



Week Summary Report

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A. Overall Summary

Week type: Experiments
Date/WeekNumber: 19/04/2021 to 23/04/2021 (Week 4)
EDMS number: Not Applicable (NA)

Beam time: 4.5 days
Fatal Failure time: 0 day
Installation time: 0.5 day
Number access: 5

#	Experiment Name	Person responsible	Institute	Installation time	Beam time
1	Cherenkov BPMs	E. Senes	CERN	3 h	1.5 day
2	AWAKE Spectrometer	M. Bergamaschi	CERN	3 h	0.5 day
3	Beam Loss Monitor w/ optical fibre	S. Berrocal	CERN	1 h	2 days

Weekly activity

The week was dedicated to 3 experiments:

- Beam Loss Monitor with an optical fibre.
- Cherenkov BPMs.
- AWAKE spectrometer.

B. Day by day report

Monday

Installing and improving the AWAKE Spectrometer and Cherenkov BPMs experimental setups and optimization of the oscilloscope for BLM optical fibre experiment.

Access:

Access from 10:00 to 15:00 for AWAKE Spectrometer and Cherenkov BPMs.

Tuesday

Beam time used for Beam Loss Monitor experiment with an optical fibre.

Studying the impact of the angle between the beam and the fibre on the measured signal:

Scanning from -81° to $+81^\circ$. (0° = fibre perpendicular to the electron beam).

Studying the impact of the beam intensity on the measured signal:

Scanning the beam intensity from 10 pC to 3 nC with 1 and 30 bunches at a few specific angles ($\pm 40.5^\circ$ and $\pm 46.8^\circ$).

Access:

Short access around 9:00 to move the BCT to the spectrometer line.



Wednesday

All day used for BLM 2nd optical fibre.

Studying the impact of the angle between the beam and the fibre on the measured signal.

Studying the impact of the beam intensity on the measured signal.

Access:

Quick access around 9:00 in order to change the optical fibre.

Thursday

Beam for Cherenkov BPMs.

Looking at the impact of bunch length of the measured signals.

Bunch length studied: 1.1 ps, 3.4 ps and 4.8 ps.

Access:

Quick access around 9:00 to move the BCT back to the straight line on the THz test stand.

Friday

Beam for Cherenkov BPMs in the morning.

3.65 ps long bunch.

Calibrating and doing first measurements for the AWAKE spectrometer.

Access:

Quick access around 9:00 to swap buttons for the Cherenkov BPMs.

Other business

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Additional resources

C. Main issues

- ◇ One extra BCT would be more comfortable in order to have two of them on the THz test stand at the same time (one on each line).

D. Action needed to be followed up

- Starting to create new Matlab codes for new experiments. Each experiments should have its own Matlab code in order to avoid problems while running them in the future.