

SwissFEL Exchange Meeting

Machine report

Week 51/2020

Didier Voulot
SEM, 21 December 2020

Week overview

MON

14

TUE

15

WED

16

THU

17

FRI

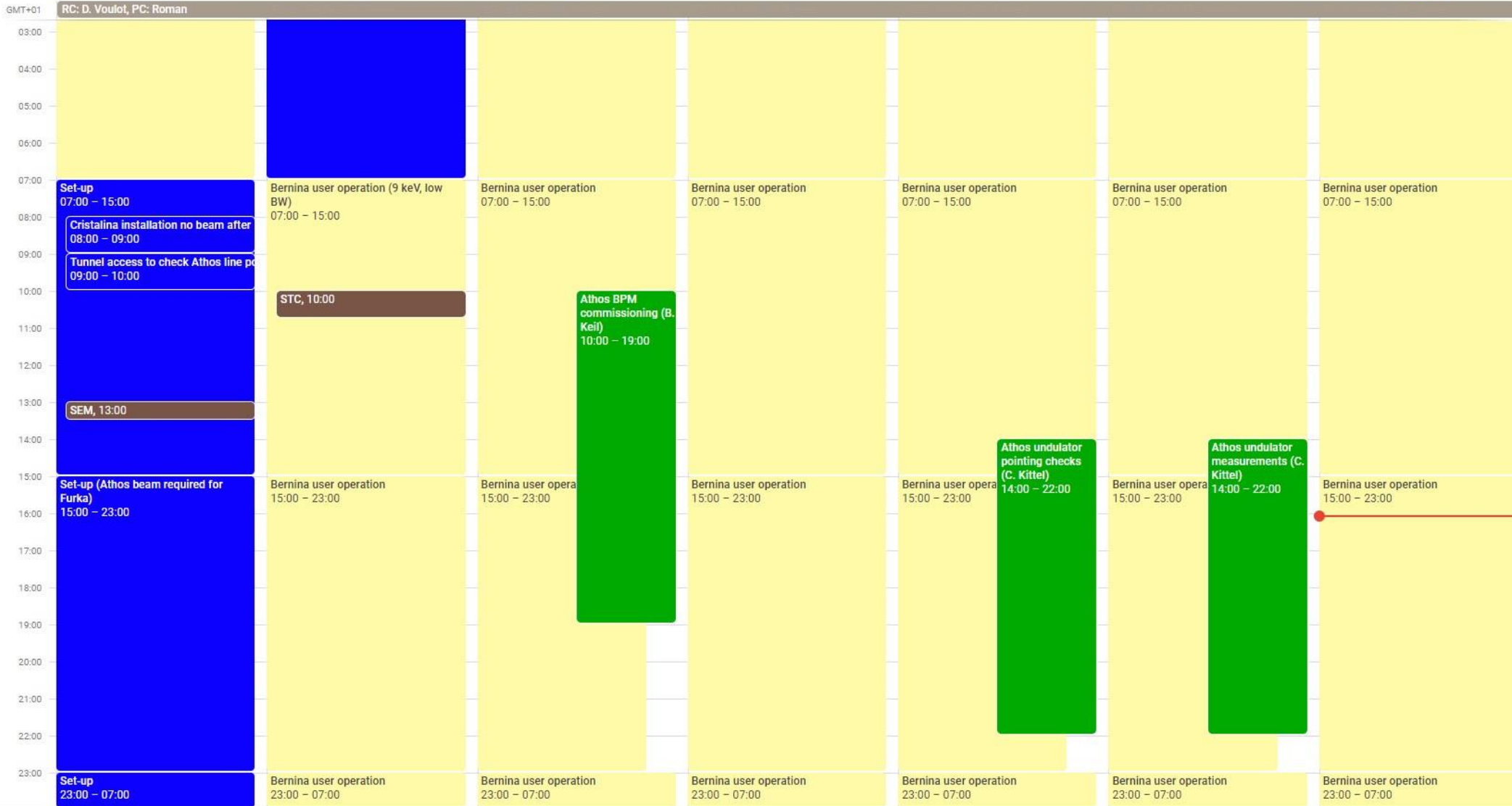
18

SAT

19

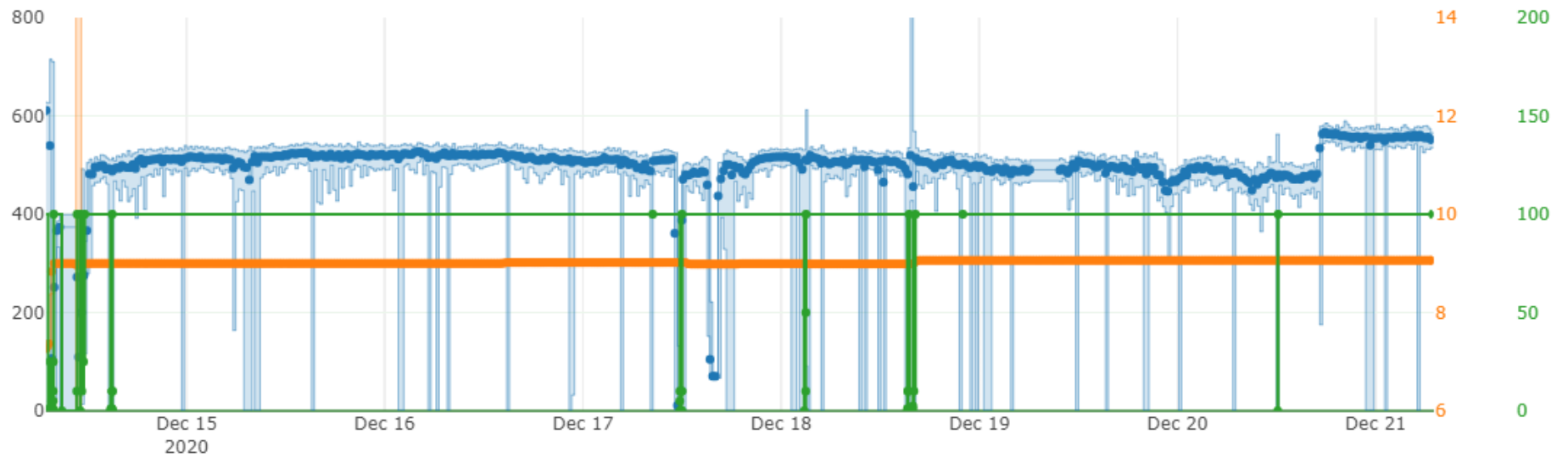
SUN

20



Aramis

- SARFE10-PBPG050:PHOTON-ENERGY-PER-PULSE-AVG\$max
- SARFE10-PBPG050:PHOTON-ENERGY-PER-PULSE-AVG\$mean
- SARFE10-PBPG050:PHOTON-ENERGY-PER-PULSE-AVG\$min
- SARUN03-UIND030:FELPHOTENE\$max
- SARUN03-UIND030:FELPHOTENE\$mean

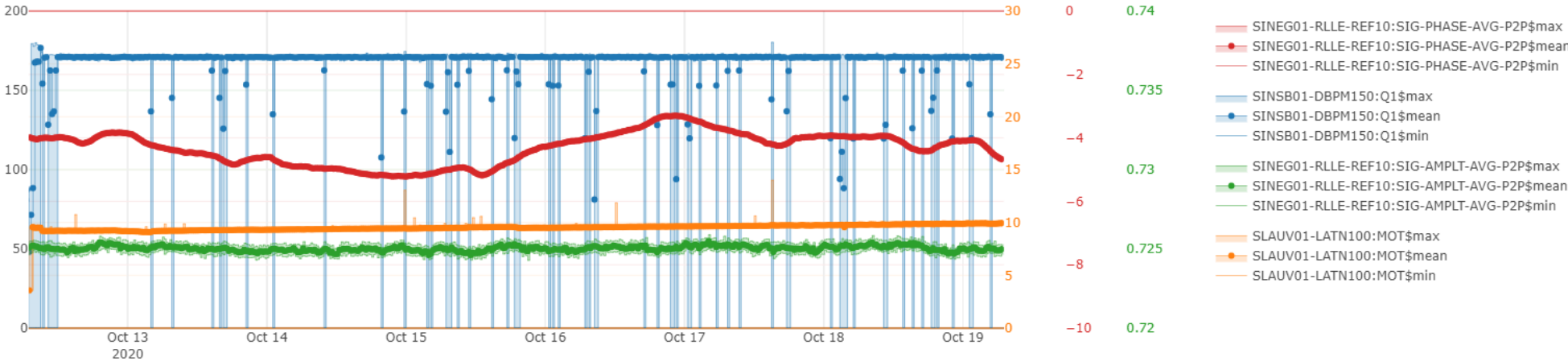


Week summary Aramis

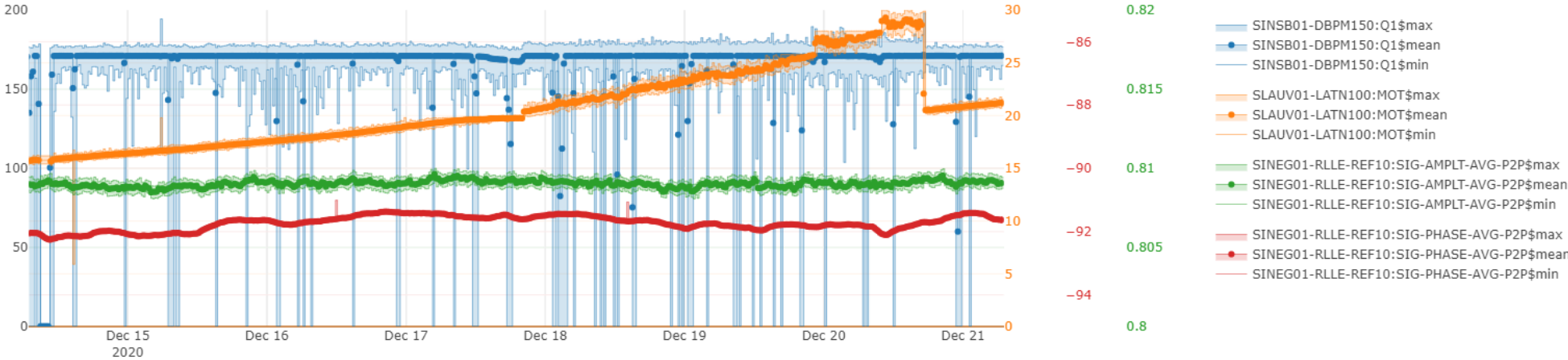
- Machine was already well set-up from last week (Alvra run)
- Energy change from 7.3 to 9 keV on Monday
 - maintain good lasing (500 uJ)
 - BW 0.12% (shot to shot)
- Charge instabilities
 - The pulse energy is oscillating slowly (several minutes), not understood
 - PSICO cannot work
 - Some strong constraint were introduced in the feedback to avoid losing the beam
=> we hit the limits in several occasions (laser drifting, compression feedback at limit)
- Data acquisition and BD –read problems impaired the experiment and the machine (PSSS)

Charge instabilities

Week 42



Week 51



Week summary Athos

- Access on Monday to check machine visually in the SATUN14 area
- Moved manually several valves by about 1 mm
 - No improvement on beam alignment, still need kinked orbit to go through, difficult to get both part of the machine lasing
 - Undulator pointing was checked during the weekend (Christoph), interpretation difficult due to different orbits
- BBA worked foreseen on Monday and Tuesday this week (Eduard, Eugenio)