



Contribution ID: 145

Type: Poster (Session A)

## Endcap Muon Chamber Calibration and Monitoring Procedures in CMS

The cathode strip chamber (CSC) system is one of the three types of muon detectors used in the Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC). It consists of 468 chambers, with a total of ~218k strips and ~183k wires, divided into two endcaps. The chambers have excellent signal-to-noise performance and they operate in a large non-uniform magnetic field ranging from 1-3T without major deterioration in their performance. To monitor the performance of the CSC front-end electronics, a set of calibration tests which measure crosstalk, gains, noise and connectivity are performed regularly. Using the strip-to-strip crosstalk corrections in the offline tracking reconstruction results in an improvement of the spatial resolution down to 50  $\mu\text{m}$ . The calibration tests are described here, together with the specific procedures for obtaining the necessary runs for the EMU system. In 2006, the full chain of acquiring, analyzing and applying the calibration constants was successfully tested for the first time on the CSC system, using cosmic-ray data.

**Author:** BOERIU, Oana (Department of Physics)

**Presenter:** BOERIU, Oana (Department of Physics)