



Contribution ID: 21

Type: **Presentazione 15 minuti**

## Upgrade of the L2 electronics in the CMS Muon Drift Tubes system

*Wednesday, 11 April 2012 18:00 (15 minutes)*

The program of upgrade for the Drift Tube (DT) system of CMS (Compact Muon Solenoid) is reviewed. The excellent performance of the DT system during the past years is expected to be pursued at the increased luminosity, so the main motivation driving the DT upgrade is focused on improving the electronic system to maintain its reliability.

To achieve such a target, the Sector Collector DT electronics will be moved from the CMS cavern to the counting room, in a more accessible and radiation-free position.

In the following, the relocation of the Sector Collector DT electronics from the CMS cavern to the counting room is described in detail. The fulfillment of this project envisages to turn electrical signals into optical signals for a total number of 3500 optical channels that run at up to 480 Mb/s data rate. The converters, located in the CMS cavern, demand in addition radiation tolerant components. For this purpose a Copper to Optical Fiber (CuOF) prototype has been produced and tested with a mixed field irradiation of high energy hadrons and neutrons which corresponds to more than 10 years of LHC. A Bit Error Rate (BER) of the order of 10<sup>-12</sup> at 95 % CL has been measured which ensures that an appropriate components choice has been made in view of the full boards production.

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**Session Classification:** Nuove Tecnologie - 1a parte

**Track Classification:** Nuove Tecnologie