

## CMS pixel detector upgrade

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The pixel detector is an integral part of the CMS silicon tracker, designed to measure the position and momentum of charged particles produced in high-energy collisions at the LHC (Large Hadron Collider). The LHC is the world's largest and most powerful particle collider built at the European Organization for Nuclear Research (CERN). CMS is one of two general purpose particle detectors at the LHC, playing a critical role in High Energy Physics research. Over the coming years, the LHC will deliver increased instantaneous luminosity to the CMS detector, soon reaching double the design luminosity. To avoid performance degradation, the phase I upgrade of the pixel detector will be installed in the winter of 2016/2017. Module testing and qualification procedures of the phase I upgrade are described.

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