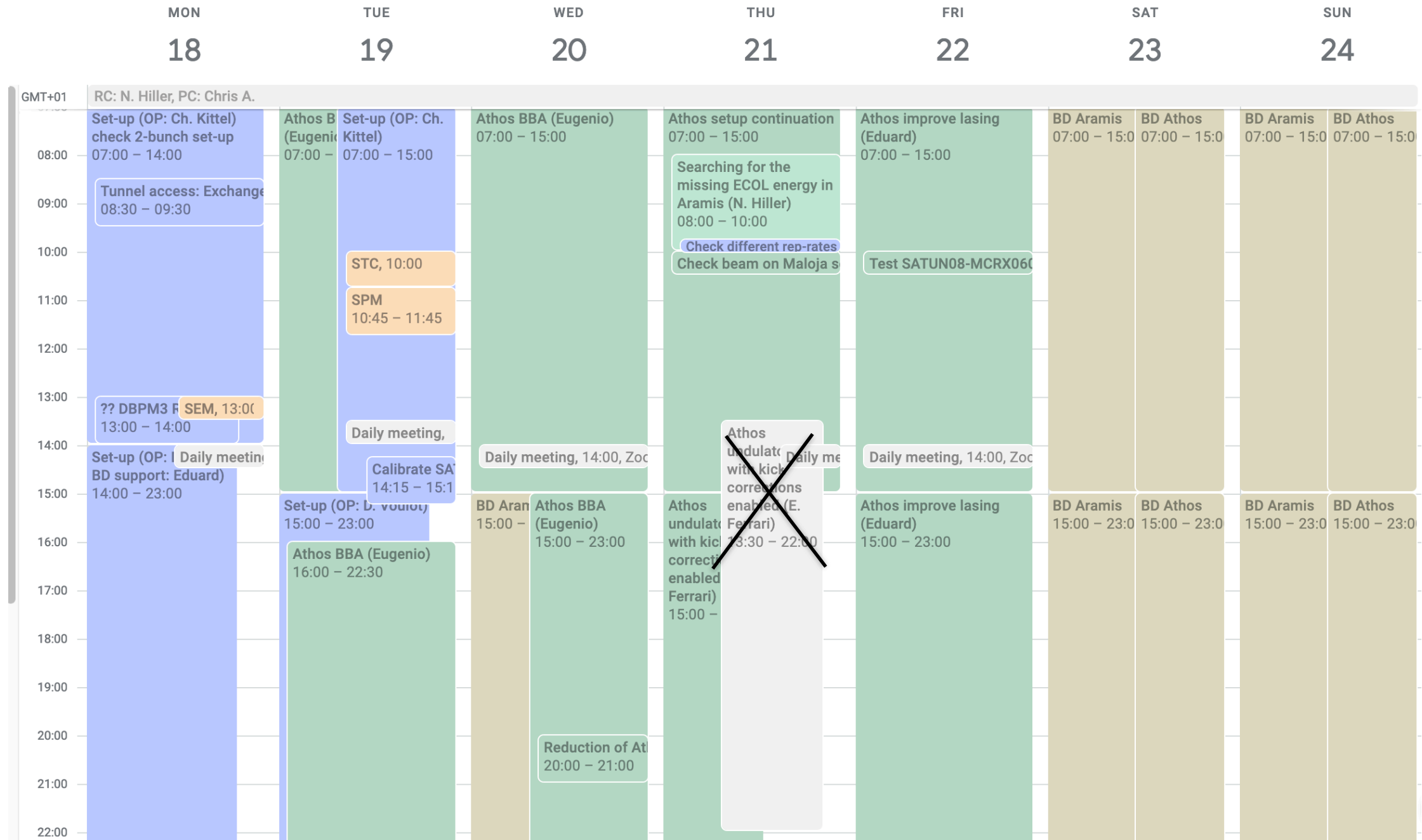
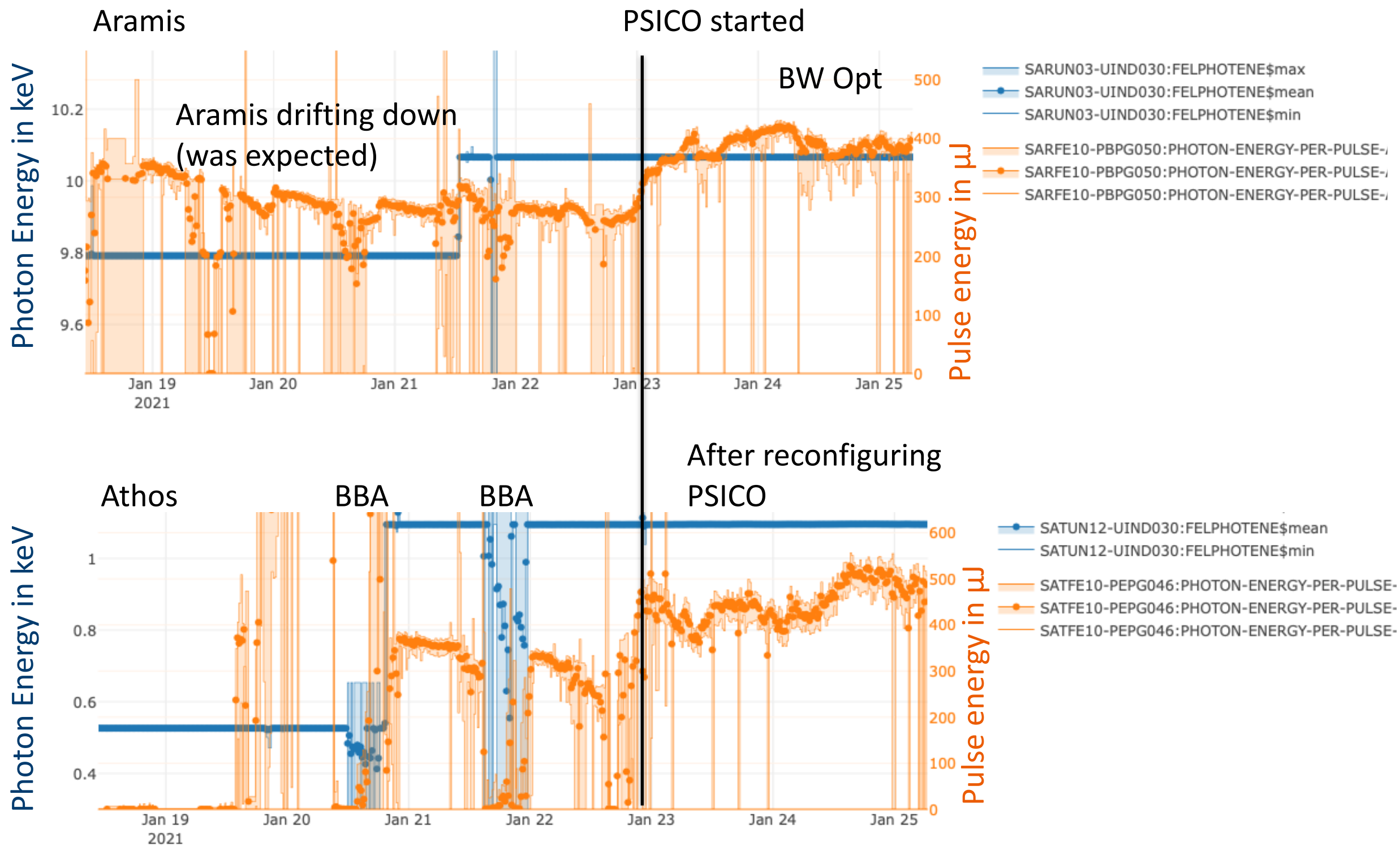


2021 Week 3 RC Report

Today < > January 2021 Week 3 🔍 ? ⚙️ Week ▾ ☰ S



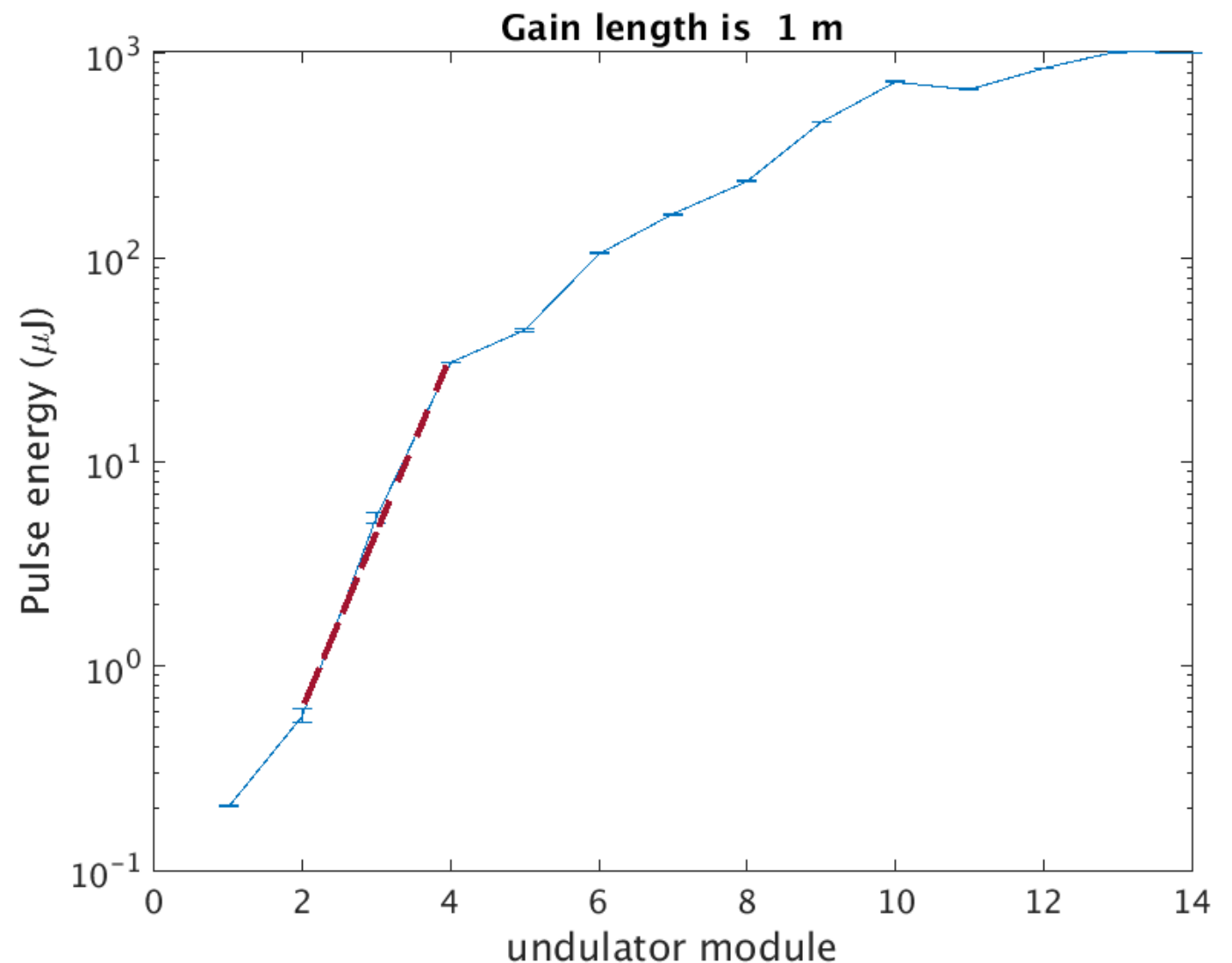
- **Week dedicated to bring Athos in a good state (2-Bunch setup & BBA) and focus on parallel operation**



2 Bunch Setup & Athos transmission

Didier, Christoph, Eduard, Eugenio?

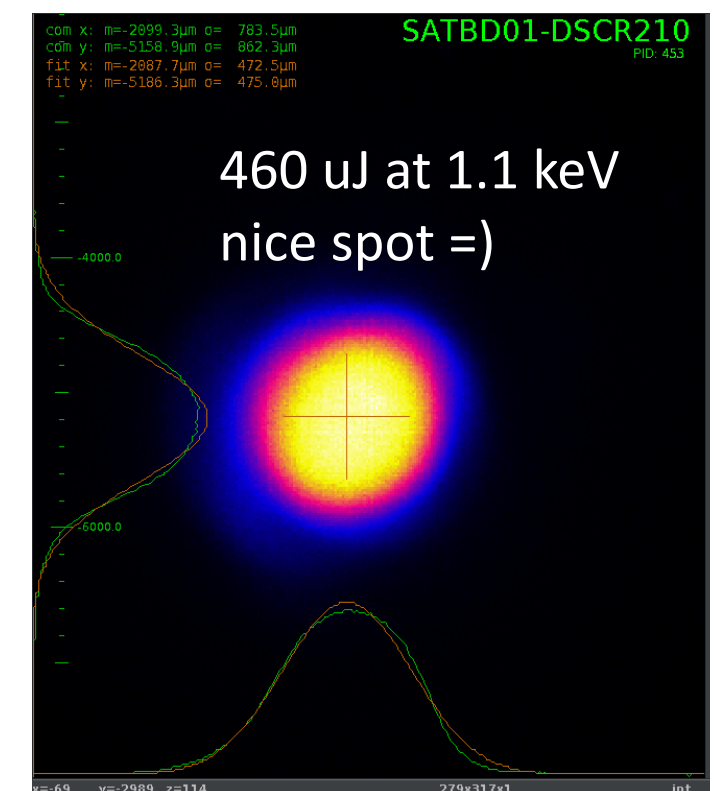
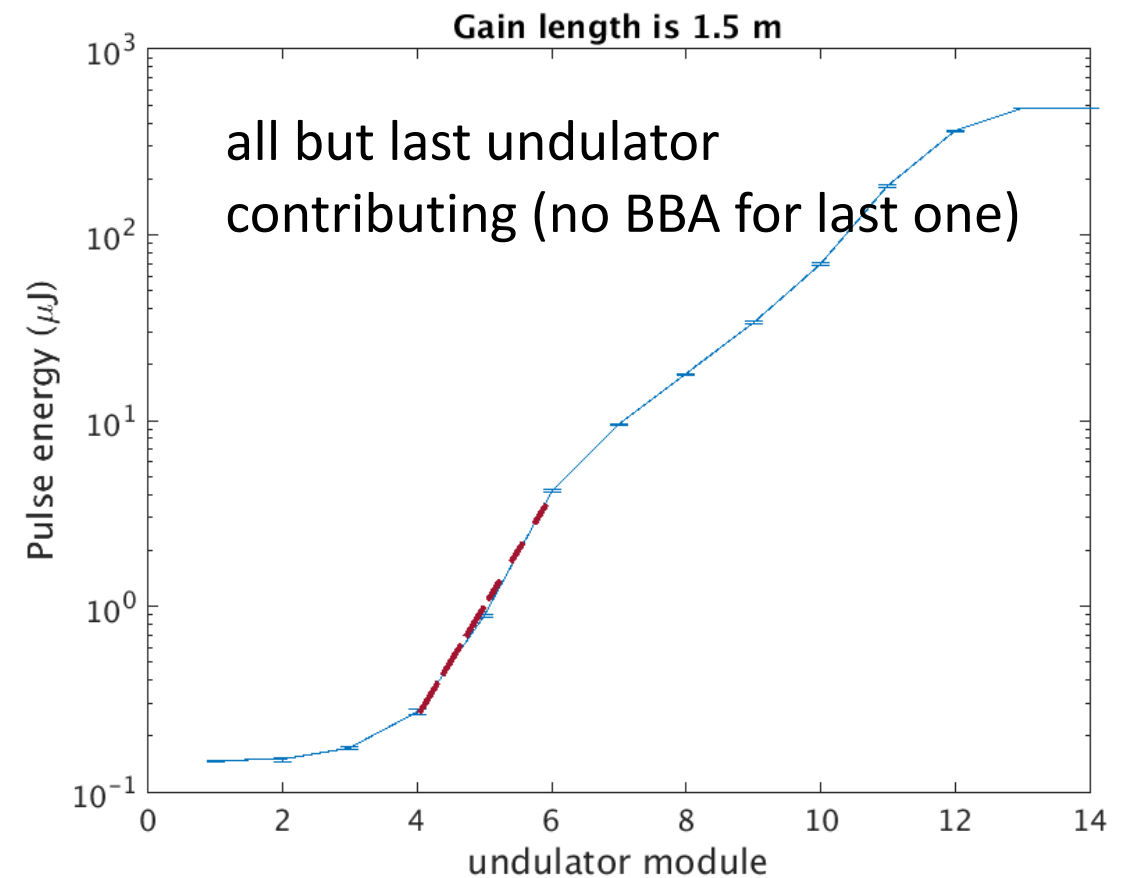
- Work on improving the 2-Bunch setup procedure -> still some points that need updating
- Transmission through Athos at first cumbersome because a mix of different settings had been reloaded -> once the correct settings were restored 350 μJ of lasing were recovered at 0.5 keV
- Commissioning/Calibration of 3 new BPMs in Athos (SATUN01-03)
- SATUN08 brought in operation
- Lasing tweaked to give around 1 mJ at 0.5 keV
- Last module not contributing



- **Athos undulator BBA**

- while in Dec'20 this was done at 10 pC and the undulators open, now it's done with 200 pC and a $K=2.7$) -> Eugenio could nicely improve his procedure
- BBA starts at SATUN04 (launch starting from SATUN01 will be added later)
- Energy range first 60 MeV, then later around 240 MeV and then even up to 1 GeV
- Meanwhile lasing in Aramis was maintained (slow drift downwards, but we also didn't bother about it)
- done without the kick corrections and without earth field coils
- worked really well and the lasing went up with each iteration
- Error found in the computation of the kick corrections found, then afterwards a sign-swap was also found.
- BBA tried for incorrect kick corrections, but no BBA yet with the proper corrections enabled -> need to schedule this.
- After the BBA at 0.5 keV we had around 0.9 mJ (dispersion below 10 μm)

- **Energy change to 1.1 keV**
 - For the first time, we managed to lase at this energy!
 - After BBA and manual tweaking the pulse energy was around 480 μJ
- **A few mostly technical issues held up things:**
 - ICT charge integration issues -> mostly fixed (still occasional alarms)
 - 5 Athos BPMs didn't show the correct shot -> fixed
 - SATUN08 corrector controller for CHIC didn't work correctly -> fixed
 - SATUN21 gab got stuck -> reset
 - Archiver retrieval issues... -> ongoing ups and downs
 - kicker feedback had troubles to follow the energy changes at first -> fixed
 - and, of course, the issue with the kick corrections applied in the wrong plane



Automated tuning over the weekend

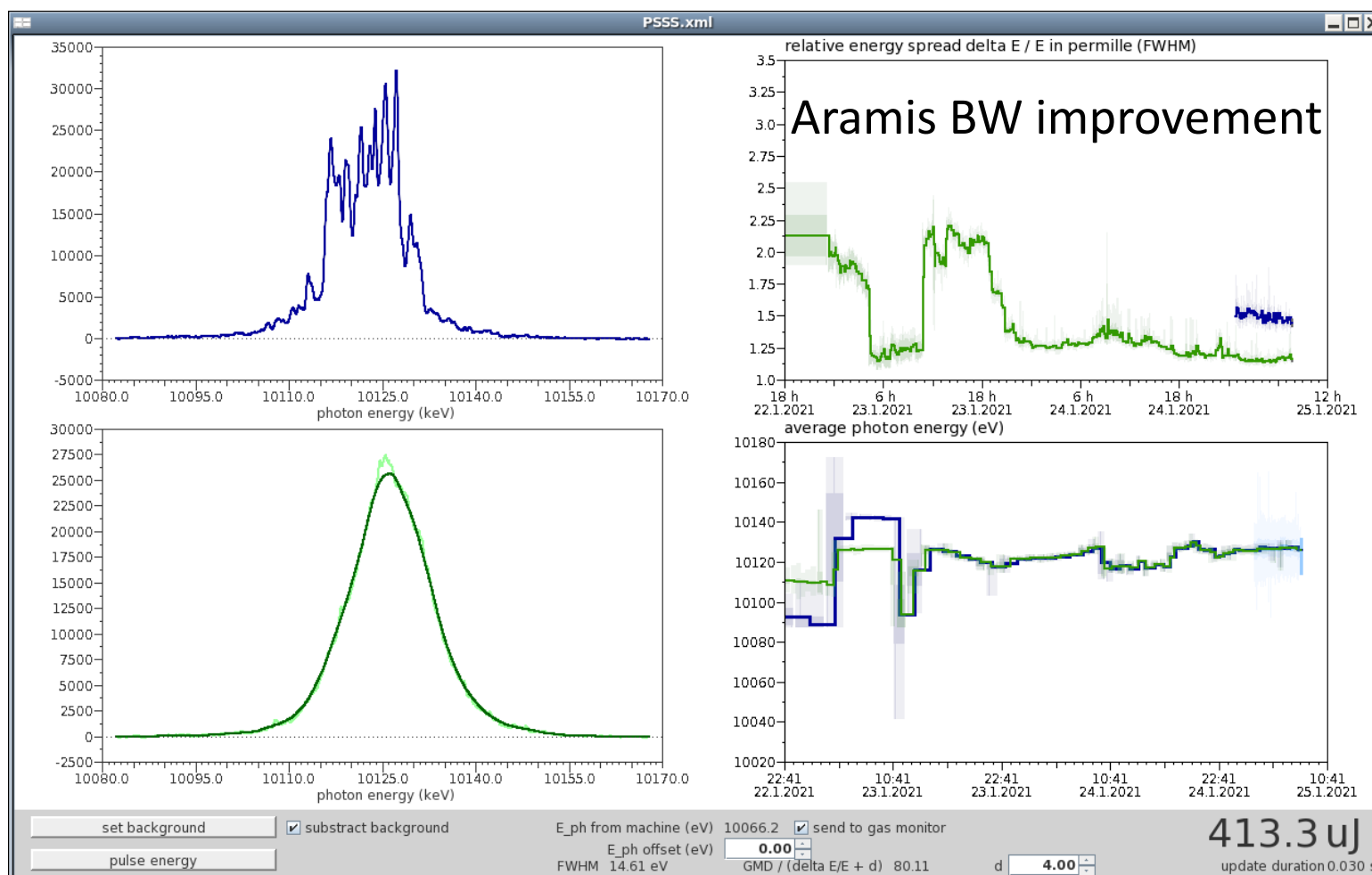
mostly Florian with a bit of help of Simona, Nicole & the shift cews

- **State on Friday evening:**

- Athos was in a fairly good state with around 470 uJ and 25 Hz possible (50 Hz possible, but SATUN09-DRM would generate an alarm eventually if left like this) -> thanks a lot to Eugenio, Eduard & Sven for bringing it there!
- Aramis had drifted down to around 280 uJ
- Athos also experienced some drifts and we wanted to stabilize these

- **Automated tuning over the weekend:**

- Re-enabled PSICO first for Aramis and then after some issues were resolved also for Athos
- Athos energy ECOL FB also re-enabled for tuning
- Optimised the BW in Aramis down to 1.25 permille (suggestion by Simona after seeing the initial BW) and maintained/recovered Athos losses on SATUN09 DRM still need some tweaking



Currently the BLMs in Athos are not yet set up correctly. Once this is done -> further tweak on the losses

