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Operational Experience with the CMS Pixel detector

The CMS pixel detector was repaired, calibrated and commissioned successfully for the second run of Large Hadron Collider. The replaced modules were calibrated separately and showed the expected behavior of an unirradiated detector. In 2015 the system performed excellent with an even improved hit efficiency and spatial resolution compared to Run I. During this time, the operational team faced various challenges including the loss of a sector in one half shell which was partially recovered. This year the detector is expected to withstand luminosities that are beyond its design limits and will need a combined effort of both online and offline team to yield the high quality data that is required to reach our physics goals. In parallel, the Phase I pilot system was commissioned and used to prepare for the imminent upgrade of the detector. We present the experience gained during the second run of the LHC and show the latest performance results of the CMS pixel detector.

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