

Installation and Commissioning of the ATLAS LAr Read-Out Electronics

Wednesday 17 September 2008 13:05 (25 minutes)

The cryostats of the ATLAS LAr calorimeter system are installed in the ATLAS cavern since several years. Following this, an effort to install and commission the front end read-out electronics (infrastructure, crates, boards) has been ongoing and is finished now, in time for the cavern closure.

Following cautious procedures and with continuous testing-campaigns of the electronics at each step of the installation advancement, the result is a fully commissioned calorimeter with its readout and a small number of non-functional channels. A total of only 0.017% of the read out channels is dead and 0.4% need special treatment for calibration.

The presentation will give a general overview of the installation and refurbishment campaign of the ATLAS LAr calorimeter electronics and show results of the calibration runs that were taken continuously during the various phases of commissioning. Different problems observed and addressed will be discussed. It will describe noise studies that have been performed and shortly review the solutions implemented to reduce noise. The excellent stability of the calorimeter readout will be demonstrated by showing results from pedestal and pulse height studies.

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Session Classification: Parallel Session A3 - Installation & Commissioning