

SPS status

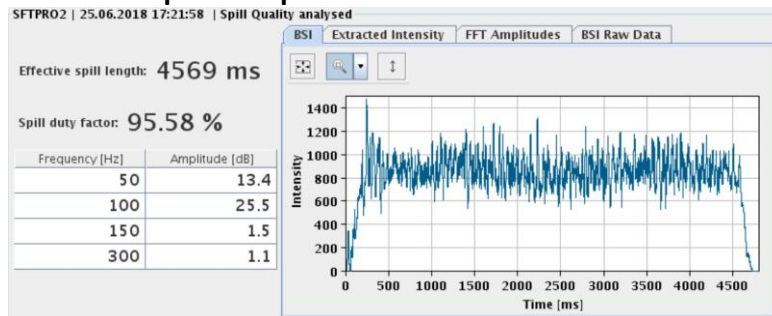
H. Bartosik for SPS operations team

MSWG, 29.06.2018

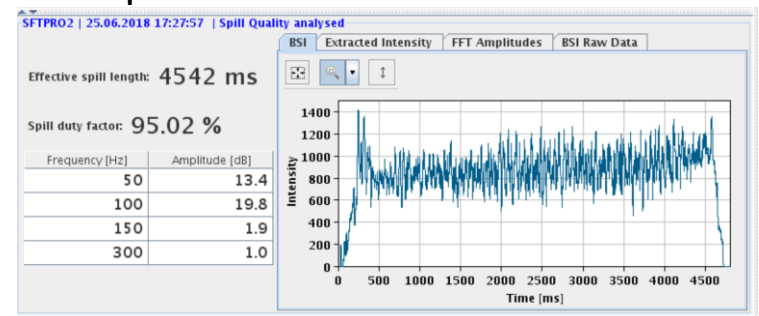
SPS overview

- Highlights from technical stop
 - Radiation hotspot at FBCT519 understood: found huge misalignment of FBCT519 (12mm horizontal and 5mm vertical) and it has already a slightly reduced aperture compared to standard SPS chambers
 - MBB30490 which had an inter-turn short was exchanged
- LHC beams
 - Some issues with transverse losses and satellites at BCMS beam transfer to LHC (Wednesday night)
- SFTPRO
 - Quick way of recovering NA spill structure after supercycle change used since Monday (Francesco): 0.005 offset in programmed tune function

Spill in production SC

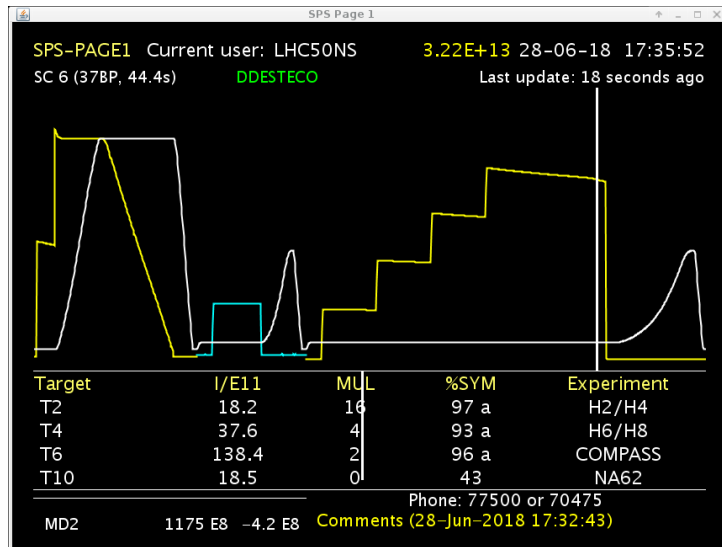


Spill in LHC SC with correction

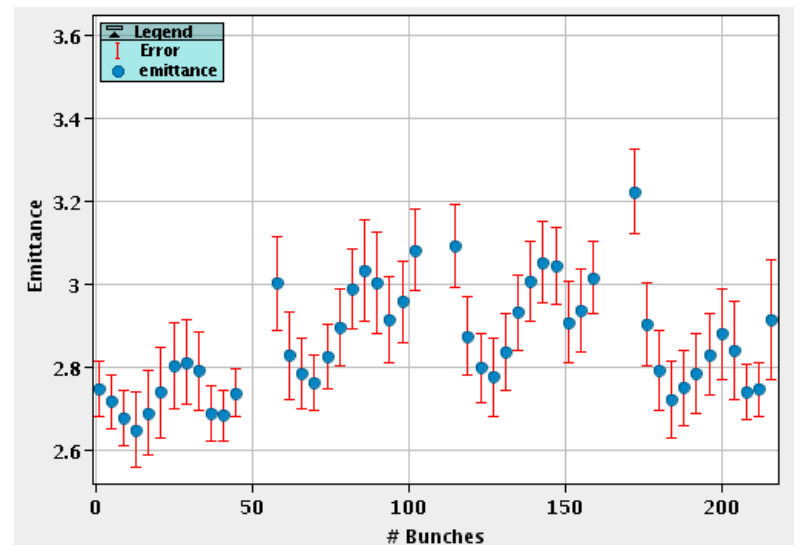


MD with BCMS beam (up to $2e11$ p/b)

- Aim is to study emittance preservation and beam stability
 - horizontal instability observed last year not yet seen this year
 - Emittance growth (of first batch) similar to values achieved after scrubbing (4 weeks ago) but still the 4 batches show large emittance at 19 s
 - Bunches longitudinally unstable – issue with one 800 MHz cavity
 - Losses out of RF bucket due to limited RF power
 - Good news: no increased sparking on ZS!

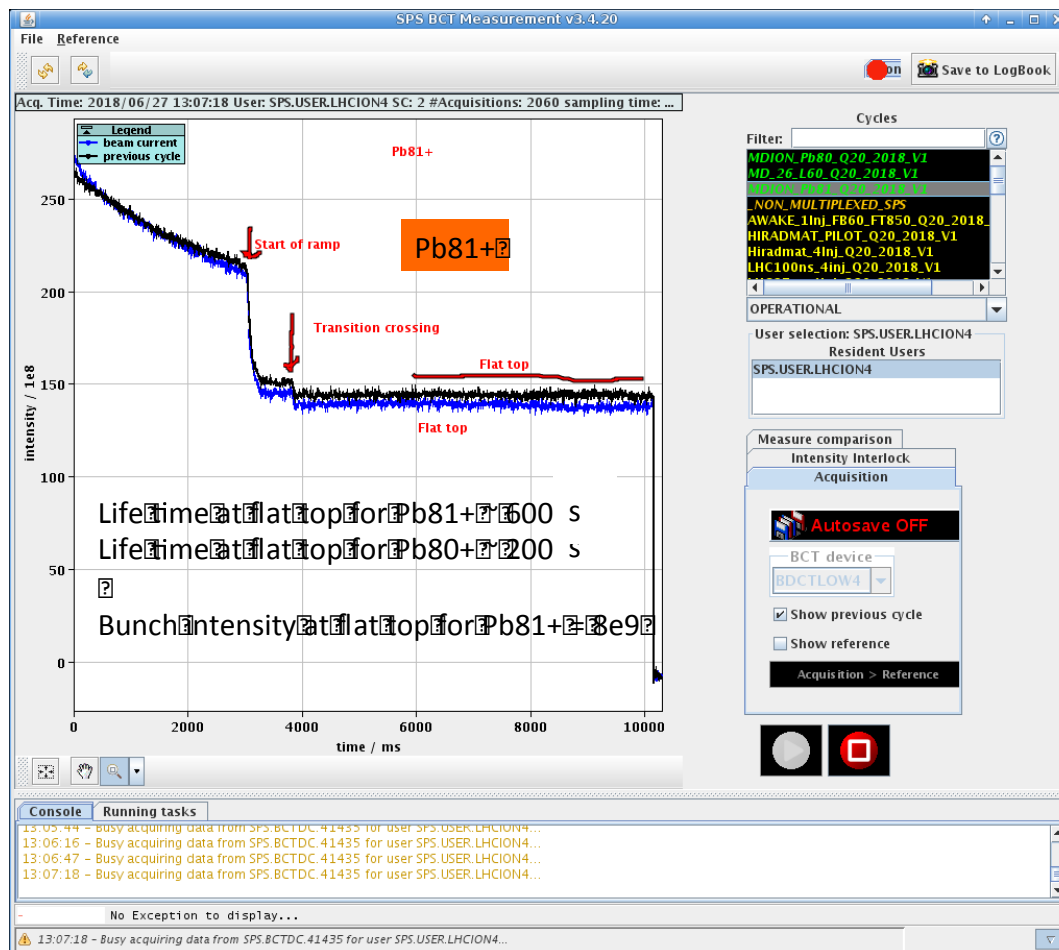


Vertical emittance at 19 s



Dedicated MD on partially stripped ions

- Studies in view of gamma factory proposal
 - Special TT2/TT10 optics for Pb80+ and Pb81+ deployed (ABT)
 - measurement of beam lifetime for Pb80+ and Pb81+



➔ Pb81+ will be used for injection into LHC during LHCMD2