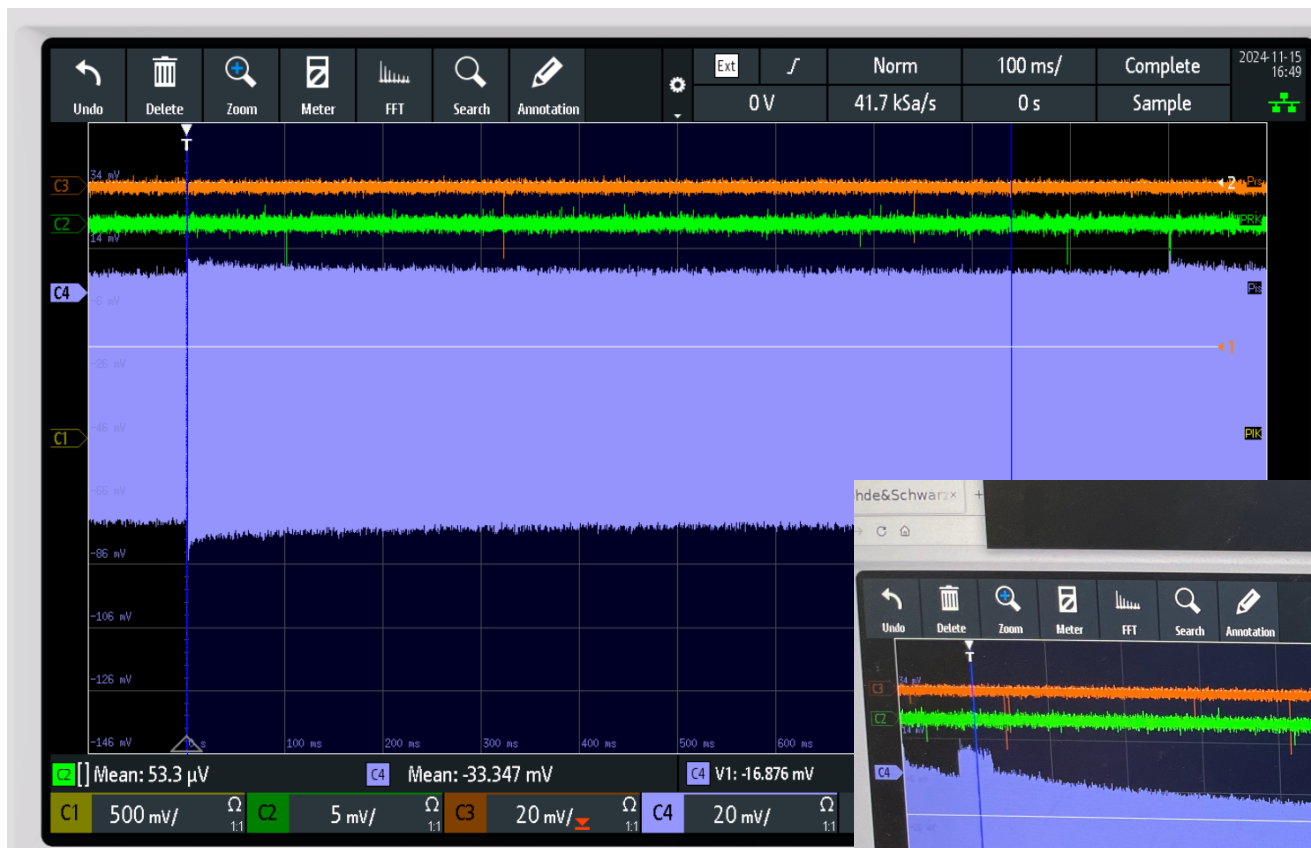


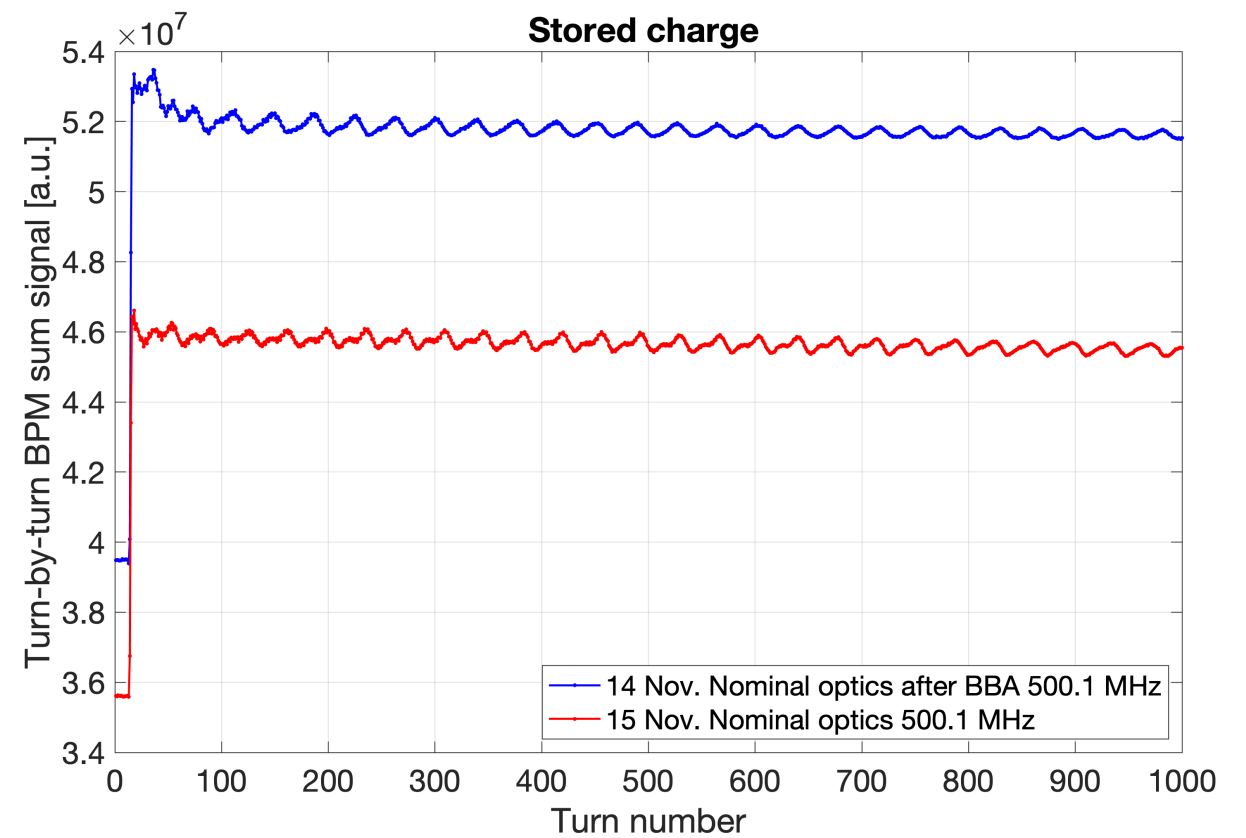
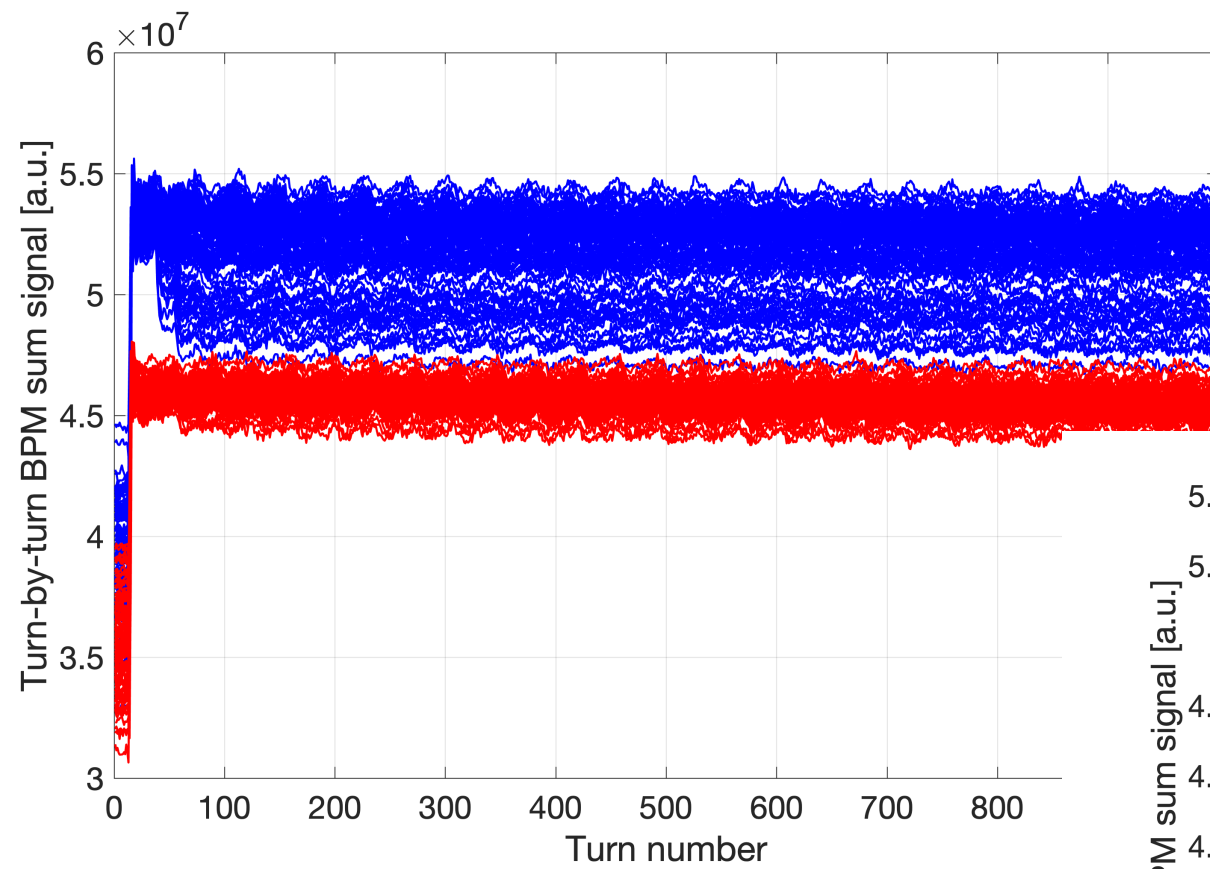
The hor. and vert. offsets are found (except 1BPMs) and set to the Libera DS. Work in progress.

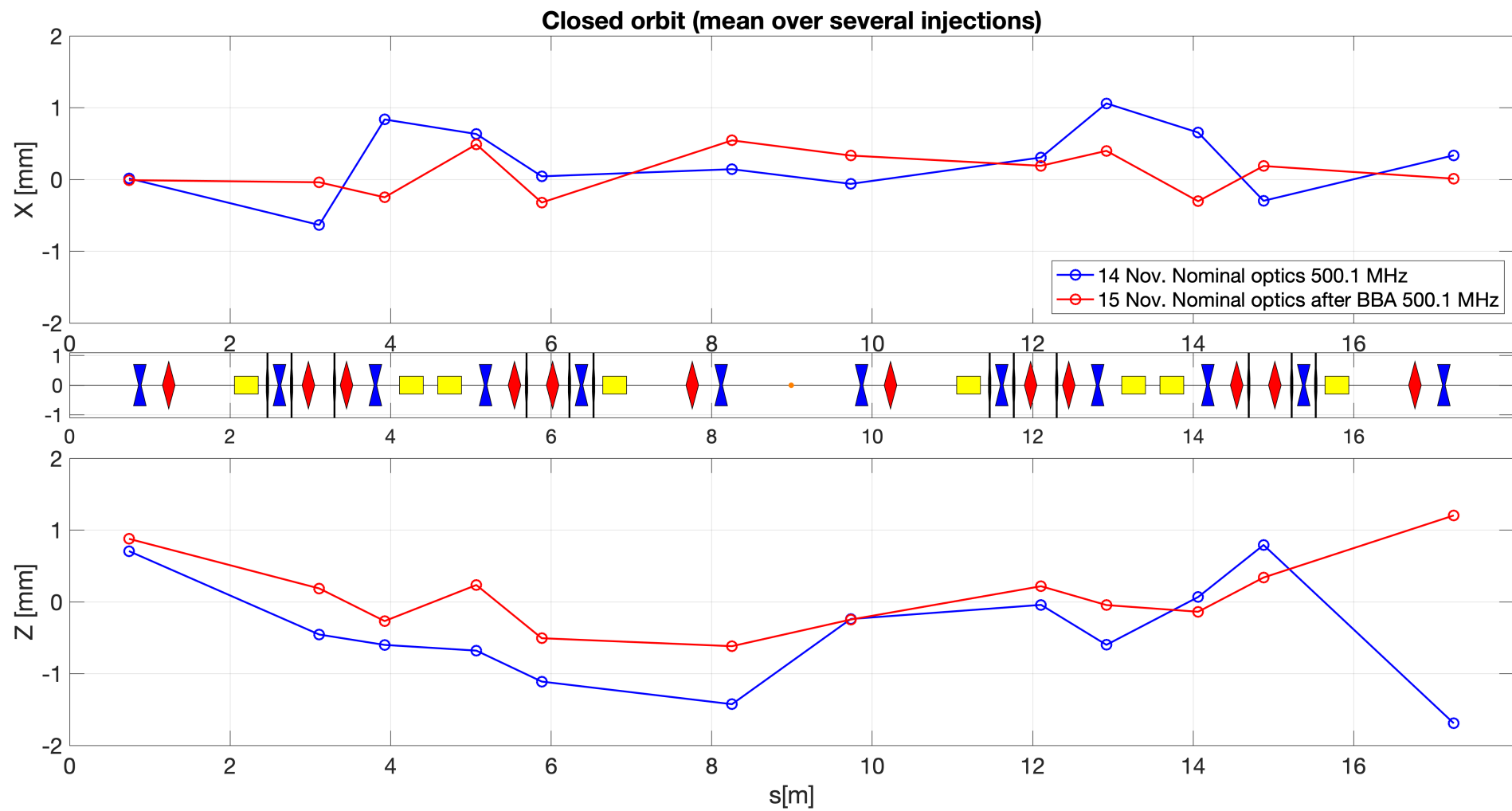
Beam storage/lifetime/First image of MRSV

15th November

Studies in single injection mode

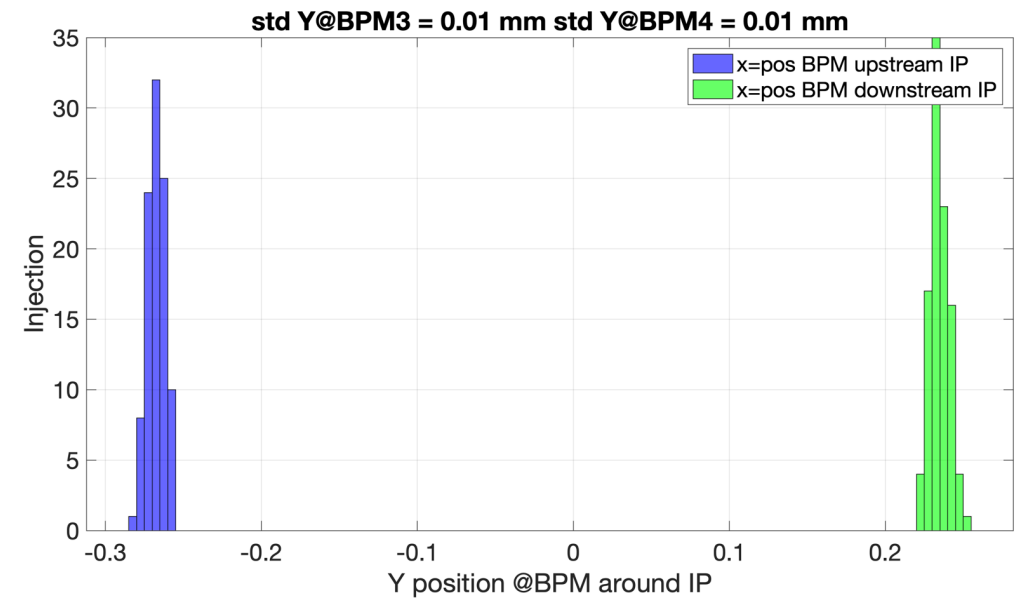
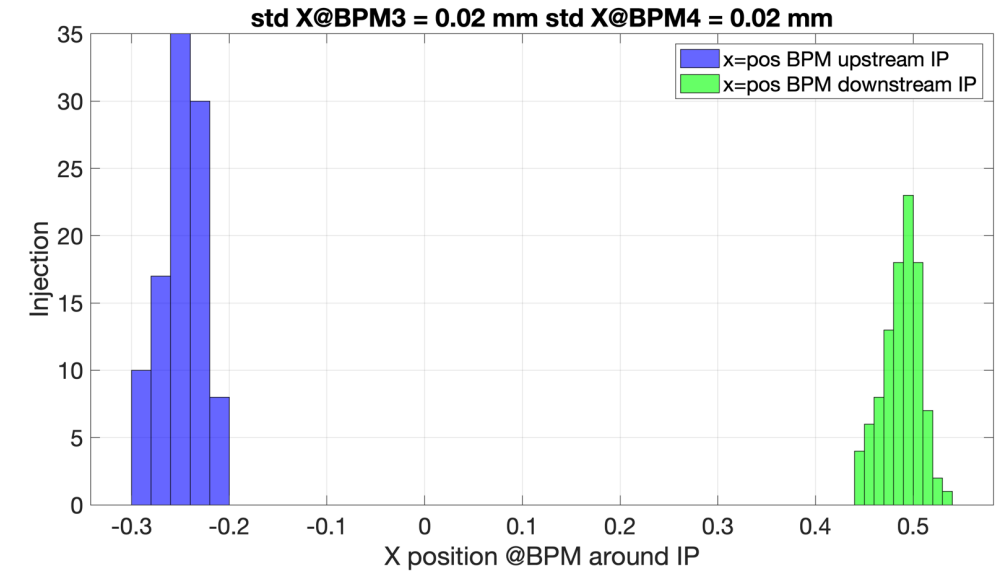
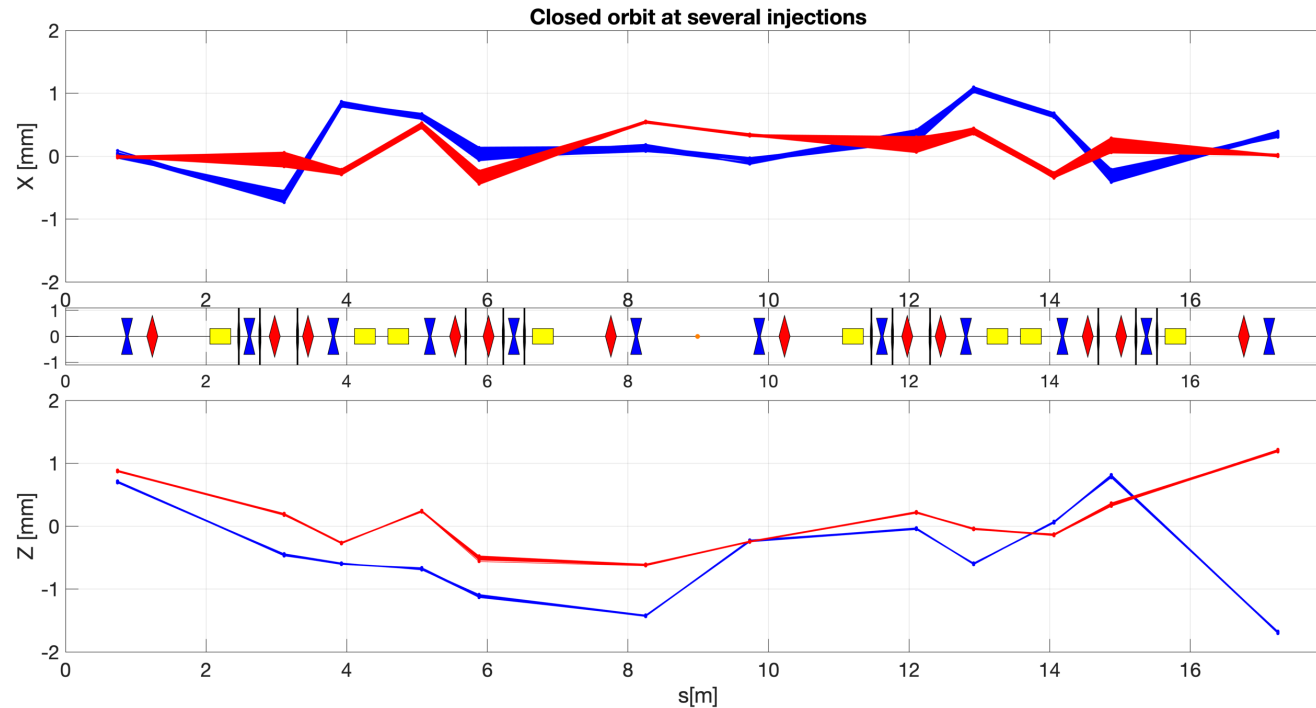






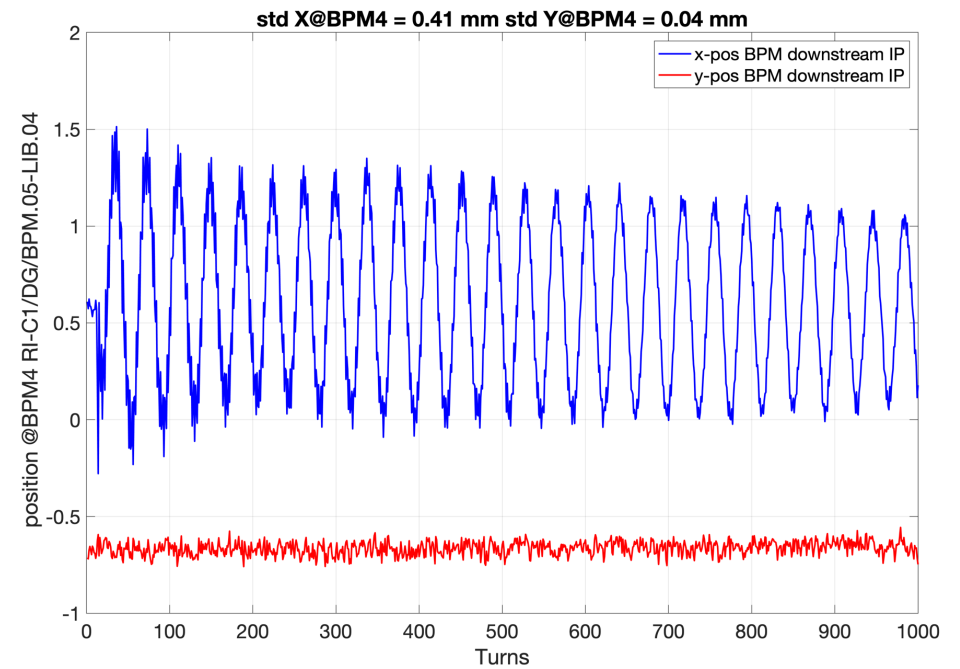
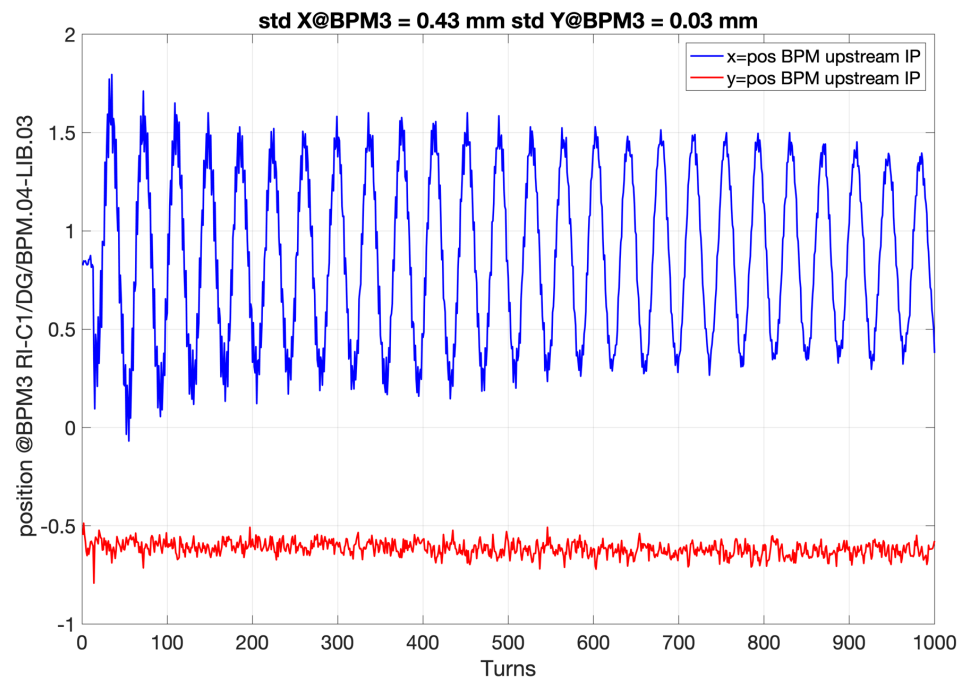
Stability (inj-to-inj) and IP BPMs

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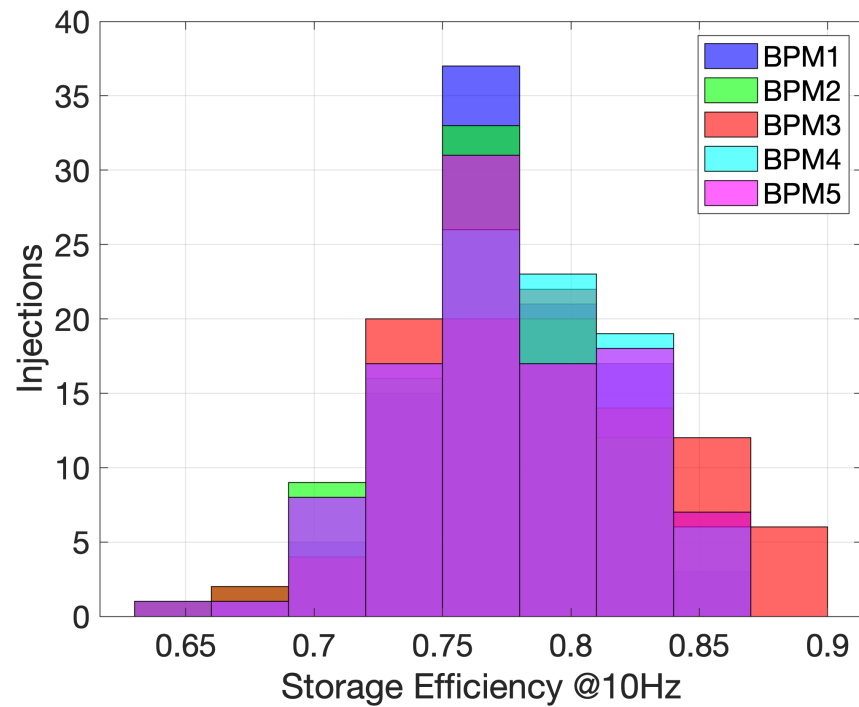
IP BPMs

15th November

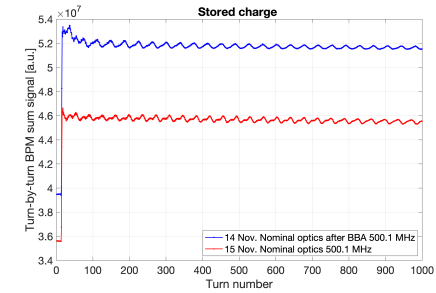
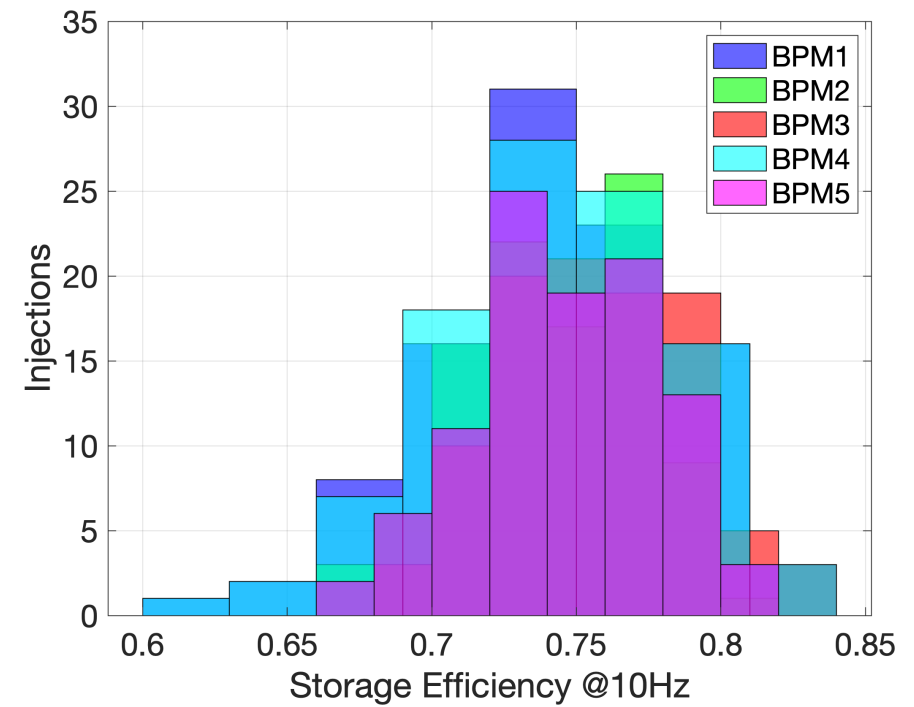


Storage Efficiency over 100 ms

14th November



15th November



Summary

- Big progress with orbit due to the correction of dipole current (IP dipole pairs)
- BBA: one by one, both in horizontal and vertical plane.
- Good storage demonstrated => correct beam orbit (beam circulated > 15 min)