

Performance of CMS pixel detector barrel modules

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The central part of the CMS pixel detector will consist of about 800 modules, which are mounted on three concentric barrel layers. The radii of the layers are 4cm, 7cm and 11cm. The modules cover an area of 66.5mm * 18.5mm and have 66560 pixels. The 16 Read Out Chips are connected to the sensor by bump bonds.

The performance of the prototype modules has been evaluated in detail in the laboratory. Furthermore there will be a high rate testbeam at PSI to validate the performance of the module exposed to a particle rate comparable to LHC conditions. The results of the measurements from the laboratory and from the high rate testbeam will be shown.

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