FACET Summary Mar 2-8

- Sat 2nd
  - Ballistic data taken in the LINAC sectors 2-18. Phased the klystrons . Working on emittance preservation down the LINAC. S18 emittance has been down to 5.2x0.51. No further vacuum spikes in NRTL (North ring to linac).
  - SOP (Standard operating procedures) measurements. Continued Phasing klystrons.
  - At 18:00 Started a 24 hr stability run to get some information on drift. Every hr Ops to measure emittances and save configs and orbits.
  - Starting emittances (cm-mrads):
  - | | LI02 | LI04 | LI11 | LI18 |
  - | X/Y | 2.77/0.27 | 2.16/0.13 | 4.77/0.43 | 9.54/1.43 |
- Sun 3rd
  - Continuing with stability study. No tuning of the machine allowed. During owl two correctors malfunctioned causing difficulty in getting above measurements. PEM worked on these during day. Better behaved after that. Trouble with the positron extraction kicker. Pulses dropping out. VVS 02 tripped off once. Stability data collected. Needs further study. More RF and quad kick data. Looking for things to investigate during this week's PAMM.
- Mon 4th
  - Continuing with ORM data and also ballistic data. Good evidence that LI14 quad 901 is high by at least 2.5 mm. Some other regions in the Linac may be looked at by the surveyors on Tuesday.
  - Current emittances (cm-mrads) : (Mon morning):
  - | | LI02 | LI04 | LI11 | LI18 |
  - | X/Y | 3.34/0.20 | 2.35/0.14 | 3.33/0.58 | 5.34/0.95 |
  - More stability measurements
- Tue 5th
  - More quad alignment scans and beam steering with zeroing out-of-plane (e+) correctors. Survey has found 5 quads that have large vertical displacements. 14-8, 14-9, 11-8, 11-9 and 12-9 all more than a 1 mm. All displacements corrected. Some were +/- 2.5 mm.
  - PAMM. Replace vacuum pumps in NRTL. Correct displaced quads. Work in the S20 experimental area.

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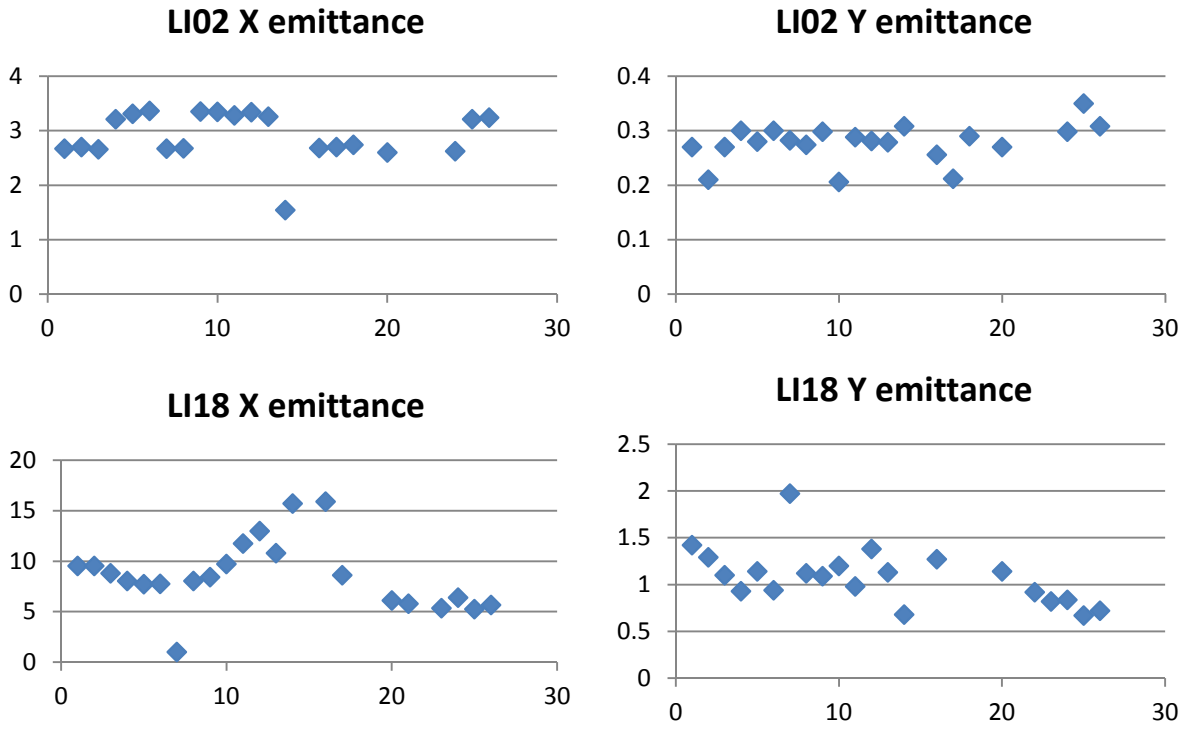
- Some stability study results (no operator tuning)



- Wed 6th
  - PAMM. Work in the S20 experimental area continues. 4 NRTL pumps replaced out of a total of 7. One pump had a bad HV wire. Fixed. Two ring correctors that do not work were investigated and no trouble was found but they still do not work. Further investigation needed next PAMM. Started turning on VVs power supplies after 20:00. Recovery.
- Thu 7th
  - Beam recovered during owl shift. Vacuum in NRTL good now. Many small problems during recovery. Injector orbit changed. SBST 0 phase changed. NDR RF tuner settings lost. NLTR energy feedback broken. Resteered LINAC at the quad moves from survey (LI11 and LI14). NDR temp. not yet back. NDR and Linac emittance tuning LI18 4.2x1.8 cm-mrads.
- Fri 8th
  - Phased klystrons. Continued emittance tuning and klystron phasing.