SPS beam commissioning: week 21

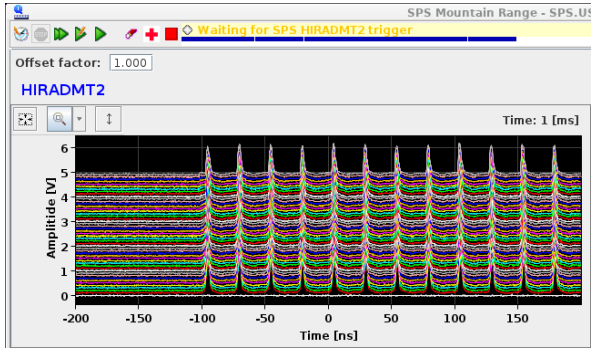
G. Papotti for the SPS team

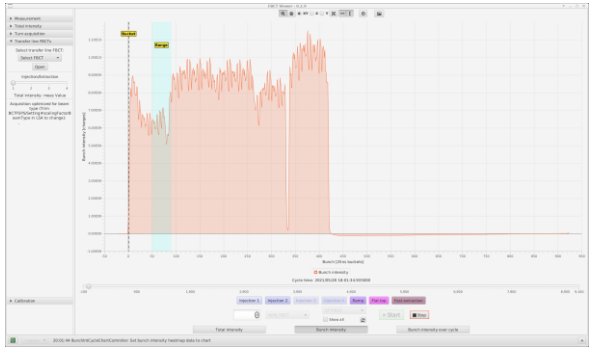
Many thanks to all involved!

SPS 8:30 meeting zoom room link

main achievements

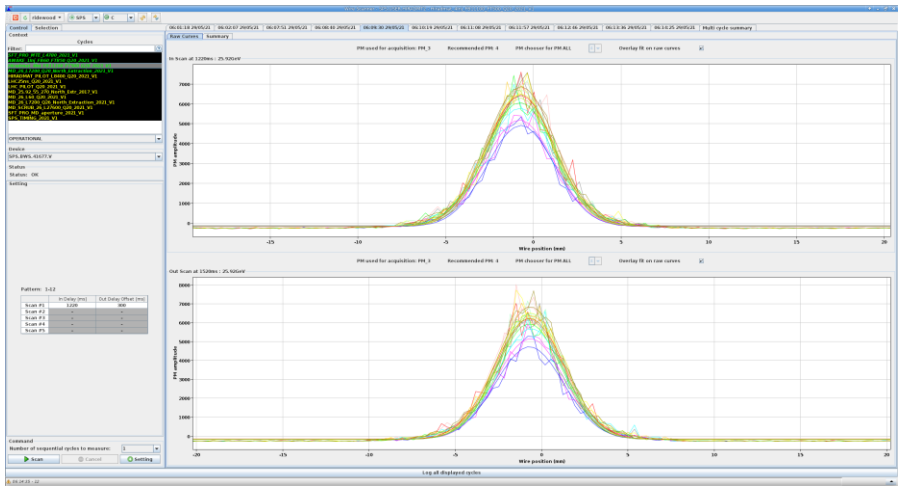
- pLHC: 12 bunches circulating up to end of flat bottom
  - vacuum activity seen since first shots (few 100 ms)
  - … scrubbing started!
- pFT
  - ZS aligned and crystals aligned, including with optimisers
  - Friday evening: taken full MTE
    - islands + core, <5e12 p
    - stopped because of high losses in TT10





main achievements: RF + BI

- RF:
  - LLRF
    - pFT radial position jitter solved
    - AWK rephasing improved (cogging issue solved + BA4 synchro settings)
    - preparation of 800 MHz (WR clock distribution, without beam)
  - cavity conditioning continued, mostly limited by cavity 1
    - new app: SPS RF conditioner
  - transverse damper setup on LHCPILOT, HIRADMT2, SFTPRO1
- BI
  - wirescanner showing first results
    - some work on PM still needed
  - Miniscans GUI working
  - improvements with SEMs
    - 2 still need interventions
  - still missing: BSI



main achievements: misc.

- bucket 1 aligned for all beams (pLHC and pFT)
  - same delays for $f_{rev\ inj\ CPS}$, inj pulse, MKP delay, including PS
- QF/QD noise improved
  - a couple more interventions to come
- Laslett automatic correction ok
- final aperture scans
- SBDS failure scenario test done
- kicker waveforms rescanned

main issues

- outstanding
  - BA3 circuit breaker trips (intermittent): symptom no ALPS in R3, access needed
- longer faults
  - long stop (Thursday): for LN4, profited for many accesses and interventions
    - thanks to all for adapting the start time!
    - lost patrol in all BA1 sectors (bad fibre manipulation during maintenance)
- shorter faults
  - BEQ1 (Thursday)
  - TT10 power converter down (Tuesday)
  - POPSB (Wednesday, Thursday)