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CMS Tracker: the Run 1 to Run 2 transition and first experience of Run 2

The CMS inner detector is the largest silicon tracker ever built. Located around the center of CMS where the LHC particle beams are brought into collision, it consists of a hybrid pixel detector with 66 million channels and a 200 mÂ² silicon strip detector with about 10 million read-out channels. The tracking detector provides high-resolution measurements of charged particles passing through a 3.8 T magnetic field and is also crucial for vertex reconstruction. The presentation briefly summarizes the operational experience gained with this detector during the first three years of LHC operation (Run 1) including performance measurements. The focus lies on the work carried out during the first long shutdown of LHC to prepare the detector for the high-radiation and high-luminosity environment of Run 2. The most important tasks were the repair of the detector and preparations for operating the detector at significantly lower temperature. First experience with 2015 operation of the detector is also presented.

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