Dear FACET Users,

E211 (a.k.a. CERN BBA) wants to share with you the summary of their four shifts last week:

- **Sunday**: preparation
  - completed Flight simulator
  - all on-line procedures tested and debugged

- **Monday**: S04-S08
  - measured responses R0 and R1
  - good orbit correction
  - corrected dispersion in X/Y by a factor 4 (see Fig. 1)

- **Tuesday**: S04-S08
  - measured responses R0 and R1
  - same dispersion correction (stable from Monday)
  - measured emittance reduction
  - spoiled beam by 5-6 correctors upstream,
  - with the correction the emittance converged to initial result (see Fig. 2)

Summary: We identified and corrected 500m in the 1st half of the linac (LI04-LI08). We saw a reduction in the dispersion by a factor 5, and a clear improvement in the transverse beam profile in monitor S19 (see facetelog). We spoiled the emittance using 5-6 correctors upstream LI04, and we saw that dispersion-free steering completely recovered the initial result.

- **Friday** owl: S11-S18
  - measured R0 and R1
  - problem: no BPM readings in S15 (getMachine(47))
  - failed to measure LI18 mittance (bad machine, bad orbit)

- **Saturday** owl: S11-S18
  - re-measured R0 and R1 with all BPMs
  - some strange behaviour in responses (YCOR:LI12:900 does not work)
  - dispersion corrected by factor ~2 in X and 1.5 in Y (Y correction made a 4mm orbit bump)
  - measured emittance in LI18 before and after, stable in X, growth in Y
  - ignited orbit bumps with 2X and 2Y correctors. Flattened successfully X, not in Y

Summary: We identified and corrected the 2nd half of linac (LI11-LI18). We saw no improvement in the emittance that was present. We excited upstream oscillations that could be flattened by the correction algorithms in X axis. Results to be analyzed further in post processing.
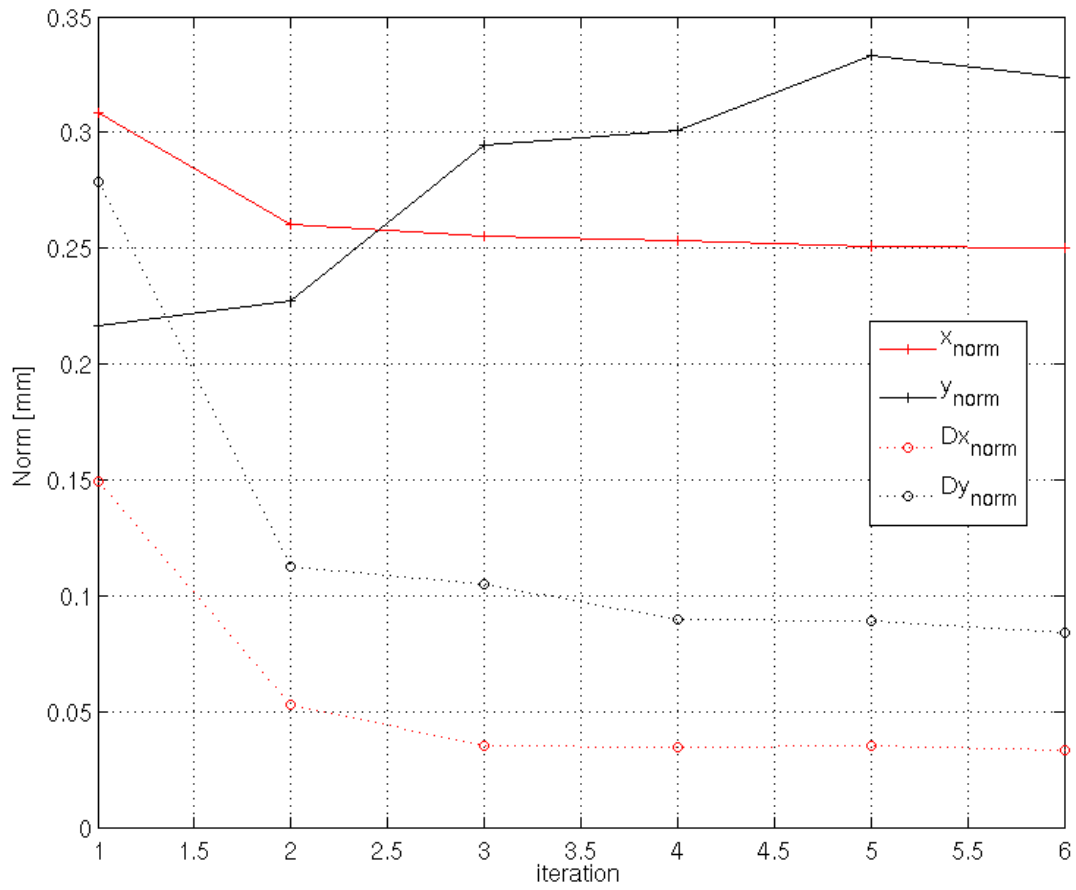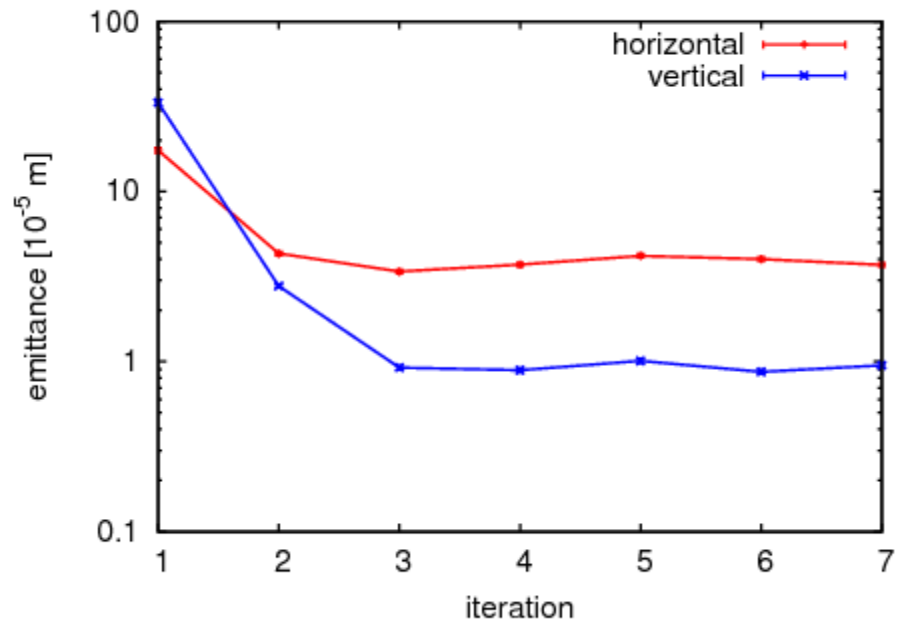
Fig. 1: Dispersion being reduced by the correction

Fig. 2: Emittance being reduced by the correction