
Contribution ID: **669** Type: **Parallel Sessions**

# Data Preparation for the CMS detector at 8TeV at the LHC.

*Saturday, July 7, 2012 2:15 PM (15 minutes)*

The CMS detector, currently taking data at the LHC in Geneva, is a very complex apparatus composed of more than 70 million acquisition channels. Fast and efficient methods for the calibration and the alignment of the detector are a key asset to exploit its full physics potential. Moreover, a reliable infrastructure for the monitoring of the data quality and for their validation are instrumental to ensure timely preparation of results for conferences and publications.

The CMS experiment has set up a powerful framework in order to cope with all these requirements and in 2012 it had to consolidate and optimize all the workflows to withstand the higher luminosity and energy delivered by the LHC machine. The reconstruction algorithms have been optimized for the higher occupancies without compromising the physics performance. A MonteCarlo production with a statistic comparable to the collision data has been prepared and fully validated.

This contribution will cover the development and operational aspects of the offline workflows reporting about the CMS performance and the experience gained during the data taking.

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**Session Classification:** Room 218 - Future Accelerators - Detectors and Computing for HEP - TR14&13

**Track Classification:** Track 13. Detectors and Computing for HEP