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PDF

https://edms.cern.ch/file/1517966/1/bl4s_tr2014.pdf

Repository

<https://svnweb.cern.ch/cern/wsvn/bl4sextras/technicalreport2014/>

Working copy in afs: /afs/cern.ch/user/d/daquser/public/daq_extras/technicalreport2014

T9 Beam - CenkYildiz

- momenta, targets, particle contents and intensities
- operation
- beam profiles measured using DWCs

- where are the beam intensities and particle composition in fig. 2 measured? target or experiment?

Installation of experiment - CenkYildiz

- detectors and geometry
- where is the first Cerenkov? Lau says 45m? What are their dimensions? length and cross section?
- cabling (details in appendix?)
- gas system for DWC - operation
- HV & LV supplies - operation

Detectors

- Cerenkov counters - CenkYildiz
 - ◆ thresholds - particle identification
 - ◇ pressure - operation
 - ◇ efficiency
 - ◇ analysis of Cerenkov test runs(here?)
- Scintillators - JorgenPetersen
 - ◆ setting of HV, thresholds, noise
 - ◇ table of dimensions, HV.
 - ◇ from scalers, noise and counts during bursts for SC0, SC1, SC2 - how?
 - ◇ compare SC0, SC2 (and SC1) counts showing pions lost in LG: high proportion of SC2=0 !!
 - ◇ TDC spectra
 - ◆ efficiency from TDC data
 - ◇ SC2: select a sample of good tracks && SC1 hit (muons). Compare counts in SC1 to SC2 also plot TDC spectrum
 - ◇ SC1: use LG to select muons. For those, compare SC1 and SC2.
 - ◇ Halo counters: BG & counts. Discuss usefulness
- Delay Wire Chambers - SaimeSarikaya
 - ◆ gas mixture
 - ◆ HV & LV settings
 - ◆ calibration of individual chambers
 - ◇ Gas system in the lab
 - ◇ Calibration with fake signals (fake signal shape)
 - ◇ Cosmic run data
 - ◇ Radioactive data and collimation trials

- ◆ calibration in T9, resolution
 - ◇ method for computing resolution?
 - ◇ Calibration with fake signals
 - ◇ Calibration of positions with the 10GeV run
 - ◇ can pion decays be identified using the DWCs?

Lead Glass Calorimeter - CenkYildiz

- Description
- history? from OPAL ...
- muon calibration and voltage settings
- calibration in T9
- geant simulations
- can we measure the pion LG spectrum?
- overlap between muon and pion spectra
- possible to fit LG spectrum with muon, pion (electron) Landau distributions?

Trigger & DAQ & HW & SW

- Triggers - NIM electronics - CenkYildiz/ JorgenPetersen
 - ◆ logic diagrams of triggers
 - ◆ timing diagrams
 - ◆ NIM modules
 - ◆ performance: show LG plots for various trigger types (with some simple cuts ?).
- DAQ HW and SW - JorgenPetersen
 - ◆ variant of ATLAS DAQ. RCD in VME. User interface.
 - ◆ SW in SBC: ATLAS RCD Single Event mode - general description - see Lucid note.
 - ◆ HW modules. V1290, v792, v560, Corbo.
 - ◆ the rcd SW packages
 - ◆ performance, VMEbus readout, deadtime.
 - ◆ OKS DB
 - ◆ Online SW including monitoring - general description and specific BL4S. OH.
 - ◆ file organisation of the DAQ SW: the "ATLAS/CMT" part, VME and monitoring
 - ◆ event displays, how they use the analysis library
 - ◆ Monitoring programs

Analysis: - CenkYildiz

- configuration and calibration files
- the chain from raw data to root files, file organisation

should the actual experiments, pion decay and DCC - go here? probably not ..

lots of references!

-- SaimeSarıkaya - 23 Sep 2014 -- CenkYildiz - 07 Oct 2014

This topic: BL4S > TechnicalReport2014

Topic revision: r18 - 2015-06-26 - TimBrooks



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