

# PITZ Run Coordination

Run-2021-1 / week 2-3

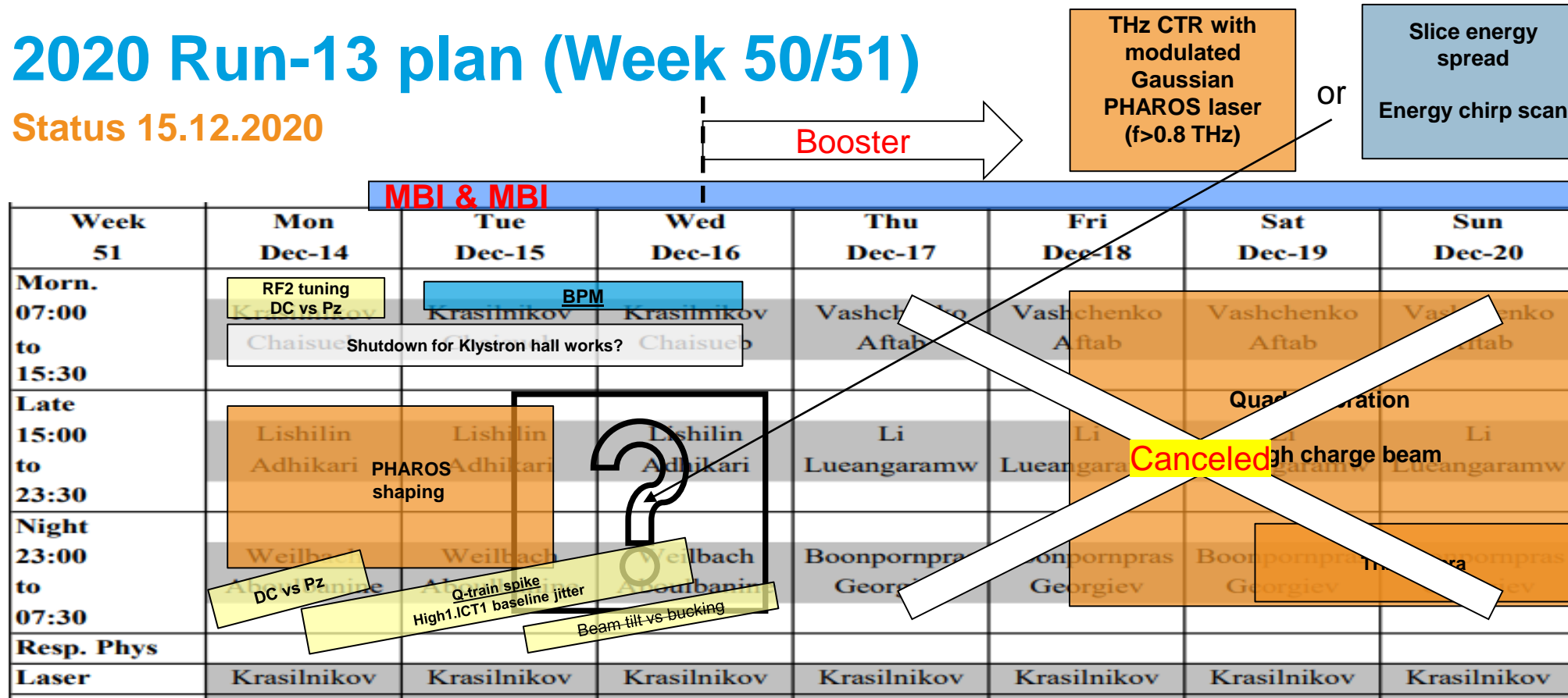
Gun4.2 run

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# 2020 Run-13 plan (Week 50/51)

Status 15.12.2020



## Main programs

- **THz**: ~1 THz modulated Gaussian laser; High charge beam measurement; THz camera
- **LPS**: tomography; slice energy spread; energy chirp
- **BPM commissioning (3 shifts)**
- PHAROS: **dispersion study**; modulation shaping

## Other (minor) programs

- RF2 LLRF tuning (0.5 shift): to tune gun sp to have same beam momentum output, dark current vs. Pz
- Q-train check (1 shift)
- Quadrupole calibration
- Check LEDA modulation vs Lyot filter tuning (0.5 shift)
- High1.ICT1 **baseline jitter** vs scope jitter
- **MBI laser modulation** check
- **Beam tilt** vs bucking solenoid field (backup program for shifts without booster)

# 2020 Last Run (15-16.12.2020)

## Progress and difficulties

- Progress

- BPM:
  - zero-crossing calibration → done for LOW.BPM1,2 and BOO.BPM1,2
  - Calibration check done for LOW.BPM1,2 and BOO.BPM1,2 (reduced accuracy)
- Lecroy scope investigations
  - tested averaging over several samples (did not help)
  - noise filtering option (seems to improve measurements a bit but also cuts signal if sampling rate is too small);
  - closer look in how amplitude and P2P are calculated (Histogram Methods vs Min/Max Methods)
- Q-spike program for BSA=1.5 mm and 1mm
- Magnet server has been modified (Grygorii) in order to avoid GUI hanging
- PMT power supplies is remotely controllable again (Grygorii)

- Difficulties

- RF2 modulator error on 15.12.2020 12:29 and 12:42
- Lecroy issues:

Lecroy tme server crashes continuously with the same scope settings as yesterday -> investigated by David and Grygorii, the only fix is to dial the sampling rate down even more

# Upgrade on Cameras

## Message from Stefan Weisse

The so-called software development kit (SDK) from Jai (JAI is a name of a camera manufacturer), through which some video cameras at PIZ (VC2, THz, vBSA, Disp2.Scr2 (RM2030), Disp3.Scr2 (RM2030), Las.Ella.UV-S, Las.Ella.UV-Spec) are controlled and read out, is discontinued and must be changed step by step to eBUS SDK of company Pleora.

The names of video servers as well as names of cameras will not be changed. Existing software should work as before (transparent change).

The first step has already been successful completed on 22.12.2020.

A limited set of servers and cameras are now working with Ebus instead of Jai SDK:

- two video servers: TV1S.Jai.2 and TV2S.Jai.2

- five camera (configuration) names:

  - "vBSA (10HzNoTrigger)"

  - "Disp2.Scr2 (RM2030 Bin2x2)"

  - "Disp2.Scr2 (RM2030)"

  - "Disp3.Scr2 (RM2030 Bin2x2)"

  - "Disp3.Scr2 (RM2030)"

At the moment, the following cameras and servers will stay at JAI SDK:

- cameras VC2, THz, "vBSA" (triggered), Las.Ella.UV-S, Las.Ella.UV-Spec
- servers TV1S.Jai.1, TV2S.Jai.1 and LV3S.Jai.1

After good experience, it is foreseen to migrate them to Ebus as well.

# 2020 Run-13 plan (Week 50/51)

Status 15.12.2020

?Booster

MBI & PHAROS

to do:	Measurement							Measurement						
Week 2	Mon Jan-11	Tue Jan-12	Wed Jan-13	Thu Jan-14	Fri Jan-15	Sat Jan-16	Sun Jan-17	Mon Jan-18	Tue Jan-19	Wed Jan-20	Thu Jan-21	Fri Jan-22	Sat Jan-23	Sun Jan-24
Morn. 07:00 to 15:30	Krasilnikov Aftab	Krasilnikov Aftab	Krasilnikov Aftab	Gross Adhikari	Gross Adhikari	Gross Adhikari	Gross Adhikari	Vashchenko Castro-	Vashchenko Castro-	Vashchenko Castro-	Vashchenko Castro-	Qian Aftab	Qian Aftab	Qian Aftab
Late 15:00 to 23:30	Shutdown for RF1 klystron works			Li Lueangaramw	Li Lueangaramw	Li Lueangaramw	Li Lueangaramw	Gross Adhikari	Gross Adhikari	Gross Adhikari	Vashchenko Melkumyan	Vashchenko Melkumyan	Vashchenko Melkumyan	Vashchenko Melkumyan
Night 23:00 to 07:30	Good Alboulbanine	Good Alboulbanine	Good Alboulbanine	Weilbach Koschitzki	Weilbach Koschitzki	Weilbach Koschitzki	Weilbach Koschitzki	Li Lueangaramw	Li Lueangaramw	Li Lueangaramw	Lishilin Georgiev	Lishilin Georgiev	Lishilin Georgiev	Lishilin Georgiev

PHAROS shaping

THz CTR with modulated Gaussian PHAROS laser (f>0.8 THz)

THz high charge beam

THz camera

## Main programs

- **THz**: ~1 THz modulated Gaussian laser; High charge beam measurement; THz camera
- **LPS**: tomography; slice energy spread; energy chirp
- **BPM commissioning (RFD.BPMs, PST.BPMs)**
- PHAROS: **dispersion study**; modulation shaping

Slice energy spread  
Energy chirp scan

LPS tomo

## Other (minor) programs

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Quad calibration

Beam tilt vs bucking

MBI LEDA modulation?