

# Data Quality Monitoring for the CMS Silicon Strip Tracker

*Tuesday, 24 March 2009 17:10 (20 minutes)*

The CMS Silicon Strip Tracker (SST), consisting of more than 10 millions of channels, is organized in about 16,000 detector modules and it is the largest silicon strip tracker ever built for high energy physics experiments. The Data Quality Monitoring system for the Tracker has been developed within the CMS Software framework. More than 100.000 monitorable quantities need to be managed by the DQM system that organizes them in a hierarchical structure reflecting the detector arrangement in subcomponents and the various levels of data processing. Monitorable quantities computed at the level of individual detectors are processed to extract automatic quality checks and summary results that can be visualized with specialized graphical user interfaces. In view of the great complexity of the CMS Tracker detector the standard visualization tools based on histograms have been complemented with 2 and 3 dimensional graphical images of the subdetector that can show the whole detector down to single channel resolution. The functionalities of the CMS Silicon Strip Tracker DQM system and the experience acquired during the SST commissioning will be discussed.

**Primary author:** Dr CIULLI, Vitaliano (Istituto Nazionale di Fisica Nucleare (INFN))

**Presenter:** BORGIA, Maria Assunta (Unknown)

**Session Classification:** Event Processing

**Track Classification:** Event Processing