



Week Summary Report

Supervisor: Luke Dyks

Overall Summary

Week type: User Experiment – AWAKE Cherenkov BPMs
Date/Week Number: 12/04/2021 to 16/04/2021 (Week 3)
EDMS number: 2508859 & 2493388

Beam time: 25.5 hours
Fatal Failure time: 2 hours
Installation time: 15 hours
Number access: 8

#	Experiment Name	Responsible	Institute	Installation time	Beam time
2508859	AWAKE Cherenkov BPMs	Eugenio Senes	CERN	15 hours	23.5 hours
2493388	Cherenkov BLMS	Belén M. Salvachúa Ferrando	CERN	2 hours	2 hours

Weekly activity

Most of the beamtime this week was spent continuing the work done of the AWAKE Cherenkov BPM. After a couple of days spent setting up the beam and experiment we were able to achieve good beam transport of 85 % with stability mostly better than 10 %. Regular accesses were held in order for the AWAKE staff to alter their set up. The RP department were fully cooperative with our requirements. After some optimisation of their setup the AWAKE team were able to gather some data which will be analysed soon.

In addition to the AWAKE tests the Cherenkov Beam Loss monitor experiment was installed on the in air test stand spectrometer. There was an initial test of the signal produced when exposed to the beam.

There were a few enforced stoppages mostly due to failures in the Klystrons. There were some stability issues with the laser also and the gun coolant had to be replenished. None of these failures were long term and operation began soon afterwards.

Main issues

- Magnet control issue
- Gun coolant running low



Actions

Devise a way of doing laser alignment on the in-air test stand.

Check the status of the SF6 error in klystron MKS11.

Further look to solve the noise in the plasma lens pump.

Understand where the end of the trigger cables in the klystron gallery.

Look at moving one of the unused CTF3 front ends to the barrack to aid data collection.

Next Week

Test Cherenkov beam loss monitors.

Install and run preliminary tests on AWAKE spectrometer screen.

Further Details

<https://indico.cern.ch/event/1026605/>