

Beamline for Schools 2022

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Competition Overview

BL4S invites teams of high school students from all around the world to design an experiment that can be realised at a test beam facility of a particle accelerator.

Goal: bringing young people close to the fundamental research in particle physics. Learning by doing.

Winners: One team carried out its experiment at DESY and two teams carried out their experiments at CERN. PS - East Hall - T9.





Experiments

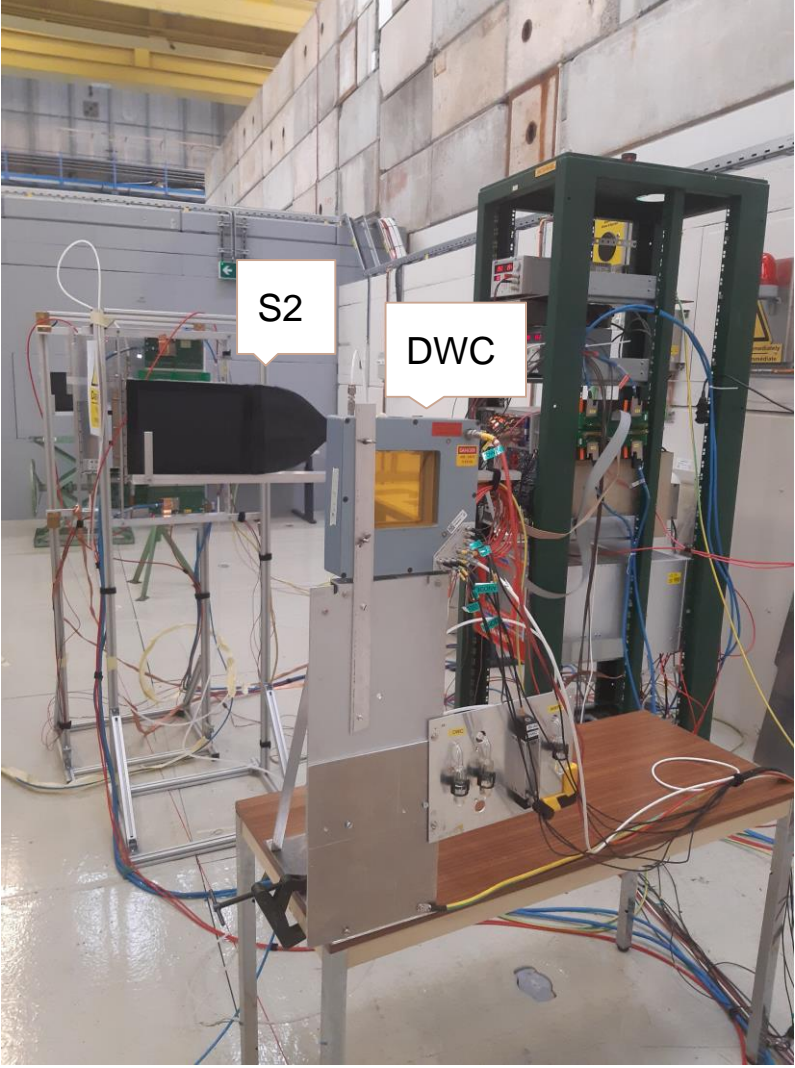
Both experiments focused on the performances of MRPC - Multi Resistive Plates Chambers.

Egyptian team: Detector efficiency study for different gas mixture. SF6 2% + R134a vs CO2/He 40%-60% + R1234ze (eco-freon) 60%-40%.

Spanish team: Correlation between the mass of particles and the charge deposited in the detector. Analysis at different incident angles.

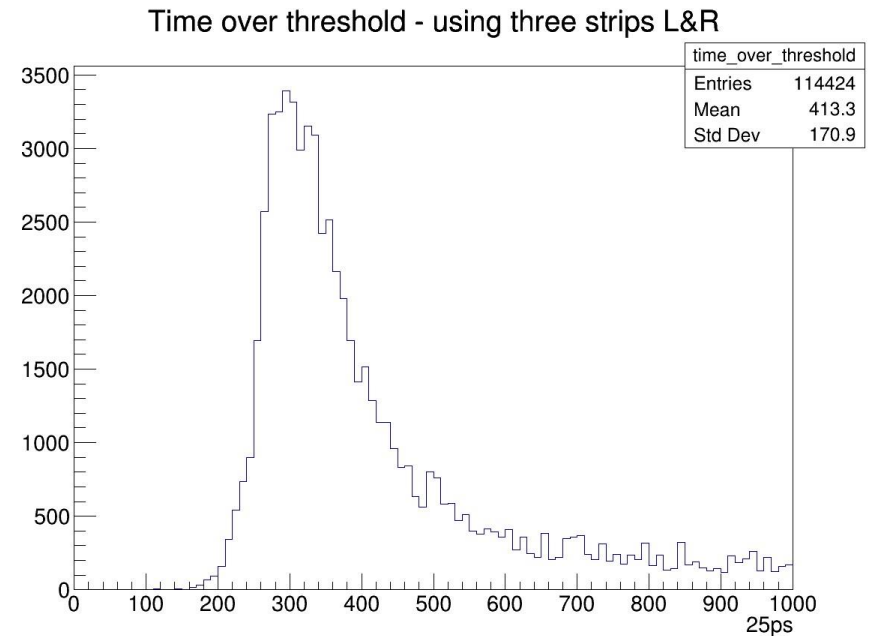
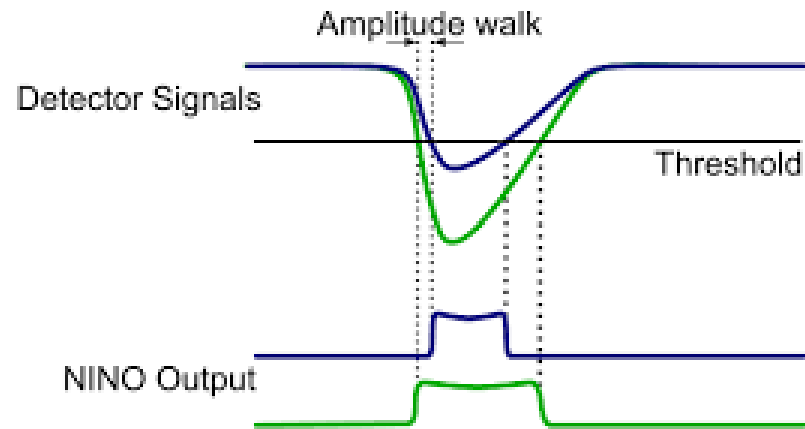


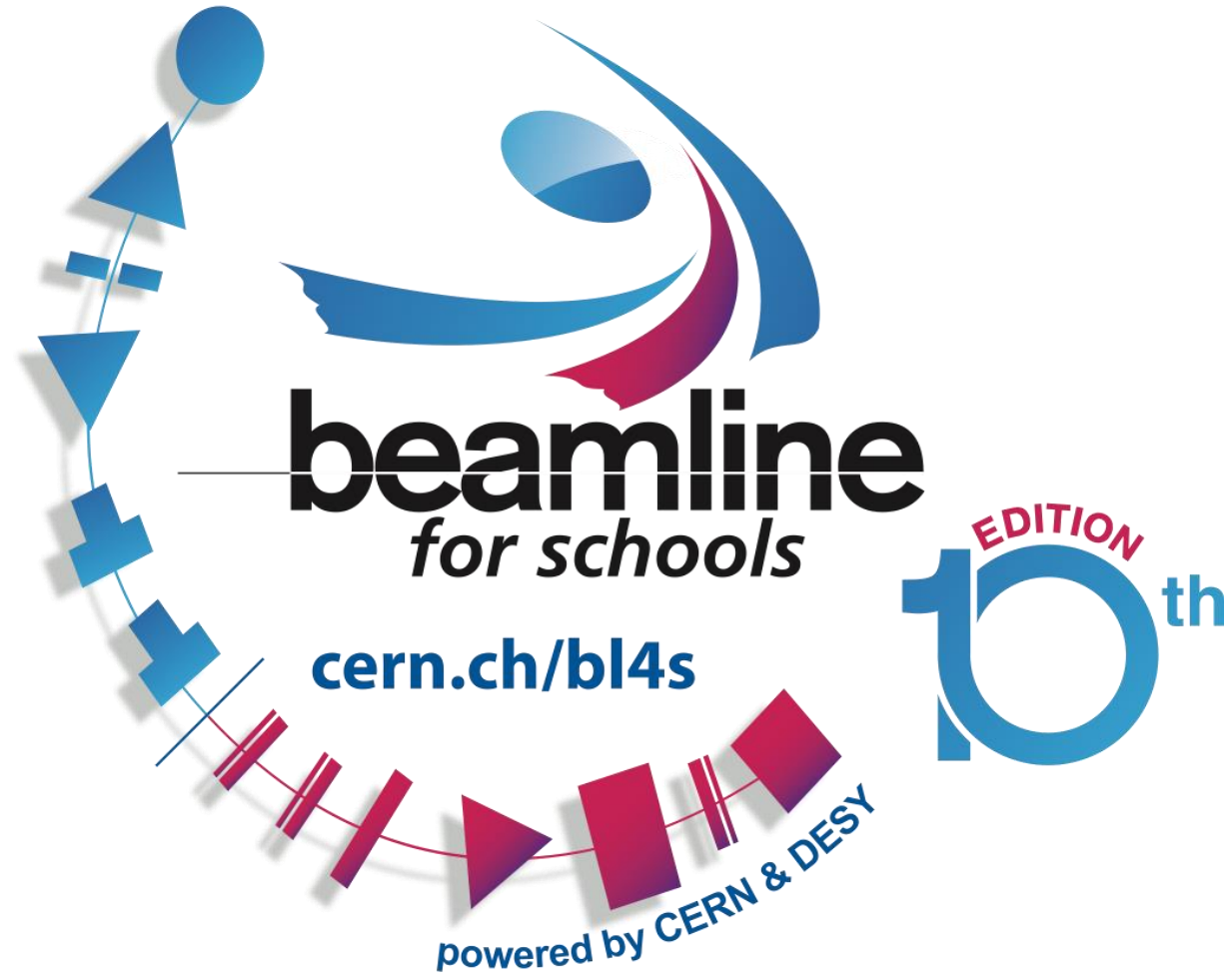
Beamtime at CERN



Outcomes

- Data analysis not completed yet.
- Unfortunately we didn't have enough time to do a systematic study with all gas mixtures.
- Preliminary result of charge deposited in MRPCs: Landau distribution of the time-over threshold in the detector.





Thanks a lot to those who contributed!
See you next year! Registrations open on cern.ch/bl4s please share!