Test Beam and Laser Measurements of Irradiated 3D Silicon Strip Detectors

Wednesday 2 June 2010 10:30 (20 minutes)

This talk presents measurements of irradiated double-sided 3D silicon strip detectors. The devices under test were irradiated at the proton cyclotron in Karlsruhe with fluences expected for the sLHC strip and pixel layers. Results of measurements performed in a test beam with high energy pions and with an infrared laser are presented. Charge multiplication, which leads to a significantly increased signal of the irradiated detectors, is further investigated and implications on noise and space-resolved signal are studied.

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