

Trainee's Project Report

Job Code	PH4944
Department	PH
Discipline	Electronics Engineering
Supervisor	HENRIQUES CORREIA Ana Ma

Description

The Tile Calorimeter is a sub-system of the ATLAS experiment, one of the experiments that operate at the CERN LHC collider. The electronics of the calorimeter is a complex system that is being upgraded. It includes several boards located inside the detector (front-end) and several boards located in the electronics room (back-end), communicating via fast optical links. A new front-end high voltage distributor system is being designed and its control system will be located in the back-end. The context of the job offer is to be integrated in the team developing the high voltage system and the transfer of data and commands using the optical links between the so-called sROD board in the back-end and the so-called Daughterboard in the front-end. Both boards have FPGAs that will encode/decode commands and will address them correctly to other buses.

By being involved in this project, it is possible to get an overall view of the execution of an electronics project. Last "state of art" resources will be applied for these tasks. The candidate will take part in the development and implementation of the system, in the tests and in the analysis of the data collected. The candidate will interact with the physicist teams that are running the detector and will have to coordinate actions with them, as well as with the engineers that are developing the new electronics.

Special Requirements

Electronics engineering or equivalent

Training Value

Gain experience in electronics, control and software

