## **ICHEP 2010**



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## Operation of the CMS detector with first collisions at 7 TeV at the LHC

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The CMS detector, now taking data at the LHC in Geneva, is a very complex apparatus with more than 70 million acquisition channels. To exploit its full physics potential, a very careful calibration of the various components (crystal, drift tubes, silicon devices) and their attached electronics, together with an optimal knowledge of them in 3D space, is absolutely needed. The CMS Collaboration is putting a big effort in developing and deploying an infrastructure to allow for the best knowledge of those conditions at any given moment, thus following as fast as possible any change in running conditions. The talk will cover the development side of the Calibration and Alignment system, together with planned features and the operational report from the first data taking period for the different detectors. Focus is also put on the detector performances and features of the Reconstruction used to allow for such high precision calibrations.

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