

Grounding, Shielding and Cooling Issues on LHCb electronics at the LHC pit 8.

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The grounding, shielding and cooling issues are important factors in the design and the maintenance of all the electronics systems. Inadequate grounding, shielding or cooling can lead to unreliable operation of the sub-detectors. This paper provides an overview on the LHCb strategy and achievements in the field of grounding, shielding and cooling for the electronics equipments.

Summary

The LHCb detector is designed to study the CP violation in the B-mesons at the LHC collider. The installation of the experiment was completed in June 2008, ready for data taking in July 08 as scheduled. The experimental cavern (ex-DELPHI at LEP) 100 m underground at pit 8 has been divided in two areas. The detector area (UXB) is separated from the protected area (UXA) by a radiation shielding wall of 3200 t of concrete. The UXA area is essentially dedicated to the non-radiation tolerant electronics, CPUs farm & detector control systems. This area is always accessible when the LHC operates. The grounding, shielding and cooling issues are important factors in the design and the maintenance of all the electronics systems. Inadequate grounding, shielding or cooling can lead to unreliable operation of the sub-detectors. This paper provides an overview on the LHCb strategy and achievements in the field of grounding, shielding and cooling for the electronics equipments. Practical details are also reported.

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