

Abstract Submitted  
for the APR12 Meeting of  
The American Physical Society

**CMS Pixel Tracker Upgrade: Results from Test Beam** RICHARD BROSIUS, AVTO KHARCHILAVA, ASHISH KUMAR, SUNY at Buffalo, CMS COLLABORATION — The CMS Pixel detector is the closest tracking device to the interaction point. With current sensor technology, maintaining reliable performance of the tracker at much higher luminosities expected in the High Luminosity LHC environment would be extremely challenging. A promising research and development plan is being pursued to evaluate novel detectors, with improved radiation hardness of sensors, allowing for less frequent replacement of the inner layers of the pixel detector. A series of tests with beam have been conducted at Fermilab to study various types of sensors: (a) n-in-n magnetic Czochralski (MCZ), (b) 3D silicon, and (c) diamond. Preliminary results from the test beam will be discussed.

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Date submitted: 09 Jan 2012

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