Status of operational beams (1)

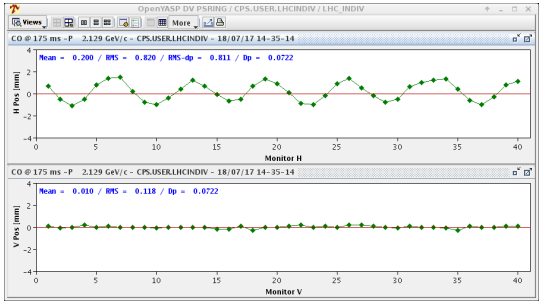
PS Beams	Status	Comments
LHCPROBE	OK	
LHCINDIV (nominal, VdM)	OK	VdM ready in PS: ε_h = 2.5, ε_v = 2.7 mm mrad
LHC25 (12b, 72b)	OK	
LHC25 BCMS (48b)	OK	$\varepsilon_h \approx \varepsilon_v \approx$ 1.8 mm mrad
LHC25 8b4e (56b)	TBC	Last checked on 19 June 2017: if needed by LHC we should re-check it
LHC50 (36b) (mapped on MD1)	OK	To help LHC diagnose cause of 16L2 problem: quick setup at short notice! **$\varepsilon_h \approx \varepsilon_v \approx$ 1.6 mm mrad**
LHC ION: EARLY	OK	Sent to LHC (extraction settings were incorrect)
LHC MD beam requests	**OK**	**Standard beams: PROBE, INDIV + 144b BCMS**

Status of operational beams (2)

PS Beams	Status	Comments
EAST1 (Irrad)	OK	
EAST2 (North)	OK	
TOF	OK	
AD	OK	
MTE	OK	~1500E10 ppp, $\varepsilon_v \approx 4.0$ mm mrad measured every shift Intensity limitation at about ~1700 ppp is being followed up on different fronts: • optimisation of TFB damper excitation and multipoles • shadowing of SMH16.

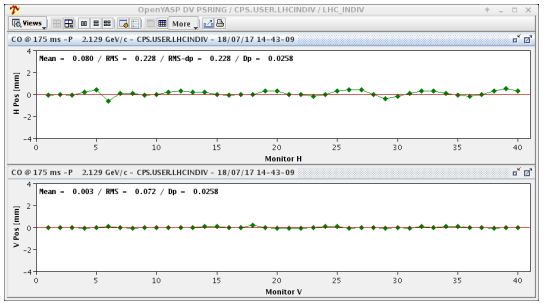
News (1)

- BGI kick compensation with additional trim circuit successful, thanks to TE-MSC, BE-BI and BE-ABP:
  - 6.25% compensation needed at 176 A



I_{main} = 60 A

I_{trim} = 60 A

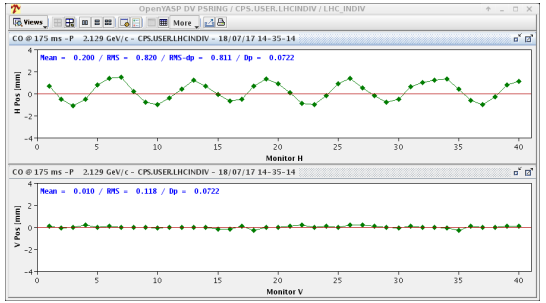


I_{main} = 60 A

I_{trim} = 63 A

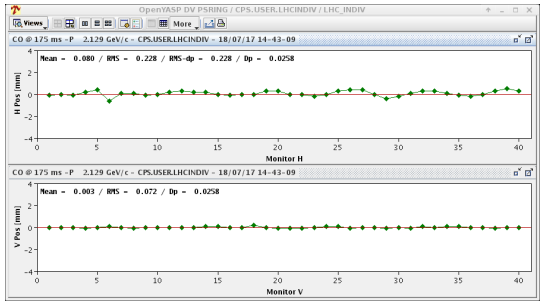
News (1)

- BGI kick compensation with additional trim circuit successful, thanks to TE-MSC, BE-BI and BE-ABP:
  - 6.25% compensation needed at 176 A
- LHC ion transmission in TT2:
  - TT2 optics scaled to rigidity of ^{39}Xe and extraction from PS
  - By chance rigidity of ^{54}Xe and ^{82}Pb is almost identical after stripping: no scaling of optics needed after foil
  - Problem was scaling of PS extraction equipment: Pb settings from which we scaled were not nominal.



I_{main} = 60 A

I_{trim} = 60 A



I_{main} = 60 A

I_{trim} = 63 A

News (2)

- MTE shadowing measurements on-going and further tests planned over the weekend:
  - Orbit has changed since last year (MU's replacement), position of BLMs too.
  - Improvement of relative losses TPS15/SMH16 has been demonstrated
  - Optimisation is needed: positon of septa, extraction bumps, orbit at flat-top etc.
  - Will also need an optimisation of all other extractions… work in progress.
  - End of summer deadline for intensity ramp-up.
- LHC25 BCMS 1.5 eVs provided by the PSB:
  - Single bunch, R3
  - First injection into PS, transverse emittance blow-up observed on flat-bottom

MD studies

Some of the studies on-going in the last week…

- **MD2145:** *Transition jump without gamma jump*:
  - LHC magnetic cycle with TOF type RF cycle (no splitting) testing stability limits (using high intensity) with emittance blow-up on intermediate flat-top
- **MD2498:** *MTE optimisation*:
  - Checking effect of TFB excitation and multipole ramp rates on splitting efficnecy/emittance, extraction shadowing studies are now being taken over by BE-OP.
- **MD1941:** *Quadrupolar pick-up study:*
  - Investigating space-charge driven quadrupolar oscillations
- **MD1939:** *KFA45 waveform measurements:*
  - Short-circuit termination of module 1 adjusted for tests of impact on rise/fall time.
- **MD2508:** *Re-matching PSB R3 to PS:*
  - Dispersion measurements and kick response from PSB to PS to validate optics model