

# Bunch compressor commissioning at PITZ

## Dispersion measurement

Full compression studies using CTR

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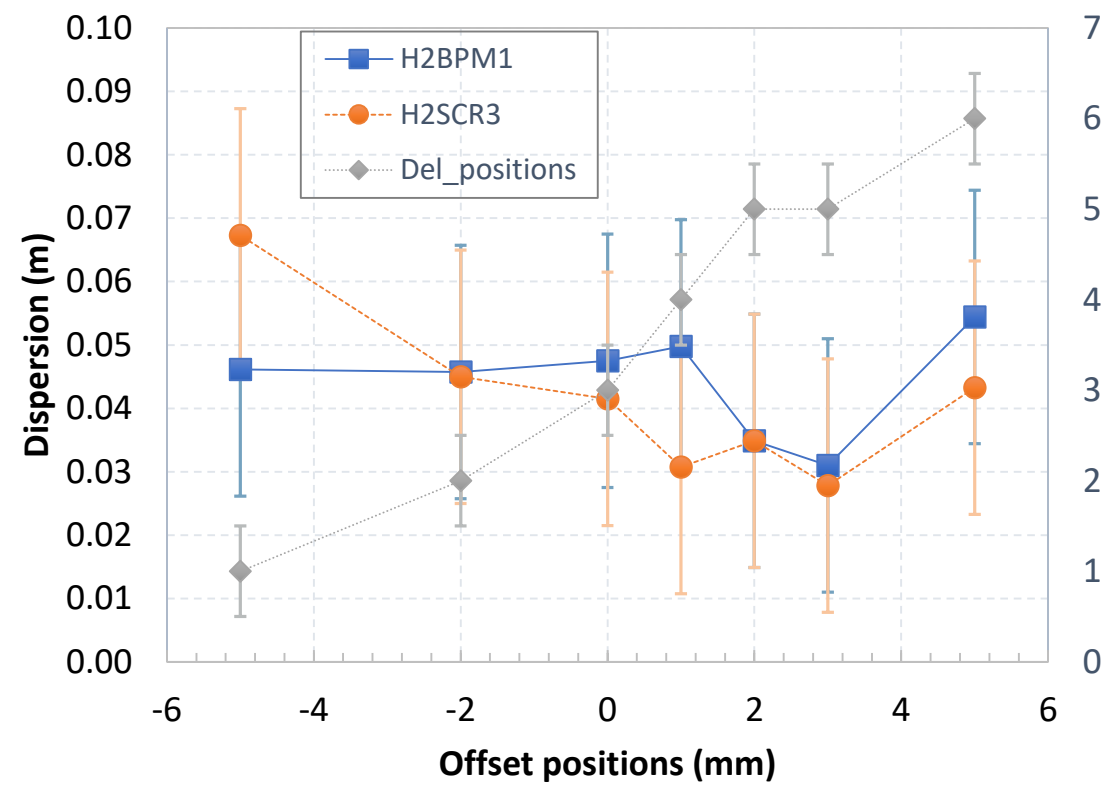
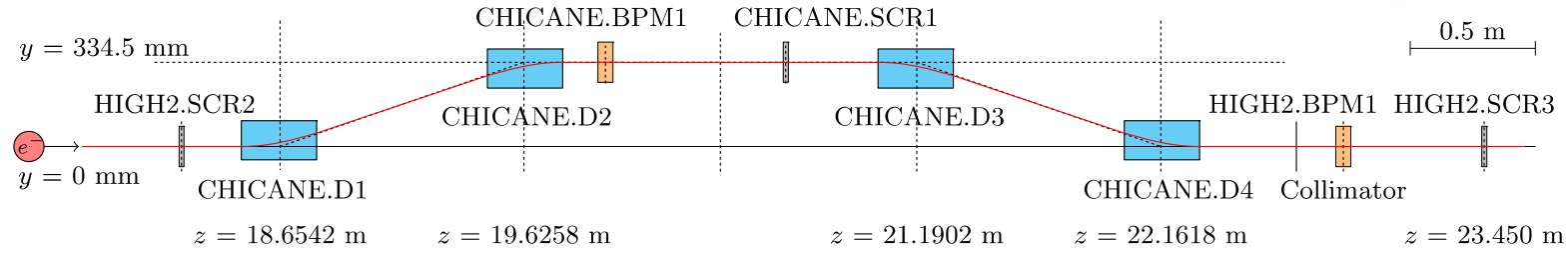
6 April 2023

HELMHOLTZ



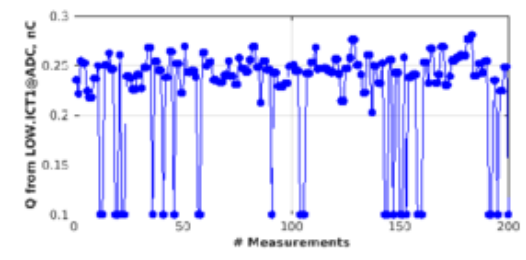
# Dispersion measurement

Late shift 5.04.2023

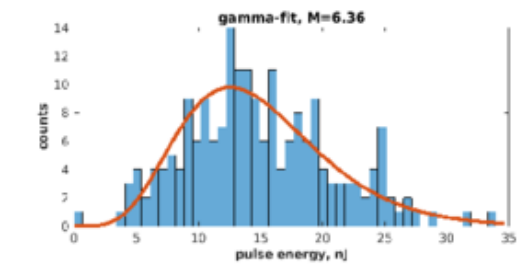
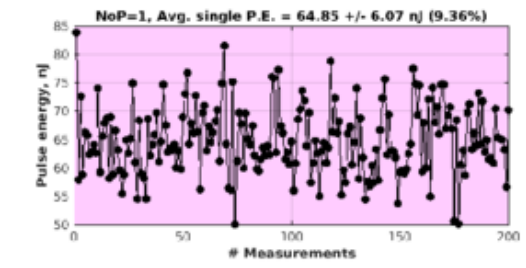


Beam offset at H2Scr2 (mm)	Beam offset at H3Scr1 (mm)
5	48.473
3	39.227
2	38.227
1	29.981
0	21.736
-2	12.490
-5	2.245

Energy measurement using HIGH3.SCR1 (THz10, Gain1000)



Bunch charge : 250 pC  
 Pulse energy : 65 nJ  
 Booster phase : +20 deg  
 from MMMG

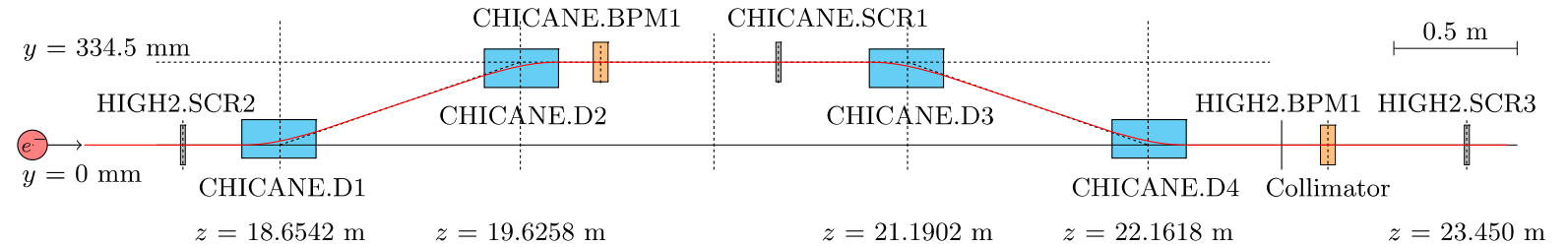


Number of measurement 200, delay time 0.30 sec  
 Data saved to /docs/measure/THz/2022/PulseEnergy/2023/20230405N/THzPE\_0124.mat

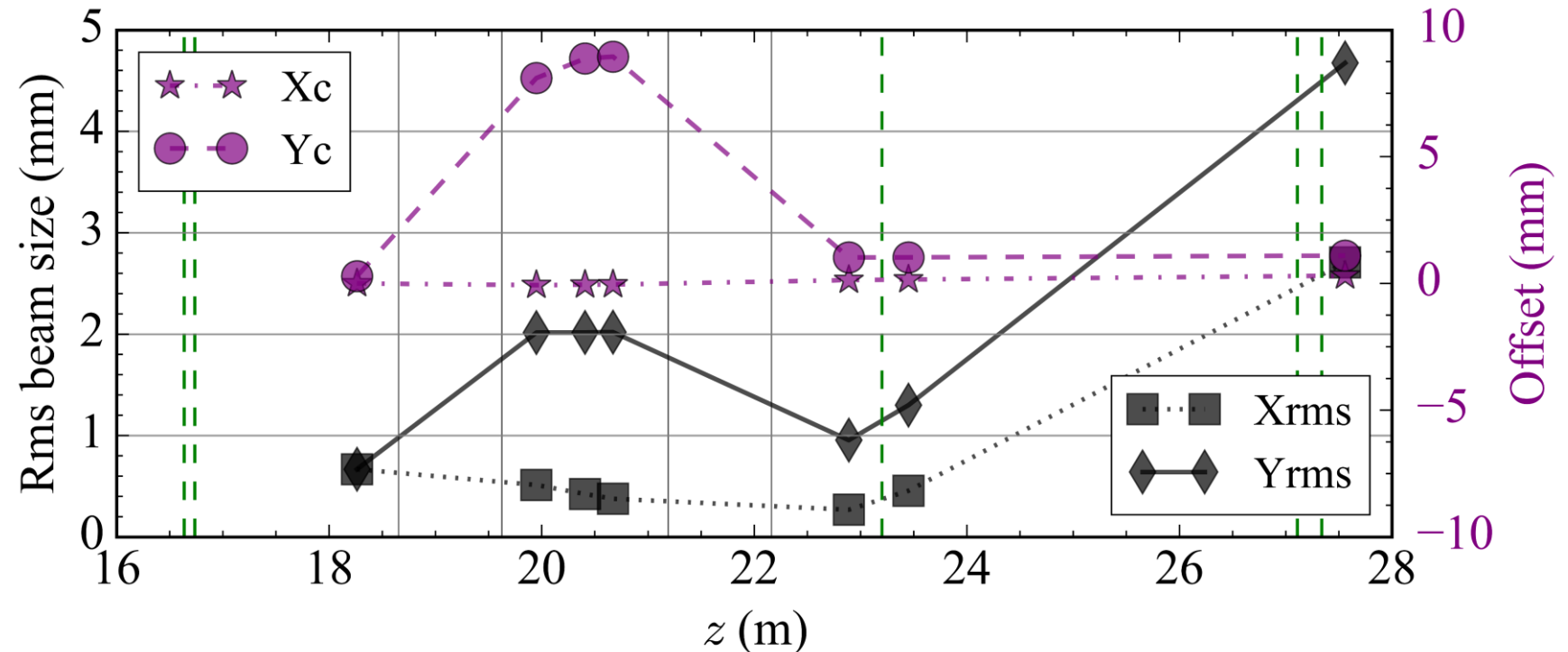
# Simulation results

## At chicane section

- Beam momentum after gun :  $\sim 6.3$  MeV/c
- Bunch charge : 250 pC
- BSA : 1 mm
- Bunch length : 8 ps FWHM



- Booster phase : -20 deg.
- Avg. momentum : 17.0251 MeV/c
- Momentum spread : 0.6 %



# Simulation results

At chicane section

