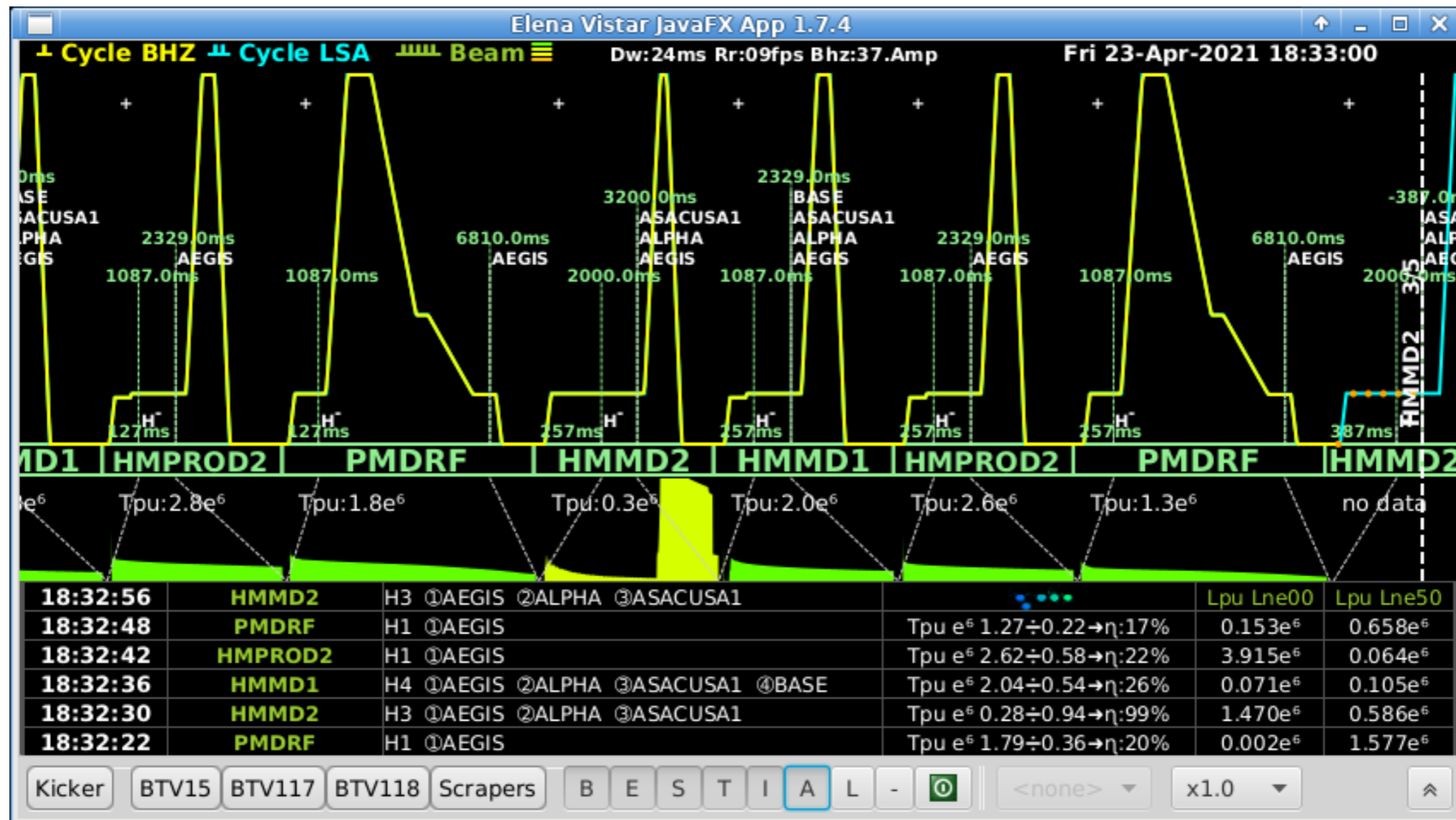


# ELENA commissioning status



- Test of Multi RF-segment functionality:
  - Mandatory for pbars operation:
    - Injection on  $h=1$ , debunching for e-cooling and rebunching on  $h=4$  for extraction
  - Spent couple of days to set-up the cycles for RF observation/measurement/setting-up
    - Found and fixed couple of bugs
  - Remains stability problem to close the servoloop
    - LLRF experts still working on it
  
- The mechanics is (almost) there, clean-up of settings to be done
  
- We have now a full zoo of cycles with different multi-segments configuration:
  - Need to merge all the knowledge in the future operational cycle

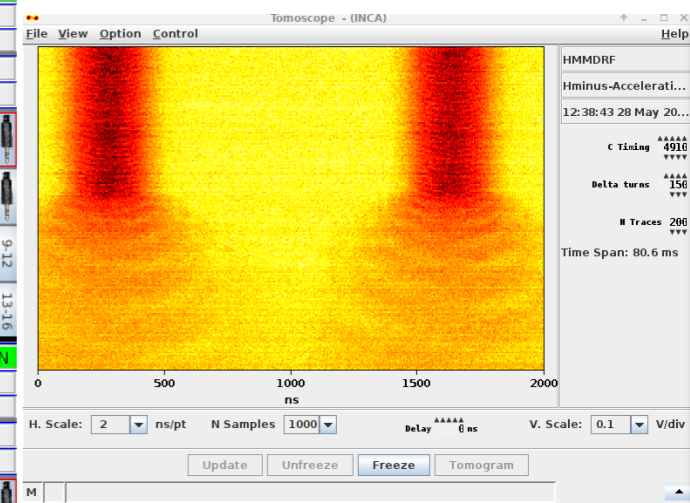
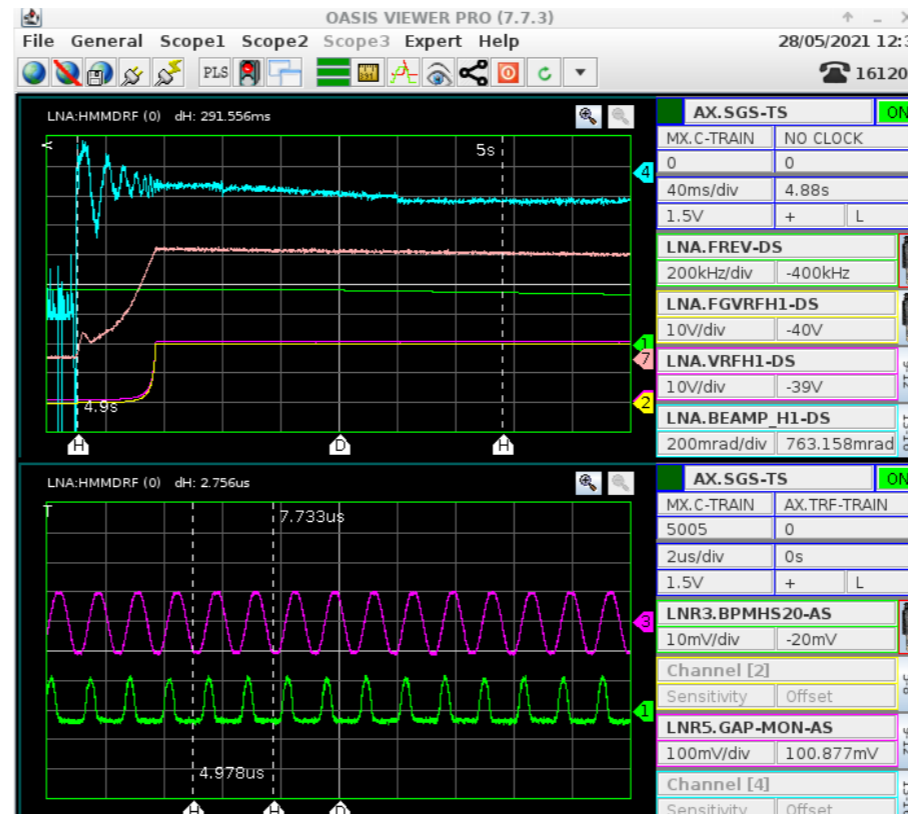
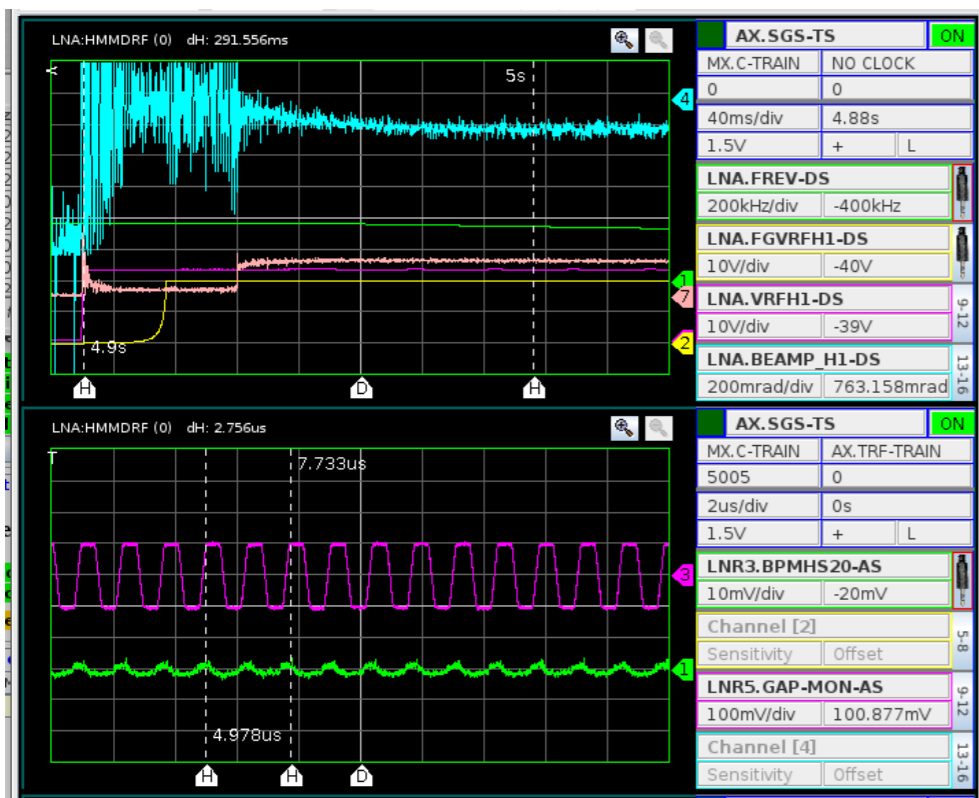
- Much more injected intensity when enabling multi RF segments
  - Nice to have, but better to understand

RF  
segment  
enabled

RF  
segment  
disabled



- Changing frequency offset to solve instability issues on HMMDRF



- Problem to measure electron beam orbit on intermediate plateau
  - Saturation of BPM suspected?
  - More tests performed on Thursday morning
  
- Test of automatic injection setting up algorithm developed for LINAC4
  - Variation of correctors and quadrupoles
  - Optimization of intensities (on pick-up at first turn )
  - Beam time given in the evenings

- Problem with FGC\_93:
  - electrostatic correctors in transfer line regularly tripping
  - New version to ease remote restart deployed last week, working but still have to restart the devices once or twice per day!
  - Problem reported to ISEG
  
- Several trips of source HV:
  - 2-3 times per day form Thursday
  - Lost vacuum gauge on Friday evening: were the trips a pre-warning?
  - Repair (with a hammer!) on-going while waiting for the spare gague to be ordered
  
- To keep in mind:
  - Status of the measured B-train → we are working with synthetic Btrain for all cycles

# Tentative Program for This Week



**Week coordinator:** Christian

**Operators:** See [op-webtools](#)

|                  | Main activities   |
|------------------|---|
| <b>Monday</b>    | <ul style="list-style-type: none"><li>• Source repair</li><li>• New LLRF software release</li></ul>   |
| <b>Tuesday</b>   | <ul style="list-style-type: none"><li>• Ring MD</li><li>• Electron beam orbit adjustment</li></ul>  |
| <b>Wednesday</b> | <ul style="list-style-type: none"><li>• Machine in <b>access whole day</b>:<ul style="list-style-type: none"><li>• Upgrade of vacuum software</li><li>• Start LNE02 bake-out (no extraction in LNE-02 and LNE04 for 1 week)</li></ul></li></ul> |
| <b>Thursday</b>  | <ul style="list-style-type: none"><li>• Ring MD</li><li>• Beam based alignment tests</li></ul>  |
| <b>Friday</b>    | <ul style="list-style-type: none"><li>• Ring MD</li><li>• Beam based alignment tests</li></ul>  |

**Note: opening of LNS/LNI vacuum sector for profile monitors exchange planned for next week: no Hminus beam from 7<sup>th</sup> of June for ~2 weeks**